

Narrative Statement

This extension of previously granted STA call sign WM9XAX (File number: 1686-EX-ST-2017) is necessary to continue work developing an all outdoor microwave radio with an integrated flat panel antenna that would operate in the “lightly licensed” 70/80/90 Ghz spectrum. This solution in this high bandwidth, short distance spectrum is perfect for a point to point hop from one building to another to support 5G in urban cores.

T-Mobile already holds a nationwide license for use of these bands (Callsign: WQWZ779) and operates many links which were registered through the third party database manager system. Thus T-Mobile is familiar with the use of this band. T-Mobile also acknowledges its obligation under an experimental STA to neither cause harmful interference to and accept harmful interference from, any registered link.

The instant STA is necessary to continue current testing and is needed as the antenna being used for testing purposes does not meet the sidelobe suppression requirements in 47 CFR 101.115. That rule requires use of an ETSI Class 3 or Class 4 antenna. The Huber and Suhner SENCITY[®] Matrix 70/80 antenna (Model #: 1378.99.0002) meets the ETSI Class 2 certification.

T-Mobile does not anticipate the need for continued testing beyond the term requested herein.

Site and Antenna Information

The test will consist to two sites located in Bellevue, Washington. The antenna will be mounted on the roof of each building, 6 meters or less above the building height.

Site 1:

3655 131st Ave SE, Bellevue, WA 98006
North 47° 34' 40" West 122° 10' 0"
Building height: 185 feet AGL

Beamwidth: 0.8 degrees
Antenna Gain: 43 dBi
Azimuth: 276 degrees from true North
Orientation in Vertical Plane: -6.7 degrees

Site 2:

3545 Factoria Blvd SE, Bellevue, WA 98006
North 47° 34' 41" West 122° 10' 18"
Building height: 63.2 feet AGL

Beamwidth: 0.8 degrees
Antenna Gain: 43 dBi
Azimuth: 96 degrees from true North

Orientation in Vertical Plane: 6.7 degrees