

Exhibit

Applicant seeks a two (2) year experimental license for operating U-NII-5 (5925 – 6425MHz) and U-NII-7 (6525 – 6875MHz) bands, and experimental equipment for testing the frequencies. Applicant seeks to study the functionality and capabilities of U-NII-5 and U-NII-7 equipment operating under the IEEE 802.11ax/WFA Wi-Fi 6E standard or the 3rd Generation Partnership Project (“3GPP”) LTE-LAA/5G NR-U standard. Testing will explore the potential for interference and co-existence with incumbent licensed fixed services in these U-NII-5 and U-NII-7 bands and provide valuable information as to performance, feedback to regulatory and standard bodies enabling future standards improvement and system optimizations. Testing is to occur in and around the AT&T Center for Learning, 6301 Colwell Blvd, Irving, Texas 75039.

Testing will use both low power and standard power equipment. Testing of low power access points (“APs”) will involve the use of equipment that is currently available on the commercial market. Testing of standard power APs will involve the use of pre-AFC (i.e., automatic frequency coordination) certified experimental equipment, as standard power AFC-certified equipment is not expected to be available before the end of 2021. All equipment used for the testing will operate using transmitter powers and channel bandwidths in conformance with FCC regulations for the 6 GHz band.¹

U-NII-5 and U-NII-7 test equipment will utilize advanced antenna technologies with multiple in multiple out (“MIMO”) and beamforming technologies, as well as more efficient coding and modulation schemes. These technologies are expected to result in higher spectral efficiencies, reduced latency, and enable gigabyte per-second (Gbps) broadband services.

Applicant’s experiments will involve communications between APs placed both indoors and outdoors. Wireless links will be established between the AP and user devices in the form factors of a smartphone or laptops, located close to the APs within a general Wi-Fi AP coverage area. The APs will connect to a LAN traffic server for performance/ interference tests or connect to an ISP internet service for functionality/performance/interference tests.

The AP and user devices placements are generally as follows:

MANUFACTURER	MODEL	DEPLOYMENT
Humax (AP)	XP-32AX48	25 ft AGL (indoor ~6 ft above 2 nd floor level)
ASUS (AP)	AXE11000	10 ft AGL (outdoor)
NetGear (AP)	RAXE500	10 ft AGL (outdoor)
Samsung (UE)	GS21 Ultra	10 ft AGL
Samsung (UE)	PC with Intel AX210 Cards	10 ft AGL

¹ 47 C.F.R. §§15.401-407.

