

Explanatory Exhibit

AT&T requests a two-year experimental license to conduct proof of concept experiments of an Intent Based Network (IBN) for uncrewed aerial vehicle (UAV) use cases. The proposed experiments will include:

[1] Transmissions in C-Band frequencies licensed to AT&T affiliates (i.e., 3840 – 3920 MHz).

[2] Transmissions from fixed stations will be over the Ericsson commercial Radio AIR 6449 B77D, which operates at up to a maximum effective radiated power (ERP) of 78 dBm, with antenna beamwidth 120 deg. H, 15 deg. V. Those fixed station transmissions will occur from up to three locations at any one time from the attached potential site lists:

Location	LAT	LON	Ground Level (m, AMSL)	Antenna Heights (m. AGL)	Distance to Nearest Airport (km)
Pole 1	N 30°28' 49.4"	W 97°46' 45.9"	280	7.32 - 8.23	4.11
Pole 2	N 30°28' 50.2"	W 97°46' 43.6"	278	7.32 - 8.23	4.11
Pole 3	N 30°28' 50.4"	W 97°46' 41.2"	277	7.32 - 8.23	4.07
Pole 4	N 30°28' 50.5"	W 97°46' 38.7"	275	7.32 - 8.23	4.07
Pole 5	N 30°28' 50.4"	W 97°46' 36.3"	273	7.32 - 8.23	4.08
Pole 6	N 30°28' 50.4"	W 97°46' 34.0"	272	7.32 - 8.23	4.08
Pole 7	N 30°28' 50.4"	W 97°46' 31.5"	270	7.32 - 8.23	4.09
Pole 8	N 30°28' 50.3"	W 97°46' 29.1"	270	7.32 - 8.23	4.10
Pole 9	N 30°28' 50.5"	W 97°46' 26.6"	269	7.32 - 8.23	4.10
Pole 10	N 30°28' 50.6"	W 97°46' 24.2"	269	7.32 - 8.23	4.11
Pole 11	N 30°28' 50.8"	W 97°46' 21.1"	269	7.32 - 8.23	4.11
Pole 12	N 30°28' 50.9"	W 97°46' 18.7"	269	7.32 - 8.23	4.12
Buildings	LAT	LON	Building roof top (m, AGL)	Antenna Heights (m. above rooftop)	Distance to nearest Airport(km)
BLD_RS1	N 30°28' 47.3"	W 97°46' 48.5"	9.144	3.05 - 4.57	4.16
BLD_RS2	N 30°28' 47.2"	W 97°46' 47.2"	9.144	3.05 - 4.57	4.17
BLD_RS3	N 30°28' 47.5"	W 97°46' 45.7"	9.144	3.05 - 4.57	4.16
BLD_RS4	N 30°28' 48.1"	W 97°46' 41.0"	9.144	3.05 - 4.57	4.14
BLD_RS5	N 30°28' 47.7"	W 97°46' 38.0"	9.144	3.05 - 4.57	4.16
BLD_RS6	N 30°28' 48.2"	W 97°46' 33.8"	9.144	3.05 - 4.57	4.15
BLD_RS7	N 30°28' 48.1"	W 97°46' 30.4"	9.144	3.05 - 4.57	4.17
BLD_RS8	N 30°28' 48.7"	W 97°46' 27.1"	9.144	3.05 - 4.57	4.15
BLD_RS9	N 30°28' 48.4"	W 97°46' 25.3"	9.144	3.05 - 4.57	4.17
BLD_RS10	N 30°28' 48.7"	W 97°46' 23.6"	9.144	3.05 - 4.57	4.17

[3] Transmissions from a single mobile station will occur from a UAV flying at approximately 50 feet above ground level (AGL) with maximum transmit power of 23dBm (200 mW). The device to be attached to the UAV will be a standard, off-the-shelf, FCC-certified Samsung device. The operating radius of the mobile station will be limited to 2 kilometers from NL 30-28-47; WL 97-46-40 (9825 Spectrum Drive, Austin, TX).

[4] Drawing of trial lab area and potential fixed station locations:



Fig. 1: Fixed Stations