

## Request for Special Temporary Authorization Exhibit

Applicant seeks a six (6) month special temporary authorization from the Federal Communications Commission to conduct short-term experimental testing between 3550-3700 MHz in suburban and rural environments in the California Central Valley, including locations in Kern, Fresno, Merced, Tulare, Kings, and San Joaquin counties. The experimental testing will collect Continuous Wave (“CW”) data for the purpose of a propagation modeling study in suburban and rural environments. The testing will involve transmissions between fixed stations and mobile stations operating within a 20 kilometer radius of the fixed stations, allowing for an evaluation of path loss characteristics in real-world outdoor environments.

### **Radio Systems:**

Applicant will transmit and collect CW data using 3.5-3.7 GHz radio systems, with test equipment consisting of a self-contained equipment box with transmitter, filters, watt meters, power supply, cabling, and two omni-directional antennas up to five feet in height. The equipment box weighs about 45 pounds, is approximately 30” (l) x 30” (w) x 14” (h) in size, and is powered from an external A/C power outlet. The maximum transmitter power will not exceed 20W/43 dBm.

### **Antenna Systems:**

The maximum gain of any antenna deployed will not exceed 10 dBi. Furthermore, the main lobe of any antenna deployed will be pointed approximately to the horizon plus or minus 10 degrees. The azimuthal orientation of the main lobe of the antenna may be arbitrary.

### **Spectrum:**

The radio transmitters may occupy spectrum from 3550 MHz to 3700 MHz, transmitting a single narrow band CW channel within that range. The maximum CW channel bandwidth is 10 KHz. No digital modulation will be used.

### **Equipment Deployment:**

The radio units and antennas will be deployed outdoors at up to 40 stations as provided below. No more than one radio transmitter will be operated simultaneously. The deployments will be temporary in nature, such that a test at any location will take a maximum of 10 hours. Antennas will be mounted on rigid masts not exceeding a height of 90 meters above the ground level on an existing monopole structure or on building rooftops no more than 3 meters above the roof.

Site	Latitude	Longitude	Tx Height (m)
1	35° 40' 24.97" N	119° 13' 31.09" W	46.65
2	35° 23' 07.91" N	119° 06' 27.51" W	30.18
3	35° 22' 19.35" N	119° 01' 44.39" W	20.43
4	35° 22' 13.15" N	118° 58' 04.95" W	24.09
5	35° 18' 53.26" N	119° 02' 13.44" W	44.51
6	35° 13' 21.69" N	119° 00' 08.89" W	50.30
7	35° 24' 09.69" N	119° 23' 54.89" W	44.82

8	36° 04' 14.94" N	119° 01' 01.66" W	13.11
9	36° 47' 03.46" N	119° 51' 11.31" W	32.63
10	36° 40' 10.98" N	119° 32' 45.60" W	60.99
11	36° 43' 17.77" N	119° 46' 55.68" W	33.24
12	36° 29' 18.38" N	120° 05' 50.76" W	59.47
13	36° 48' 28.69" N	119° 47' 12.50" W	21.04
14	36° 50' 01.39" N	120° 03' 13.79" W	50.01
15	36° 13' 56.30" N	119° 47' 19.20" W	87.52
16	37° 11' 38.42" N	120° 14' 35.91" W	60.99
17	36° 59' 00.20" N	120° 36' 04.89" W	46.05
18	36° 18' 48.57" N	119° 19' 09.69" W	27.45
19	36° 03' 14.78" N	119° 11' 45.35" W	64.04
20	37° 19' 10.71" N	120° 28' 46.90" W	11.28
21	35° 35' 40.99" N	119° 23' 05.89" W	44.82
22	35° 21' 58.39" N	119° 06' 43.59" W	39.94
23	35° 22' 40.00" N	119° 01' 02.99" W	29.88
24	35° 20' 21.83" N	118° 58' 51.59" W	26.22
25	35° 17' 40.70" N	119° 03' 29.90" W	27.44
26	35° 06' 46.79" N	118° 54' 54.69" W	45.73
27	35° 27' 47.80" N	119° 11' 17.69" W	45.73
28	36° 03' 46.51" N	119° 02' 12.27" W	30.80
29	36° 47' 53.37" N	119° 41' 51.32" W	30.50
30	36° 47' 30.50" N	119° 39' 01.01" W	55.20
31	36° 44' 38.49" N	119° 49' 13.95" W	30.19
32	36° 19' 38.20" N	120° 13' 44.78" W	60.38
33	36° 50' 16.59" N	119° 45' 52.09" W	13.72
34	36° 44' 29.23" N	119° 58' 12.37" W	34.16
35	36° 12' 38.40" N	119° 36' 32.90" W	60.99
36	37° 04' 49.01" N	120° 12' 32.78" W	47.88
37	37° 03' 17.39" N	120° 38' 48.69" W	33.55
38	36° 13' 32.85" N	119° 20' 03.55" W	20.43
39	36° 02' 12.46" N	119° 17' 10.05" W	75.93
40	37° 21' 23.65" N	120° 37' 56.99" W	41.47