

Kymeta Corporation
Application for STA for Experimental License for
“Connected Car” Testing within and around Redmond, Washington
Using an Intelsat Fixed Satellite

Narrative Statement

(1) Name, address, phone number (also e-mail address and facsimile number, if available) of the applicant.

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(2) Description of why an experimental license is needed.

Kymeta is developing a microwave antenna technology that could significantly improve performance and lower costs in commercial deployments. Grant of the experimental license will allow Kymeta to test and demonstrate its technology with a moving car.

(3) Description of the operation to be conducted and its purpose.

Kymeta will test and demonstrate its antenna technology within a 30 km radius of its headquarters in Redmond, Washington. The purpose of the tests is to demonstrate that the Kymeta beam steering technology and antenna mounted on a mobile platform can track and transmit to a fixed satellite.

(4) Time and dates of proposed operation.

Kymeta requests an STA for six months, from October 26, 2015 to April 26, 2016.

(5) Class(es) of station (fixed, mobile, fixed and mobile) and call sign of station (if applicable).

The transmitting station will operate in fixed and mobile mode, with the following Intelsat Ku-band satellite:

Horizons 1 at 127° W.L. S2475

(6) Description of the location(s) and, if applicable, geographical coordinates of the proposed operation.

Within a 30 km radius of:

12277 134th Court NE, Suite 100
Redmond, Washington 98052

47-42-35 North; 122-09-46 West

(7) Transmit equipment to be used, including name of manufacturer, model and number of units.

Kymeta mTenna – cylindrical/radial (experimental)

(8) Frequencies desired.

Transmit: 13.75 – 14.50 GHz

(9) Maximum effective radiated power (ERP) or equivalent isotropically radiated power (EIRP).

10 W output power; 45 dBW EIRP; 42.85 dBW (40 kW) ERP

(10) Emission designator (see §2.201 of this chapter) or describe emission (bandwidth, modulation, etc.)

Transmit: 100KG7W to 50M0G7W
Enter as G 7 W

(11) Overall height of antenna structure above the ground (if greater than 6 meters above the ground or an existing structure, see part 17 of this Chapter concerning notification to the FAA).

The antenna will be mounted on the roof of a car, and will not exceed 6 meters above ground level.

(12) Additional Information

Width of beam in degrees at half-power point: 2.50.
Satellite coverage: both narrow beam and wide beam.
Receive antenna gain (maximum): N/A
The antenna will transmit using linear polarization.

Frequency tolerance: 0.001%.

Transmit antenna azimuth: Various. The application seeks authority for the earth terminals within 30 km of Kymeta's headquarters in Redmond, WA. Thus, the azimuth will vary.

Elevation of transmit antenna MSL (in meters): Various. It will depend on the location of the earth terminal.

Elevation of transmit antenna AGL (in meters): Various. It will depend on the location of the earth terminal.

Transmit antenna gain (dBi): 35 dBi.

Stop buzzer POC: Mersad Cavcic – see page 1 for contact information.