September 26, 2017

Reference #38659

The following is an updated response to the request from the FCC for clarification on File # 0573-EX-CN-2017 dated August 30, 2017. Note the September 5th, 2017 submission had errors. Updated values are in red.

The 1615.650-1618.110 MHz transmission supports a space-to-space link from the cubesat to the Globalstar satellite network. As such both the transmitter (CubeSat) and receiver (Globalstar satellite) are mobile and located in space. The orbital characteristics are those of the TEMPEST-D cubesat and are listed below.

Spacecraft: TEMPEST-D

    Inclination: 52º [ISS]

    Apogee: 420km

    Perigee: 400km

    Orbital period: 1.62h

    Number of satellites in the system: 1

    Number of transmitting satellites: 1

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Transmitter

    Center Frequency: dynamically assigned via Globalstar between 1615.650MHz and 1618.110MHz

    Bandwidth: 1.25MHz

    3dB beamwidth: 120º

    Maximum Antenna Gain: 4.5dBi (Globalstar GAT-17PP)

    Polarization: LCP

    Maximum transmit power: 446.7mW

    Modulation: QPSK

    ITU emission designator: 1M25G1W