

1	<u>Reference number:</u> 33088
2	<u>Purpose of the request:</u> We hope to develop a new equipment and application that will use one or a combination of the frequency bands specified below to determine the location of interference in a large shop or factory floor setting and its impact on low power communication of IOT devices. The sources of the interference may be many and also either stationary or moving along the floor.
3	<u>Antenna location:</u> Fixed/Base, 3308 WOEDDEE DR EL DORADO HILLS, California, 38-42-52 North Latitude, 121-4-29 West Longitude
4	<u>Frequency bands:</u> The following bands may be used be used singly or in combination. a) Frequency Range: 2400.00000000 to 2500.00000000 MHz, Power: 1.000000 W, Mean Peak: Peak, Tolerance: 0.00000250, Station Class: Fixed - Emission Designator: 22M0M7D, Modulating Signal: DSSS, FHSS, OFDM, Necessary Band Width: 22.00000000 MHz b) Frequency Range: 5100.00000000 to 5850.00000000 MHz, Power: 1.000000 W, Mean Peak: Peak, Tolerance: 0.00000250, Station Class: Fixed - Emission Designator: 20M0M7D, Modulating Signal: OFDM, Necessary Band Width: 20.00000000 MHz c) Frequency Range: 902.00000000 to 928.00000000 MHz, Power: 1.000000 W, Mean Peak: Peak, Tolerance: 0.00000250, Station Class: Fixed - Emission Designator: 3M00M7D, Modulating Signal: Frequency hopping, DSSS, Necessary Band Width: 3.00000000 MHz
5	<u>Location of private test laboratory and infrastructure:</u> 3308 WOEDDEE DR EL DORADO HILLS, California, 38-42-52 North Latitude, 121-4-29 West Longitude
6	<u>Test laboratory setup: Equipment list</u> a) Faraday cage measuring (TBD) – current estimate 8 feet deep, 7 feet tall, 7 feet wide. b) Various 802.11 B, G, N WiFi Access points as radio emitters. c) Various 802.11 B, G, N WiFi Access points as detectors. d) Spectrum analyzer software to 3D image of the radio space e) Spectrum analysis software to determine impact of various objects in the space and rough estimation of its location. f) IOT devices Note: All radio emitters will be operating at 1W confined within the Faraday cage.