



31 October 2018

Introduction

Intel is a world leader in computing innovation. The company designs and builds the essential technologies that serve as the foundation for the world's computing devices. Intel also offers a portfolio of wireless communications solutions to connect a broad range of devices. Hardware and software products by Intel and its subsidiaries power the majority of the world's data centers, connect hundreds of millions of cellular handsets and help secure and protect computers, mobile devices and corporate and government IT systems. Intel technologies are also inside intelligent systems, such as automobiles, automated factories and medical devices.

Testing to be Performed

Intel's research and development teams have been designing new radio technologies for the next generation broad band wireless devices. A Special Temporary Authority grant is requested for testing and demonstration. We have received authorization from the carrier to utilize their spectrum for the proposed STA, and will not connect to their network.

Location:

Las Vegas, Nevada

Centered around: 36° 7' 21.00" N
115° 9' 32.00" W
3.2 km radius

Proposed Operation: 12/10/18 to 1/31/19

Frequencies:

3.4 -- 3.7 GHz
26.5 -- 29.5 GHz
37.0 – 40.0 GHz

"Stop Buzzer" Contact

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Proposed Transmitter & Antenna Parameters:

Location Details					Transmitter Emission					
Location	Station Type	Latitude	Longitude	AGL meters	Antenna Type:	Antenna Gain dB	Maximum ERP dBm	Frequency GHz	Bandwidth MHz	Emission Designator MW7W
~3.2 km from center point	MO-to-MO	36° 7'21.00"N	115° 9'32.00"W	NTE 25	Omni, beam-forming	3.5 – 14 dB maximum with beam-forming	34	3.4 – 3.7	20 40 60 80 100	20M0W7W 40M0W7W 60M0W7W 80M0W7W 100M0W7W 200M0W7W
~3.2 km from center point	MO – to – FX	36° 7'21.00"N	115° 9'32.00"W	NTE 25	Omni, beam-forming	5dB	27.85 - 57.85	26.5 -29.5	100 200 300 400	100M0W7W 200M0W7W 300M0W7W 400M0W7W
~3.2 km from center point	FX – to – MO	36° 7'21.00"N	115° 9'32.00"W	NTE 25	Patch	23dB beam-forming	50.85 - 59.85	26.5 -29.5	100 200 300 400	100M0W7W 200M0W7W 300M0W7W 400M0W7W
~3.2 km from center point	FX-to-MO	36° 7'21.00"N	115° 9'32.00"W	NTE 25	Omni, beam-forming	5-48dB maximum with beam-forming	27.85 - 57.85	37.0 –40.0	100 200 300 400	100M0W7W 200M0W7W 300M0W7W 400M0W7W

28 GHz Transmitter Details:

Number of Antenna Elements	Power in at Antenna dB	Ant Gain per element: dBi	Beamforming Antenna Gain: dB --includes power combining	Pout dBm EIRP	Pout dBm ERP
8	12	5	18	30	27.85
16	12	5	24	36	33.85
32	12	5	30	42	39.85
64	12	5	36	48	45.85
128	12	5	42	54	51.85
256	12	5	48	60	57.85

28 GHz Transmitter Details:

Number of Combined Antenna Arrays	Power to Array dB	Gain Per Array dB	Combined Arrays Pout dBm EIRP	Combined Arrays Pout dBm ERP
1	30	23	53	50.85
2	30	23	56	53.85
3	30	23	59	56.85
4	30	23	62	59.85

Geographical Areas of Proposed STA Location:

Centered around: 36° 7'21.00"N
115° 9'32.00"W
3.2 km radius

