



3-December-2015

Testing to be Performed

Intel's research and development teams have been designing new radio technologies for the next generation broad band wireless devices. The intent of the sounding and path estimation validation is to provide data to compare and calibrate path estimation and simulation tools.

Testing is done entirely with test equipment. Rhode & Schwartz

R&S SMW200A Vector Signal Generator

R&S AFQ100B UWB signal and I/Q Modulation Generator

R&S SMB100A Microwave Signal Generator

Location:

Location: 1 km radius centered on coordinates: 45°31'2.70"N 122°53'19.48"

(See photo below)

Test Duration: 90 days, beginning 4-January-2016

“Stop button” – john.a.hammond@intel.com; 503-264-8726

Transmitter & Antenna Parameters:

Parameter	Value
Antenna setup (# of simultaneously supported TX and RX at BS and MS)	1 TX station and 1 RX station
Maximum number of simultaneously supported frequency bands	2
Frequency bands to test	3800 – 4200 MHz 27.5 – 28.5 GHz
Bandwidth (maximum)	100 – 800 MHz Typically in 50 MHz increments
Multipath time resolution	approx. 1 ns
Waveform	Optimized multi-tone sequence
TX power	33 dBm ERP

Measurement repetition rate	≥ 1 kHz
System processing gain (without further post-processing)	≥ 60 dB (≥ 100 dB expected for static scenarios with channel coherence time in the order of 1 s)
Antenna characteristics at TX / RX	omnidirectional / omnidirectional
Antenna gain at TX / RX	approx. 2 dBi
Antenna azimuth 3 dB beam width	omnidirectional
Antenna elevation 3 dB beam width	approx. 80 deg.
Antenna polarization at TX / RX	vertical / vertical
Antenna Height AGL Above Ground	6.1 meters

