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To: Whom it May Concern

Subject: Calculated Mobile Station Coupling Losses (MSCL)

FCCID: PWO075

The following formulas were used to calculate MSCL with a 45 degree polarity mismatch between the inside antenna and the mobile device:

Distance (feet): 6

Path Loss dB = 36.6 dB + 20Log(F MHz) dB+ 20Log(D_{miles}) dB

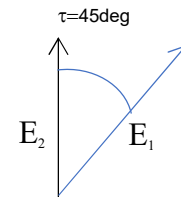
Polarity Loss dB = 10Log(E₁/E₂)² dB = P_L dB

P_L dB= 10Log(E₁²/(E₁Sin(45_{deg}))²) dB = 20Log(1/Sin(45_{deg})) dB = 3.01dB

Where:

E₁ = Maximum Possible Magnitude of the Electric Field from the Mobile Device

E₂ = Magnitude of the electric field from the Mobile device with a 45deg polarity mismatch = E₁Sin(t).



MSCL dB = Path Loss dB + Polarity Loss dB - Antenna Gain dB

The results of the calculations are shown in the following table:

| Uplink Center Frequency MHz | 707-710 | 782 | 836.5 | 1732.5 | 1880-1882.5 |
|--|--------------|--------------|--------------|--------------|--------------|
| Path Loss (dB) | 34.72 | 35.58 | 36.16 | 42.49 | 43.20 |
| Polarity Loss (dB) | 3 | 3 | 3 | 3 | 3 |
| Inside Antenna Gain with Coax Loss (dBi) | -2.43 | -1.69 | -2.79 | -0.33 | -1.29 |
| MSCL (dB) | 40.15 | 40.27 | 41.95 | 45.82 | 47.49 |

Note: Antenna Gain with Coax Loss as measured.

Sincerely

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