Environmental evaluation and exposure limit according to
FCC CFR 47 part 15, §15.247(e)(i) and §1.1307

RF exposure must take into consideration the worst case configuration (i.e. maximum combined EIRP out of one antenna).

In order to meet 20 cm safe distance, the following must be true:
Power Density1/Limit1 + Power Density2/Limit2 + Power Density 3/Limit3 must be < 1.

$$A\ power\ density\ S\ (mW/cm^2) = \frac{EIRP}{4\pi\ r^2}$$

The transmitted signals EIRP:

1) EIRP cellular (850 MHz): 20 dBm +5 dBi = 25 dBm (316 mW)

2) EIRP PCS (1950 MHz): 17 dBm +6 dBi = 23 dBm (200 mW)

3) EIRP WLAN b/g (2450 MHz): 27 dBm +7 dBi = 34 dBm (2512 mW)

MPE limit for power density for general population/uncontrolled exposure according to FCC §1.1310 is:
for 850 MHz = f/1500 = 0.57 mW/cm^2 , for all other bands - 1 mW/cm^2

The power density at 20 cm (minimum safe distance, required for mobile devices),
calculated as follows:

S(850) / Limit + S(1950) / Limit + S(2.4G) / Limit = 0.06/0.57 + 0.039/1 + 0.5/1 = 0.654 < 1,

where

S(850)= 316/ (4π x 400) = 0.06 mW/cm^2

S(1950) = 200/ (4π x 400) = 0.039 mW/cm^2

S(2.4) =2512/(4π x 400) = 0.5 mW/cm^2.

Public cannot be exposed to dangerous RF level.

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