October 27, 1998

Federal Communications Commission
Equipment Authorization Division
7435 Oakland Mills Road
Columbia, MD 21046

Subject: Maximum Permissible Exposure calculations for   **FCC ID: EV9WNIP2458C**

To whom it may concern,

Wireless is submitting a low power transmitter for the WaveNet IP System. The unit has a low power frequency hopping spread spectrum radio operating in the 2480 - 2483.5 MHz range with a radiated output power of 33.8 W.

Assuming a worst case of no duty cycle.

For an Isotropic radiator the surface area of a sphere can be used to determine the area over which the transmitter energy is radiated.

$$\text{Surface area of a sphere} = 4*\Pi*\text{radius}^2$$

In the case where there is antenna gain, the worst case energy density is increased by the antenna gain. The exposure level can be calculated as follows for the antenna gain:

MPE distance = (output power *duty cycle*10(antenna gain/10)/(4*Π*Exposure Limit (mW/cm^2)$^{1/2}$

EV9WNIP2458C MPE distance

DB906S 8 dBi Omni Antenna = (240 mW*1*6.3/4*3.14*1)$^{1/2}$
= 10.9 cm
= 4.3 in

DB977H 90 Panel Antenna = (240 mW*1*39.8/4*3.14*1)$^{1/2}$
= 27.56 cm
= 10.8 in

SP1-2/5 Dual Band Antenna = (240 mW*1*25.1/4*3.14*1)$^{1/2}$
= 21.9 cm
= 8.6 in

SP2I-2/5 Dual Band Antenna = (240 mW*1*125.8/4*3.14*1)$^{1/2}$
= 49.0 cm
= 19.3 in

If you have any questions please do not hesitate to call me.

Sincerely,

Chris Byleckie
Technical Director
Electronic Compliance Laboratories