

# Exhibit 11

## RF Exposure Information

## Radio Frequency Radiation Exposure Evaluation

Rule Part Number: 1.1307, 1.1310, 2.1091

**1.1307 Actions that may have a significant environmental effect, for which Environmental Assessments (EAs) must be prepared.**

TABLE 1—TRANSMITTERS, FACILITIES AND OPERATIONS SUBJECT TO ROUTINE ENVIRONMENTAL EVALUATION

Multipoint Distribution Service (subpart K of part 21).	Non-building-mounted antennas: height above ground level to lowest point of antenna < 10 m and power > 1640 W EIRP Building-mounted antennas: power > 1640 W EIRP MDS licensees are required to attach a label to subscriber transceiver or transverter antennas that: (1) provides adequate notice regarding potential radio frequency safety hazards, e.g., information regarding the safe minimum separation distance required between users and transceiver antennas; and (2) references the applicable FCC-adopted limits for radio frequency exposure specified in § 1.1310.
Experimental, auxiliary, and special broadcast and other program distributional services (part 74).	Subpart I: non-building-mounted antennas: height above ground level to lowest point of antenna < 10 m and power > 1640 W EIRP Building-mounted antennas: power > 1640 W EIRP ITFS licensees are required to attach a label to subscriber transceiver or transverter antennas that: (1) provides adequate notice regarding potential radio frequency safety hazards, e.g., information regarding the safe minimum separation distance required between users and transceiver antennas; and (2) references the applicable FCC-adopted limits for radio frequency exposure specified in § 1.1310.

**1.1310 Radio frequency radiation exposure limits.**

TABLE 1—LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm <sup>2</sup> )	Averaging Time (minutes)
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**(A) Limits for Occupational/Controlled Exposures**

1500–100,000 .....	.....	.....	5	6
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**(B) Limits for General Population/Uncontrolled Exposure**

1500–100,000 .....	.....	.....	1.0	30
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f = frequency in MHz

## Radio Frequency Radiation Exposure Evaluation

### § 2.1091 Radio Frequency radiation exposure evaluation: mobile devices.

(a) Requirements of this section are a consequence of Commission responsibilities under the National Environmental Policy Act to evaluate the environmental significance of its actions. See subpart I of part 1 of this chapter, in particular § 1.1307(b).

(b) For purposes of this section, a mobile device is defined as a transmitting device designed to be used in other than fixed locations and to generally be used in such a way that a separation distance of at least 20 centimeters is normally maintained between the transmitter's radiating structure(s) and the body of the user or nearby persons. In this context, the term "fixed location" means that the device is physically secured at one location and is not able to be easily moved to another location. Transmitting devices designed to be used by consumers or workers that can be easily relocated, such as wireless devices associated with a personal computer, are considered to be mobile devices if they meet the 20 centimeter separation requirement.

(d) The limits to be used for evaluation are specified in § 1.1310 of this chapter. All unlicensed personal communications service (PCS) devices and unlicensed NII devices shall be subject to the limits for general population/un-controlled exposure. (1) For purposes of analyzing mobile transmitting devices under the occupational/ controlled criteria specified in § 1.1310 of this chapter, time-averaging provisions of the guidelines may be used in conjunction with typical maximum duty factors to determine maximum likely exposure levels. (2) Time-averaging provisions may not be used in determining typical exposure levels for devices intended for use by consumers in general population uncontrolled environments as defined in § 1.1310 of this chapter. However, "source-based" time-averaging based on an inherent property or duty-cycle of a device is allowed. An example of this is the determination of exposure from a device that uses digital technology such as a time-division multiple-access (TDMA) scheme for transmission of a signal. In general, maximum average power levels must be used to determine compliance.

Calculations:

The NextNet Wireless Expedience RSU-2400-AV operates at a maximum of 2 watts (33dBm) average power while transmitting in the 2500-2686 MHz band, and a maximum of 0.52 Watts (27.16 dBm) when transmitting in the 2400-2483.5 MHz band. The RSU-2400-AV has a maximum transmit duty cycle of 14.29 % and is based on a TDM frame (see test information at end of this report).

The vertically polarized antenna for the OSU-2400-AV has a maximum gain of 14.5 dBi. Therefore the maximum radiated transmit power would be:

#### **2500-2686 MHz Band:**

14.29 % Transmit duty cycle:

$$P_{max} = P_{tx} + G(\text{antenna}) - 10 * \log(\text{duty cycle})$$

$$P_{max} = 33 + 14.5 - 10 * \log(0.1429) = 33 + 14.5 - 8.45$$

$$P_{max} = 39.05 \text{ dBm} = 8.035 \text{ Watts EIRP} < 1640 \text{ Watts EIRP}$$

#### **2400-2483.5 MHz Band:**

14.29 % Transmit duty cycle:

$$P_{max} = P_{tx} + G(\text{antenna}) - 10 * \log(\text{duty cycle})$$

$$P_{max} = 27.52 + 14.5 - 10 * \log(0.1429) = 27.52 + 14.5 - 8.45$$

$$P_{max} = 33.57 \text{ dBm} = 2.275 \text{ Watts EIRP}$$

$$P_{max} = 2.275 \text{ Watts EIRP} < 4 \text{ Watts EIRP (15.247 limit)}$$

## Radio Frequency Radiation Exposure Evaluation

Calculations: The following calculations can be used to determine the distance from the transmitting antenna that must be maintained to ensure that the exposure limit as defined in Table 1 of part 1.1310 (B) Limits for General Population/Uncontrolled Exposure. The formula for the following calculations are found in the OET Bulletin 65, edition 97-01 August 1997, "Evaluating Compliance with FCC Guidelines for Human Exposure to Radio Frequency Electromagnetic Fields". It is noted that the formulas from Bulletin 65 are for prediction of power density in the far-field of the antenna and will over predict the requirements in the near-field.

The maximum power level from the previous calculations will be used.

$$S = \text{EIRP}/4\pi R^2$$

or

$$R = (\text{EIRP}/4\pi S)^{0.5}$$

### 2500-2686 MHz Band:

$$\text{EIRP} = 8.035 \text{ W}$$

$$\text{EIRP} = 8035 \text{ mW}$$

$$S = 1 \text{ mW/cm}^2$$

$$R = (8035/(4\pi \cdot 1))^{0.5}$$

$$R = 25.28 \text{ cm}$$

$$\text{EIRP} = 8.035 \text{ W}$$

$$\text{EIRP} = 8035 \text{ mW}$$

$$R = 20 \text{ cm}$$

$$S = 8035/(4\pi \cdot 20^2)$$

$$S = 1.5985 \text{ mW/cm}^2$$

### 2400-2483.5 MHz Band:

$$\text{EIRP} = 2.275 \text{ W}$$

$$\text{EIRP} = 2275 \text{ mW}$$

$$S = 1 \text{ mW/cm}^2$$

$$R = (2275/(4\pi \cdot 1))^{0.5}$$

$$R = 13.46 \text{ cm}$$

$$\text{EIRP} = 2.275 \text{ W}$$

$$\text{EIRP} = 2275 \text{ mW}$$

$$R = 20 \text{ cm}$$

$$S = 2275/(4\pi \cdot 20^2)$$

$$S = .4526 \text{ mW/cm}^2$$

Calculated safe distance from transmitting antenna is 25.28 cm and 13.46 cm respectively for a point source radiation element. The NextNet Wireless Expedience outdoor CPE uses a 4 element patch array, the power supplied to each patch is one quarter the total power that would be supplied to a single radiating antenna as described in Bulletin 65. Because this transmitted power is distributed over a larger area, the actual signal at 20 cm will be less than the calculated value. A measurement of the signal strength at 20 cm is detailed below.

## Radio Frequency Radiation Exposure Evaluation

**Test Procedure:** The NextNet Wireless, Inc. Expedience system operates as a Time Division Duplex (TDD) product with a Time Division Multiplex (TDM) frame structure. The OSU-2400-AV Customer Premise Equipment (CPE) is able to transmit a time division duplex (TDD) signal up to a 14.29 % transmit duty cycle. To measure the RF Exposure, the OSU transmitter is enabled in a test mode that transmits random data at the 2 watt power level for the 2500-2686 MHz band and 0.52 watt power level for the 2400-2483.5 MHz band into the antenna. Measurements are performed at the low, mid, and high channels of each frequency band, using the maximum transmitter duty cycle and the three modulation formats available.

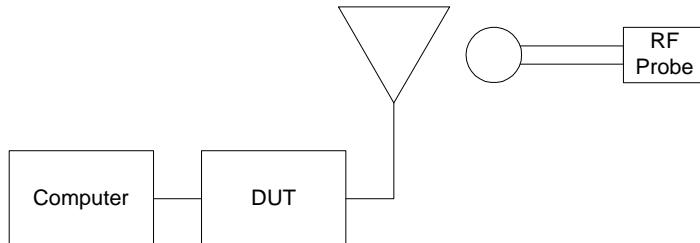
**Test Conditions:** Frequencies = 2404, 2440, 2476 MHz  
2503, 2593, 2686 MHz  
Temperature = 25°C  
Supply Voltage = 120 Vac (19.5 Vdc supplied to OSU-2400-AV)

**Test Equipment:**

DUT	NextNet Wireless CPE (RSU-2400-AV) # 2008687
Computer	Dell Inspiron 5000 Model: PPM S/N: 000832RM-12961-04R-0441
Ethernet Switch	D-Link Model: DSS-5+ 5 port 10/100Mbps S/N: B205335003175
Power Supply	Globetek Model: GT-21097-5024-4.5 19.5 Vdc / 2.56 A Limited Power Source S/N: 008988 23/04
Radiation Hazard Meter	General Microwave Corporation RAHAM Model 3 Cal Date: 10-14-2003 Cal Due: 10-14-2005

## Radio Frequency Radiation Exposure Evaluation

Test Set-Up:



Test Results: 2500-2686 MHz Band

14.29 % Duty Cycle

At 20 cm away from the surface of the OSU-2400-AV antenna, the highest RF Exposure reading was measured to be  $0.85 \text{ mW/cm}^2$ , including the calibration factor, this value becomes  $0.85 * 1.05 = 0.89 \text{ mW/cm}^2$ .

2400-2483.5 MHz Band

14.29 % Duty Cycle

At 20 cm away from the surface of the OSU-2400-AV antenna, the highest RF Exposure reading was measured to be  $0.21 \text{ mW/cm}^2$ , including the calibration factor, this value becomes  $0.21 * 1.19 = 0.25 \text{ mW/cm}^2$ .

Test Conclusion: The NextNet Wireless, Inc., Expedience, OSU-2400-AV Customer Premise Equipment is below the limits of RF Exposure as detailed in 47CFR1.1310.

### **The following warning statement is included with the OSU-2400-AV product package:**

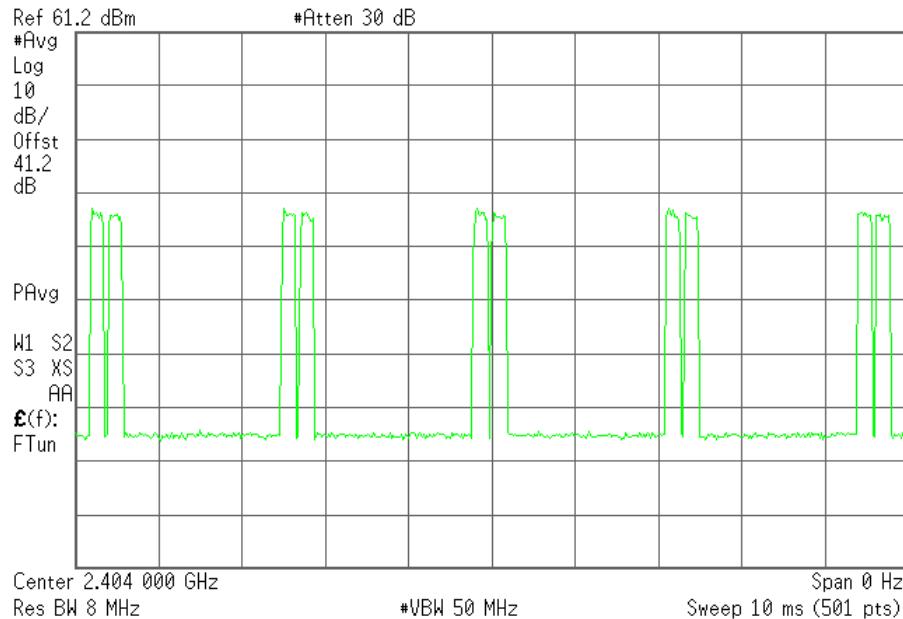
NOTICE: This equipment has been tested and found to comply with the Radio Frequency Radiation Exposure Limits detailed below. A minimum of 20 centimeter (8 inches) separation between the OSU and the operator and all other persons should be maintained.

### **The following information is located on the OSU-2400-AV product:**

To comply with FCC radio frequency exposure rules, 47CFR1.1307 and 1.1310, a minimum separation of 20 cm (8 inches) is required between this device and all persons.

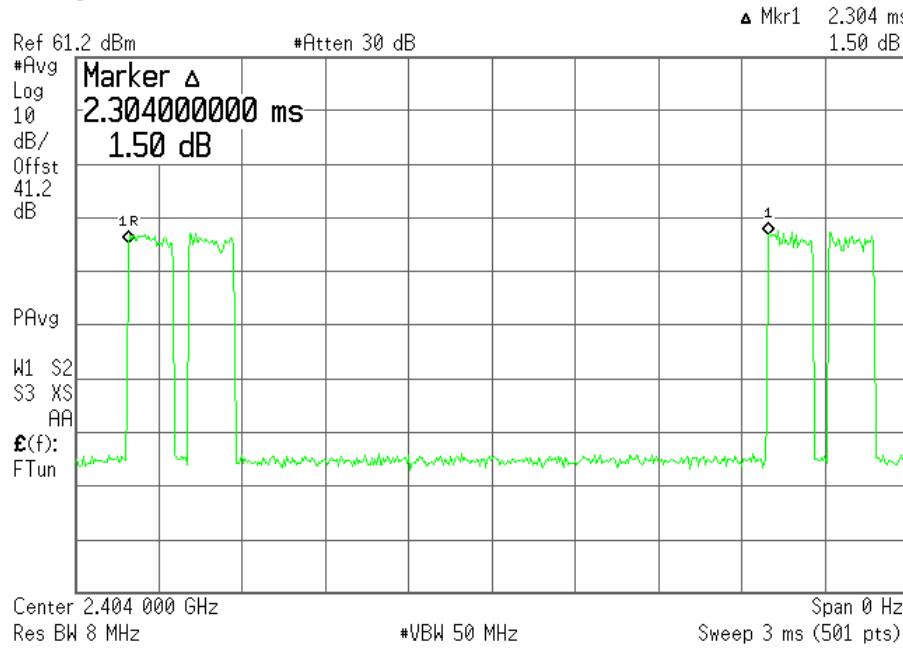
Verification of the transmit duty cycle is shown below.

Agilent 15:02:22 Oct 6, 2004

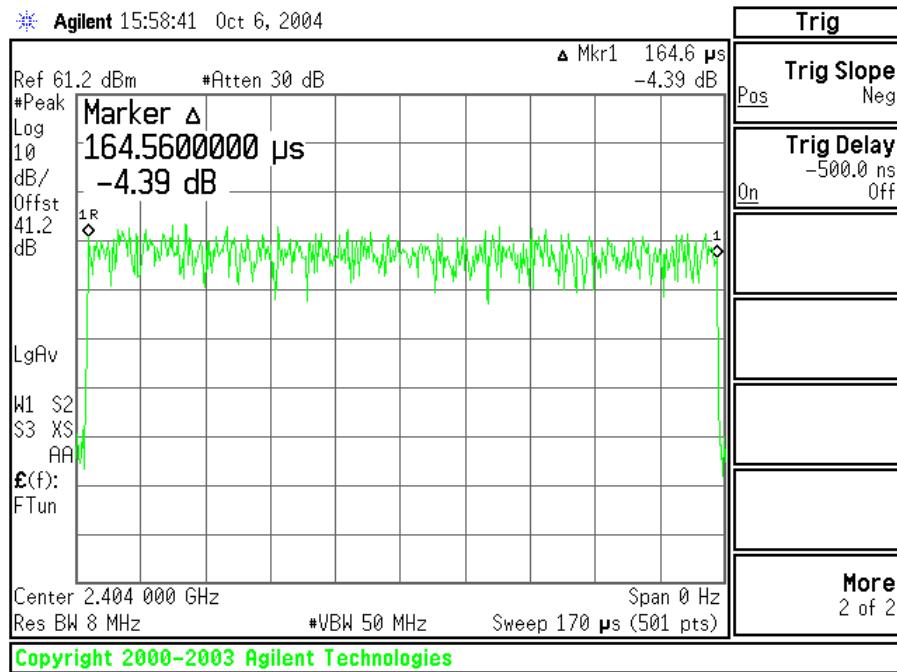


Wide time sweep of transmitter at maximum duty cycle (14.29%)

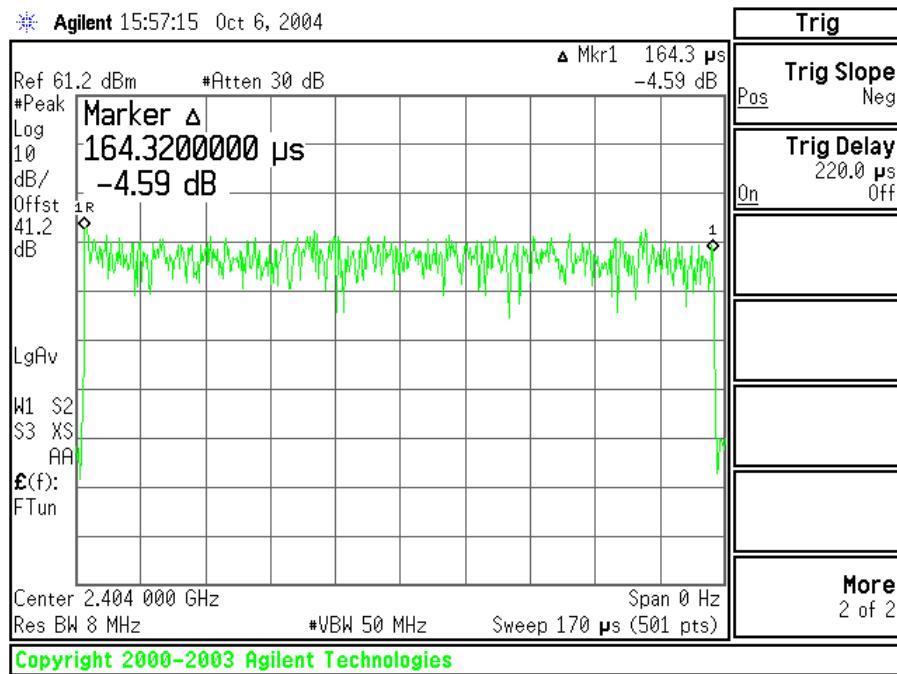
Agilent 15:03:11 Oct 6, 2004



Time measurement between one complete transmit cycle is 2.304 msec.



TX pulse number 1 on time = 164.56 usec.



TX pulse number 2 on time = 164.32 usec

Transmit duty cycle = total time transmitting / time between repetition

Transmit duty cycle = (164.56 usec + 164.32 usec) / 2.304 msec

Transmit duty cycle = 328.88 usec / 2.304 msec = .14274 or 14.274 %