

EXHIBIT # 8

Type of Emission, Necessary Bandwidth and Modulation Characteristics for 1XT1 XP2 38 GHz

The Innova XP2 T-Carrier radio is employed to process digital information of various types. Voice, data, television, and many other information types can be encoded and transmitted across this radio system. The emission designator (5M00F7W) was developed by the following process:

The necessary bandwidth was developed from the following equation: CFR 47 part 2.202,(b)

For 1XT1 Data rate:

$$B_n = 2DK + B$$

$$B = R / \log(\text{base } 2) \text{ of } S$$

$$B = (1.8125 \text{ Mbits/sec.}) / 1 = 1.8125 \text{ M Symbols/sec.}$$

Where: B_n = Necessary bandwidth in MHz
 R = Aggregate bit rate in bits/sec = 1.8125 Mbits/sec.
 S = number of transmitter levels = 2
 D = deviation in MHz = 1.58 MHz
 K = 1 for this modulation type

$$\text{Therefore } B_n = (2) (1.58\text{E}+6) (1) + 1.8125\text{E}+6 = 5.0 \text{ MHz}$$

The F7W portion of the designator is derived as follows

F = Frequency Modulation [CFR47 part 2.201 (c)]
7 = is the nature of the modulation signal [CFR47 part 2.201 (d)]
W = is the type of information transmitted [CFR47 part 2.201 (e)]

The resultant complete emission designator can be stated as 5M00F7W¹

¹ fcc15.doc