ENSEMBLE COMMUNICATIONS

5/23/01

Federal Communications Commission
7435 Oakland Mills Road
Columbia, MD 21046

Re: ONZODU-2800-001

This document describes the method used for determining the minimum separation distance between the CPE ODU and the general public in order to prevent RF exposure as per paragraph 1.13.10.

The minimum separation distance was determined using calculations. They were done using FCC OST/OET Bulletin 65 ("Evaluating Compliance with FCC Specified Guidelines for Human Exposure to Radiofrequency Radiation"). The aperture antenna equations for predicting RF fields from that document were used. They yielded the following results:

Power Density

At the surface of the antenna	1.008 mW/cm^2 (OST/OET Bulletin 65, equation 11)
In the near field (R < 2.5m):	0.458 mW/cm^2 (equations 12, 13 & 14)
In the transition region (2.5m < R < 6m):	0.191 mW/cm^2 (equations 16 & 17)
In the far field (R < 6m):	0.196 mW/cm^2 (equation 18)

Antenna Information

Frequency Frequency Band	27.5-29.5 GHz LMDS A Band
Gain	35.8 dBi, minimum
Polarity	Linearly polarized (H/V)
Beam Width (azimuth) Beam Width (elevation)	2.2° mimimum 2.2° mimimum
Cross-polarization discrimination	> 30.0 dB
Diameter	12.5" (31.75 cm)

The FCC General Population limit is 1 mW/cm^2, hence the use of 0 cm as the minimum separation limit.

A drawing of the radiation warning label and a picture of its location has been submitted. The file names are: ODU_RFlabel.pdf and ODU_RFlabel_location.pdf.

Sincerely,

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