

# THE RADIO CHANNEL

## Site Surveys and RF Propagation Studies



RF Engineering Design Services

### DESCRIPTION

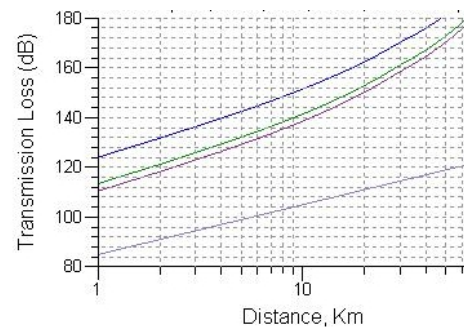
NuWaves conducts site surveys and RF propagation analysis in support of robust system engineering design.

The prediction of path loss is very important in planning the deployment of communications devices. Regardless of range, close, long, or line of sight (LOS), the path loss can be considerable as the waveform gets absorbed in vegetation, trees, and other obstacles. Understanding the RF propagation characteristics associated with deploying the communications system is key in establishing mission objectives and maintaining link closure.

NuWaves can determine your system specifications for link closure inclusive of receiver performance and transmit power requirements. We conduct propagation studies and site surveys up to decimetric wavelengths (frequencies to 8 GHz).

Should conditions warrant, NuWaves can develop a custom propagation model unique to your requirements using empirical and theoretical data.

Site surveys offer the end user a unique and customary look into the noise or interferers that that your system is operating with. A frequency plan can be designed with this data to improve the performance of your link.



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### Applications:

- Analysis of pre-existing background noise in the form of man-made or adjacent channel interference at specific sites.
- Measurement of ambient RF transmissions that can potentially cause interference in the communications channel.
- Assistance with processing DD Form 1494.
- Prediction of path loss using both models and through the compilation of empirical data.
- Frequency planning.
- Transmitter and Receiver installation design verification. Installation checks to verify VSWR and RF Cable loss.
- Analysis of Line of Sight (LOS), propagation over ground, dense foliage, knife-edge diffraction, hills, etc.
- Special studies in propagation over ground with antennas at ground level or reduced effective antenna heights.
- Spurious frequency and harmonic emission measurement and analysis.
- Design of custom spectral clean up filters.

***Outsource your RF Requirements - Contact NuWaves today!***