Abstracts

Impact of vegetation on the performance of 28 GHz LMDS transmission

M. Chavero, V. Polo, F. Ramos and J. Marti. "Impact of vegetation on the performance of 28 GHz LMDS transmission." 1999 MTT-S International Microwave Symposium Digest 99.3 (1999 Vol. III [MWSYM]): 1063-1066 vol.3.

The scattering produced by vegetation in the radio channel propagation of a 28 GHz LMDS transmission is studied. Measurements in a typical LMDS path were carried out. The radio channel is statistically modeled using the Smirnov-Kolmogorov test to determine which radio propagation model best fits the experimental data. The link availability is derived from this model using the cumulative distribution function. The experimental results show that the polarization-dependent scattering produced by vegetation seriously limits the link availability, introducing attenuation figures ranging from 19 to 26 dB. These data will find practical application in the planning of real LMDS networks.

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