

In-Building Wideband Partition Loss Measurements at 2.5 and 60 GHz

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Abstract:

This paper contains measured data and empirical models for 2.5 and 60 GHz in-building propagation path loss and multipath delay spread. Path loss measurements were recorded using a broadband sliding correlator channel sounder which recorded over 39000 power delay profiles (PDPs) in 22 separate locations in a modern office building. Transmitters and receivers were separated by distances ranging from 3.5 to 27.4 m and were separated by a variety of obstructions, in order to create realistic environments for future single-cell-per-room wireless networks. Path loss data is coupled with site-specific information to provide insight into channel characteristics. These measurements and models may aid in the development of future in-building wireless networks in the unlicensed 2.4 and 60 GHz bands.

Index Terms:

in-building propagation, millimeter wavelength, partition loss, path loss