Abstracts

An electromagnetic characterization of indoor radio environment in microwave WLAN systems

P. Bernardi, R. Cicchetti and O. Testa. "An electromagnetic characterization of indoor radio environment in microwave WLAN systems." 2001 MTT-S International Microwave Symposium Digest 01.2 (2001 Vol. II [MWSYM]): 1101-1104 vol.2.

An accurate electromagnetic characterization of a typical indoor environment in which a microwave WLAN system operates is presented. The characterization has been performed by means of a heuristic UTD diffraction coefficient suitable to take into account not only the effects of building walls, floors, and corners, but also the presence of penetrable furniture. The numerical results show that the electromagnetic field distribution and the channel performances are significantly influenced by the diffraction processes arising from the presence of furniture.

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