Ray Tracing Modified 3D Image Method Simulation of Picocellular Propagation Channel Environment

Authors : Fathi Alwafie

Abstract : In this paper we present the simulation of the propagation characteristics of the picocellular propagation channel environment. The first aim has been to find a correct description of the environment for received wave. The result of the first investigations is that the environment of the indoor wave significantly changes as we change the electric parameters of material constructions. A modified 3D ray tracing image method tool has been utilized for the coverage prediction. A detailed analysis of the dependence of the indoor wave on the wide-band characteristics of the channel: Root Mean Square (RMS) delay spread characteristics and mean excess delay, is also investigated.

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