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Fading Modelling in Maritime Container Terminal Environments

In this paper a detailed analysis of slow and fast fading effects in container terminal environments is presented, fading distribution parameters are evaluated and an analytical model is proposed. The model is composed of a set of analytical equations allowing to evaluate fading statistical distribution parameters for different system and environments conditions. Globally, it is observed that for slow fading a good fitting is obtained with the Lognormal distribution. Values of $(\mu\_L)^-$ and $(\sigma\_L)^-$ ranges from -1.95 to -1.18 dB and 2.45 to 3.22 dB, respectively. Fast fading effects are well modelled by Rayleigh, Rice or Nakagami distributions with the later one being the more appropriate. The best fit was obtained with the Nakagami distribution with shape and scale parameters, $(\mu\_N)^-$ and $(\Omega\_N)^-$, ranging from 0.79 to 1.23 and 2.52 to 3.58, respectively.

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