

Characterization of Off-Body Area Network Channels During Walking

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Abstract

In this work, the off-body area network channel characteristics during walking were investigated using finite-difference time-domain. The channels were investigated in terms of fade variation and the correlation between different channels. Larger fade variations were experienced by the channel with the absence of line-of-sight, due to constructive and destructive interference as the distance between the end nodes changes. The channels showed significant correlation and hence a multivariate normal distribution was considered. The distribution has the capability of modeling channels jointly which make it easier for network analysis. The resulting estimated multivariate distributions fit well with the simulated data.