Powerline Communications: The Effects of Branches on Network Performance

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Abstract

The paper presents the effects of branches on powerline networks performance using recent developed model. The channels segments which have been compared are access, indoor and medium voltage channels. The comparison was done by varying different load at one of the terminals. The relationship between signal level and number of branches has been established. Quadrature amplitude modulation (QAM) is applied to the access channel model and attainable bit error rate (BER) against SNR analysed and compared with possible transmitted power. It is observed that BER degrade as number of branches increases and SNR of about 4 dB is needed to attain the original performance without a branch

Keywords

Powerline Communications**;** Quadrature Amplitude Modulation**;** branched network**;** channel model**;** channel performance**;** modulation