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Abstract

Broadband Power Line Communication (BPLC) is a method of providing broadband internet access to consumers using High Frequency (HF) radio signals coupled into the mains power wiring. In the BPLC system, data signals are modulated at HF and injected into the power lines using broadband modulation techniques. Design of a BPLC system requires a complete understanding of the Power line network (PLN) topologies involved. PLN can be classified as Indoor or In-home, Low voltage, Medium voltage and High voltage respectively. In this study four maps representing typical Tanzania houses were selected randomly, and then four indoor power-line networks were derived from their circuit diagrams. The Impulse response was estimated at the switch sockets using the recent power-line channel model by Anatory et al. The delay spread estimated from the impulse response was used to design the OFDM system and the OFDM system performance was evaluated.

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Index Terms

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Keywords

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