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## Abstract

In this paper, BER performance of WRAN based on IEEE 802.22 standard is introduced, the performance of physical layer of IEEE 802.22 network is analyzed and simulated over different communication channels. AWGN and multipath fading channels are assumed. BER performance is applied to different types of users and areas. Stationary and mobile users performance is proposed for typical rural and hilly terrain rural area. Different mapping schemes and code rate is presented.

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## **Index Terms**

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Keywords

WRAN, IEEE 802.22, Network Performance