「エレクトロニクス実装学会誌」12〔2〕154～158 (2009)

論文

石膏ボードを用いた電波吸収体による無線LAN使用環境改善に関する検討

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Improvement of Wireless LAN Communication Environment Used by Wave Absorbers Using Plaster Boards

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Abstract

This paper reports the design of a wave absorber composed of plaster board, a common building material, and conductive paper, for IEEE 802.11b/g (2.45 GHz) and IEEE 802.11a (5.2 GHz) wireless LANs. A plaster board of standard thickness was selected for this design and the resistance of the conductive paper was changed; the total thickness is 50 mm and the resistance is 194 Ω/□. The wave absorber was fabricated based on the design, and its absorption characteristics were measured. Furthermore, an installation test of this absorber was conducted in a shielded room and improvement of speech quality was observed. Thus, we have shown that a wave absorber for two frequencies commonly used in wireless LANs can be realized.

Key Words: *Plaster Board, Conductive Paper, Wave Absorber for Dual-frequency, Installation Effectiveness*