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Disturbances and Data Rate Limitation; 2.4.4 Realization of Broadband PLC Transmission Systems; 2.4.5 Performance Improvement by Efficient MAC Layer; 2.5 Summary; 3 PLC Network Characteristics; 3.1 Network Topology; 3.1.1 Topology of the Low-voltage Supply Networks; 3.1.2 Organization of PLC Access Networks; 3.1.3 Structure of In-home PLC Networks; 3.1.4 Complex PLC Access Networks
3.1.5 Logical Network Models3.2 Features of PLC Transmission Channel; 3.2.1 Channel Characterization; 3.2.2 Characteristics of PLC Transmission Cable; 3.2.3 Modeling of the PLC Channel; 3.3 Electromagnetic Compatibility of PLC Systems; 3.3.1 Different Aspects of the EMC; 3.3.2 PLC EM Disturbances Modeling; 3.3.3 EMC Standards for PLC Systems; 3.4 Disturbance Characterization; 3.4.1 Noise Description; 3.4.2 Generalized Background Noise; 3.4.3 Impulsive Noise; 3.4.4 Disturbance Modeling; 3.5 Summary; 4 Realization of PLC Access Systems; 4.1 Architecture of the PLC Systems
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6.2.1 Analysis Method

Sommario/riassunto

Broadband Powerline Communications: Network Design covers the applications of broadband PLC systems in low-voltage supply networks, a promising candidate for the realization of cost effective solutions for "last mile" communications networks. There are many activities surrounding the development and application of PLC technology in the access area, particularly because of strong interest of new network providers after the deregulation of telecommunications market. Nowadays, there are no existing standards for broadband PLC networks, which use a frequency range up to 30 MHz. This book
