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Reed-Solomon Codes; 4.3 BCH Codes; 4.4 Decoding of BCH Codes; 4.5 The Sudan Algorithm and its Extensions; 5 Decoding of LDPC Codes; 5.1 Low-Density Parity-Check Codes; 5.2 LDPC Constructions; 5.3 Estimating the Minimum Distance of EG-LDPC Codes; 5.4 Burst-Error-Correcting LDPC Codes; 5.5 Decoding Schemes of LDPC Codes; 5.6 Simulation Results in AWGN; Appendix 5.A Euclidean Geometries; 6 Convolutional Codes and Turbo-Codes
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9.4 Development of Coding Methods at the Presentation Layer9.5 Reconciliation of Coding at Neighbour Layers of a Network; Index

Sommario/riassunto

Error correcting coding is often analyzed in terms of its application to the separate levels within the data network in isolation from each other. In this fresh approach, the authors consider the data network as a superchannel (a multi-layered entity) which allows error correcting coding to be evaluated as it is applied to a number of network layers as a whole. By exposing the problems of applying error correcting coding in data networks, and by discussing coding theory and its applications, this original technique shows how to correct errors in the network through joint codin