Abstract

Low-Density Parity-Check (LDPC) codes are higher coding gains, the performance of LDPC code are closed to the Shannon limit, this make the decoding very attractive to many applications in digital communication systems, like DVB-S2 and WLAN802.11n, in this work the performance of LDPC code evaluated in different block lengths, code rates and number of iterations and implemented in MatLab simulation. In this work, a random signal is generated and encoded by multiplying the information by a matrix in the encoder, the resulting codeword modulated using BPSK modulation, codeword transmitted over an AWGN channel. This process implemented over different Eb/N0 values.

References

2. BERNARD SKLAR, PABITRA KUMAR RAY, Digital Communications Fundamentals and

4. SARAH J. JOHNSON, Iterative Error Correction Turbo, Low-Density Parity-Check and Repeat–Accumulate Codes, Cambridge University, 2010.


12. Sarah J. Johnson, Introducing Low-Density Parity-Check Codes, School of Electrical Engineering and Computer Science, the University of Newcastle, Australia, May 2010.


15. Bačić Iva et al,“ DVB-S2 Model Based on Reed-Solomon Outer Encoder”, IARIA, 2012.


18. Yong-Min Jung1, Chul-Ho Chung1, Yun-Ho Jung2, and Jae-Seok Kim1,7.7 Gbps Encoder Design for IEEE 802.11ac QC-LDPC Codes, Journal Of Semiconductor Technology And Science, VOL.14, NO.4, pp. 215-218, AUGUST, 2014.

19. Merve Peyic, Hakan Baba, Erdem Guleyuboglu, Ilker Hamzaoglu and Mehmet Keskinoz,


Index Terms

Computer Science          Wireless

Keywords

LDPC Code, DVB-S2, WLAN802.11n