variety of error correcting codes. When the codeword length is long, this optimized energy allocation scheme also has the advantage of simple and easy to operate. By applying this scheme to the different type of error-correcting codes, the simulation results show that its improvements for the BER performance are noticeable.

References

[1] S.Tong, H. Zheng, B. Bai , "Precoded turbo code within 0.1 dB of Shannon limit ,"Electronics Letters., vol. 47,no. 8,pp. 521-522, April 2011.

[2] Sae-Young Chung, G .D Forney, Thomas J.Richardson, et al. ,"On the design of Low-Density Parity -Check Codes within 0.0045 dB of the Shannon limit ,"IEEE Communications Letters, vol. 5,no. 2,pp. 58-60,2001.

[3] Salah, M.M. ,Raines, R.A. ,Temple, M.A. and Bailey, T.G., "Energy Allocation Strategies for Turbo Codes with Short Frames," Int. Conf. on 2000 Information Technology: Coding and Computing, Proc.,2000,pp. 408 – 411.

[4] Felipe Cabarcas and Javier Garcia-Frias, "Asymmetric Energy Allocation Strategies to Improve Turbo Codes Performance," Vehicular Technology Conference, 2001. VTC 2001 Fall. IEEE VTS 54th, vol. 3, pp. 1839 - 1842, 2001 .

[5] W. Zhang and X. Wang, "Optimal energy allocations for turbo codes based on distributions of low weight codewords," Electronics Letters, vol. 40 , no. 19, pp. 1205 – 1206, Sept. 2004.

[6] Wei dang Zhang, Xia Shao, Mahin Torki, Atousa HajShirMohammadi, and Ivan V.Bajic, "Unequal Error Protection of JPEG2000 Images Using Short Block Length Turbo Codes," Communications Letters, IEEE , vol. 15 , no. 6, pp. 659 – 661, June 2011.

[7] ZHANG Wei-dang, LI Ping ,"Study of Improvement of the BER Performance of Error Correction Code Based on Optimizing Energy Allocation ,"Journal of Zhengzhou University (Engineering Science), vol. 34 , no. 1, pp. 125-128., January 2013.