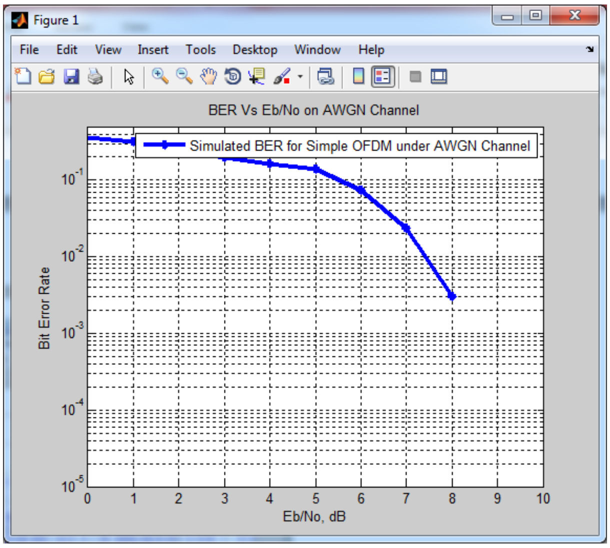

Figure 4: BER v/s SNR for simple OFDM

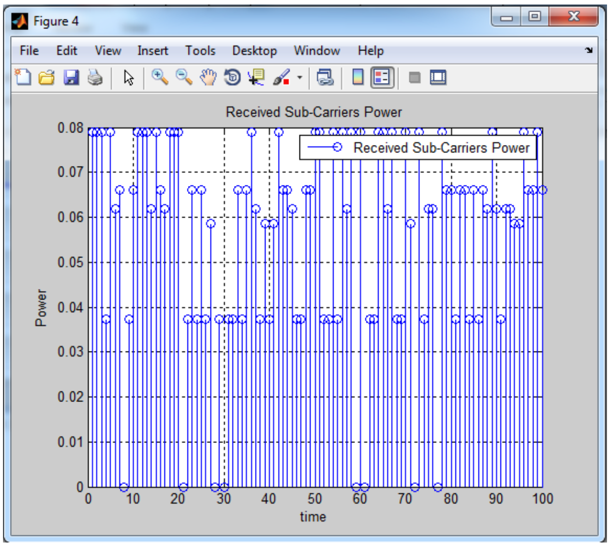

Figure 5: Received subcarrier power for OFDM with compander

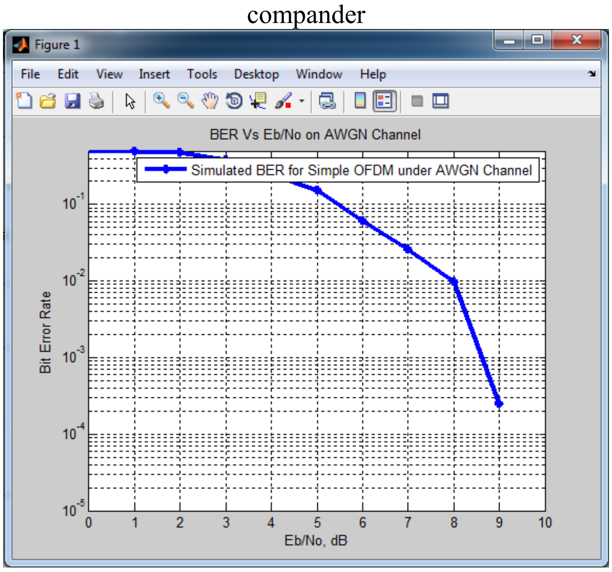

Figure 6: Received subcarrier power for OFDM with compander

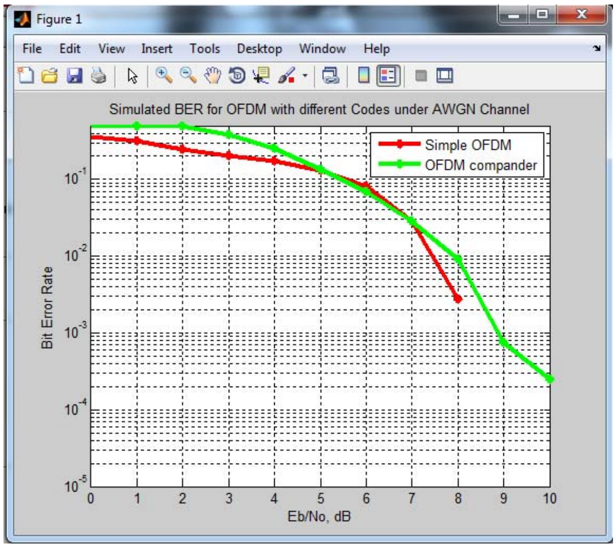

Figure 7: Compare Between Simpale OFDM and Compander OFDM

5. Conclusion

From figure 7 it is clear that the OFDM with Compander technique has better BER. Companding techniques can solve the high PAPR problem for OFDMsystems. Two of companding scheme, i.e. the uniformlydistributed companding scheme and the piecewise companding scheme, are studied herein to provide efficient PAPR reduction with a low BER. However, both of the referred schemes cannot deliver the performance that satisfies the various requirements of the systems. In this work, the distribution of the OFDM signal is transformed into the trapezium distribution, and the general formulas for the proposed scheme are derived that enable the desired performance to be achieved by controlling the parameter. The uniformly-distributed companding scheme is the special case of the proposed scheme. Then, the simulation results reveal that the proposed scheme may offer the more efficient PAPR reduction or the lower BER than the uniformly-distributed and piecewise schemes under the condition of efficient PAPR reduction or efficient BER performance.

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