



High Performance of Telecommunication System to Enhance the Encoder and Decoder System

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Abstract:

The encoder changes data from one arrangement to additional for the resolves of calibration. The decoder is an automated scheme that transforms information from one formula to supplementary such as television. In this paper, the telecommunication system by both encoder and decoder is applied that is extensively benefiting for great quickness requests. The system is depending on logic circuit for executing and detecting signal by encoder and decoder devices. These logic circuits are AND, OR, XOR which has the capability to decrease the consumption of power for encoder and decoder. The suggested program is designed and applied by using Matlab toolbox. The results for encoder and decoder system appear that the system is successful for encoding and decoding signal with optimal power efficiency.

Keywords: encoder signals, decoder transformation, Matlab, telecommunication system

Introduction:

Telecommunications can significantly rise and enlarge incomes to all kinds of persons. It has the transmission systems with nodes to passes the signal through theses nodes with fast response to the receiver systems with encoding and decoding applications. These telecommunication systems are like computer net and internet grid.

Recently, high communication response with superior size is proposed for fast reaction. The power consumption is minimized by difference methods to enhance the communication systems [2]. For great promptness statement systems, a appropriate communication program is desired. A allowed DC program or a program with a continual DC element has numerous benefits for electromagnetic connection associations with optics based on fiber [2]. The fibber optics has worthy clock salvage of the programmed information. The specification is that it has the ability to transmit the data to eight multiple to become the 20 bit programmed data arrangement [3][4]. In addition, it can prevent direct current instable to time [4] [2]. Which detecting programmed arrangement is right or not accurate. To classify the data order border, technique is proposed in greatest of the great quickness requests like fibber station [5].

In this paper, the telecommunication system with encoder and decoder system is planned to enhance the system performance. From the results, the encoder and decoder systems have excellent performance to encoding and decoding the data respectively.

Simulation Results:

The Simulink is presented to emerge the results by using toolbox of communication system. Figure 1 exhibited the encoder link 1 and decoder link 2 for path 1 which is more sequence.

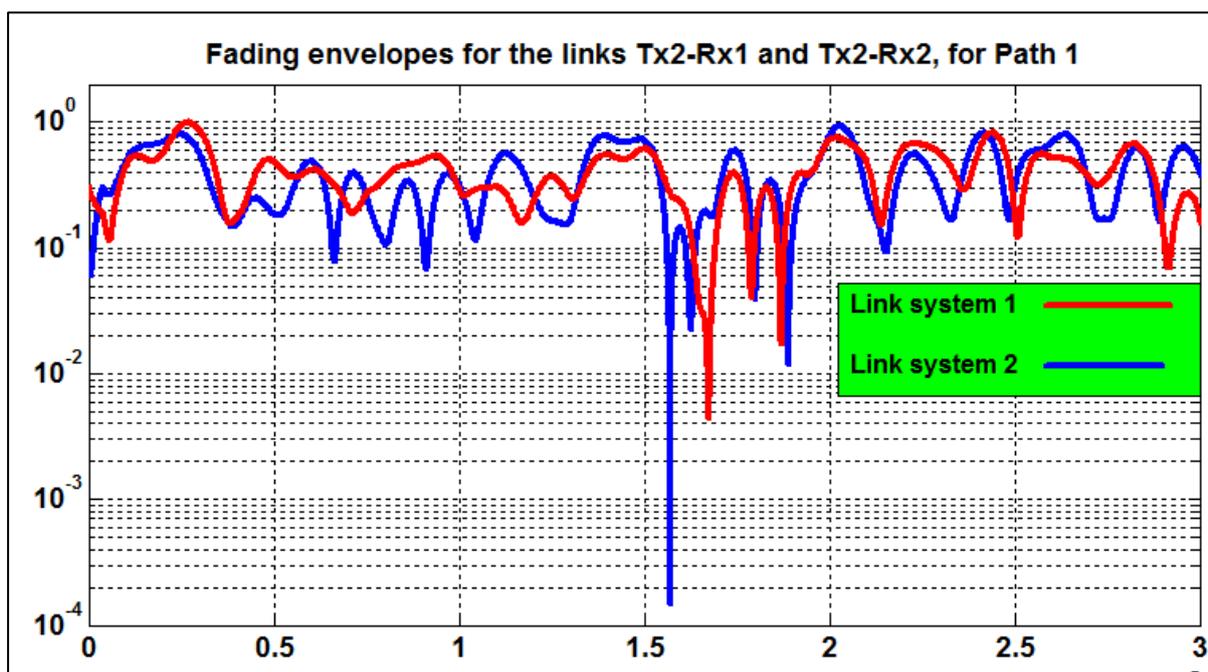


Figure 1: link system 1 and 2 for path 1.

In figure 2, the system for encoding and decoding is more significant with low distortion.

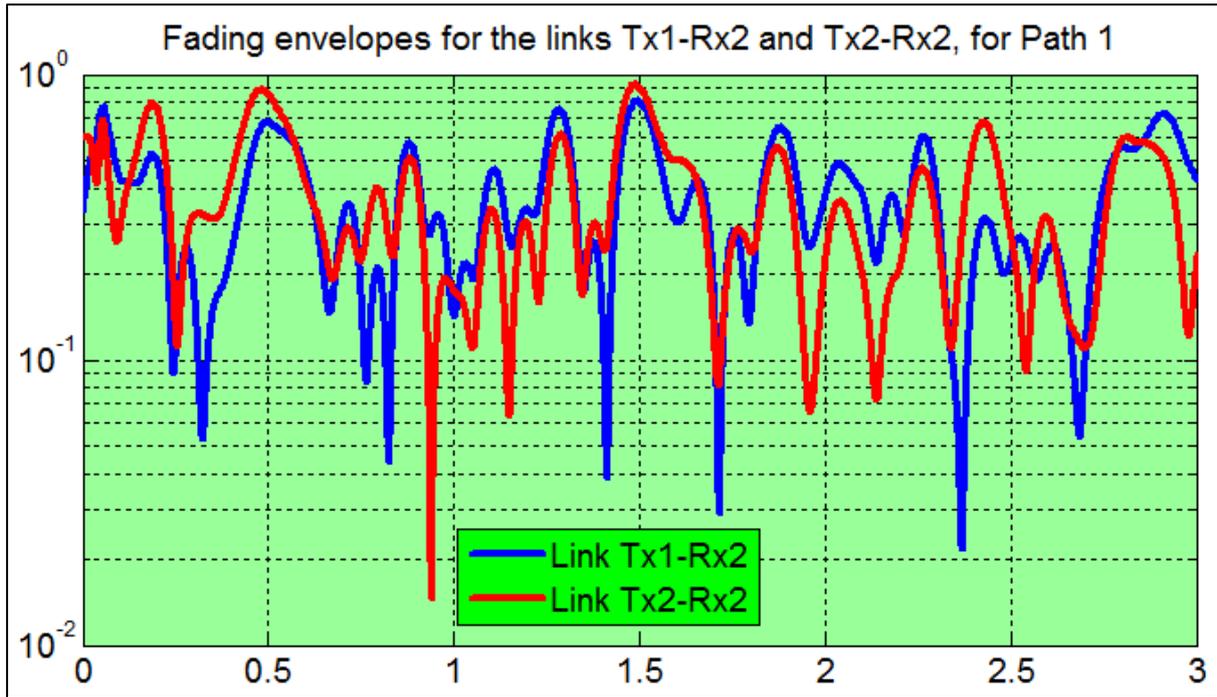


Figure 2: behaviour of encoder and decoder system

The comparison results between the theory and simulation for power density can be seen in figure 3.

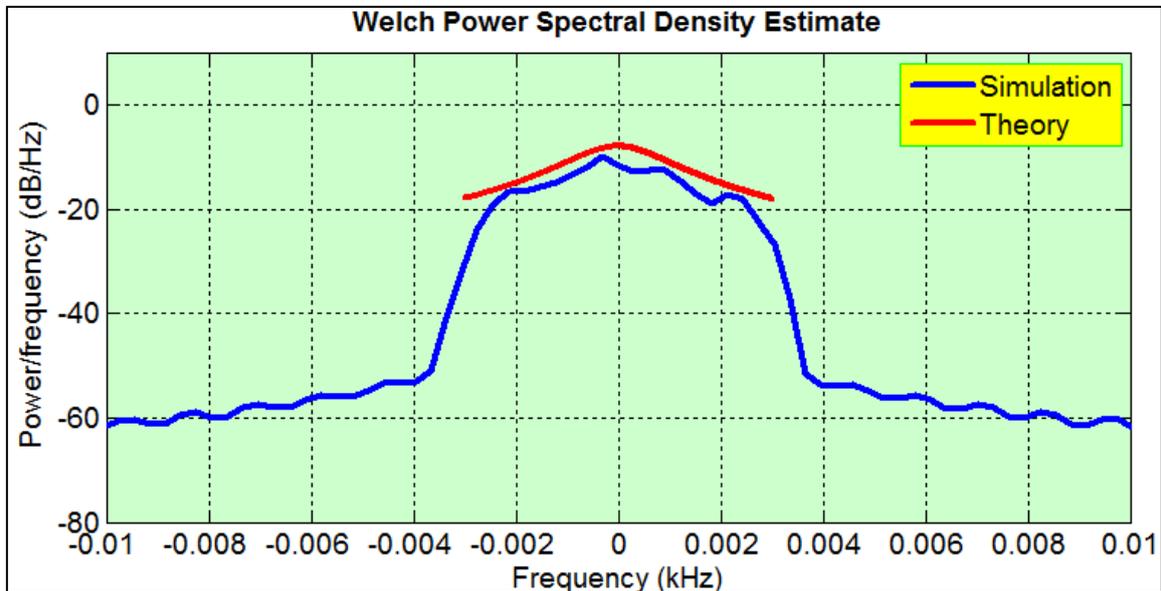


Figure 3: the simulation and theory power density comparison

Figure 4 presented the encoder signals with low undershoot and low rippling with respect to decoding data.

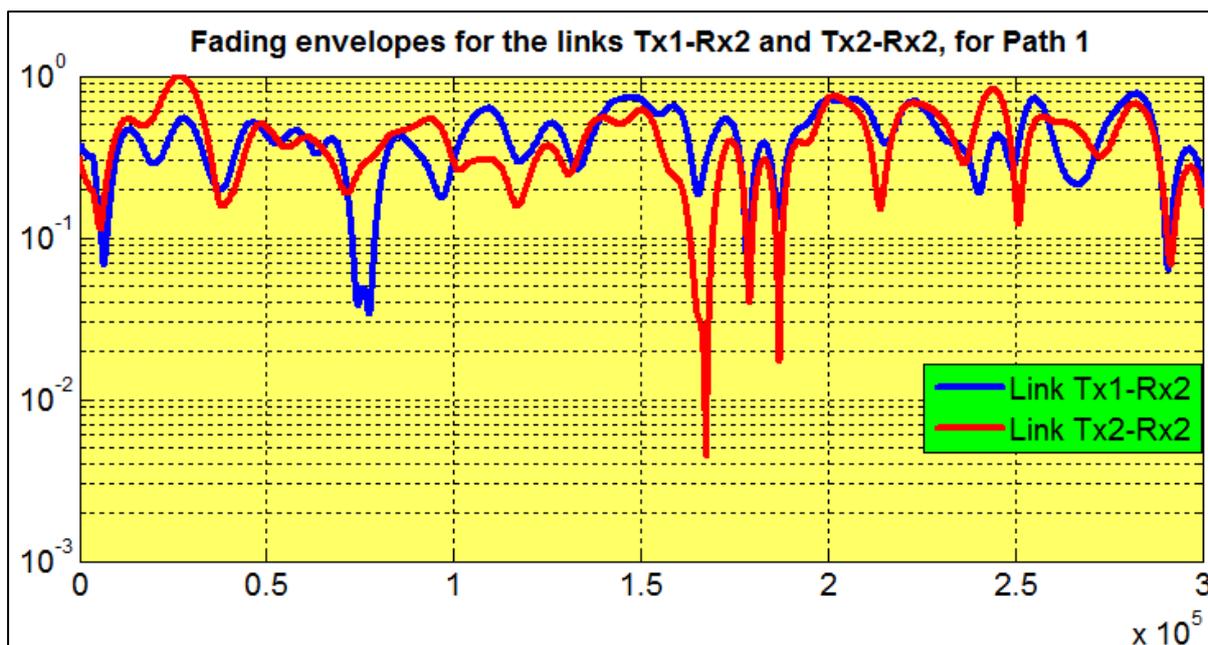


Figure 4: encoder with decoder signals

Conclusion:

Encoder signals and decoders are exposed in the results mentioned above. It means that the power losses for logic circuit are very low. Therefore, the system of telecommunication via encoder and decoder signal with logic circuit is clearly effect to minimize the distortion signal and transmit the data exactly without changing the data specification. Finally, the logic circuit with complete telecommunication system has the powerful over the conventional system.

References

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