

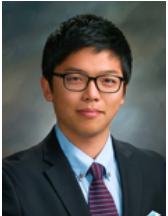
Design of Chaotic CDSK Modulation System using Different Chaotic Maps

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Abstract— Recently, it has been studied how to reduce the probability of interception and to increase the communication security efficiently in the wireless communication systems. Among the possible approaches for the information security, the chaotic signal can be used to encode information very efficiently in many ways due to the inherent characteristic of irregularity. Also, the chaotic signal is very sensitive to the initial conditions. So, if you do not know the initial conditions. In noise and interference environment, we will evaluate performance of different chaotic maps in the CDSK chaotic modulation system. Also, we analyze BER performance depending on the selection of spreading factor. We like to propose the selection condition of spreading factor to maximize BER performance. For this analysis, we were used Tent map, logistic map, henon map, Bernoulli shift map. Through the theoretical analysis and computer simulations, it is confirmed that henon map is better than the other three chaotic maps. Also, henon map shows maximize BER performance when spreading factor is 70..

Keyword— *Correlation Delay Shift Keying; Chaotic maps; Spreading factor; Henon map; Tent map;*



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