Study on the Performance of NC-MFSK with Selective Combining Diversity over Weibull Fading Environments

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ABSTRACT

The methods applied to improve the receiver of wireless communication system with digital modulation combines and diversity combining manners are investigated in this thesis. The channel fading phenomena exist in the modulation schemes are also considered in this study. There are some of the famous and most assumption channel model introduced in my study. The main reason for adopting the Weibull distribution in my study is it has the shape parameter can be applied to characterize the channel fading. On the other hands, the performance of average LCR (level crossing rates) and AFD (average fading durations) for the simplest combining diversity, SC (selection combining), are also evaluated in here. In fact, in this paper some of the formulas of BER (bit error rate) performance are proposed for the SC diversity with noncoherent MFSK (M-ary frequency shift keying) and DQPSK (difference quaternary phase shift keying) over Weibull fading environments.

Keywords : Weibull fading channel、LCR (level crossing rates)、AFD (average fading duration)、NC-MFSK、DQPSK

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