A Study and Design of Speech Recognition System By Using Fuzzy Theory

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ABSTRACT

In this thesis the investigation of an MC-CDMA (multi-carrier coded-division multiple access) system is constructed on the background of the OFDM techniques, where there are three different scenarios of antenna arrays considered to applied in this study, and they are including linear antenna array, triangular antenna array, and circular antenna array. Moreover, except the parameters of the correlated-fading channel are included, the frequency selective fading channel characterized by the correlated-Nakagami-m fading distribution is also adopted. In order to avoid the complex processing of the formulas for deriving the BER (bit error rate) performance of an MC-CDMA system, the complementary error function is adopted as the special function for evaluating the SNR (signal-to-noise ratio) at the output of the MRC (maximum ratio combining) diversity scheme. Furthermore, it is known that the more the received branch is at the output of the MRC, the better of the BER performance of an MC-CDMA system is. In the real world, the correlated-Nakagami-m distribution can be utilized to as the fading model for calculating the system performance of an MC-CDMA system. Thus, there are some of the important factors are assumed in this thesis, for example, the number of the sub-carriers, the system parameters of the fading, the correlation coefficients etc.. The proposed issue involved in the thesis is a valuable experience and capable of the theoretical research and the reality implementation on the basis of the MC-CDMA system.

Keywords : Pattern Matching、Isolated Word Recognition

Table of Contents

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