

A Comparative Study of Equalization Techniques for MIMO Systems

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Abstract – Multiple-input-multiple-output (MIMO) system has become one of the major focuses in the research community of wireless communication and information theory. Due to the channel characteristics, severe inter-symbol interference (ISI) may occur to the transmitted signals. Therefore it is necessary to use an equalizer to counter the effect of the channel. The effect of fading and interference effects can be combated with equalizer. In this paper, we propose different equalization scheme for MIMO systems such as, Zero Forcing (ZF) equalization, Minimum Mean Square Error (MMSE) equalization, Zero Forcing equalization with Successive Interference Cancellation (ZF-SIC), ZF-SIC with optimal ordering, MIMO with MMSE SIC and optimal ordering and ML.

Keywords – equalization techniques, MIMO system