THE COMPATIBILITY DISCRETE FOURIER TRANSFORMATION (DFT) FOR MIMO-OFDM SYSTEM

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ABSTRACT

Multiple input multiple output (MIMO) is a system that has more than one antennas receiver or transmitter at transmitter and receiver station. To improve information or data transfer and also communication performance, orthogonal frequency division multiplexing (OFDM) is purposed. Orthogonal frequency division multiplexing (OFDM) is a multicarrier system and available bandwidth is separated into many narrow bands and data is transmitted in parallel on these bands. OFDM also provides robustness, high spectral efficiency to intersymbol interference (ISI). MIMO-OFDM system can provide high transmission data rate, spectral efficiency and reliability for wireless communication system.. But all this system has a problem which is noise. To overcome that noise, channel estimation is needed and this paper focus on discrete fouriertransform(DFT). This paper present a discrete fourier transform based channel estimation scheme, which shows better performance when compared with existing channel estimation schemes like least square error (LSE) and minimum mean square error(MMSE) scheme and also shows the performance of channel estimation (CE) system in terms of increasing signal noise ratio (SNR) and decreasing bit error rate (BER).

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CHAPTER 1

INTRODUCTION

1.1 INTRODUCTION

This chapter focus on a project background or overview of the project. It mention about the problem statement of the project, why the existence system is not efficient. From the problem that occur, it comes to the solution on how to overcome the problem, to improve the system performance, this is called the objectives of project. The solution propose is by added discrete fourier transform (DFT) into channel estimation (CE) technique which is least square (LS) and minimum mean square error (MMSE).