WHITE NOISE EXTRACTION USING MATLAB AND XILINX ISE

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ABSTRACT

Background noise is a major problem that disturbed electrical or electromagnetic energy and in environment. This project is aimed to eliminate noise and background noise from ***.wav*** signal. White noise is one of the noises that exist in ambient which are consisting of all audible frequency with equal intensity. In this work, waveform audio file format - WAVE, or more commonly known as ***.wav*** is use as a sample and the white noise from the signal was extracted using Butterworth filter. *Matlab* was employed to generate the pure white noise. The results show the performance of the filter and the comparison between the input and output signal.

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CHAPTER 1

INTRODUCTION

1.1 Introduction

Chapter 1 covers the background of entire project starting with project overview. This project overview gives a big picture about this project. This background project also includes the issues, problem statement, objective, scope of project and outline of this thesis.

1.2 Overview of Project

Noise is a nuisance or disturbance during communication, conversation and human hearing and it is unwanted. However, in data processing or computing it can be considered as unwanted data without meaning. Noise occurs because of many factors such as interference, delay and overlapping. In sound signal, noise is very problematic because it will make the understanding of the information difficult to understand.

Adaptive noise control (ANC) is a method for reducing unwanted sound. ANC is achieved by using the computer, which analyzes the waveform of the noise signal, then generates a signal reversed waveform to cancel it out by interference.