

FINAL YEAR PROJECT REPORT

**STUDY AND SIMULATION OF
DIGITAL MODULATION TECHNIQUES
IN PRESENCE OF AWGN**



A PROJECT REPORT

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DEDICATION

This our project is dedicated to our parents, who brought us here to do this project. Its all there effort which make us stand on this place to have BS(EE) degree in our hand and there a bright future for us ahead.

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REPORT COMPLETION CERTIFICATE

It is certified that the work contained in this report has been completed by **Hassan Mahmood, Sohail Afzal** and **Muhammad Faiz Ismail** under my supervision.

Dated: 13-11-2014

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Chapter 1

Introduction

Communication has been one of the deepest needs of human throughout the history. Good communication is central to civilized society. Today we live in a world of technology. The purpose of communication system is to transport and information bearing signal from a source to a user destination via communication channel. A communication system is of analog and digital type. In an analog communication system the information bearing signal is continuously varying in both amplitude and time. While in a digital communication system the information bearing signal is represented by a discrete messages.

Digital communication is the transfer of data over point to point channel. It is the transfer of discrete messages. The messages are represented by pulses using a digital modulation method. With digital systems great stores of information can be transmitted more speedily and accurately. The advantages of digital communication include the ability to eliminate noise and distortion at each repeaters greater accuracy than analog systems and the ability to use error detection and error codes.

Many digital systems are in use today. Pulse width modulations are commonly used. Pulse amplitude modulation, Delta modulation and PCM are also being developed. The digital communication has great growth in scope and application.