SCHOOL OF ENGINEERING

FINAL REPORT

A STUDY OF DIFFERENT CODING SCHEMES

STUDENT'S NAME : SHIRLEY NGU YIEN FONG

STUDENT'S ID : 99308883

MAJOR : B.ENG (HONS) COMMUNICATION &
ELECTRONICS ENGINEERING

FIRST SUPERVISOR'S NAME : MR. LOW BOON TAT
SECOND SUPERVISOR'S NAME :MR. LACHMAN
PROJECT COORDINATOR : DR. KHEDR M. M. ABOHASSAN

MAY – DECEMBER 2004

Abstract

This project is entitled as "A study of different coding schemes". The basic ideas that are developed in this project are based on Forward Error Correction (FEC) method particularly focus on the linear block codes such as Hamming, Cyclic, BCH (Bose-Chaudhuri-Hocquenghem) and Reed-Solomon codes. The main purpose of this project is to study and analysis on each type of these coding techniques. In addition, it also required to study on the encoding and decoding techniques such as Generator matrix G, Parity-check matrix H and Syndrome S. Besides, it also applied on the techniques to design different codes. Other than that, this project also develops a MATLAB for the purpose of correcting and detecting errors.