MODIFIED TEXT FOR SYNOPSIS AND INTRODUCTION:

pg1: Change from Final Project to Project Report

pg1:

Synopsis

The primary objective of our project is to create a hardware implementa-

tion of the game ’Tic-Tac-Toe’ with the facility of playing against the 8085

microprocessor. The microprocessor algorithmically analyses the state of

the game and pick the most optimum move so as to ensure that it always

wins or draws. We have used the Minimax algorithm to determine the

moves picked by the 8085. This project aims at highlighting the decision-

making capability of microprocessors. Additionally, a separate mode for

player-versus-player games has been provided as well.

Keywords: Minimax Algorithm, 8085 Microprocessor, Game Theory

Date: January 2018

Pg4:

//Motivation is fine introduction edit below:

Tic-Tac-Toe is a simple two-player game played in turns where each player

places their mark on a 3x3 grid with the goal of having three consecutive

marks in either the horizontal, vertical or diagonal direction. The game can

end in three possible states of either winning, losing or drawing. We have constructed a

hardware implementation of this popular game with the

facility to play against either another player or the 8085 itself. We take user input using a re-purposed numeric keypad and instead of placing a

mark, an LED of a specific colour is lit instead, representing either O or X.

The state of the game has been displayed using a 3x3 grid of bi-colour LEDs

and a 16x2 character LCD is present to provide textual information

about the game status. The block diagram representation of the proposed

model is shown in Figure 1.