Flappy Bird Game

EECS W4840 Embedded System

Project Proposal

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1. Introduction
For this project, we plan to design a very popular game called Flappey bird using FPGA Cyclong board. This game is pretty charming and playable. However, its logic is not too complicated and we think it would be an excellent project for us to learn coding for hardware and software.

2. Game Logic
In this game, player will use keyboard to control a bird to jump and fly through some pipes. If the bird touch the pipes, then game would end. In the gaming process, player will get their score which represents the amount of pipes the bird passed through on the screen. Also, player can use keyboard to pause or restart the game.

3. Hardware Usage
In this project, we will mainly set up the following hardware:
(1) Keyboard
(2) VGA
(3) Sound chip driver
(4) Memory

4. Software Usage
In the project, we plan to use software to achieve the following functions:
(1) Game logic control
(2) Random placement of Pipes
(3) Sound control

5. Milestone
(1) Milestone 1: Game rule design and set up the basic VGA and Keyboard driver.
(2) Milestone 2: Game logic implementation.
(3) Milestone 3: Optimization of logic. Game testing and sound effect implementation.