

CG Project 2 Assigned 09/24; due 10/15

1 Purpose

The purpose of this project is for you to implement many of the aspects regarding interactive animation discussed in class.

2 Description

In this project you will recreate a classic Atari game.

you may choose from the following games (others may be permitted; see below):

1. air-sea battle
2. asteroids
3. breakout
4. canyon bomber
5. centipede
6. combat (tank)
7. defender
8. missile command
9. pac-man
10. space invaders
11. surround

Each game involves moving objects; most include projectiles. All require the player to control some object in the game. If you should decide you want another game, it must have all of these features. Note that no game will be implemented by more than one student! Game choices are first-come, first-served.

3 Requirements

1. There must be a menu. The menu must provide:
 - (a) Instructions.
 - (b) Play/quit option.
 - (c) Possible difficulty level setting.

You may provide additional choices at your discretion.

2. Your program should produce flicker-free animation.
3. The user should be able to interact smoothly with the game.
4. You must incorporate picking into your game in some manner. All of these games originally used joystick control (moving weapons, aiming weapons, controlling movement, etc.). Since we don't have joysticks, user control will be via mouse or keyboard. Most of the games listed above lend themselves to picking; e.g., dragging the shooter left and right in Space Invaders. It is up to you how you make use of picking, but it must be there and it must involve more than a single pickable object in a static location. Simply clicking a start/stop button will not suffice.
5. Window resizing should not affect game play.

4 Discussion

Since the graphics were pretty primitive on the Atari 2600, you should be able to duplicate the graphics fairly faithfully. For some of the games (e.g., Centipede), it is doubtful whether you will be able to implement full functionality in the time allotted. As usual, the amount of effort you invest in the project is up to you. Your grade will reflect your effort.

You have 3 weeks for this project; you'll need them!

5 Submission

Hard copy of code. Electronic version of source code (portable medium; emailed is fine).