

CE810 - Game Design 2

Introduction

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But First ...

Before we begin though ...

- This will be less formal than most modules...
- Feel free to ask questions as we go along
- We're going to try and make this as interactive as possible
- Try to attend as much of this as possible!

Conventions

Word	Word	A normal word in the presentation
Keyterm	Word	A word or term that will be explained later in the slides
Emphasis	Word	Purely stylistic in most cases
Link	Word	A link to something so you do not have to type in URL's

An Overview

Learning Outcomes

1. Evaluate the mechanics of a game.
2. Explain gameplay elements in terms of game theory.
3. Describe the relationship of story and computer games.
4. Develop measures of player experience and apply them to optimise game parameters.
5. Evaluate the effects of game AI on player experience.

The Goal

To use **game playing agents (AI)** to help us test points in our **design space** to improve **player experience** in games

How is AI used in games?

Bots Agents that act like players *possibly*

NPCs Agents that act like characters

Directors Things that alter the game

For this module, we'll mostly be talking about bots.

Games have many different **parameters** which can be tuned to produce different outcomes.

Examples:

- How much damage does my **bullet** do?
- How many coins do I need to collect?
- What terrain can my scout walk over?

Definition

Collection of events that **occur** to the player **during** the game

Why?

- Understand **differences** in variations - is version A better than version B?
- Does a game have defects/exploits
- Are there dominant strategies?

Main Topics

- Game Design Spaces
- Player Experience
- ~~General Video Game AI~~
- Game Design

Who are We?

Who are we?



Joseph Walton-Rivers

- PhD Student
- Research on:
 - Artificial Intelligence
 - Player Modelling
 - Believability



Piers R. Williams

- PhD Student
- Research on:
 - Artificial Intelligence
 - Partial Observability
 - Co-operation

Admin Stuff

- Two Weeks - here (Lab 2)
- Module will be a mixture of lectures, labs and group work.
- Information on our site
<http://ce810.fosslab.uk/timetable.html>

Assessment

- Asteroids Experiment [10%]
 - Search design space for target game
- Game Design Hack [40%]
 - Working game and brief description of how it works
 - List of parameters that could be modified
- Player Experience Experiments [50%]
 - Final Presentation [10%]
 - Presentation itself (pptx or pdf)
 - Presentation given in week 2
 - Final Report [40%]
 - Game variants
 - Reports (pdf)

Full details on the [module page](#).