Foundations of Interactive Game Design (80K)

week three, lecture one
Today

- Announcements
- What is a game?
- What is the focus of this class?
- Physical prototyping
- Storyboarding
International Education Office announcement
More playtesting

Playtesting for Pattern will be Thursday from 10-noon or by appointment. Email ucscproject.pattern@gmail.com
Also: only 15 min of office hours today
What is a game?
Is this a game?
Is this a game?
Is this a game?
Is this a game?
Is this a game?
Is this a game?
Is this work?
Are these games?

- Jazz improvisation
- Tug of war
- Wii Music
- Russian roulette
- Renaissance fair
- Dungeons & Dragons
- Stock markets
- Crossword puzzles
- Slot machines
- Ring around the rosy
- Driving
- The Sims
Defining “game”

A “closed, formal system that engages players in structured conflict and resolves its uncertainty in an unequal outcome”
— Tracy Fullerton
Defining “game”

• “playing a game is the voluntary effort to overcome unnecessary obstacles”
  — Bernard Suits

• “A game is a form of art in which participants, termed players, make decisions in order to manage resources through game tokens in pursuit of a goal”
  — Greg Costikyan
Defining “game”

A “system in which players engage in an artificial conflict, defined by rules, that results in a quantifiable outcome”
— Katie Salen and Eric Zimmerman
Artificial conflict

- They are a system that participants play
- This system “maintains a boundary from so-called ‘real life’ in both time and space”
- They “embody a contest of powers” that can be cooperative or competitive for players, single- or mult-player, etc
Defined by rules w/ quantifiable outcome

• Rules are the structure out of which play emerges for Salen & Zimmerman, subsuming Fullerton’s objectives, procedures, and rules

• For S&Z, a quantifiable outcome is what distinguishes a game from less formal play activities
Defining “game”

A “rule-based formal system with a variable and quantifiable outcome, where different outcomes are assigned different values, the player exerts effort in order to influence the outcome, the player feels attached to the outcome, and the consequences of the activity are optional and negotiable.”

— Jesper Juul
Rules

• Well-defined rules — unambiguous
• Affinity between games and computers
• Game rules and world rules
• Rules as software that require hardware
Variable, Quantifiable Outcome

- Not only in theory, but at this level of player skill
- Beyond discussion — a win, a score
- Making something a game — turning the creativity and grace of dance into a score for competitions
Valorization of Outcome

- Some outcomes are *better*
- Unwinnable games — but high score is better
- Positive outcomes are harder to reach — challenge
Player Effort

- People work — intellectually, physically
- Doesn’t work in pure chance, but people act like it does
- Reinforces attachment to outcome
Player Attached to Outcome

• Wanting to win, and not wanting to lose

• Violating this is playing wrong — spoilsport — usually

• If play among unequals (e.g., against small child) different story — but still a game for all players?
Negotiable Consequences

• There can be consequences, but not built into the game

• Poker can be for things of value, or not

• Not: stock market, traffic, russian roulette

• But their systems could be used for a game, w/o non-negotiable consequences
Game definitions

- Are often presented as “consensus” definitions based on surveys of previous game scholarship
- Can be interesting to think about, intellectually
- Can be a good source of game ideas: think about what to violate in the definition!
- But: consistently marginalize things that should be central. For example...
This is not a game
The Sims is not a game

- “The #1 best selling game of all time.”
  — Electronic Arts, 2004

- But The Sims doesn’t meet formal definitions. Such games “have emergent quantifiable goals but usually no single overriding outcome.”
  — Katie Salen and Eric Zimmerman

- “Open-ended simulation games such as The Sims change the classic game model by removing the goals, or more specifically, by not describing some possible outcomes as better than others.”
  — Jesper Juul
Beyond the margins

- fantasy and vertigo games
- casino poker and blackjack
- *The Sims* and *SimCity*
- *Dungeons & Dragons* and *GURPS*
- *EverQuest* and *World of Warcraft*
- *Dogz* and *Electroplankton*
- *Farmville* and *Pet Society*
What makes the borders?

- Juul says this definition applies to a 5,000 year history of games
- Many game scholars agree
- But some (e.g., Pearce) argue these definitions based on a history of boys’ play as “games” and girls’ play as “not games”
- Others argue that even the distinction between “work” and “play” is something only introduced in the modern era
What is this course about?
For this course

- We will consider the idea of computer games something *broader* than the output of the industries, not narrower

- All software that “invites and structures play” — that is *playable*

- We will be much more interested in “how is this played?” than “is this a game?”
Prototypes
Why prototyping?

• You want to experiment with ways to turn your game *concept* into a *system*

• You want to involve your full team — and make sure you’re all on the same page

• You want rapid iteration

• You want to make sure the game works before you start writing code, making art, etc — so start with most important parts and biggest risks
What kind of prototype?

- Many games have deep gameplay systems — role-playing, real-time strategy, etc — so prototype the system
- Other games have simpler systems and deeper level design — puzzle, platformer, adventure, etc — so prototype levels
- Two examples from last year’s CMPS 170
Stack and Deploy
Stack and Deploy is...

- A trading card game:
  - Players create decks from card collection
  - Play cards to create customized units
  - Commanders determine personality
Stack and Deploy is...

- A strategy game:
  - Autonomous units are deployed to battle
  - Capture strategic objectives, combat enemies
  - Destroy the enemy base!
Innovation

- Unique mixture of card and strategy games
- Adds dimensions of space to card game
- Removes micro management from RTS
- Incorporates strategy into very short game length
- Emergent gameplay through card combos
Prototyping

• System-oriented prototyping

• Game map essential to system, prototyped different maps

• Different rules for combat and movement

• Different cards, different deck types against each other

• Game team member did AI’s work, tested with outsiders
Prototyping

• Board game tools are very effective for system-oriented prototyping

• Use maps, cards, dice, counters, etc

• Keep everything as reconfigurable as possible — be able to change while testing

• Test with people outside your group
Penumbra
Penumbra

Demons have entered your world and taken refuge in the shadows.

A puzzle game where shadows are manipulated by the rotation of the level.

Theme explored: dynamics of shadows

Creates a literacy relating object shape with the shadow it casts.
Level Progression – Intro

First level of the game.

Introduced to the concept of shadows as an obstacle.

Does not require use of the game play mechanic.
Level Progression - Rotation

Given the knowledge just gained, level appears impossible.
Rotating the world, which changes the lighting, reveals the solution.
Some prototype questions

• Will the basic mechanic work?
• Can we create levels that will lead people astray interestingly?
• Also discovered: play strategy they wanted to prevent
Prototyping
Penumbra physical prototypes

- Level-oriented prototyping, but with basic mechanic played in each level
- Figured out ways to make levels challenging
- Figured out how people respond to leading elements in the geometry (e.g., arches), their strategies for movement, etc
- Figured out camera can’t show full level
Textbook example
We all believe you can paper prototype a board game—it’s already paper—but what about real-time computer games?

What are some design questions you might ask?

What are the basic actions a player can perform?

How big should the level be?

What’s the level design (for a particular level)?

What objects are in the environment and how do they help or hurt the player (weapons, powerups, health…)?

Where are spawn points?
Simulating real-time with a paper prototype

- To answer questions, may need to simulate real-time gameplay
- Build stack: each player chooses three action cards and places them face down
- Reveal: each player turns over his top card.
- Resolve shoot cards: players with shoot cards fire in the direction their unit is pointing in a straight line. Simultaneous shots are resolved with dice.
- Resolve turn cards: Players with turn cards turn their unit. The order of simultaneous turns is resolved with dice.
- Resolve move cards: Players with move cards move their units the number of spaces they selected. Resolve multiple move cards with dice. Cannot occupy the same cell.
- Repeat steps 2-5 for the second and third cards in the stack.
Physical prototypes

- What are the strengths and weaknesses of this kind of prototype?
- Create much faster than on computer
- Change much faster than on computer—even during playtest
- Everyone can participate
- Allows rapid iteration
- Can’t explore certain areas of game feel
- Can’t figure out if game technology will work
- Can’t execute complex processes—but can couple with computational support
Your prototypes

- Due in section next week, with your core concept document (outlined in syllabus)
- Should be playable for in-section demo
- For best results, have people outside your team play before you bring to section
- As you build, try things, revise, and try again
- Questions?
What if you can’t figure out how to prototype?
Prototype problems

• If you can’t figure out how to prototype your idea
• Brainstorm w/ your team
• Brainstorm w/ reader/tutors and/or TA
• If your TA agrees there’s no good physical prototyping strategy ... you can storyboard!
Storyboards
For this course, storyboards will help you clarify how players begin playing your game.

This will help clarify why players are playing.

What teaches them how to play — what signals to try things, what feedback?

What hooks them on the experience and keeps them playing?
Storyboards

• The images do not have to look pretty — though you can use storyboards to work out art style

• The idea is to work through the flow of potential sequences of actions

• What are the first things the player is asked to do? What happens with success or failure?

• Not asking for cutscenes
Creating storyboards

• Start out with what sequences you need to show — one for each version of each major action at the game opening

• To create initial images, hand sketch, use GIMP, screenshot other games, or...

• Organize the images, caption them, refine
Brief look at Celtx?

(Could also use Powerpoint, etc)
Also think of sequence relationships

(from Jakub Linowski)
Show, discuss, and argue storyboards as a team

Works better than doing it with design doc