Today

- Prior 80K game demos
- Prototyping
- Quiz
- What’s coming up
Demo:
*Derpatron 3000*
What do you do after brainstorming?
Edit and refine

• Will Noah and the TAs think it is innovative?
• Do we have the skills needed?
• Do we have the time needed?
• Will we be happy to have made it?
• Do we know how to start prototyping a playable, formal system?
• Would it be compelling to play?
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 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!
Prototyping

- System-oriented prototyping
- Game map essential to system, prototyped different maps
- Different rules for combat and movement
- Different cards, different decks 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.
First level of the game.

Introduced to the concept of shadows as an obstacle.

Does not require use of the game play mechanic.
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

QuickTime™ and a
DVD/VCPro - NTSC decompressor
are needed to see this picture.
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
Demo:
Call of the Void
Shayne Clementi, Alex Marcolina
FPS 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
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