Foundations of Interactive Game Design (80K)

week two, lecture one
Today

• Demos of *Adventure* and *Ad Verbum*
• What questions do you have *on the reading*?
• Systems, interaction, and digital media
• Preview of this week
Adventure

http://jerz.setonhill.edu/if/gallery/adventure/index.html
You are standing at the end of a road before a small brick building. Around you is a forest. A small stream flows out of the building and down a gully.

> enter

You are inside a building, a well house for a large spring.

There are some keys on the ground here.
There is a shiny brass lamp nearby.
There is food here.
There is a bottle of water here.

> get lamp

Ok.
Adventure

• Will Crowther (c. 1975) and Don Woods (1976, Stanford U.)

• There were earlier textual games, but very primitive: *Hunt the Wumpus*

• Another set of hugely influential formal structures: navigating simulated world (based on real caves), gathering items, solving puzzles, story/score progression
Adventure

• Technologically, another advance from universities, & inspired MIT/Infocom group

• As media, another form of fiction (fantasy, not science fiction) and a role for language

• Socially, the player as “hacker”

• Together with Spacewar!, we see many of the elements of modern gaming in their first form
Ad Verbum

http://nickm.com/if/adverbum.html
Ad Verbum

- Nick Montfort, 2000 — the same “use language to move and gather” mechanics, with puzzles
- A fictional reason why only certain kinds of language work
- Just as *Orbient* takes the gravity pioneered by *Spacewar!* in a fresh direction, *Ad Verbum* does so with control through constrained language
Questions on the reading?
Early handheld games

by request
Mattel 1977-78

Parker Brothers 1978

Nintendo 1980-91

Epoch 1984

Nintendo 1989

Atari 1989

Digital Media
Building a model of digital media

- Starting with the viewpoint of digital art/writing, game design, and CS: including authoring

- Authors define *data* (text, image, sound) and *process* (operations, algorithms)
Adding the surface

- Process and data create *surface*
- The audience sees it, and may interact (and communicate) through it
- CS might use the terms “output” and/or “interface”
Interaction is, here, a change to the state of the work, for which the work is designed, that comes from outside the work.

**Interaction**
Systems
Systems

• “A system is a set of parts that interrelate to form a complex whole. There are many ways to frame a game as a system: a mathematical system, a social system, a representational system, etc.”

• Salen and Zimmerman are talking not just about digital media, not just about games, but about systems in general
System elements

- Objects — parts, elements, variables
- Attributes — qualities and properties
- Internal relationships — among the objects
- Environment — surrounding context
Framing systems

- Formal, Experiential, and Cultural
- Each of the above contains the previous — and alters what elements are seen
- Open or closed — exchange with the environment
Interactivity
Modes of interaction

- Cognitive — interpretive participation
- Functional — utilitarian participation
- Explicit — with designed choices
- Beyond the object — cultural participation
- S&Z’s modes all from POV of audience, rather than system focus
Action–Outcome

• S&Z analyze interactive systems by looking at choices
• Macro and micro choices
• Micro choices via action–outcome stages
Stages

• What happened before the player was given the choice?

• How was the possibility of choice conveyed to the player?

• How did the player make the choice?

• What is the result and future impact?

• How is the result conveyed?
Interactivity

• Is it the same for digital and non-digital games?
• This chapter discusses them in the same terms
• But the challenge of conveying game state, possibilities, and future impact is different in a game where the players enact the processes
Diagnosing design problems

- Choices feel arbitrary — problem with results of choices
- Not knowing what to do next — problem with representing choices
- Losing without knowing why — results of choices not communicated
Today’s demos

• The great frustration of *Adventure* and other text-based games is knowing what is possible to type — only a few things work.

• This is S&Z’s second stage of action–outcome: conveying the possibility of choice.

• *Ad Verbum* takes this frustration and turns it into the game’s source of puzzles.
For discussion
What do you find most frustrating about interaction in your favorite kind of game?

Can you imagine a game that turns this curse into a blessing?
This week
First assignment due
Tutorial #1

- Due in section this week, graded on screen
- Covered in last week’s sections — also in detailed tutorial online (link from syllabus)
- Required customization: a different sprite
- If you can: One or more additional clown(s), operating based on different rules
Wednesday

- More Atari
- More reading from *Rules of Play*
- Fundamental questions: What is a game?
- Outlines of second and third assignments
Don’t forget:
Ken’s signup sheet