

Temporal Aspects of Games

Gameplay and Gameworld Rules

- From last class
- Gameplay rules
 - Rules imposed on a gameworld that make interactions with it a game
 - Just randomly moving about and interacting with a gameworld doesn't create a game—it's just infrastructure upon which you can create a game

Gameplay and Gameworld Rules

- Gameworld rules
 - Rules that describe the behavior of the world containing the player's avatar
 - Gravity (or lack thereof)
 - Allowable actions (can I swim in the lake, or is it just an obstacle?)
 - What items can break, or be moved

Cardinality of Gameplay

- The degrees of freedom a player has in her movement
- Different than the cardinality of the game world
- In Monopoly, the game board (game world) is 2D, but the play progresses along a single path, thus the gameplay cardinality is 1D

Examples

- Space Invaders
 - 1D cardinality of gameplay, since base moves only left and right
- Recca (most 2d space shooters)
 - 2D cardinality of gameplay, since ship has free movement in 2D plane of play
- Super Mario 64
 - Free movement in 2D around a 3D world, as well as the ability to jump

Discussion

- Guitar Hero?
- Mario Party?

Lives

- A quantifiable number of opportunities a player has to succeed in a game
- Loss of life implies a break in gameplay
 - An animation of the loss of life
 - Break might be minimal, as in a space shooter where ships regenerate quickly, and in the same location in the game
 - Different from loss of some expendable item, such as a shield that eventually goes away
 - Loss of the shield does not imply a break in gameplay
- Often accompanied by an indication of player health
 - How much more damage can player sustain?

Temporal Aspects of Computer Games

game ends: example of gameworld rule

- The way in which a game may end
- Many possibilities
 - Completing the game's goals
 - Running out of lives
 - Exhausting available time



game ends: example of gameworld rule

- Separate from evaluation of the ending
 - Want to separately describe possible endings, and the value judgements applied to each one
 - Similar to Juul's game definition, where he discusses valorization of outcome
- Evaluation:
 - Usually win/loss, but can also have ranked endings
 - Team rankings over a season
 - Placement in a race

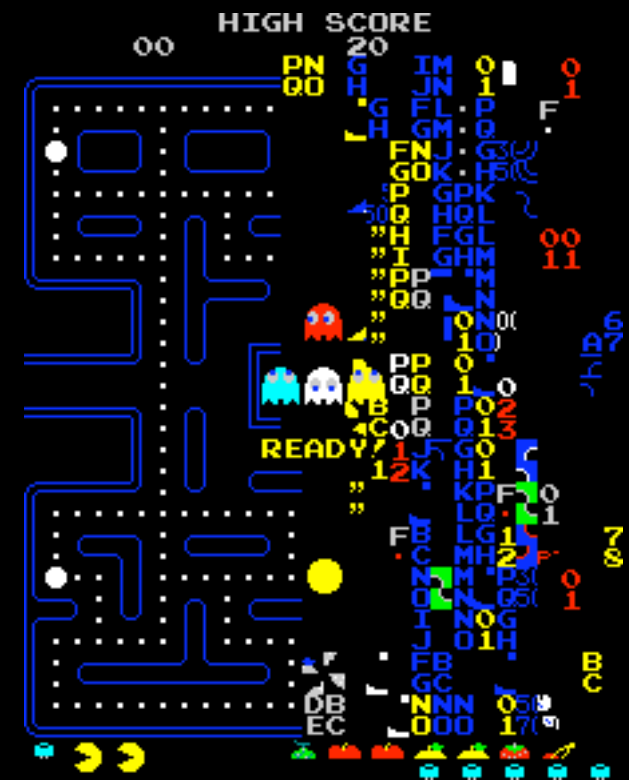
no game end?



- Examples
 - World of Warcraft (strong example)
 - No single goal (though achieving high levels is popular)
 - New content is added periodically
 - Grand Theft Auto III (weak example)
 - Player can complete all missions, but can still continue to play the game
 - Civilization II/III (weak example)
 - Player can satisfy a win condition, and can still continue playing
 - Is very possible to lose the game, which is final

types of game exhaustion

- Gameworld exhaustion
 - Player has seen and done everything there is to do
 - Pac-Man: only 255 levels, with a maximum possible (“perfect”) score
 - Well, there is a 256th level, but the right hand side is garbled, and appears impossible for an unassisted human to play



more exhaustion

- Narrative exhaustion
 - Once the game's story has been completely told
 - Narrative and gameworld exhaustion are often synonymous
- Resource exhaustion
 - Player runs out of some resource needed to play the game
 - No more lives
 - Insufficient resources leave player in position where it is not possible to win the game

segmentation of game play

- The process of managing and regulating the development of gameplay experience through the design of a game
- The way in which the play of a game is divided into smaller chunks (elements) of gameplay

examples of segmentation

- Examples
 - Football game is divided into halves, quarters, and individual plays
 - Turn-taking games segment gameplay by causing players to alternate turns
 - In Final Fantasy
 - Player wanders around countryside
 - Occasionally has battles with monsters
 - Also can have interactions with shopkeepers, or other NPCs

challenge segmentation

- Challenge Segmentation
 - Dividing gameplay into discrete, self-contained situations, which are perceived by the player as a test or trial
 - Examples: puzzles, bosses, waves of enemies
 - At time not clear-cut, since games tend to increase challenge over time

types of challenge segmentation

- Boss challenge
 - A particularly difficult challenge that must be overcome to continue or finish the game
- Bonus stage
 - Section of gameplay, normally a level, where the player can earn rewards without any risk of losing the game

types of challenge segmentation

- Puzzle
 - A challenge where there is no active agent against which the player is competing
 - Features problem-solving skills, not quick eye-hand coordination
- Wave
 - A group of, usually similar, enemies that must be avoided or completely destroyed as they approach the player

spatial segmentation

- Division of the gameworld into different spaces, when this division also partitions gameplay
 - Gameworld is not presented as a continuous whole
 - Instead, is distinct subspaces that are navigated separately
 - Each space may have its own rules
- Example: Kingdom Hearts
 - Many worlds, each with distinct characteristics, often based on Disney movie

spatial segmentation

- Types of spatial segmentation
 - Level
 - Recognizable subspace of the gameworld, containing tasks that must be completed before players can advance
 - Spatial checkpoint
 - Boundary between juxtaposed sublocations of the gameplay space

temporal segmentation

- Limiting, synchronizing, and/or coordinating player activity over time

temporal segmentation

EXAMPLES

- Fixed game periods in sports games
 - Quarters, halves, plays
 - Who plays when
- Games where you play against the clock
 - Driving games where you must complete a number of laps by a fixed time to continue
 - Marble Madness
- Time as a fixed resource

segmentation

Narrative Segmentation

Changes in story often accompany
changes in level, story of a boss fight etc

Some games do have changes in story within the same setting

Facade has distinct beginning, middle, end where characters behave differently

Colonel's Bequest is a text and graphics mystery game

Game divided into 8 acts, each corresponding to an hour of game time

Other examples?



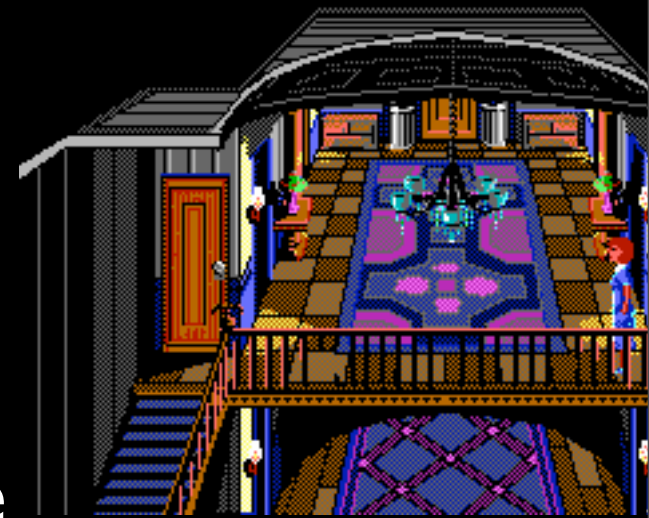
narrative segmentation

- dividing gameplay to put it at the service of a storyline of a game
- difficult to separate this from other forms of segmentation
- Changes in story often accompany changes in level, start of a boss fight, etc.

narrative segmentation

difficult to separate

- Facade has distinct beginning, middle and end where characters behave differently
- Colonel's Bequest is a text and graphics mystery game
- game is divided into 8 acts, each corresponding to an hour of game time
- Other examples?



What forms of segmentation are visible in the following games?

Portal

Super Mario Galaxy

Recca (shmups in general)

Types of segmentation

Challenge segmentation

Spatial segmentation

Temporal segmentation

Narrative segmentation