Outline

- Admin
  - Please submit game choice
    - 6 people haven’t yet
  - Homework #1 due today
- "Rules" paper
- Systems of information
Game Demos

- 9/19 Mario Kart
- 9/24 Madden
- 9/26 Guitar Hero II
- 10/1 Wind Waker
- 10/8 GTA III
- 10/17 Katamari Damacy
Rules paper

- Due 10/3
  - Analysis paper #1: "Rules"
  - You should be playing your game and taking notes

- Note
  - you cannot use lab machines to do word processing
  - laptops are OK
Important points

- Thesis
  - "great game" is not a thesis
  - This is a thesis
    - "Inertial navigation, fixed firing direction and accurate collision detection in Asteroids create an environment in which ship orientation is highly coupled, generating emergent forms of gameplay."
  - No thesis = paper will get an automatic rewrite

- Documentation
  - game itself, book, lectures
  - other sources if used
  - Missing or inadequate documentation = paper will get an automatic rewrite
How to Footnote

- Little number at the end
- Citation at bottom of the page

NOT
- At the end
- Not a list of references
- Not inside the text

Follow the guidelines!
- In MS Word, "Insert" -> "Reference" -> "Footnote"
What to Footnote

- **Primarily**
  - direct quotations, even excerpts
  - paraphrased or summarized presentation of original or unique ideas (indirect quotes)
  - quantifiable data (facts and statistics)
  - visual material, both content and design

- **Also**
  - a fact that is not well known, even within a discipline.
  - a fact that is contradictory to other facts or suppositions.
  - a fact that is obscure or difficult for the reader to verify.
  - verify specific pieces of information that bear directly upon important points or arguments.
  - verify facts brought in from other disciplines
  - any opinions and ideas not your own.

- It is OK if you have a lot of footnotes
How to cite the game

- Reference the game once at the beginning of the paper
  - Gears of War$^1$
- No need to cite again
  - The game itself is unambiguous
  - Can't indicate sections of content more specifically
    - No way to indicate locations within the game (cut scene 5, level 10, etc.)

$^1$ Gears of War Epic Games, 2006. XBox 360.
Rules paper 2

- Schemas
  - *Emergence
  - Uncertainty
  - Information Theory
  - *Information Systems
  - *Cybernetics
  - Game Theory
  - *Conflict

- Do not use more than one

- Some (most) of these we won't cover in detail in class
  - doesn't mean you can't use them
  - see me if you want some help on how to use these
Rules paper 3

- Outlines
  - suggestions

- Focus
  - do not catalog every rule, every game object
  - identify those items that contribute to your argument
  - depth over breadth
Rules paper 4

- Meaningful play
  - deliberately vague
- What makes the game a compelling experience?
  - How does the aspect of the game that you are analyzing contribute?
Rules paper 5: Criteria

- Knowledge
  - demonstrate you understand the schema
  - demonstrate that you understand the game and how it achieves meaningful play
  - demonstrate that you can state a thesis and argue for it clearly and convincingly

- Communication
  - documentation
  - organization
  - mechanics: spelling, punctuation, grammar, word choice
Rules paper 5

- Turn in to turnitin.com
  - on 10/3
- Late policy
  - ½ grade per day
  - up to 3 days late
Turnitin.com

- Class id
  - 2006576
- Password
  - masterchief
Procrastination

- Perceived utility of task
  \[ U = \frac{E \cdot V}{\Gamma \cdot D} \]
  - \( E \) = probability of completion
  - \( V \) = value of completion
  - \( \Gamma \) = immediacy of completion
  - \( D \) = sensitivity to delay

- Avoid procrastination by
  - picking subtasks that can be completed relatively quickly
    - \( E \) is high and \( \Gamma \) is low
Analysis Paper Subtasks

- Picking the schema you're going to use
- Reading the chapter associated with that schema (again)
- Making notes about particular aspects of the game related to the schema
- Etc.
Reaction Papers

- Game syllabus
  - Grand Theft Auto 3, Grand Theft Auto: Vice City, Grand Theft Auto: San Andreas, or Bully
  - Half-Life or Half-Life 2
  - Katamari Damacy or We Love Katamari
  - Age of Mythology, Civilization IV, Lord of the Rings: Battle for Middle Earth (I or II), Total War(any) or WarCraft III
  - Guitar Hero, Guitar Hero II, or Dance Dance Revolution (any)
  - Gears of War, Rainbow Six: Vegas, or Ghost Recon: Advanced Warfighter (XBOX 360)

- Play one game a week
  - submit a one-page reaction paper

- Due dates:
  - 9/24, 10/8, 10/22, 10/29, 11/5, 11/12

- Object
  - exercise game analysis skills
  - use the analytic schemas from the book
Aside

- Game order goes out soon
  - obvious stuff is on it
  - email me if there are games you think we should have
Information

- Information theory (Shannon, 1956) says that information is a quantity measured in bits.
- Says nothing about how messages are generated or interpreted.
- (Lots more in Ch. 16)
Interpretation

- Crucial if we want to understand information in games
- Example
  - Game behaviors are more meaningful if
    - the player can discern success and failure
    - the behavior has a direct connection to the overall outcome
  - The game must communicate to the player
    - "you did it wrong"
    - "you're close to winning"
  - Game must lead player to a correct interpretation
Meaning is encoded in signs
  - verbal, gestural, sartorial, etc.

Example
  - architectural configuration
  - the necktie
  - a yellow ribbon
Semiotics 2

- The sign has two parts
  - signifier
    - the expression that is made
  - signified
    - what the expression represents

- The meaning of a signifier is conventional
  - "ya" means "I" in Russian, but "yes" in German
  - hitchhiker's gesture
Decoding a sign is interpretation
How the sign is interpreted depends on
- the interpreter
- the context
Games establish a context for signs
- words, actions, symbols, visual cues
- the designer creates signifiers for the important elements of the game
- the player must learn to extract their meaning
Meaning is created by the interpretation of signifiers in context

A game designer
- creates a new context
- with new meanings
- using particular signifiers

But not in a vacuum
- signifiers are usually borrowed from the wider culture
- the design may rely on aspects of their conventional meaning
Example: Chess

- **Signifiers**
  - shapes of pieces
  - names for pieces

- **Cultural Meanings**
  - powerful societal roles

- **In-Game Meanings**
  - ability to move
  - ability to control space

- Think about the "King"
Example: Almost every FPS

- Signifiers
  - red cross
- Cultural Meaning
  - sign for hospital
- In-Game Meaning
  - an opportunity to recharge "health meter"
- Real-world note
  - The Red Cross is now threatening to sue game companies for doing just this.
Systems of signs

- Signs do not stand alone
  - signs are interpreted in the context of other signs
- Consistent semiotic structure
  - makes your game easier to understand
  - players enjoy decoding clues
    - if there is a sensible pattern

Example
- Mario Bro's Superstar Saga
  - Enemies that can be attacked with electricity usually wear or carry something metallic.
- Final Fantasy X
  - creatures can be attacked best with fire magic look cold / icy and use ice attacks
From signs to information

- The interpretation of signs yields information
- Information
  - about the state of the game
  - about the game environment
  - about what just happened
  - about what might happen next
Information in Games

- Many games require that players manipulate information
  - Card games
    - dealt card unknown
  - Computer games
    - map / location of opponents unknown

- Players typically acquire discover information through play
  - Cards held
  - Map locations
Systems of information

- Incomplete information makes for interesting gameplay
  - why playing cards have a front and back
- Types of information
  - public
    - known to all
  - private
    - known to one player
  - hidden
    - not known by any
Rules are not game information

- Information = what makes one game situation different from another
  - state of the shuffled deck
  - position / strength of opponents

- Rules
  - may be known or unknown based on player ignorance
  - but they can't be private
Example game

- Liar's Dice / Pirate Dice
  - Each player has five dice
  - 1s are wild
  - rolled in secret
- Each player makes a claim about all the dice
  - for example, 6 4s
- The next player must increase the claim
  - either a higher value (6 4s → 6 5s) or
  - greater count (6 4s → 7 4s)
  - or both (6 4s → 8 6s)
- Play continues until a player is challenged
  - "Arrr! Ye be a lying scurvy dog, ye be"
  - All players reveal their dice
  - If the challenge is met
    - the challenger gives up a die
  - if not
    - the challengee gives up a die
  - the losing player gets to bid first
- Play continues until only one player has dice left
Now play

- without hiding dice
Information?

- Public
- Private
- Hidden
Information economy

- Games of information often have an "information economy"
  - a system through which
    - hidden information is revealed
    - private information becomes public

- Like all economies
  - based on exchange
Example 1

- Liar's Dice
- I don't know what dice my opponent holds
- Consider the following bid sequence
  - P1: 3 3s
  - P2: 3 4s
  - P1: 5 4s
- What can we learn
  - private information is potentially revealed
    - she may have wild cards (perhaps two)
    - she may have lied before
    - she may be lying now
- Tradeoff
  - benefit = knowledge of dice held, game requirement
  - cost = higher bid situation
Example 2

- Crazy Eights
- I don't know what cards my opponent holds
- If she changes suit to Diamonds
  - private information is revealed
    - I'm pretty sure she has diamonds
  - but she is closer to winning
- Tradeoff
  - benefit = knowledge of hand
  - cost = improved opponent position
Example 3

- First-person shooter
- I don't know what opponents are in the next room
  - or what the layout is
- If I walk in
  - I'll learn what the opponents are
  - but I might get killed
- Tradeoff
  - benefit = tactical knowledge
  - cost = risk of defeat
Information as reward

- Often information is a reward
  - (more about rewards in "Play" unit)
- If you are successful in some action
  - the game reveals more information
- If you take some extra effort to explore the environment
- Could be
  - what to do next
    - the location of something valuable
    - a map
  - a shortcut
Example
Information seeking

- Players will take action to gain information
  - reduce uncertainty
  - enable preparation / planning
- Meaningful choices arise
  - when there are multiple ways to learn
  - when those choices have different costs / consequences
  - when those choices yield different kinds or qualities of information
Information revealing

- (Especially in multi-player games)
- Players may need to keep certain information hidden
  - gain advantage over opponents
- Meaningful choices arise
  - when exercising an option that might disclose valuable information
  - in the possibility of deception
Example

- Civilization
  - players have the option of trading maps
  - this gives you information about opponents' situation
  - but also reveals your assets and weaknesses
Game Design Issues

- What kinds of information are inherent in the design?
- What is the status of the information during the game?
- How is information communicated?
- How is hidden information revealed?
- What are the costs of information?
- What meaningful choices revolve around gathering, using and/or sharing information?
Wednesday

- Information theory and cybernetics
- Ch. 16, 18