

G54GAM Games

Categorising Games

Meaningful Play, Interactivity

Question

- What was the *worst* game that you played recently?
- Why was it *objectively bad*?

Homo Ludens / Huizinga

- In play there is something "at play" which transcends the immediate needs of life and imparts meaning to the action. All play **means** something
 - The goal of successful game design is the creation of meaningful play.

Laurel (1993)

- [They] identified action as the key ingredient and conceived Spacewar! as a game that could provide a good balance between thinking and doing for its players. They regarded the computer as a machine naturally suited for representing things that you could see, control, and play with. Its interesting potential lay not in its ability to perform calculations but in its capacity to represent action in which humans could participate.



Meaningful Play

- A descriptive definition:
 - Describes what happens in every game
 - A feature of *all* games that we can look for
- **Meaningful play** in a game emerges from the relationship between player action and system outcome; it is the process by which a player takes action within the designed system of a game and the system responds to the action. The **meaning** of an action in a game resides in the relationship between action and outcome.
 - Every game lets players take actions, and assigns outcomes to those actions

Meaningful Play

- An evaluative definition:
 - Can be used to evaluate the validity of a design
 - A goal of successful game design
- **Meaningful play** occurs when the relationships between actions and outcomes in a game are both **discernable** and **integrated** into the larger context of the game. Creating meaningful play is the goal of successful game design.
 - Critically evaluate the relationships between actions and outcomes, and decide whether they are meaningful *enough* within the designed system of the game

Meaningful Play

- Provides internal structure
 - Interaction between the player and elements of a system are made meaningful by rules which describe their relationship
- Includes a context
 - Assigns meaning to actions that are taken
- Discernable
 - The player can perceive the immediate outcome of an action
- Integrated
 - The outcome of an action is woven into the game system as a whole, including the future

Systematic Game Design

- Game Design is a **second-order** design problem
- Designer creates...
 - The formal system
 - The rules
 - Explicit interactions with the system
- The designer **indirectly** designs the player's *experience* by **directly** designing
 - The formal system
 - The rules
 - Explicit interactions with the system

Understanding Interaction

- Cognitive interactivity
 - Emergent
 - Interpretive participation
 - Using your imagination while playing a game
 - Psychological, emotional, intellectual interaction between player and system
 - **How do we measure this? Presence, Immersion measures**
- Functional interactivity
 - Designed
 - Utilitarian participation
 - Structural interactions
 - What does the interface look like, is it well designed?
 - Does the game feel responsive?

Understanding Interaction

- Explicit interactivity
 - Designed
 - Participation with designed choices and procedures
 - Using the joystick to move Pac-Man
 - Choices, random events, rules and procedures
 - Defining what we mean when we say that games are interactive
 - **Allowing the player to make choices**
- Cultural, beyond-the-object interactivity
 - Emergent
 - Participation within the culture of the object
 - Fan-culture
 - Memes, videos, cosplay (!)



Farming Simulator Mad Skill | No Plow | 360 Crop Rotation |



Garen Official Trailer | De
Noxus is worst turk

Understanding Interaction

- Game design is the process of creating an experience with meaningful play
- By focusing on defining **explicit** and **functional** interaction
- If we're lucky this also leads to cognitive and cultural interactivity

Meaningful Choice

- Meaningful play has to incorporate explicit interactivity and meaningful choice
 - Otherwise the player must invent their own goals
 - Interactivity without context (i.e. reason) has no meaning
 - Roll a dice (functional)
 - Roll a dice while playing Monopoly (cognitive, functional, explicit)
- Micro-choices
 - Moment to moment interactivity
- Macro-choices
 - Concern the long-term progress of the game experience
 - The way micro-choices join together like a chain to form a larger trajectory of experience
 - Many levels of macro-choice

Pac-Man (1980)



Micro-Choices

- Controlling Pac-Man
 - Press left, Pac-Man moves left
 - Press right, Pac-Man moves right
- A string of micro-choices
 - Players are rarely aware of the hundreds of choices made per minute
- Discernable
 - Move the joystick, Pac-Man moves left, right

Macro-Choices

- *How to move*
 - Moving away from, or towards the ghosts
 - Moving to *that* area as there are still pills to collect
 - Planning a route to collect power-ups to catch the ghosts
 - Deciding whether to play in the first place
- **Integrated**
 - The different choices determine whether the player wins or loses the game as a whole
- **Evaluate**
 - Is this more or less *meaningful*?

Enemy Territory (2003)



Micro <-> Macro

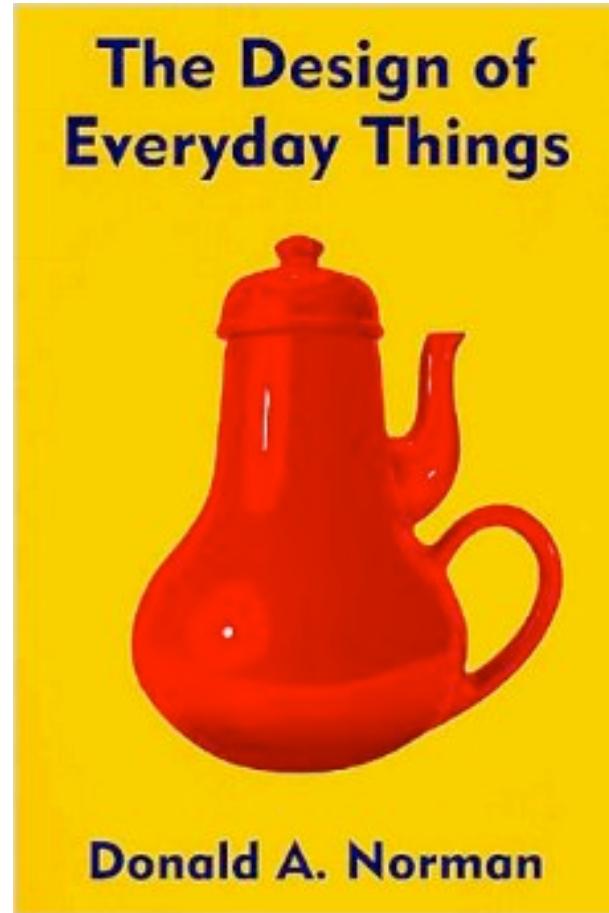
- A complex, multilayered process
 - When the outcome of **every** action is discernable and integrated, choice-making leads to meaningful play.
 - *In a fighting game, every controller action is completely consistent and visually represented by the character on-screen. In Tekken, when Eddy Gordo does a cartwheel kick, you know what you're going to get. As the player learns moves, this consistency allows planning-intention-and the reliability of the world's reactions makes for perceived consequence. If I watch someone play, I can see how and why he or she is better than I am, but all players begin the game on equal footing*
 - Doug Church

Anatomy of Choice

- What happened before the player was given the choice?
- How is the possibility of choice conveyed to the player?
- How did the player make the choice?
- What is the result of the choice? How will it affect future choices?
- How is the result of the choice conveyed to the player?
- These can be
 - Internal state – system processing
 - External - choice must be represented to the player

Non-game design principles

- Affordances
 - The actionable properties between the world and an actor
 - How are these signalled
- Can the desired controls be perceived
 - In an easy to use design, if they can both readily be perceived and interpreted
- Can the desired actions be discovered
 - Whether standard conventions are obeyed
 - What are some standard conventions?



Anatomy of Choice (1)

- What happened before the player was given the choice?
- Internal event
- Refers to the internal state of the game
- Where are the ghosts and where is Pac-Man?
- What trajectory is the ghost moving on?
- What is the player's health?

Anatomy of Choice (2)

- How is the possibility of choice conveyed to the player?
- External event
- The screen displays the state of the game
- where the ghosts are
- The maze implies where Pac-Man can move
- The joystick / knowledge of key bindings implies possible options
- Knowledge of how Pac-Man moves

Anatomy of Choice (3)

- How did the player make the choice?
- Internal event
 - To the player
- The player decides what to do
- The player makes their choice by moving in one of four directions where possible

Anatomy of Choice (4)

- What is the result of the choice? How will it affect future choices?
- Internal event
- The game updates its internal state
- Did we hit a ghost?
- Did we eat a pill?
- Did we eat the fruit?
 - Change ghosts to edible

Anatomy of Choice (5)

- How is the result of the choice conveyed to the player?
- External event
- The result of the choice is represented to the player via screen graphics and audio
 - Pac-Man moves
 - We see Pac-Man eating a pill
 - We see the ghosts killing Pac-Man
 - The game ends
- ...leads back to step 1
- Game interaction = state machine

Example: Mario 64



Example: Mario 64

- Consistency
 - Simple movement, small selection of jumps
 - Each action can always be performed
 - A triple jump goes a certain distance
 - Predictable physics
 - Game situations are highly *discernable*
 - Players can make good guesses about what will happen *should* they try something
- Evolve plans for action
 - (Implicit) knowledge of how the (Mario) world works
 - Consistency of the world makes it obvious when a choice does / doesn't work
 - Make another plan using the information learned during the first attempt as the reason for failure is understandable
- Many apparent options
 - Multiple goals in each world
 - The first star (collectible) is positioned to encourage players to see most of the area
 - Players have control over what they want to do and how they want to do it, leads to participation

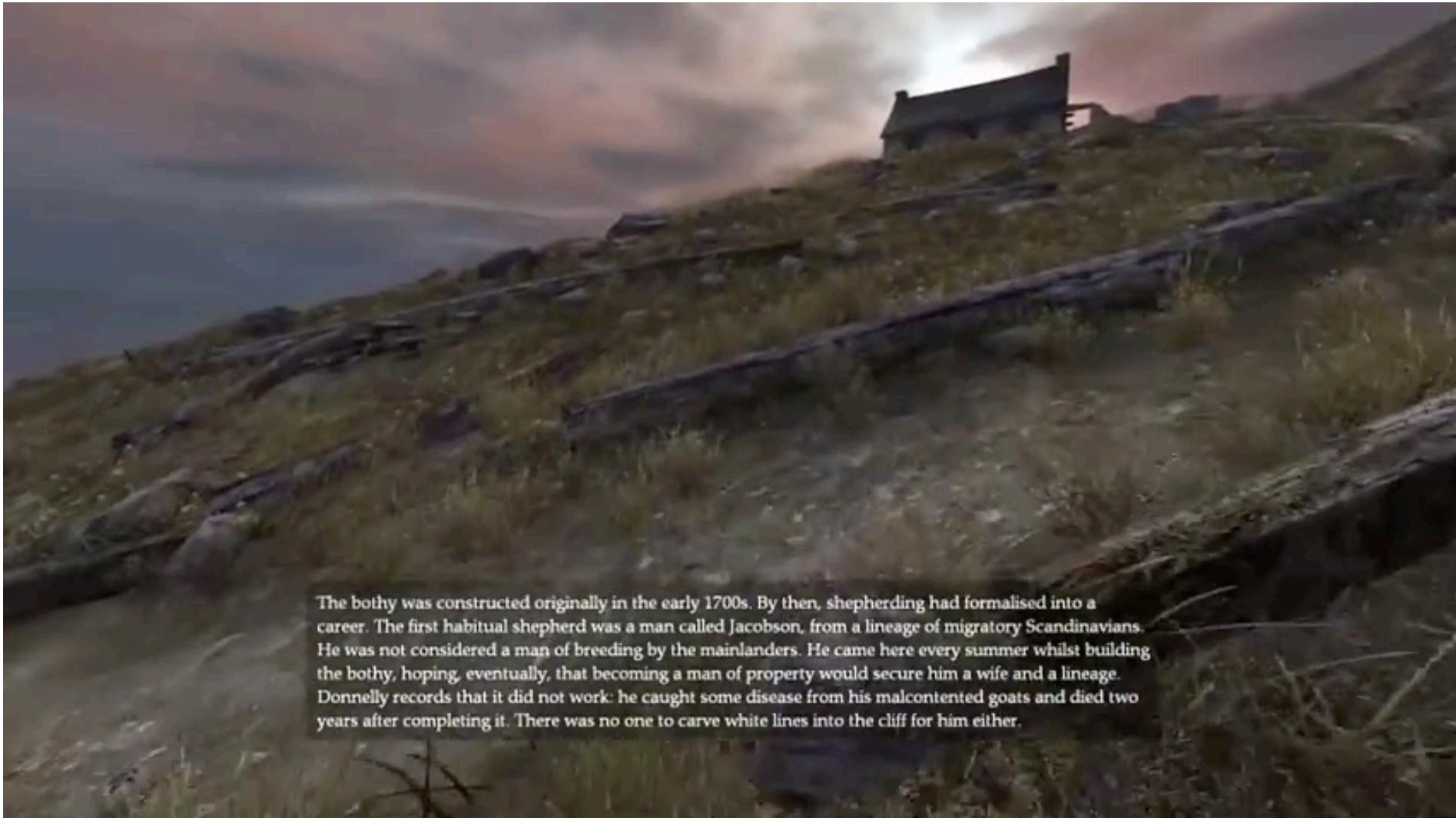
Categorising Choice

- Hollow
- Obvious
- Uninformed
- Informed
- Dramatic
- Weighted
- Immediate
- Long-term
- Orthogonal

Dark Souls (2011)

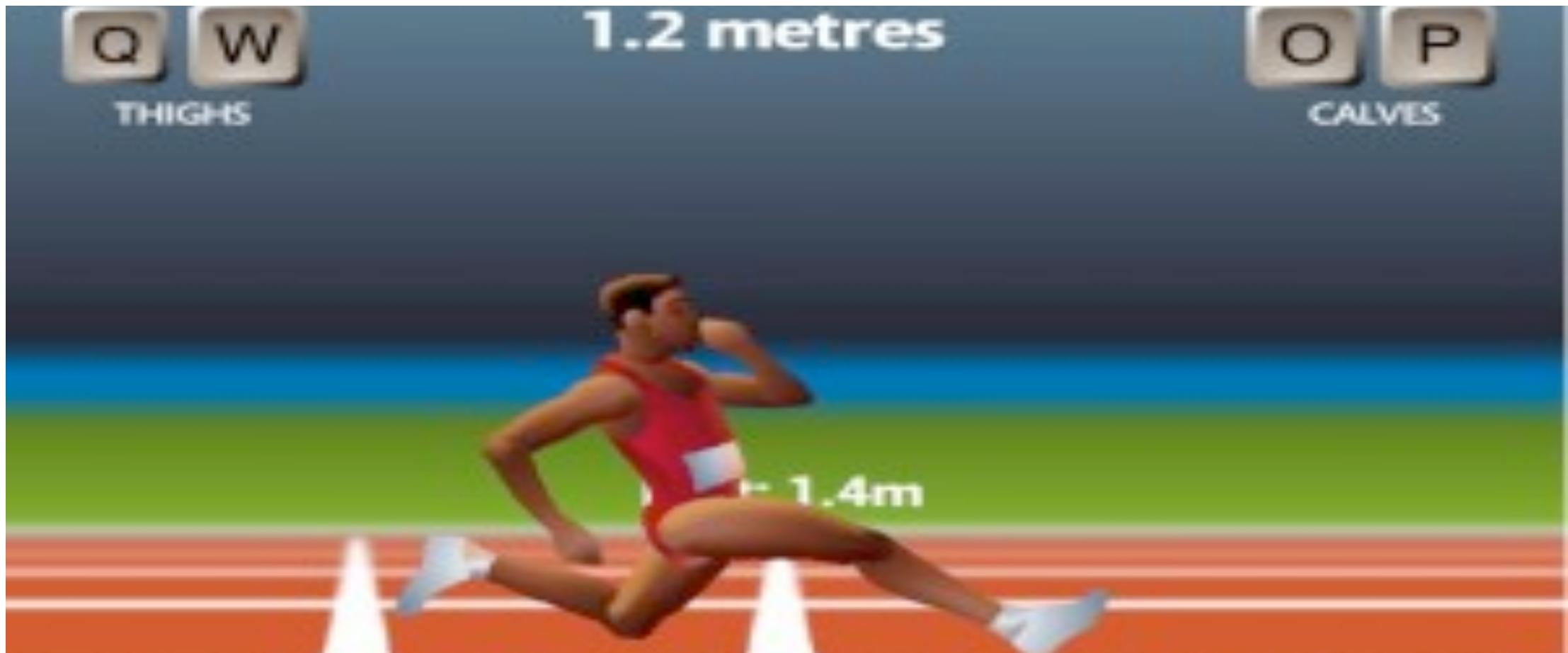


Dear Esther (2008)



The bothy was constructed originally in the early 1700s. By then, shepherding had formalised into a career. The first habitual shepherd was a man called Jacobson, from a lineage of migratory Scandinavians. He was not considered a man of breeding by the mainlanders. He came here every summer whilst building the bothy, hoping, eventually, that becoming a man of property would secure him a wife and a lineage. Donnelly records that it did not work: he caught some disease from his malcontented goats and died two years after completing it. There was no one to carve white lines into the cliff for him either.

QWOP (2008)



Failure States

- Actions seem arbitrary
 - Player actions should have meaningful outcomes in the internal game state
 - Eventually
 - Everything should be there for a reason
- Not knowing what to do next
 - Clearly represent choices to the player
- Punishment without knowing why
 - The state resulting from a choice is not represented clearly enough to the player
- Not knowing whether an action had an outcome
 - Short or long-term?
 - Action and outcome should be explicit
 - Movement should be responsive



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Choose your faction:

The Resistance

The Resistance seek to battle the forces that are attempting to use Exotic Matter to enslave humanity.

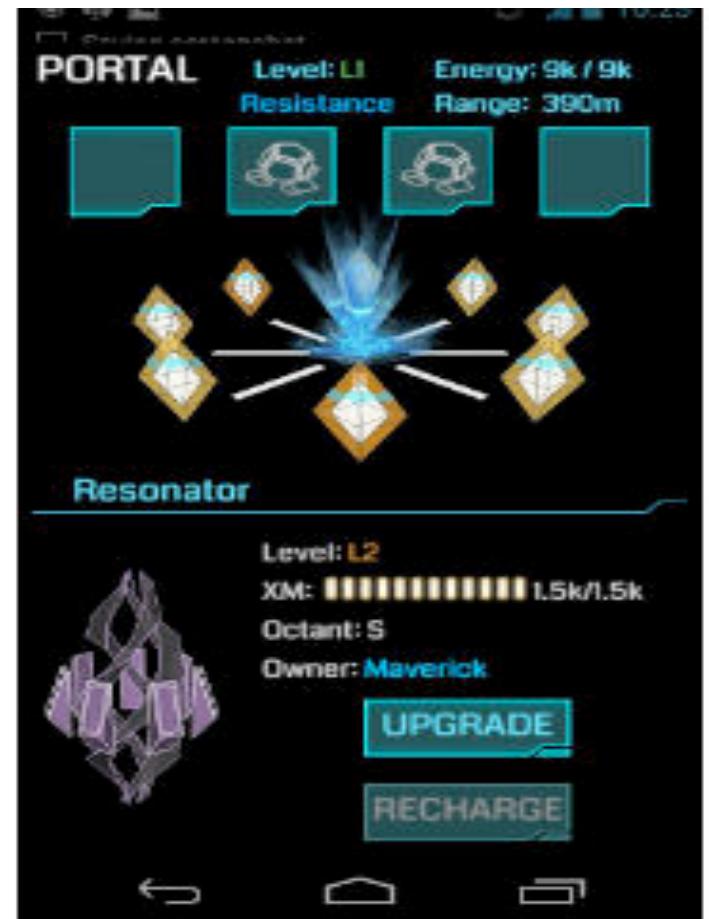
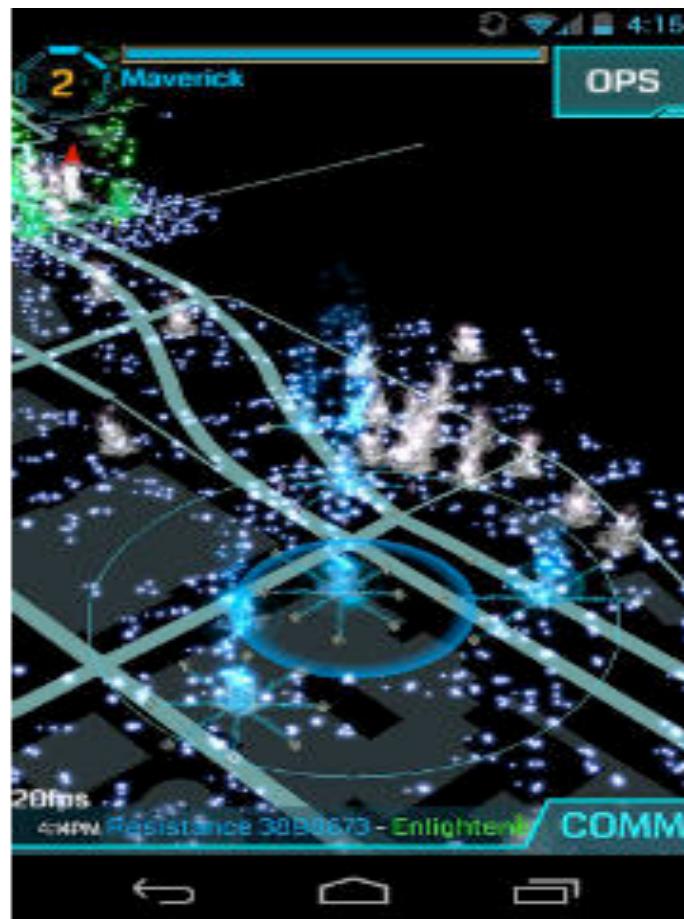
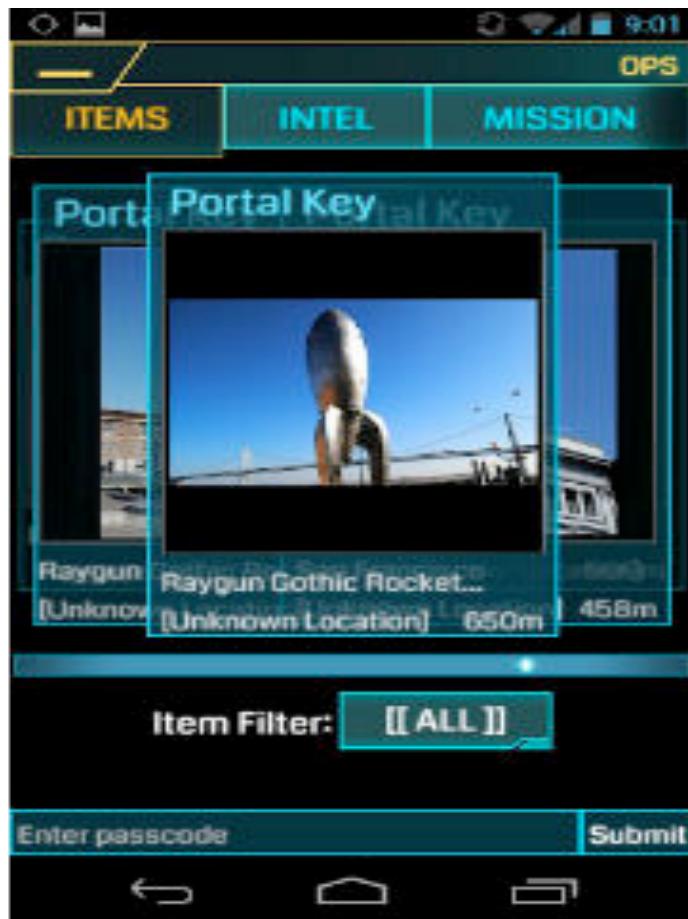
The Enlightened

The Enlightened seek to harness the power of Exotic Matter to evolve mankind to a higher level.

Choose carefully. This choice is final.



Ingress (2012)



Game Experience and Choice

- Low-level design principals
 - Immediate feedback
 - Moment-by-moment systems
 - Keep the player in the game
- High-level design principals
 - Progression and Motivation
 - Pacing and difficulty
 - Genre-specific design principals
- Puzzle design
 - Resource management
 - Economic systems

Key points

- Games as systems
 - Second-order design problem
- Forms of interaction
 - Context is key
- What makes play meaningful?
 - Context
 - Affordances / Signals
- Anatomy of choice
- Where might it go wrong?

Extra-curricular reading

- Pilgrim in the Microworld. David Sudnow (1983)
- “If only I could feel the impact of the ball on the paddle, that would certainly help, would give me a tactile marker, stamping the gesture's places into a palpable little signature so I'd feel each destination being achieved and not just witness the consequences of a correct shot.”

Reading

- Doug Church
[http://www.gamasutra.com/view/feature/131764/formal abstract design tools.php](http://www.gamasutra.com/view/feature/131764/formal_abstract_design_tools.php)
- Rules of Play chapters 3, 6
- Homework
 - Play QWOP <http://www.foddy.net/Athletics.html>