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COMP150

Session 1a
Games: From Concept to Design

From Concept to Prototyping

INTRODUCTION

Today's Session on Games Design

- Towards a functional definition of a "game" and "games design".
- Typically, what approach do "games designers" actually adopt in order to create a coherent design?
- What is the role of "prototyping" and "play testing"?

Towards a Functional Definition for Designers

WHAT IS GAMES DESIGN?

Defining “Game”

So, what is a “game”, again?

Definitions

FALCOMPMIKE

Propose your own definitions

Definitions

A game has “ends and means”: an objective, an outcome, and a set of rules to get there.

(David Parlett)

Definitions

A game is an activity involving player decisions, seeking objectives within a “limiting context” [i.e. rules].

(Clark C. Abt)

Definitions

A game has six properties:

- it is “free” (playing is optional and not obligatory),
- “separate” (fixed in space and time, in advance),
- has an uncertain outcome,
- is “unproductive” (in the sense of creating neither goods nor wealth
- is governed by rules,
- and is “make believe” (accompanied by an awareness that the game is not Real Life, but is some kind of shared separate “reality”).

(Roger Callois)

Definitions

voluntary effort to overcome unnecessary obstacles

(Bernard Suits)

Definitions

Games have four properties:

- They are a “closed, formal system”;
- they involve interaction;
- they involve conflict;
- and they offer safety...

(Chris Crawford)

Definitions

a form of art in which the participants, termed Players, make decisions in order to manage resources through game tokens in the pursuit of a goal

(Chris Crawford)

Definitions

a system in which players engage in an artificial conflict, defined by rules, that results in a quantifiable outcome

(Salen & Zimmerman, 2004)

Definitions

http://www.gamedefinitions.com/

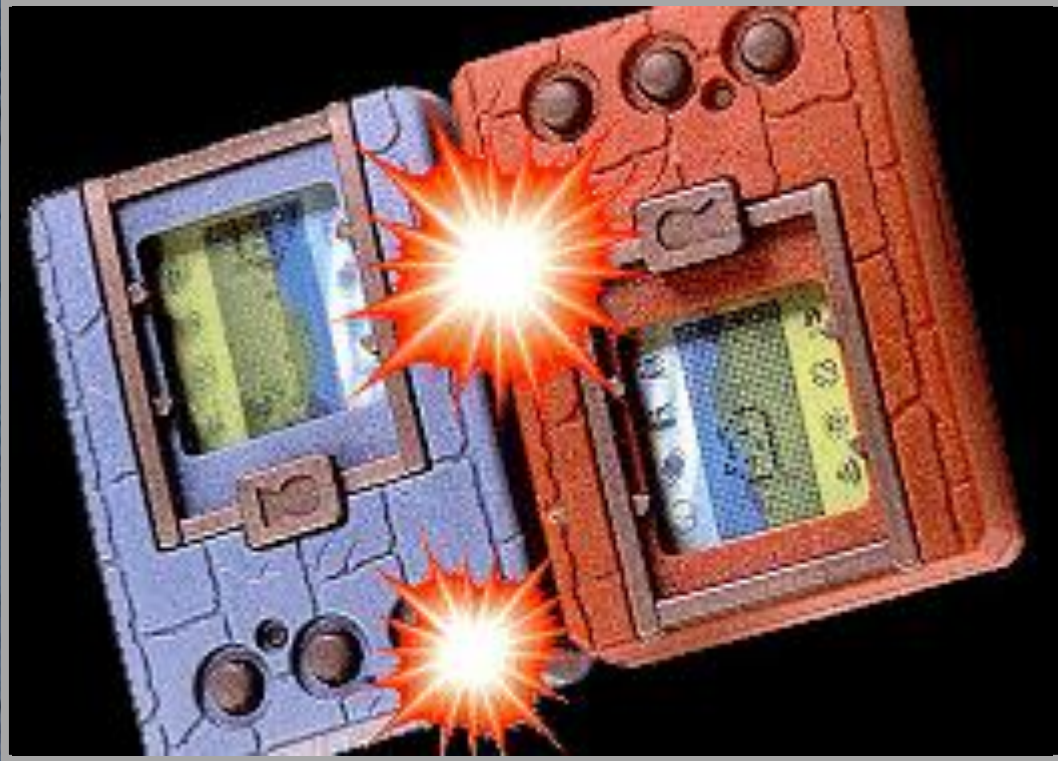
A Functional Definition

“A game is a framework for imagination that encapsulates a playful experience in a way that allows it to be copied and shared”

A Functional Definition

"A game is a framework for imagination that encapsulates a playful experience in a way that allows it to be copied and shared"

Is it a Game?



Toy, Game, or Both?

Do design approaches differ?

Is it a Game?

A game, a puzzle, or a simulation?

Is it designed differently? Why?

Is it a Game?

Is this just a simulation? What is the goal?

Is it designed differently? Why?

The Player Experience

Generally, when designing a game, or game-like product, it is the experience of those interacting with the product that is important.

I Have No Words...

Few designers actually understand what "gameplay" is, because the term itself is nebulous and therefore pretty useless.

I Have No Words & I Must Design:
Towards a Critical Vocabulary for Games,
Costikyan, 2002

I Have No Words...

Saying “it has good gameplay” doesn’t help us understand what is good about it, what pleasures it provides, and how to go about doing something else good...

I Have No Words & I Must Design:
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Costikyan, 2002

Formal Elements of Games

A game:

- is a system (a framework for interactivity)
- has mechanics (rules)
- has sequence (real-time or turn-based)
- will communicate with players (control, feedback, text)
- has states of perceivable consequence (player resources, game state, outcomes)

Formal Elements of Games

A game:

- has dynamics (decision making, intention, flow)
- has uncertainty (randomisation, luck)
- enforces inefficient means (difficulties, handicaps, challenges)
- can have terminal end-states (objectives, winning conditions)

Formal Elements of Games

A game:

- has representations (tokens, assets)
- can have theme and narrative (story, setting)
- requires volunteers (people who use the system)
- Is systematic (applies rules fairly to all players)
- produces an aesthetic (the gameplay experience)

Formal Elements of Games

- Manipulating any of these elements can make for a very different experience
- Often, these elements are interrelated, in particular: mechanics and representation
- Changing one element affects the others!

Formal Elements of Games

With a more realistic representation, should the ball bounce off the “wall” of the table like Pong?

The MDA Model

Formal Elements e.g.
Game States,
Transitions, and Interface

"the rules"

"how the game operates"

Player Actions, and System
Run-Time Behaviour

"what the player does"

"interaction between rules"

Presence, Flow, and
Emotional Responses

"fun"

"bliss, excitement,
frustration, fiero, wonder,
fellowship, naches"

The MDA Model

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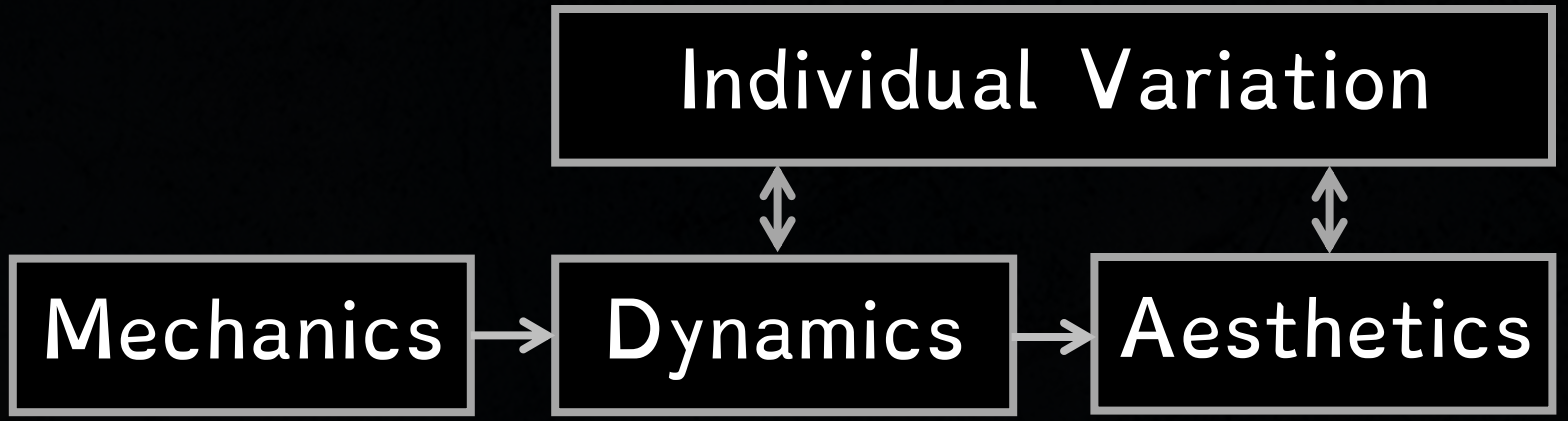
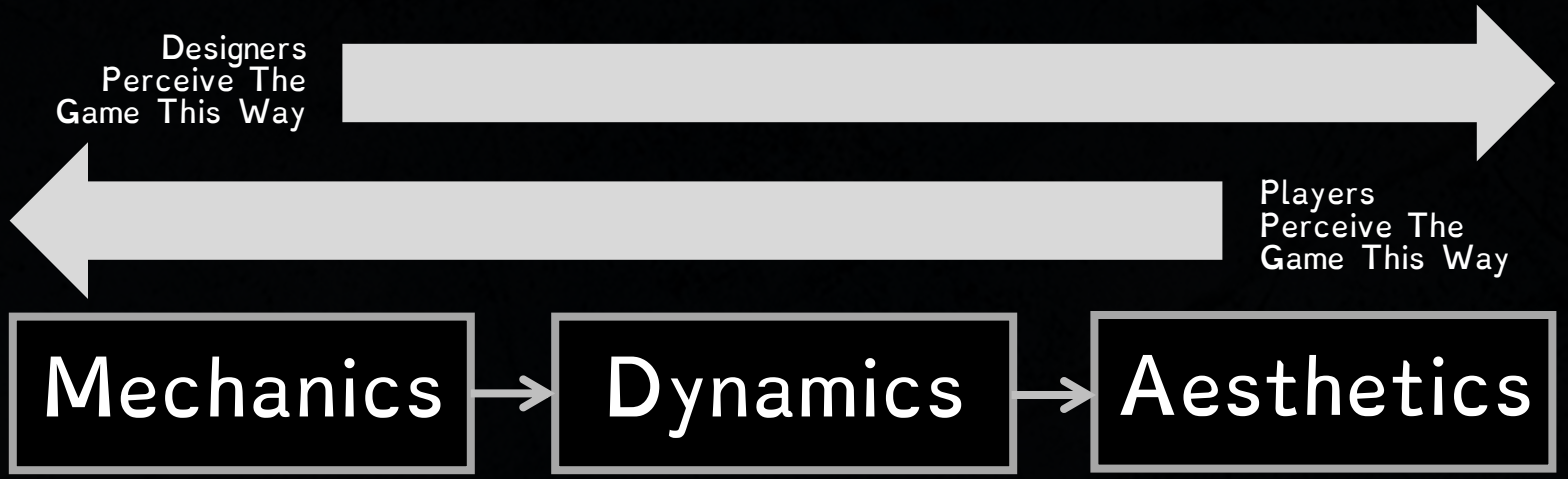
The MDA Model

Hunicke, Leblanc & Zubek, 2004



The MDA Model

Hunicke, Leblanc & Zubek, 2004



What is Games Design?

"The process of games design is using the formal elements of games to craft a system of interaction that drives an aesthetic"

From Concept to Design

FIRST STEPS IN DESIGN

Forms of Games Design

System Design
Level Design
Content Design
Interface Design
World Design
Narrative Design

Forms of Games Design

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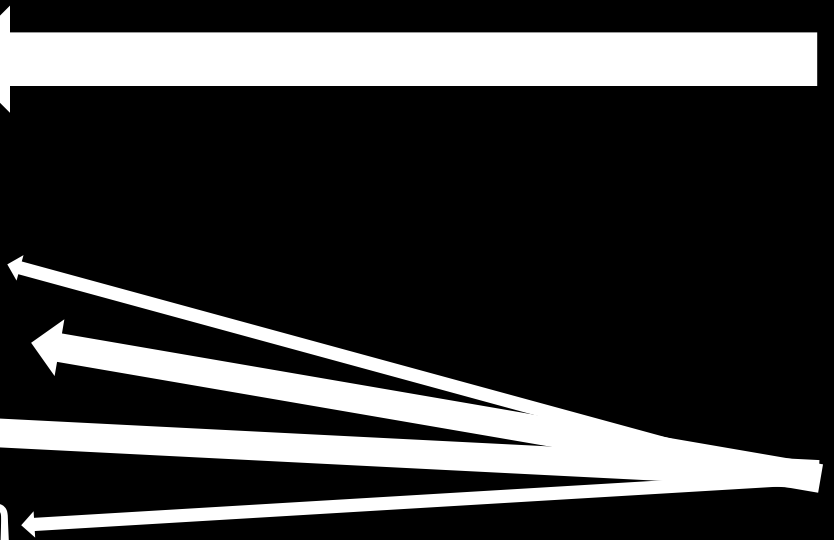
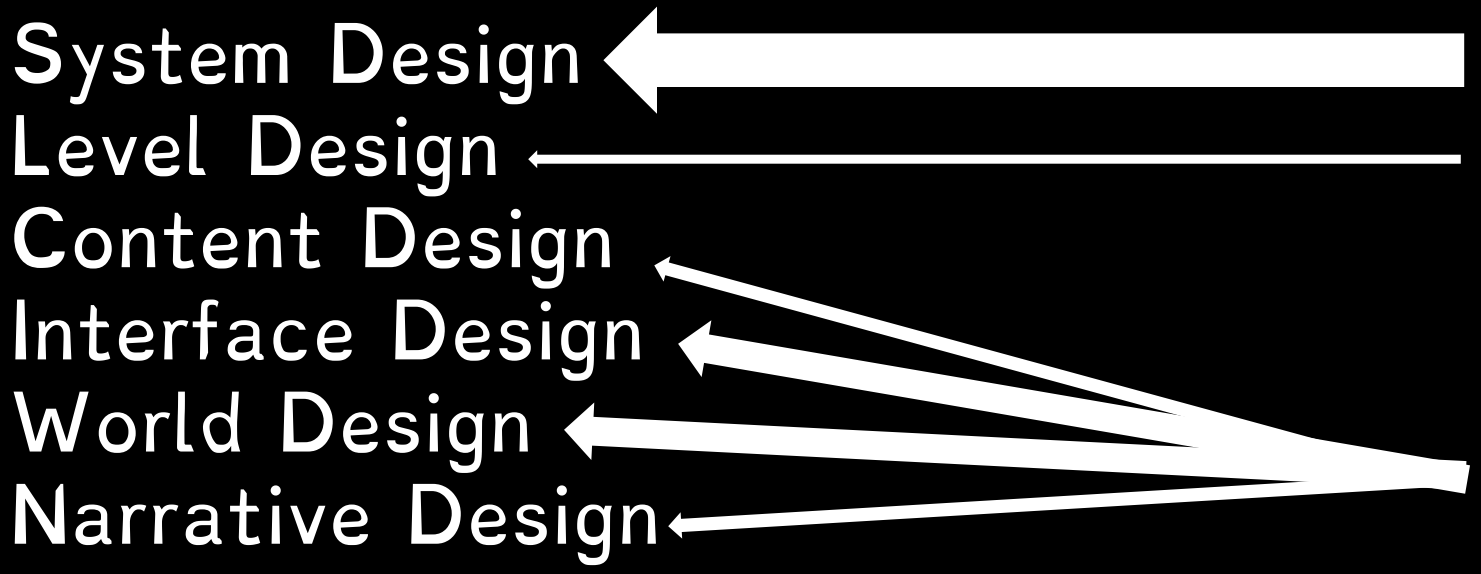
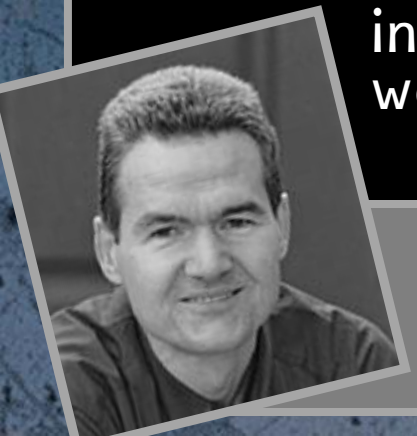


Forms of Games Design



Approaches to Games Design

"I don't have a fixed design process. Quite the contrary, I believe that starting from the same beginning will frequently lead to the same end. Finding new ways of working leads to innovative designs. Of course, I use the same basic ingredients of mechanics, materials, theme and world. These are good anchor points..."



The Design and Testing of the Board Game: The Case of The Lord of the Rings, Knizia, 2008

Approaches to Games Design

Blue Sky

Story

Slow-Boil

Mechanic

Research

IP

MDA

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MDA

Games Design

What do “games designers” actually do to create a coherent design?

Activity

Let's Make A Game!

Make a race-to-the-end style board game.

In groups of 3-4:

- Design the play space
- Think of a Theme
- Set an Objective
- Represent the player in some way
- Design some movement rules
- Set a winning condition
- Propose a form of conflict

Moving away from documentation

DEVELOPMENT PROCESS

Games Development Methodology

- In the late 1970s, engineers tended to adopt a “Just-do-it” approach.
- It became more common in the late 1980s to use up-front monolithic ‘living’ design documents to drive iterative waterfall processes.
- From around 2000s, agile methodologies based on pre-production, vertical slices, prototypes, and iteration became prominent.

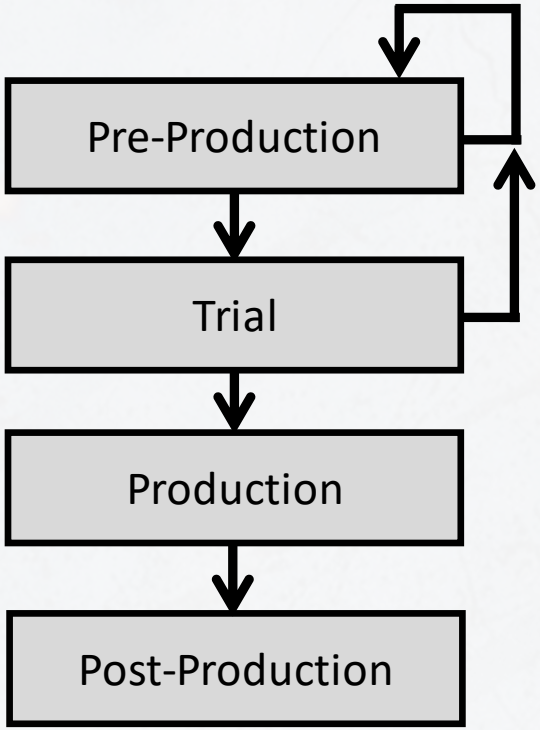
Games Development Methodology

Common Myths found by Cerny & John (2002):

1. Scheduling is possible
2. Shouldn't throw out good work
3. Milestones
4. Alpha = first playable
5. Killing a project is bad
6. The bigger the design document, the better
7. The consumer is king

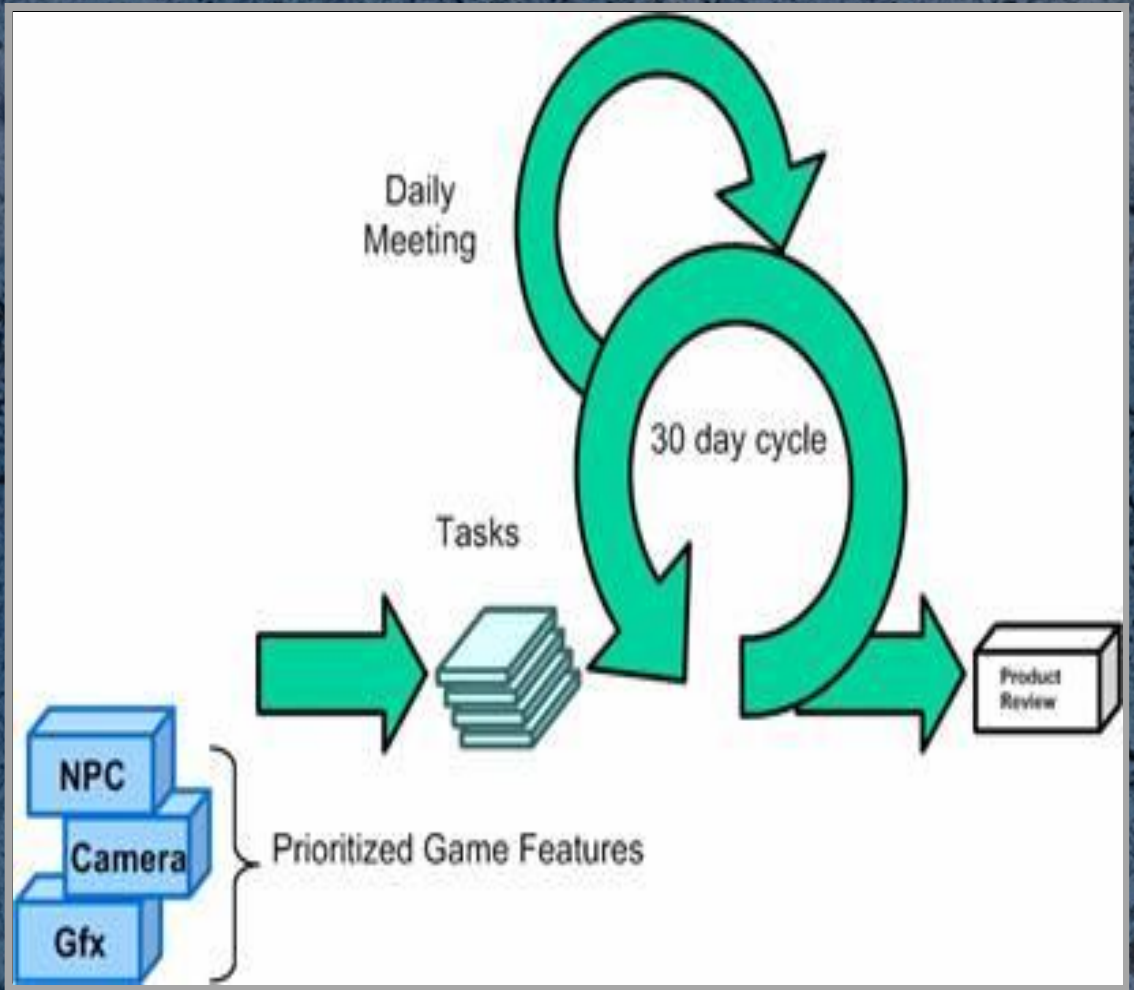
METHOD

Cerney's free-form, pre-production to production method that explores a game's viability prior to production. It advocates that if the first level produced does not excite customers, then the game idea should be revised or set aside.



SCRUM

A method that has recently gained popularity is known as **SCRUM**. It based loosely around testing ‘vertical slices’ regularly and is highly iterative.



A Simple Approach

1. Come up with a basic idea.
2. Revise ideas and form a concept.
3. Implement a prototype that demonstrates the concept.
4. Play Test
5. Repeat from 2.

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Session 1b
Games: From Design to Prototyping


Moving away from
documentation
PAPER
PROTOTYPING

Why Prototype?

So, why do we prototype?

Why Prototype?

- Ideation = proposing over-arching key elements, such as theme, forming a concept
- Design = nitty-gritty decision making, forming a game

Why Prototype?

- Prototyping in games reduces risk associated with the design process
  - Design Risk
  - Development Risk
  - Market Risk
- It is an essential part of moving beyond a “ideation” to actually “designing” and “prototyping” a game?

Why Prototype?

- Maximise iterative cycles in order to reduce design risk
- Develop and solidify ideas into concrete designs
- Evaluation does not take very long, and early feedback is valubal
- Reduce the expense caused by changing a well-developed product

Why Prototype?

- Build as fast and early as possible – make your first prototype as ugly as possible – there is a time and place for nice looking prototypes (e.g. a pitch)!
- Minimise what you need to build – only prototype the important things
- Make it easy to change – so you can adjust on-the-fly during play tests!

Why Paper Prototype?

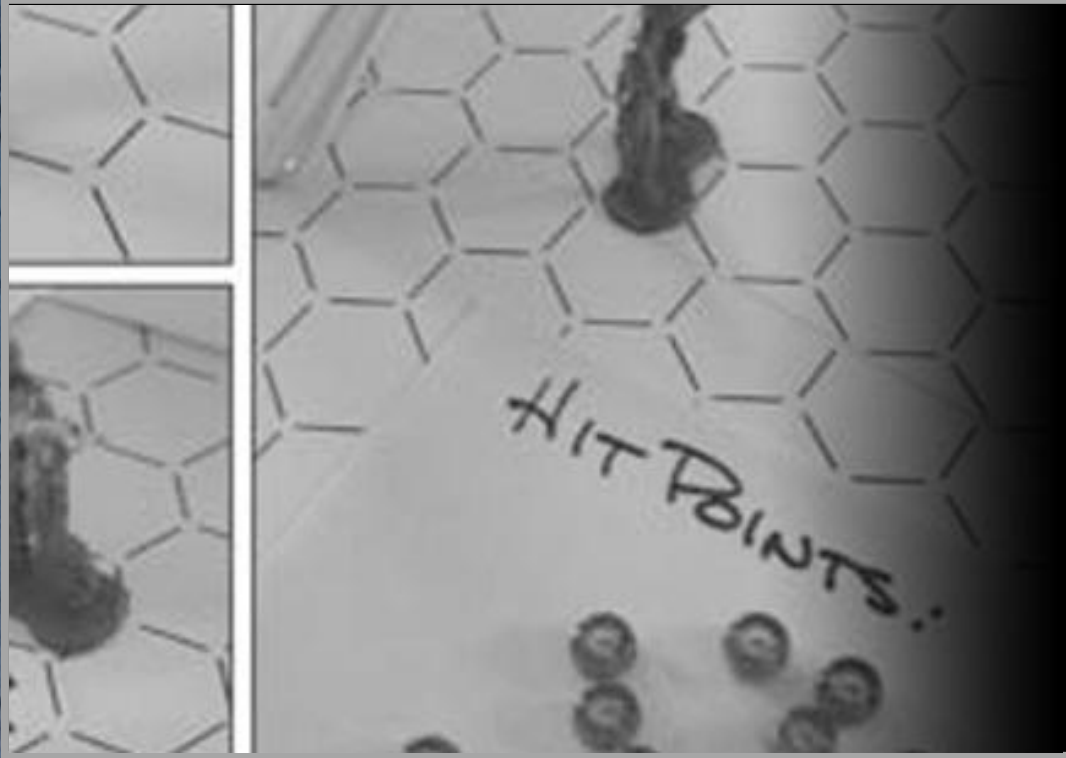
- Paper can be used to model many gameplay systems — even the ones we normally associate being specific to video games.
- By making something *playable*, you are forced to actually design the game properly — “no hand-waving of “this game will have 50 puzzles”

Paper Prototype

You cannot handle "twitch" mechanics

...but you can design spaces and world for a top-down action or strategy type game.

Paper Prototype

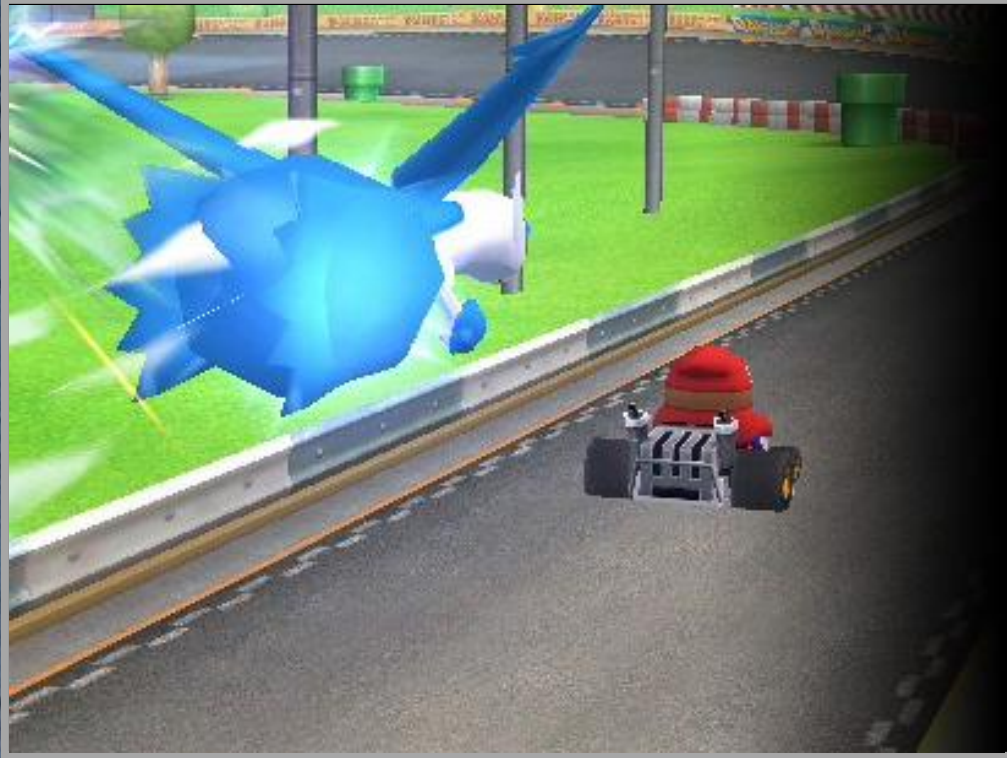


...and you can simulate many mechanics, such as a battle sequence...

Paper Prototype

A paper prototypes cannot simulate an entire digital game, but can feed into designs in very specific sub-systems within a game

Paper Prototype

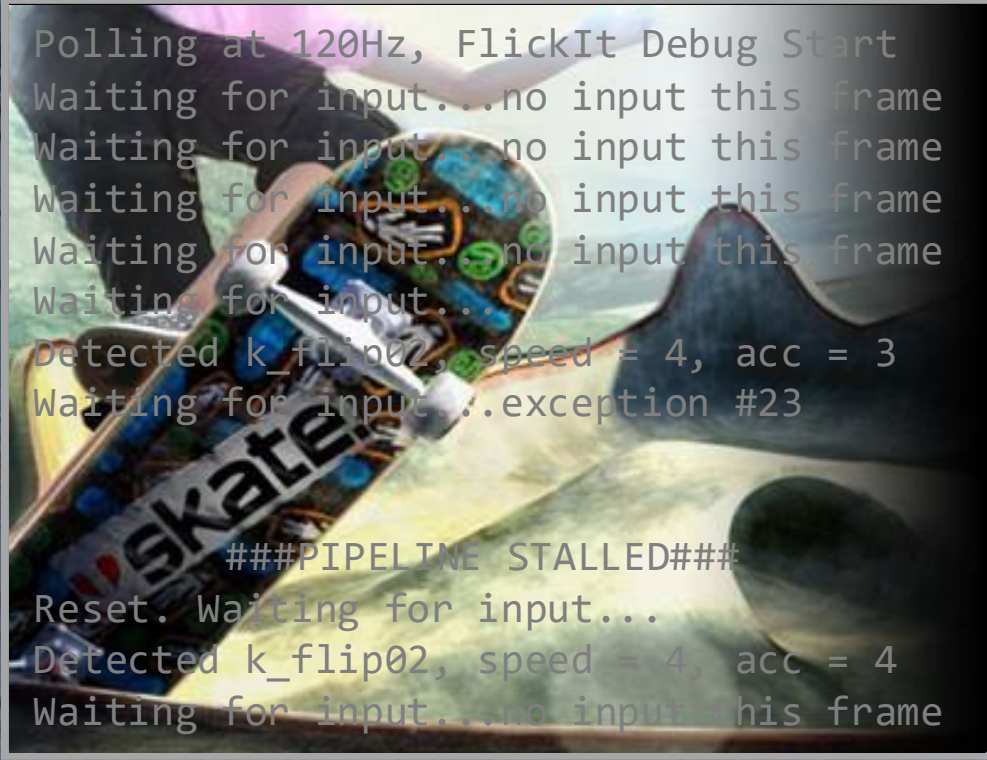


You can even check specific content and some mechanics for “game balance”

Moving away from documentation

DIGITAL PROTOTYPING

User Interface Design



The control scheme for Skate was conceived on paper and tested digitally using a basic console application

Level Design

Prototyping levels is very important part of the design process – changes become more expensive as more art assets are added to a level.

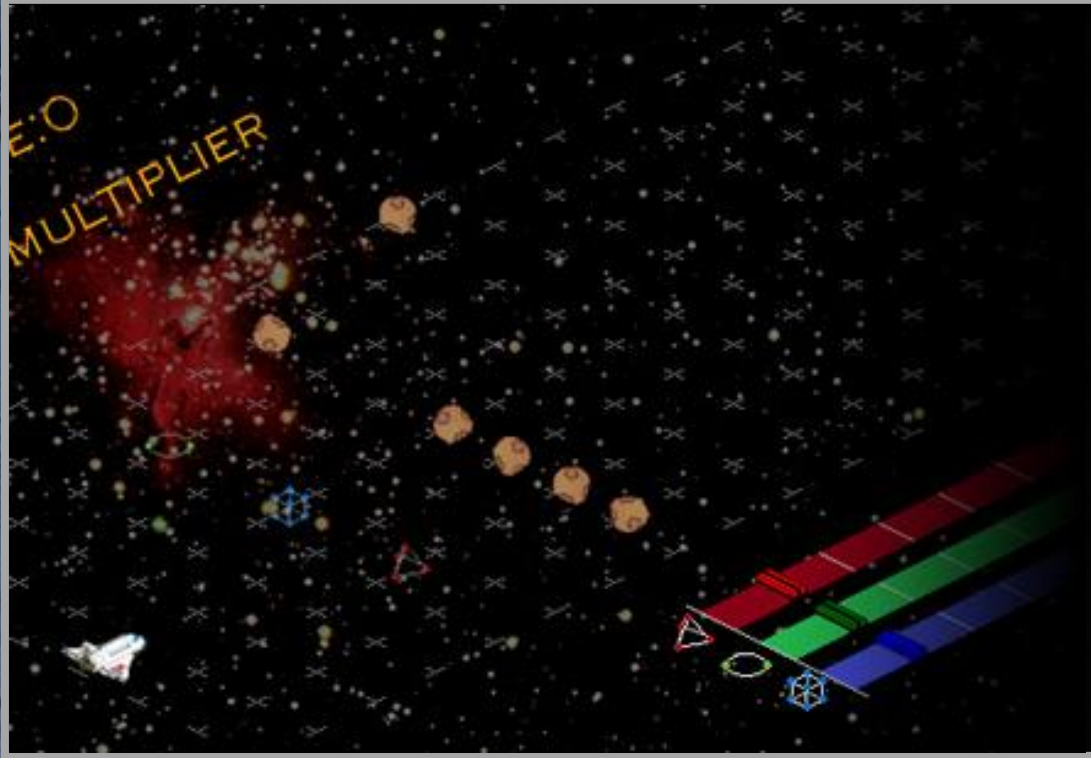
Aesthetic Direction

Videos are quite good at developing and communicating story-based and MDA driven designs.

Ludic Sketch

A ‘vertical slice’ that demonstrates an ‘hands tied behind back’ game concept

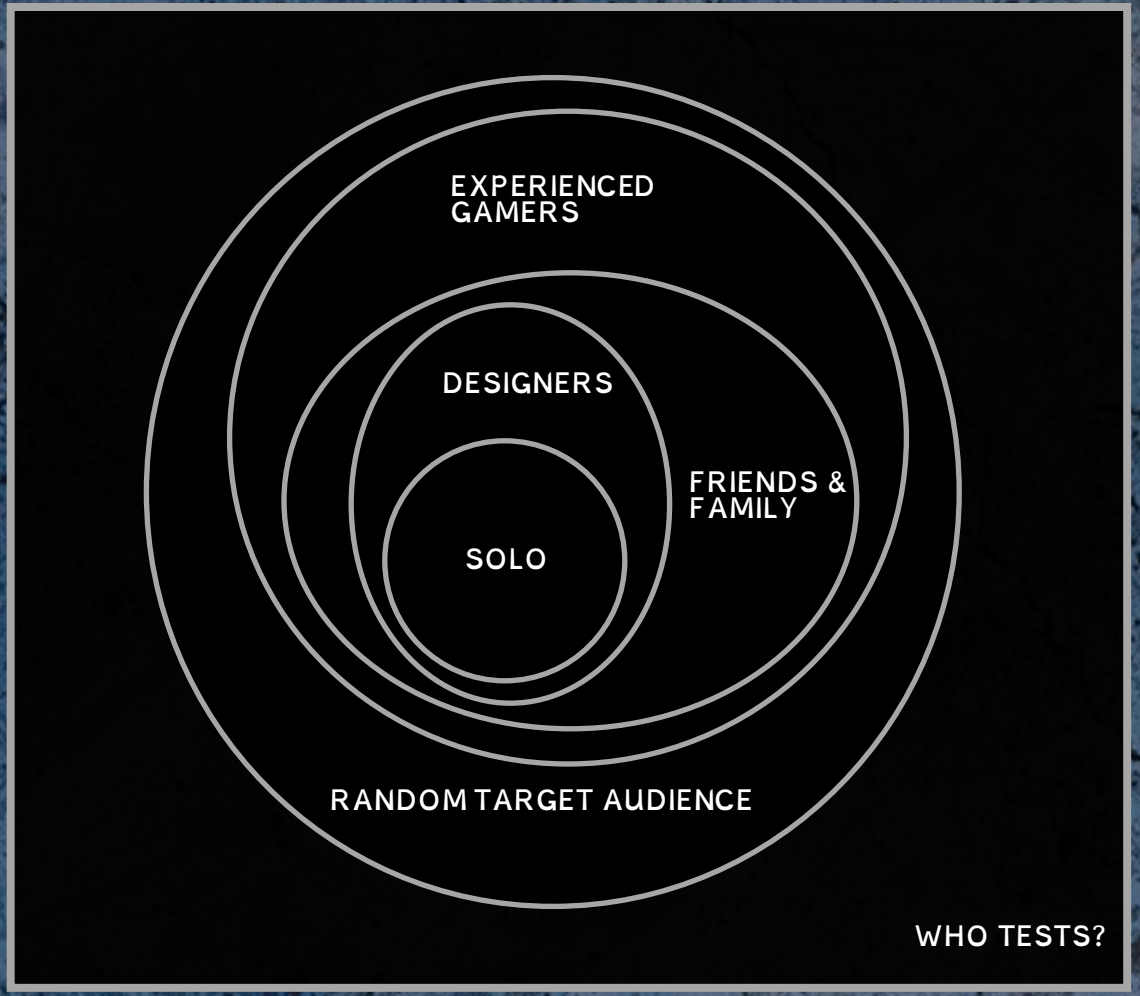
Prototypes and Beyond



Once you have your first playable, it is time to move on to play testing and refinement

Play Testing

- Listen to your play testers...
- Listen to your game...
- Listen to yourself...



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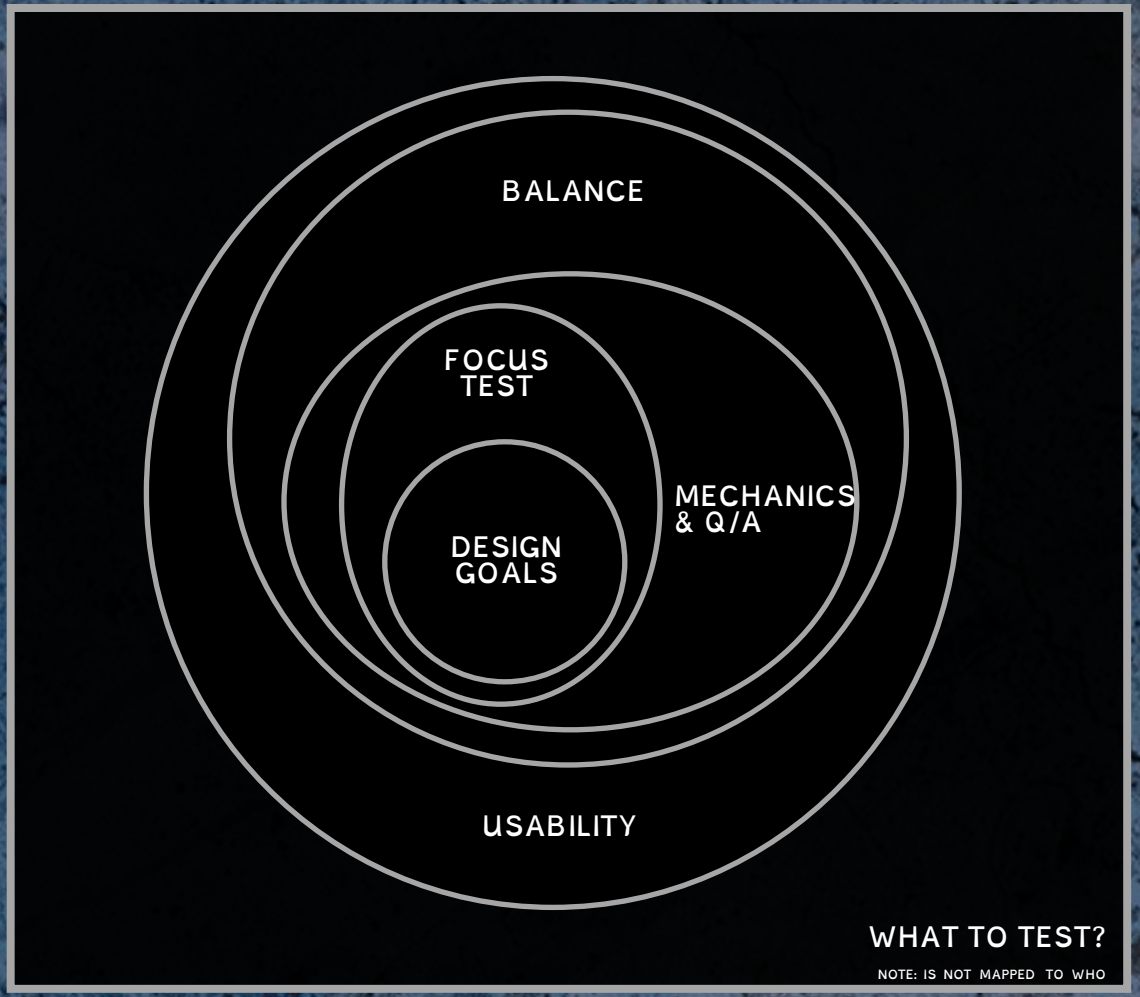

A Great Game...

The most important skill of a designer is to listen. Games often seem to take on a life of their own once they reach a certain complexity, and it's more important to make a *great* game, than to make the game that you originally intended.

The Art of Game Design: A Book of Lenses, Schell, 2008

Design Testing

LET'S PLAY


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