GAT 261

User Experience Design II

Instructor

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Office Hours

- Tues/Weds 2pm-4:30pm

DigiPen INSTITUTE OF TECHNOLOGY

Game Feel & Menu Systems

- ❑ Game Feel
- ❑ Correction Cycles
- ❑ Navigation Models
- ❑ Menu Systems

PLEASE SILENCE
ALL ELECTRONIC DEVICES

THANK YOU

GAME FEEL

What is Game Feel?

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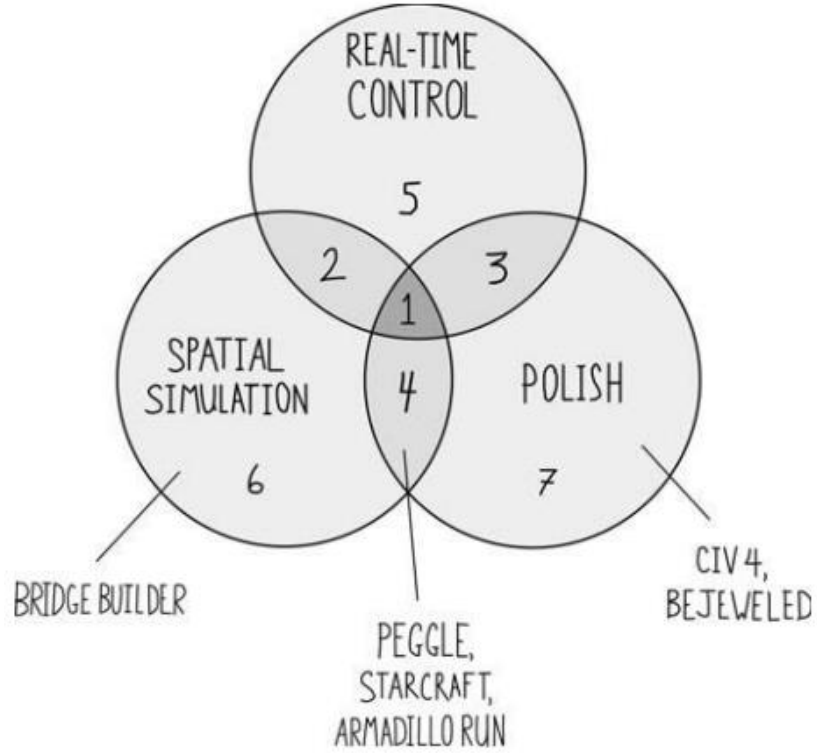
Swink's definition of game feel is:

Real-time control of virtual objects in a simulated space, with interactions emphasized by polish.

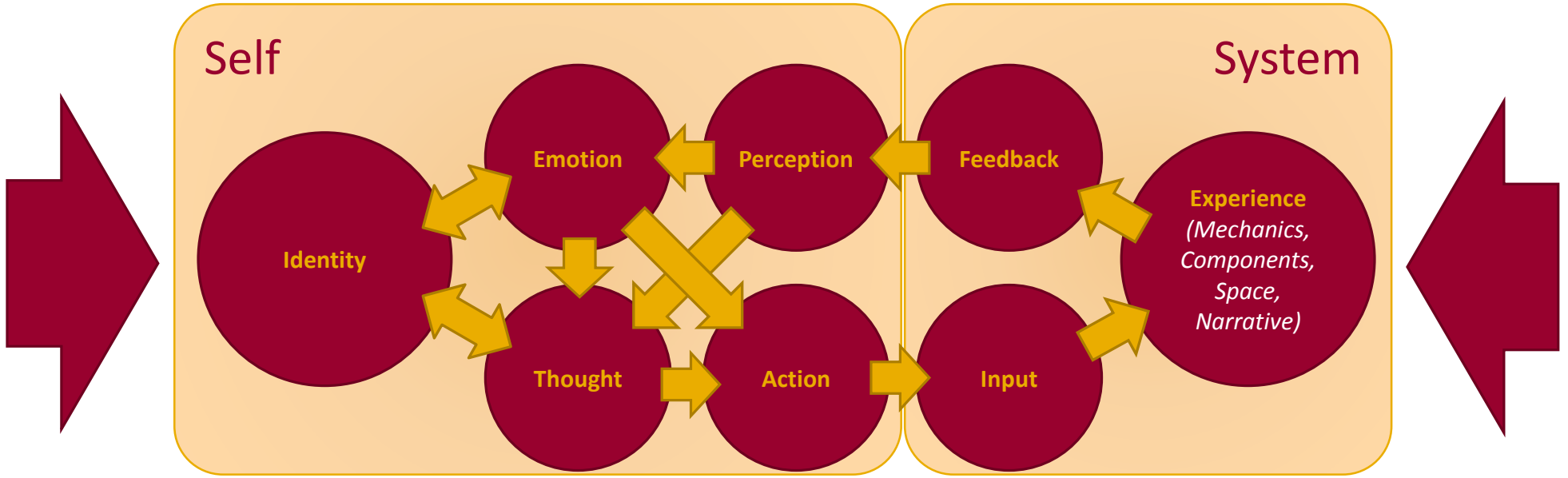
He is particularly focused on simulated reality, or as I would term it, Kinesthetic Flow.



What is Game Feel

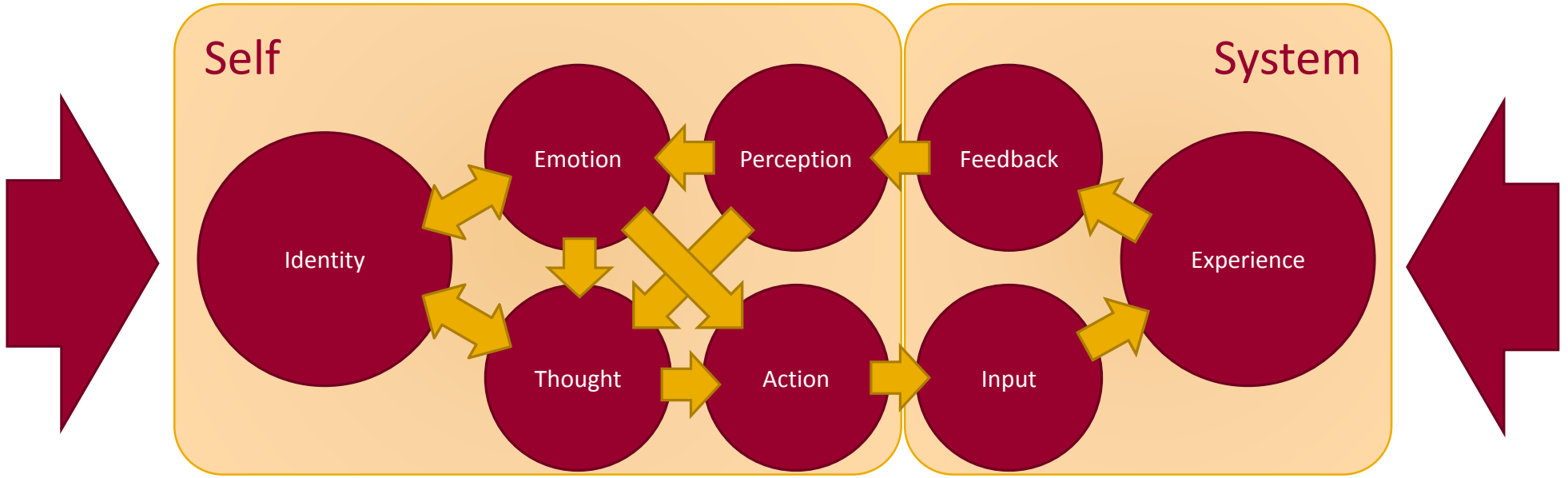
My definition of game feel is somewhat broader:

The system of interactive input and feedback within a system that moves toward meshing perception, thought, action, and emotion toward a singular experience that subsumes or augments a player's identity.



What is Game Feel

- “Real Time Control” is talking about when the loop from experience to identity is very fast and ideally continuous. You can achieve something very like this as Identity and Experience begin to move closer together.
- Polish is talking about removing friction from this system.



CLASS DISCUSSION

What Makes a Game Feel Immersive?

Experiences of Game Feel

Many experiences combine to create game feel:

- Sensation of Control
  - Conceptual Model
  - Mastery Cycle
- Sensation of Meaning
  - Goals and a sense of purpose
  - Expository and emergent narrative
- Sensation of Place
  - Extension of the Senses
  - Extension of Identity
  - Continuity of Place

Sensation of Control

- Conceptual Model
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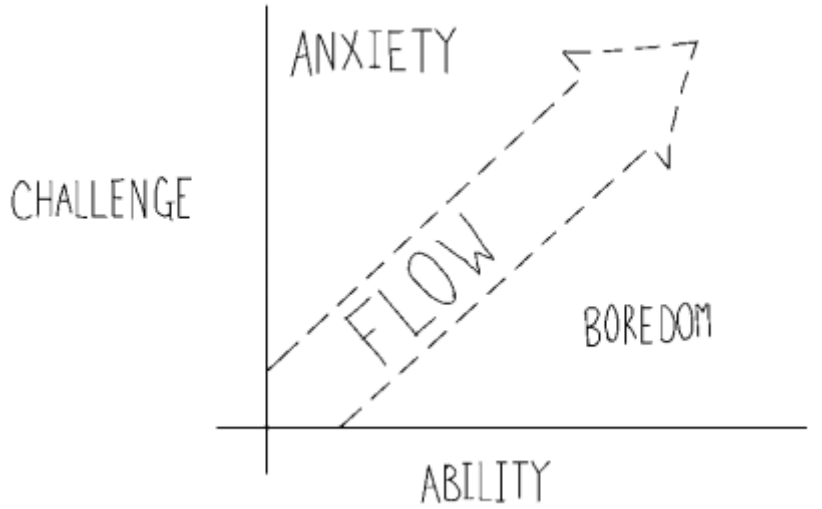

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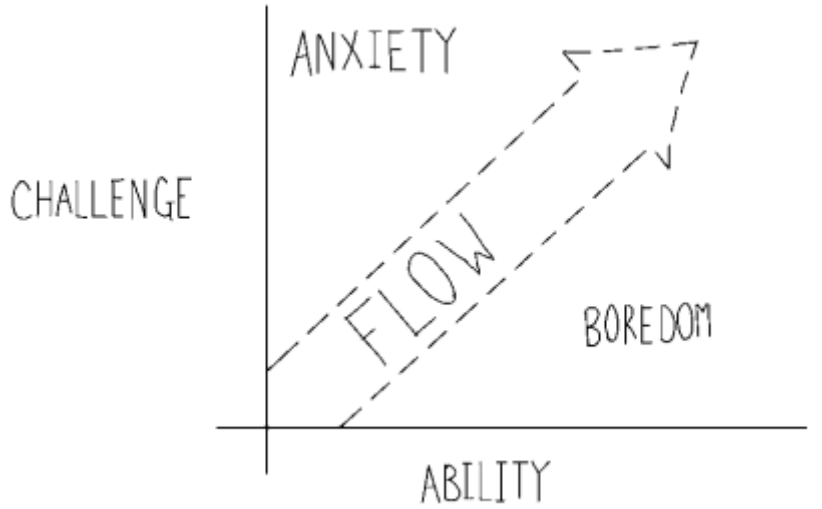
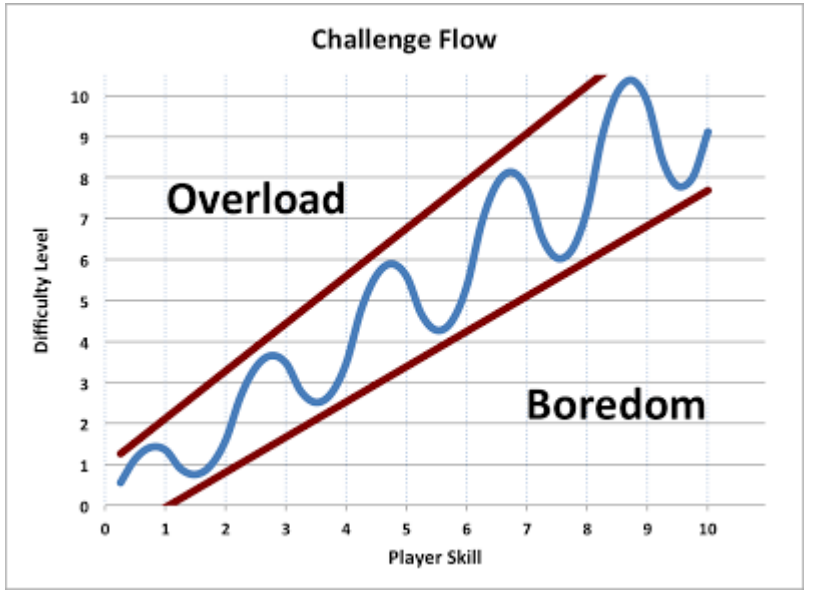
- Challenge
  - Challenge focuses the player on different areas of the possibility space of motion.
  - Progressively more challenging actions lead to the development of mastery.





Sensation of Meaning

- Goals
  - Goals provide motivation to move through the various challenges which build toward mastery.
  - Goals provide a sense of purpose – why is the player continuing to engage in this experience?
  - Goals can be both extrinsic (provided by the game designer) or intrinsic (player's desire for self improvement).

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- Narrative
  - Goals are intrinsically tied to narrative.
  - Narrative can be either expository (provided by the game designer) or emergent (what the player pieces together to make sense of the game).

Sensation of Place

- Extension of the Senses
  - The game defines how players will be able to see, hear, and feel within a space.
  - Camera behavior is key to our most important sense of sight, followed by visual feedback.
  - Sound and haptic/proprioception feedback is strong secondary support for how a game behaves.

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- Continuity of Place
  - In the real world, we have continuity of our place in the world; we merely shift our focus.
  - Great user experience requires us to help players make transitions from game location to game location, game to menus, etc. This means it is key to maintain as much of the game feel even when operating in non-game space.

PERCEPTION & CORRECTION CYCLES

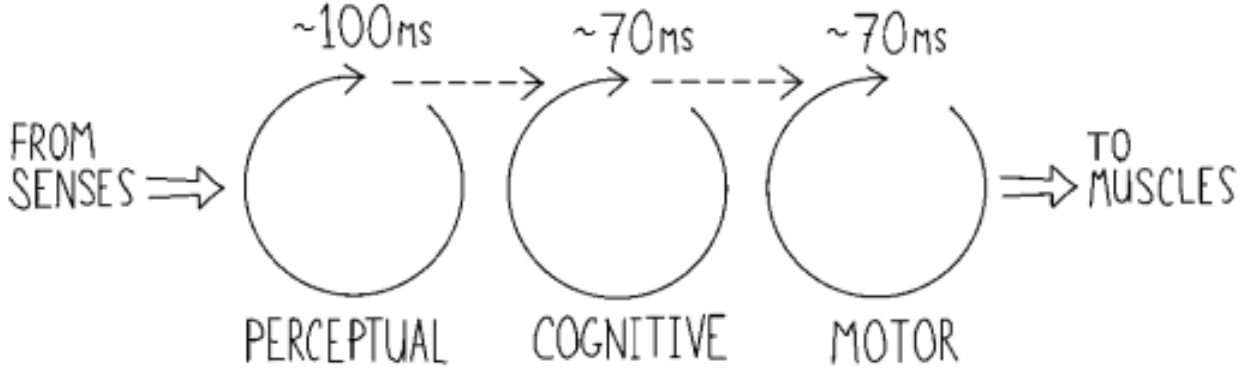
Feedback Cycles

Reaction Time

How fast a player can react to or correct input from feedback depends on both physiology and situation, but generally it moves through three processing modes:

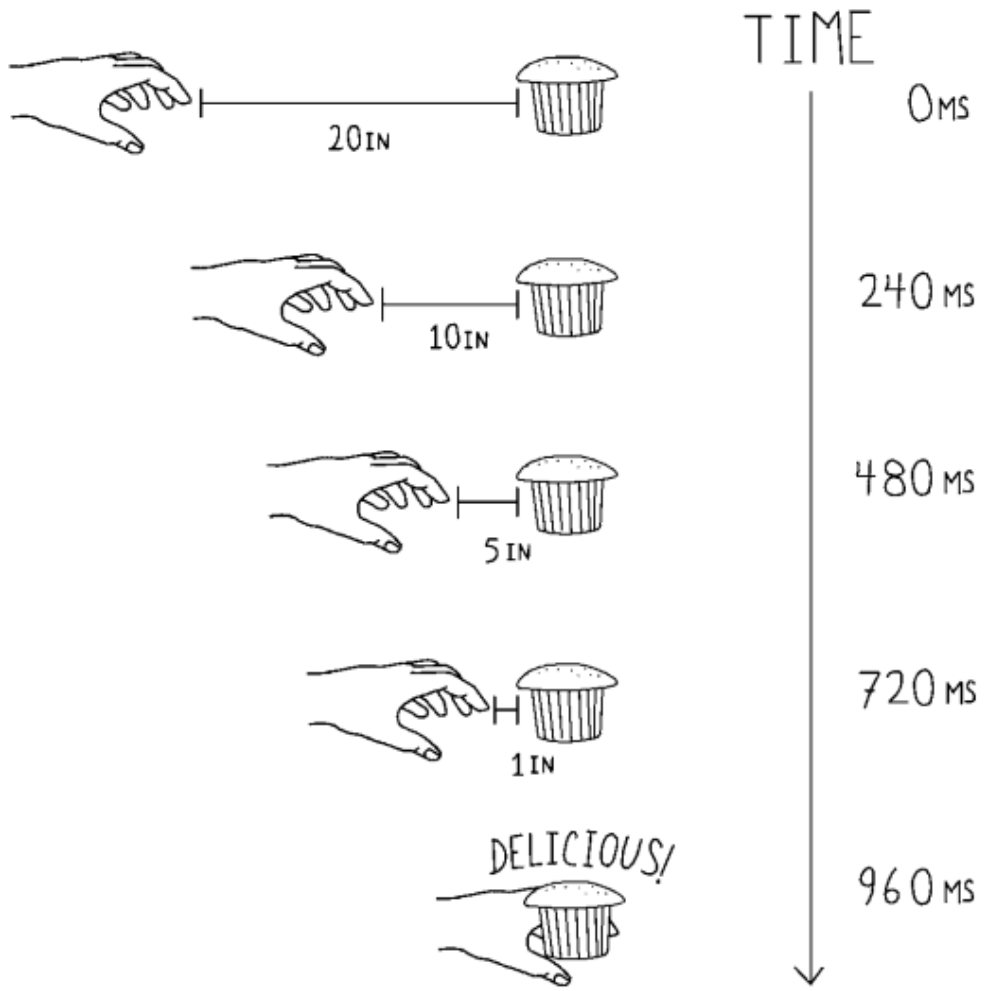
- Perceptual Processor: 50-200ms
- Cognitive Processor: 30-100ms
- Motor Processor: 25-170ms

On average, the reaction time is ~240ms.



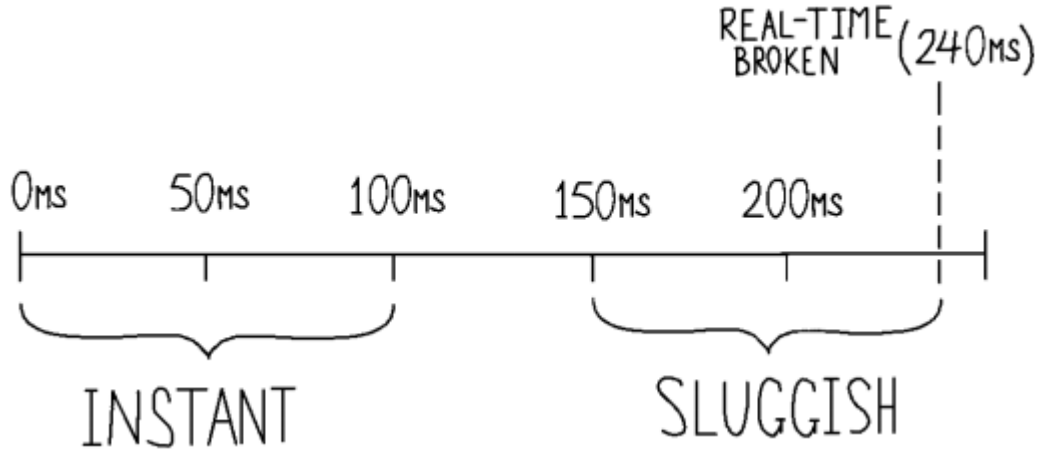
Fitt's Law

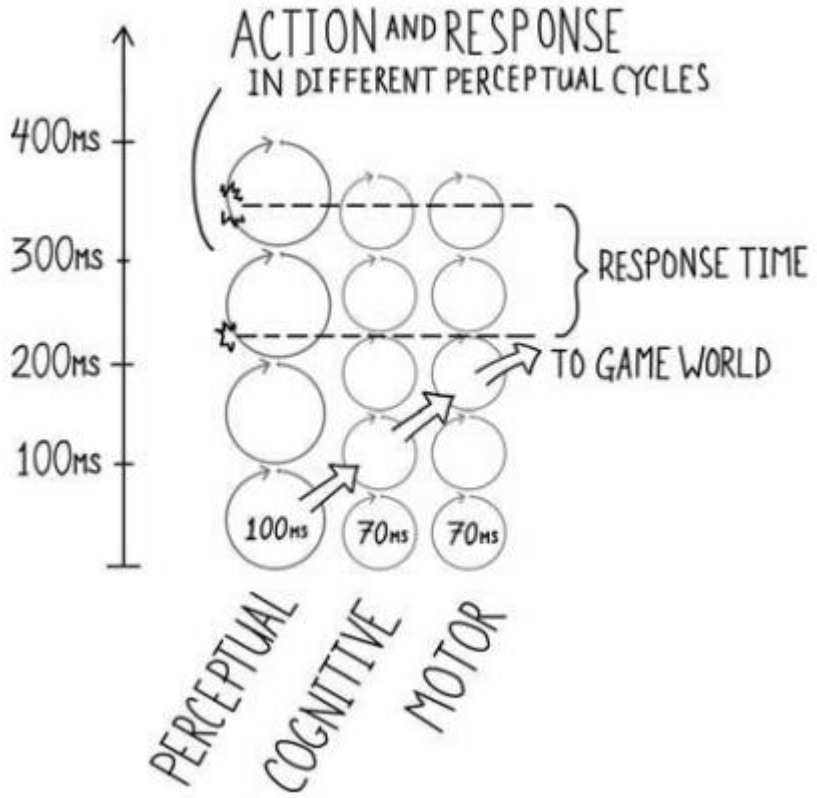
- Fitt's Law describes how quickly you can reach a desired target given the distance from the target and the size of the target.
- The most important thing to note is that the smaller the target is, the more you have to slow down as you get closer to the target in order for your reaction time cycles to allow accurate connection with the target.

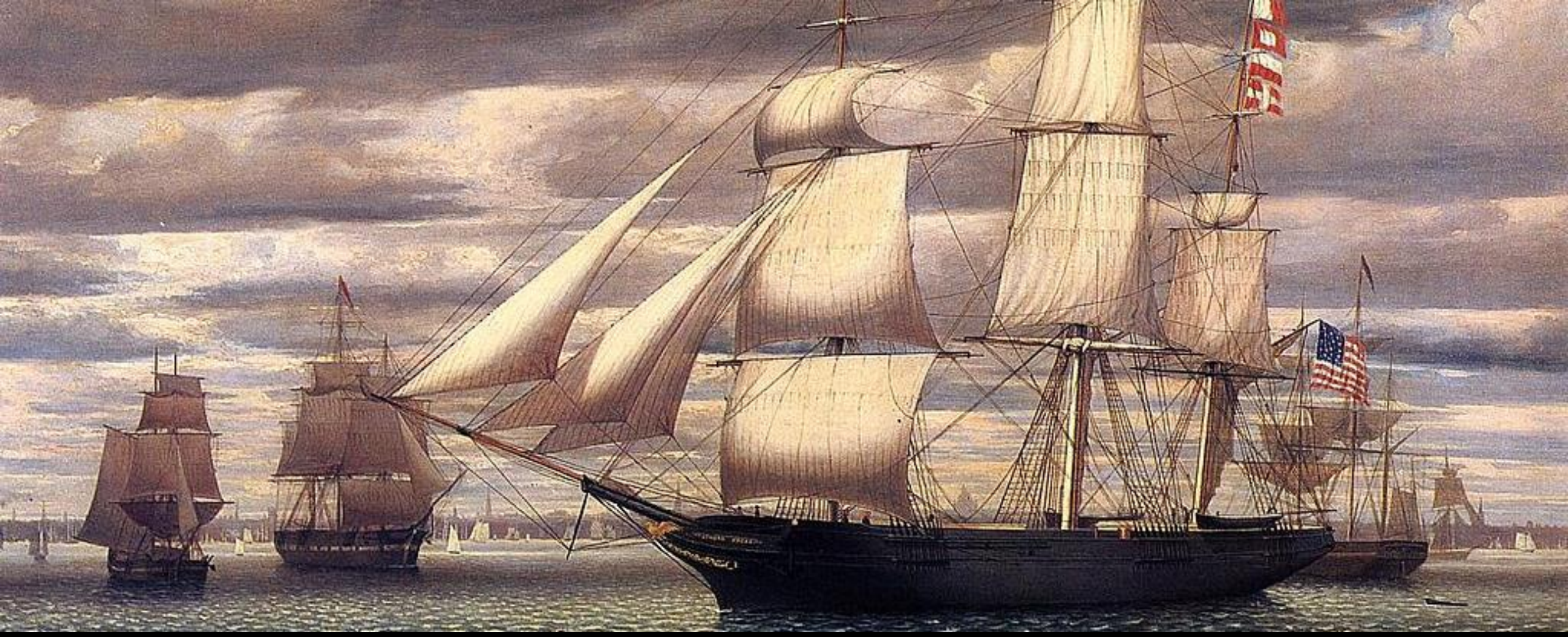


Instantaneous Response

- Generally, things have to happen within one perception cycle to feel instantaneous.







NAVIGATION

Methods of Moving Through an Interface

Navigation

- Navigation patterns deal with ways that a player can move around an interface.
- Navigation is like commuting – it is necessary but dull and/or infuriating when heavily congested. The best kind of commute is none at all.
- Navigation imposes a cognitive tax, as each time you enter a new screen, you have to process the structure of the screen and identify important elements.
- Loading screens for heavy UI interfaces can kill a player's interest in a game; e.g., the grief *Mass Effect* got over the elevator in the Citadel and Normandy.

Loading “Screens”

“There's an elevator in Commander Shepard's ship, the Normandy. To get from one level to the next, it takes 26 seconds, which is about the same time it takes the Normandy to fly from one corner of the galaxy to the other…”

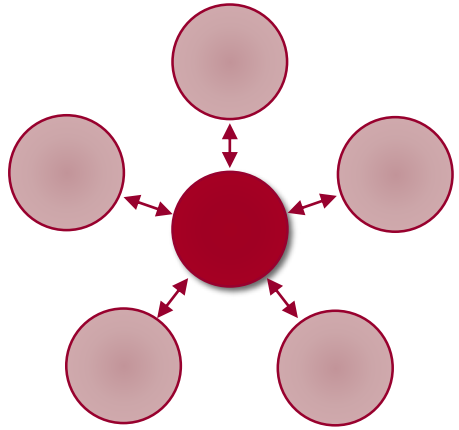
Navigation Scope

Navigation levels can be categorized by the scope of the navigation.

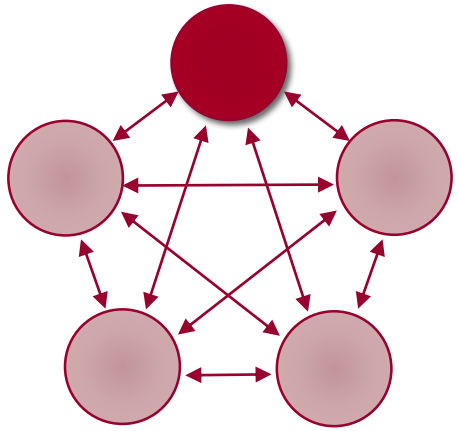
- Global Navigation
  - Global navigation deals with all navigation outside the core game experience(s). This is where you have main menus, play mode selection, sign-in processes (often), etc.
- Primary Navigation
  - Primary navigation is the navigation within a game mode. These allow access to the principal UI states and are accessed through a HUD, controller buttons, or keyboard shortcuts.
- Secondary Navigation
  - Secondary navigation is the navigation within a particular UI state.

Navigation Models

- Hub & Spoke
  - Common to both Global Navigation and to Primary Navigation scopes
  - This is used when you always return to a “hub” screen after completing a task.
  - Example Patterns:
    - Menu Page
    - Navigation HUD
    - Content Map

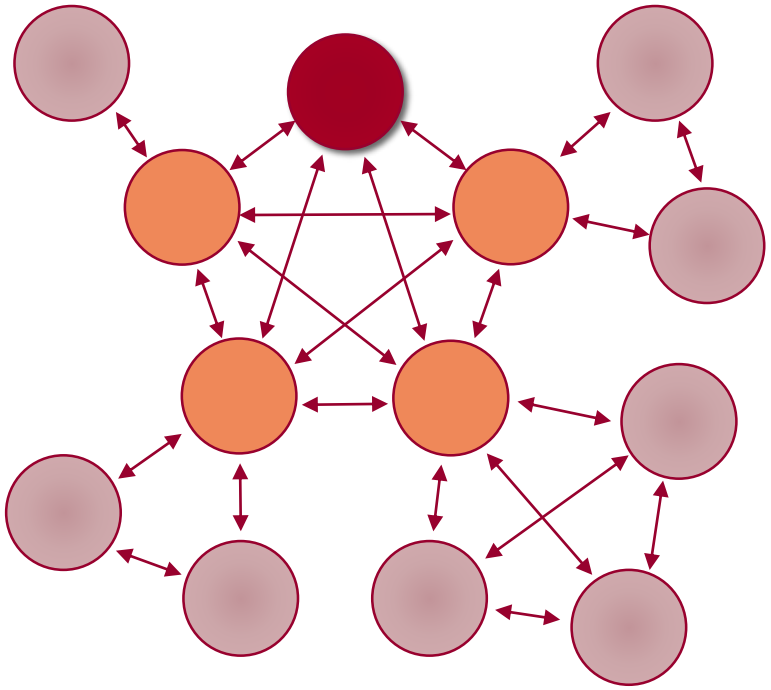


- Fully Connected
  - Common to all navigation scopes.
  - This is where you have a “home” screen that acts as an anchor point, but you’re allowed to freely navigate directly from sub-page to sub-page with a single jump.
  - Example Patterns:
    - Subtabs
    - Sidebar

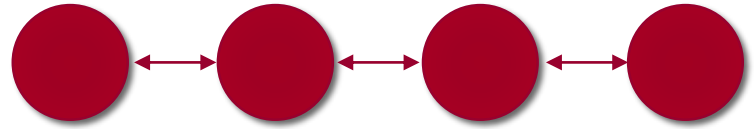


Navigation Models

- Multi-Level
  - Involves both Global + Primary or Primary + Secondary navigation
  - This is used when the main screens are fully connected, but the subscreens are only connected to each other.

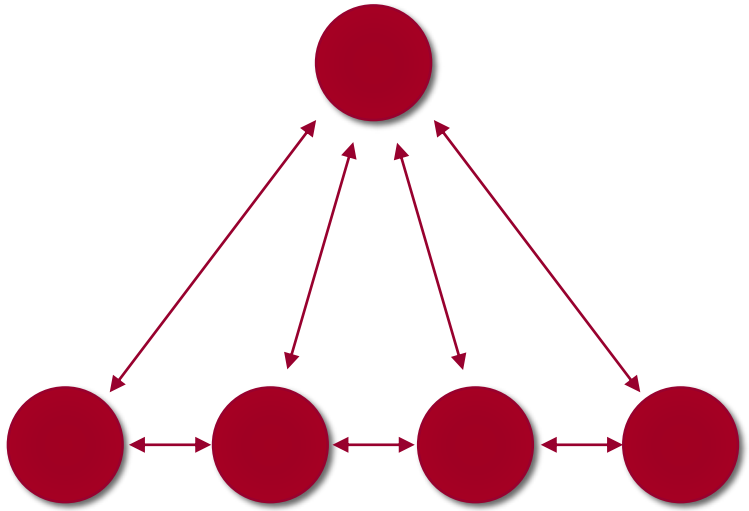


- Stepwise
  - Most prevalent in Secondary navigation
  - Useful when you need to move players through a fixed sequence of steps or a process flow.
  - Example Patterns:
    - Wizard
    - Scripted Tutorial

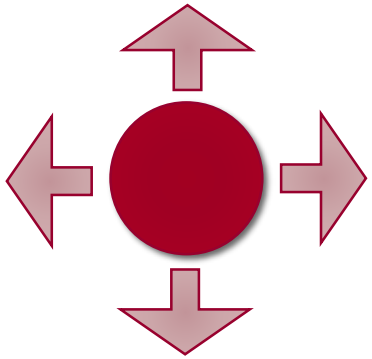


Navigation Models

- Pyramid
  - Variant of the stepwise model, this uses a hub page or menu page to group a sequence of items on one page. The player can pick any item, jump to it, use back/next to navigate between them, but they can return to the hub page at any time.
  - Example Patterns:
    - Pyramid

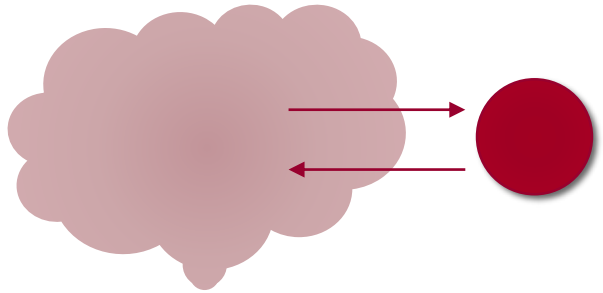


- Pan-and-zoom
  - Supporting navigation style for Primary or Secondary state.
  - Useful when you have a single large space that needs to be represented, such as map navigation, skill trees, etc.
  - Example Patterns:
    - World Map



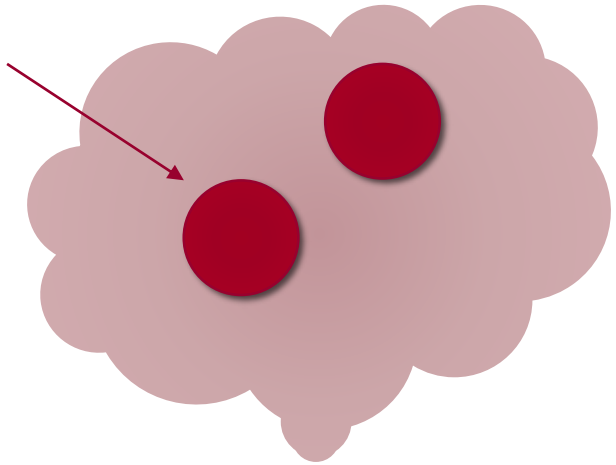
Navigation Models

- Flat
  - Basically a “no subscreens” model most appropriate for very simple games where all the actions can be shown on the main screen.
  - Example Patterns:
    - Action Palette
- Modal Panel
  - Used when a screen needs to be presented with no navigation options other than completing a function, canceling, or acknowledging a message.
  - Modal panels typically show up layered on top of the main screen and are used for small, focused actions that require a user’s full attention
  - Example Patterns:
    - Modal Panel

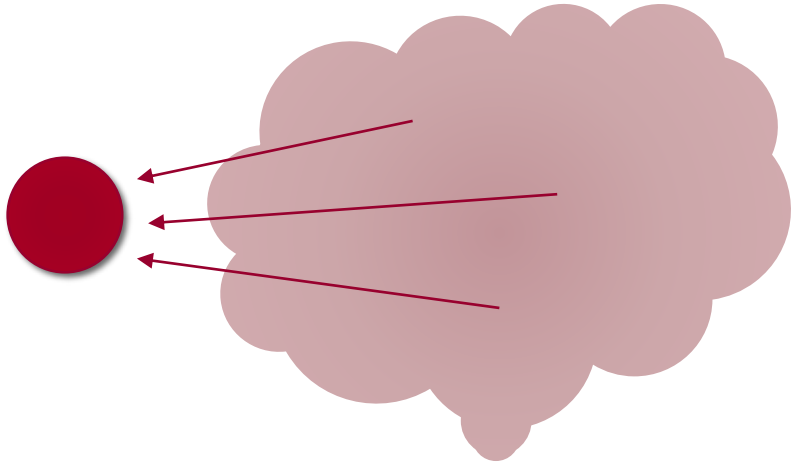


Navigation Models

- Bookmarks
  - Allow the player to access specific UI states deep within a cloud available options that would require multiple navigation efforts. Example of Streamlined Repetition.
  - Example UI cases could include saving the location of an enemy on a world map, or quick navigation to teleport pads.
  - Example Patterns:
    - Location Bookmarking
    - Quick Travel



- Escape Hatch
  - Used when the application has a very deep multi-level UI that the player could be lost in.
  - Allows the player to return quickly to a known state
  - Example Patterns:
    - Escape Hatch



Hierarchy of Needs

In order for a design to be successful, it must meet people's basic needs before it can attempt to satisfy higher-level needs.

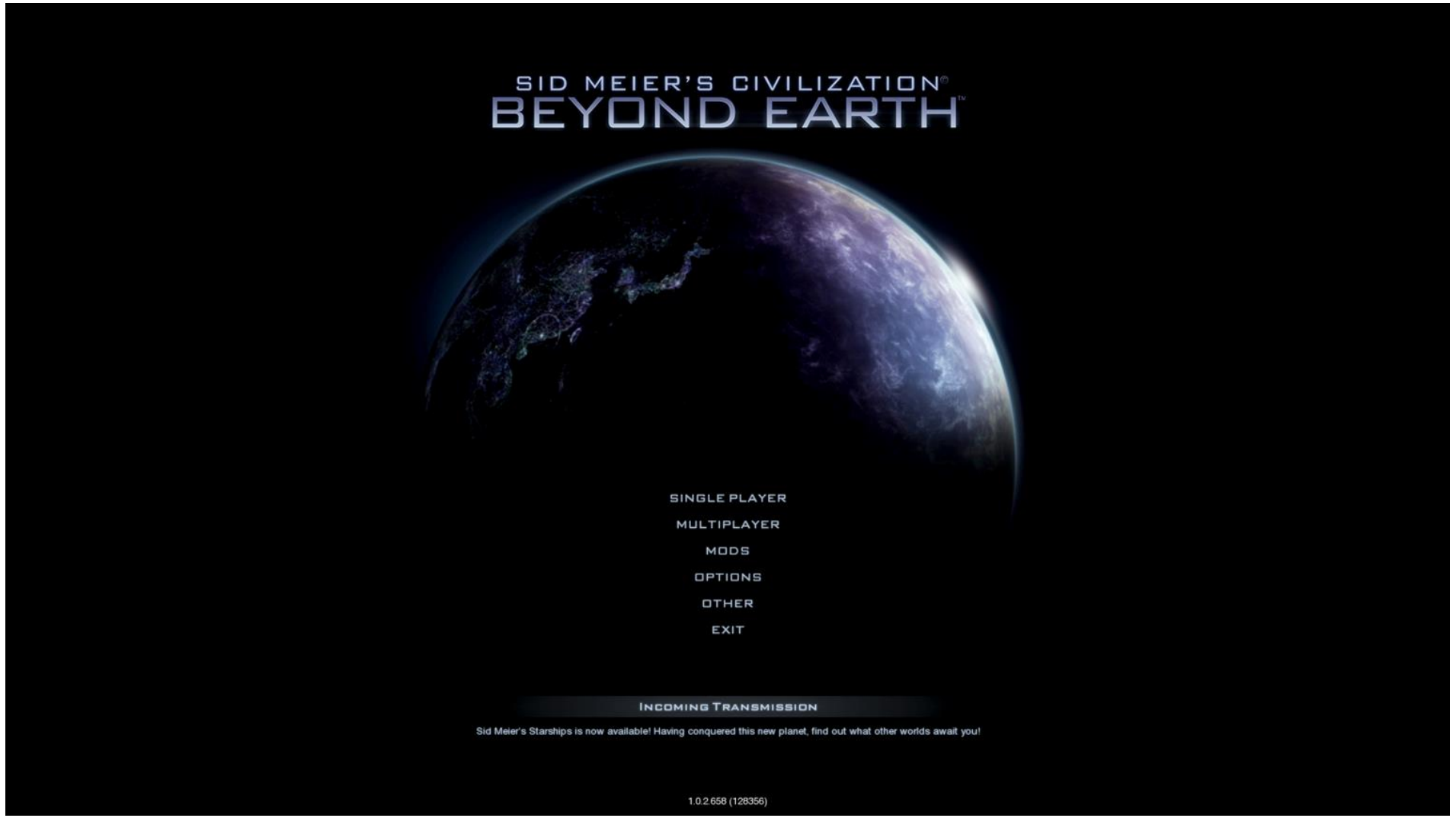
Balance

Manipulating Visual Weight

Balance

- This is the manipulation of the distribution of visual weight.
- Players expect to feel a sense of equilibrium when viewing game layouts.
- There are three types of balance: Symmetrical, Asymmetrical, or Radial.

Symmetrical Balance



Asymmetrical Balance

Radial Balance

Movement

The Path the User's Eye Takes

Movement

- This is the path the user's eye takes through a layout.
- User should flow from element to element, finally resting on your focal point.
- Direct your user's eye into your layout, not out.
- **Entry Point**
  - A point of physical or attentional entry into a design.
- Viewers can be directed using movement, lines, shape, color, anything than generates contrast.
- Determine your Visual Hierarchy by importance.

Eye Tracking Heat Maps

Eye Tracking Heat Maps


See You Next Class