subduction

Game Design Document

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# Introduction:

*subduction* places the Player in the role of a three-dimensional character that finds themselves stripped of their dimensionality and unable to view the world from beyond two-dimensions. At first able only to shift their plane of view, they eventually gain the ability "anchor" layers of the world together, compressing three-dimensional space into two-dimensions. With these abilities, players must piece together an understanding of the world just outside their reach and discover the origin of their curse.

# Gameplay Overview:

The overall gameflow in *subduction* moves through four different phases of gameplay: exploration, platforming anchoring and hybrids. The first two correlate to the different perspective views of the game; the two profile perspectives and the top-down perspective. The second two build on the base mechanics in separate ways.

## Exploration:

In the top-down view, players have a "floorplan" perspective which enables quick visualization of the space, allowing for navigation and mental mapping. Open, non-linear areas will thus necessarily be based on flat surfaces that lend themselves to this floorplan layout.

## Platforming:

Overlaid on the level floorplans are vertical platforming planes which focus on the two profile perspectives. Unlike the top-down sections, which convey a thorough three-dimensional space, these will be more planar in nature, with fewer branching points into other dimensions. These restrictions allow the profile areas to be more spread-out, allowing for an emphasis on the game's platforming mechanics, without greatly risking the player becoming lost.

## Anchoring:

Anchoring sections challenge the player to conceptualize a volumetric space as a compressed 2D plane. These areas allow the player to cross impassable barriers by jumping between platforms at different z-depths. Mechanically, the function virtually the same as other platforming sections, but necessarily occupy a greater portion of 3D space.

## Hybrids:

Finally, certain vertical planes will be denser and more compact. In these cases, the focus will be on dimensional rotating, with the tighter spaces ensuring that parallel planes remain in view of each other. These sections will use a combination of all three perspectives, and be focused less on discrete planes more and on dense, volumetric spaces that the player must fully conceptualize to navigate.

As the most complex of the three gameplay phases, these will be a push goal which will only be implemented after the successful development and playtesting of the other three.

## Game Flow Overview:

The core flow of the game relies on breaking up spaces between exploration and platforming segments.

The overall structure of the game will involve a mostly linear progression through areas composed of non-linear spaces that must be explored and mapped before the player can continue to the next area.

# Game Mechanics:

There are three core mechanics: Character Control, Rotation and Anchoring.

## Character Control:

There are two forms of Character Control: Jumping and Movement. Movement consists of both ground and in-air control. These controls should be balanced between the slightly opposing goals of platforming and navigation. Subtle shifts in Movement behavior is acceptable when in top-down vs. profile, but such differences should be kept minimal.

Jumping and In-Air control should be tuned toward precision jumping to emphasize the platforming sections as control challenges.

Overall, Character Control will target similar exploration based Platformers (ala *Super Metroid*) for the Profile perspective as opposed to more spaced out Platformers such as the *Mario* series. Speed of movement will be kept moderate to encourage exploration, but slow enough to allow for incremental movement.

## Perspective Specific Considerations:

Jumping will be limited to the Profile Perspectives. Further, moving off a platform while in top-down will shift the Perspective to Profile to ensure movement is always limited to 2D planes. As with explicit rotations (see below), this will result in cutting the player's velocity in the active depth-axis.

## Input Mapping:

Keyboard: Movement - Arrow Keys / Jumping - Space Bar  
Gamepad: Movement - Left Thumb Stick or D-Pad / Jumping - A Button

## Rotation:

The Player can switch between three fixed Perspectives: Front, Side and Top. Each Perspective aligns such that the relative depth axis moves runs negative into the screen.

With the exception of falling in top-down, rotation will be limited to the Player being unmoving and on-ground. During rotation, the Player will be unable to Move or Jump.

Initially, the player will have no control over switching between perspectives, instead being limited to rotation tiles that force a rotation to a given perspective. As such, these rotations will be slower to help acclimate the player to the action, as well as mitigate the lack of control.

Once the player obtains access to free-rotation, the action should target fluidity and control. These rotations will be faster overall and may support variable rotation speed. Rotation can also be canceled at any point, encouraging trail-and-error. The restriction on Movement during Rotation emphasizes its Explorative uses rather the Mechanical ones.

## Input Mapping:

Keyboard: Side Perspective - D / Top Perspective - W / Front Perspective - S or A  
Gamepad: Right Thumbstick

## Anchoring:

Anchoring allows the player to select a range of plane slices which are then overlapped and can be interacted with simultaneously. While inside an Anchored range, Players only collide with tiles belonging to a single slice at a time. If the players is In-Air, they will collide with the first layer their feet come in contact with, allowing them to shift between parallel layers freely. This behavior is equivalent to other platforms with overlapping platforms that the player can alternately walk in front of and land on. However, the Player will not be able to "drop" through a platform once they are standing on it.

To create an Anchor range, the Player uses two distinct inputs to designate both ends of the selection. Anchors can only be placed from within the Profile perspectives. To enter the range, the player must rotate to the other Profile Perspective at which point the Anchors take effect automatically.

## Input Mapping:

Keyboard: First Anchor - Q / Second Anchor - E  
Gamepad: First Anchor - Left Bumper / Second Anchor - Right Bumper

# Game Characters:

## Player Character:

The Player begin the game as an anonymous human figure who is soon transformed into a two-dimensional sprite. As they move through the gameworld, they will piece together not only the mystery of this curse, but their own past.

## Character Sketch:

Although the back-story remains in development, certain key factors are already in place. The Player controls a normal human, with relatively normal physical strengths (abstracted slightly to Platformer physics and range). As the emphasis of the game is on exploration, the Player will mostly be unaffected by realistic hazards (e.g. fall damage), with death limited to environmental threats such as kill-pits. Additionally, as there is no combat within the game, there will be no need for a Health system. Player Harm will exist in a binary state of instant death. These occasional threats will be mitigated by a checkpoint system that can be either explicitly or implicitly triggered.

## Stats:

Movement Speed: Brisk (Jogging equivalent)  
Jump Strength: Moderate (2x Character height)  
In-Air Control: Slight (Allow for mid-air correction to assist landings, but not full reversals)

## NPCs:

There is essentially only one kind of NPC, which exhibits three different behaviors correlated to which perspective the Player is in. In all cases, this character reacts at best ambivalently and at worst aggressively, but nonetheless poses no direct threats.

## Front Perspective: Avoider

This is the default form for the NPC, found in the Front Perspective. In this view, the NPC will be unmoving until the Player is within a certain range. From here, the Character will at first turn away, and then begin retreating at a slower rate than the Player advances. Once the Player closes enough distance, the NPC will turn into the depth plane, effectively vanishing from the Player's view.

## Stats:

Movement Speed: Slow  
Reactive Range: Half-Screen

## Side Perspective: Oblivious

In the second Profile Perspective, the NPC will not interact with the Player at all. This includes Collision, as the NPC will in fact pass in front of or behind the Player. Their behavior in this mode will be a simple randomized back and forth.

## Stats:

Movement Speed: Average (Slightly below Player's)  
Reactive Range: N/A

## Top Perspective: Aggressive

In top-down, NPCs will move rapidly toward the Player and attempt to surround them. If the Player does not push back, they can move the Player while colliding. The Player can, however, push past them.

## Stats:

Movement Speed: Fast (Faster than Player)  
Reactive Range: Full-Screen

## Notes:

In general, these characters will appear in small groups of two - five, the size of which will be based on location.

# Game Environment:

## World Structure:

The overall shape of the Environment is one of interlocking chambers staggered and offset from each other. This design draws inspiration principally from Pueblo cliff-dwellings. Initially, these chambers will occupy discrete and self-contained areas that are linked linearly, limited exploration to single areas at a time. As time allows, this may be expanded to a more thoroughly open-world environment.

## Area Structure:

Each Area will be composed of several rooms, or chambers, which overlap and are connected variously by bridges and passages. These Chambers can span several floors, which can be reached via vertical platforming. Additionally, each Area will contain sections and shortcuts which rely on Anchoring. In the case of the Linear design, these areas will be revisitable once the Player has obtained this mechanic.

# Aesthetics:

The core Aesthetics will be based around pixel art and chip tunes. This serves the dual purpose of accentuating the 2D nature of the game while contrasting it against the 3D gameworld, as well as providing a lower quality threshold over modeling and advanced texture work.

Likewise for Audio, the availability of retro sound effects tools will allow for a diverse range of potential effects with a low content production bar. Music poses a larger hurdle, but is likewise mitigated by the availability of chiptune production software such as FLStudio and MilkyTracker. In addition, the emphasis will be on ambiance over clear musical themes, limiting the amount of music that must be produced.

## Visual Design:

In addition to the overall pixel art aesthetic, the game will be based on themes of isolation and exploration, with abstract visuals targeting mystical and supernatural overtones. This will involve a muted color palette and alternating large, expansive areas with closed in, nearly claustrophobic ones.

## Audio Design:

The key for audio design is understatement and subtly, with a focus on ambience. Appropriate background noise and musical tonality will be offset by a sparse effects set focusing on core actions such as Rotation and Anchoring. More common behaviors like Jumping and Movement will be either subdued or quiet to avoid undo attention. This especially important given the relative sparseness of the gameworld and the Player's limited mechanics.

# Physics Design:

Physics are limited to basic tile-collision suitable to basic platforming and exploration. Additionally, as the Player is locked at all times to a 2D plane, there will be no need for 3D physics despite the 3D nature of the gameworld.

# Appendix A: Story

Specifics aside, the overall storyline should focus on the Abstract, with a minimal back-story. Most of the narrative focus should be applied to the environment, with visual and structural cues intentionally left open to interpretation.

Inspiration will be drawn from games such as *Shadow of the Colossus* and *Ico* as well as the anime *Haibane Renmei*.

The underlying narrative will be based around the Player exploring a Purgatory like state, using the Rotation and Anchoring mechanics to come to terms with their unresolved past. In place of a clearly developed explanation, these issues will be explored in broad, abstract themes that vary from Area to Area.

Explicit narrative and exposition will be kept to a minimum; this will limit both the amount written content as well as allow for the Player to draw their own conclusions.

# Appendix B: Art List

This section is Pending

# Appendix C: Audio List

This section is Pending