Game Design Document

Time Tear

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Table of Contents

Section 1: Overview

1.1) Game Description

- Time Tear is a first person action adventure game with time traveling mechanics and puzzle solving elements.

High concept maybe?

Section 2: User Interface (UI)

The font used for all UI text is Aero.
The Main menu background (TitleImage1.png) is a Screenshot of level 1 showing differentiation of past/future through portal with size : Height: 460, Width: 900.

2.1) Main Menu Canvas:

Canvas	Size	Text / Font size	Buttons	Enabled at start of scene	Extra Info
MainMenuCanvas	Height: 800 Width: 361	N/A	Start, Options, Controls, Quit	Yes	N/A
ExitCanvas	"	Are you sure you want to quit? Font size: 30	Exit, FromExitCanvas	No	N/A
Options Canvas	"	SFX Slider, Music Slider Font size: 18	FromOptionsButton	No	Silders: Music , SFX,
Controls Canvas	"	Keyboard Controls, Xbox 360 Controls	FromControls, Controller, Mouse	No	

2.1a) Main Menu UI Buttons:

	Button Name	Position on Canvas	Color HEX	ColorOn Click	Clicking button enables/ disables	Button Text	Button Text color	Button Text Size
MainMe nuCanv as	Start	(-141,-74)	#2967DD B3	#2967D DB3	**Scene Load**: Storage	Start	#2967DD B3	18
	Options	(-141,24)	"	"	**Disables**: Start, Options, Controls, Quit **Enables**: OptionsCanvas	Options	"	"
	Controls	(-141,-24)	"	"	**Disables**: Start, Options, Controls, Quit **Enables**: ControlsCanvas	Control s	"	"
	Quit	(-141,-70)	"	"	**Disables**: Start, Options, Controls, Quit **Enables**: QuitCanvas	Quit	"	"
ExitCan vas	Exit	(109,-107)	"	"	Closes Application	Exit	"	"
	FromExi t	(-88,-106)	"	"	**Disables**: ExitCanvas **Enables**: Start, Options, Controls, Quit	Return to Main Menu	"	"
Options Canvas	FromOp tions	(-75,-75)	"	"	**Disables**: OptionsCanvas **Enables**: Start, Options, Controls, Quit	Return to Main Menu	"	"
Control	Xbox	(200,-70)	Image of	N/A	**Disables**:	N/A	N/A	N/A

sCanvas			Xbox controller		Keyboard Controls **Enables**: Xbox 360 Controls			
	Mouse	(200,-70)	Image of Mouse	N/A	**Disables**: Xbox 360 Controls **Enables**: Keyboard Controls	N/A	N/A	N/A
	FromControls		#2967DDB3	#2967DDB3	**Disables**: ControlsCanvas **Enables**: Start, Options, Controls, Quit	Controls	#2967DDB3	18

2.1b) UI Sliders conventions:

All UI sliders, will contain a consistent theme of a white hand with a white background.

2.2) Pause Menu Canvas:

Canvas	Size	Images	Buttons	Image & Attributes	Extra Info
PauseCanvas	Height: 800 Width: 1080	PastImage, FutureImage	Resume, Restart Level, Audio, Quit	PauseMenu.jpg Height: 434 Width: 901 Opacity: 50%	If (player is in past) {use PastImage;} If (player is in future) {use FutureImage;}

2.2a) Pause Menu Buttons

	Button Name	Position on Canvas	Color	ColorOn Click	Clicking button does	Button Text	Button Text color	Button Text Size
Pause Canvas	Resume	(0,50)	#2967DDB3	#2967DDB3	**Disables**: Keyboard Controls Text **Enables**: all paused elements	Resume	#800000	18
	Restart Level	(0,0)	"	"	**Reloads**: (this Scene)	Restart	"	"
	Audio	(0,-50)	"	"			"	
	Quit	(0,-100)	"	"	**Loads**: Main Menu Scene	Quit	"	"

Section 3: Player Setup

3.1) Player Camera

- The Player navigates using first person point of view via the playerController script
- The Camera is parented to the Player at (0, .47, 0)
    - The Camera moves with the Player's transform
    - The Camera looks with the fpsCamera script
        - mouseLook.y constrained to (-90f, -90f)

3.2) Player Controls

Keyboard controls	Xbox 360 Controls
WASD - Move Mouse - Look	Left Stick- Move Right Stick - Look

Space - Jump	A - Jump
E - Interact	B - Interact
1 - Portal	Left- Portal
2 - Pistol	Right - Pistol
3 - Rifle	Up - Rifle
4 - Shotgun	Down - Shotgun
R - Reload	X - Reload
LMB - Fire	RB - Fire

3.3) Player Mechanics

- FPS movement mechanics
- Three laser weapons to defend against enemies

Weapon Name	Bullet Pool	Bullets per magazine	Damage per bullet	Fire Mode	Fire Rate (Max Bullets per minute)	Reload Rate	Max Range (in meters)
Laser Pistol	30	10	20	Semi-automatic	120	2 seconds	200
Laser Rifle	60	30	25	Semi-automatic/automatic	300	4 seconds	300
Railgun	10	1	75	Charge up	120	5 seconds	100

- Two time dimensional portal gun to go back and forth between the "Past" and the "Future".
    - The portal can only be placed on ground with the portalArea layer. The portal cannot be placed through walls. Once the portal is placed an animation of "building the portal" will play for 2 seconds. After the 2 seconds, the player may walk through the portal to travel from the current dimension to the other dimension (Past to Future or Future to Past) other dimension.

3.4) Player HUD

The PlayerHUD as well as all other Canvases in the scene will be attached to a

GameObject named "HUD and Canvas".

      The Size of the PlayerHUD will be Height: 450 Width: 600.

      The Render Mode will be set to Screen Space Overlay.

      PlayerHUD contains the following elements:

Name	Type of UI element	Position on Canvas (X,Y)	Notes
HpSlider	Slider	(20, -20)	Health is an int based on a 0-100 scale represented on the slider, 0-1. Red represents damage taken, while green represents remaining health. Health will be subtracted using the formula (player.health - enemy.damage)
Player Ammo	Text	(-155,48)	Player ammo is the amount of bullets left in the magazine for a specific weapon. Once ammo is 0, reloading will draw *magazineSize* bullets from Bullet Pool.
Bullet pool	Text	(-79,48)	The reserve ammunition for the weapon the player is currently wielding.Player ammo and Bullet pool will be presented as '10 / 200' where 10 is the Player Ammo and 200 is the Bullet Pool.

Section 4: Game Progression

The game will feature three levels all taking place within the laboratory where the main character works.

4.1) Tutorial Objectives:

1. Use the portal to exit the testing chamber
2. Jump over the pipe
3. Pick up the pistol
4. Eliminate the enemy

4.2) Level 1 Objectives

1. Get the Keycard
2. Retrieve the toolbox

3. Grab the oil
4. Open the generator door
5. Oil the gears
6. Enter the main hall
7. Exit through the door at the end of the main hall

4.3) Level 2 Objectives:

1. Find way into lab 2
2. Turn on power
3. Make way to main observation room
4. Find conferenceRoomKeycard in main observation room
5. Find Conference room grab animalRoomKeycard from conference room
6. Find animal room, search for clues & uncover Dave's last wish
7. Find Dave's computer & enter password to get keypad information
8. Go and interact with keypad, enter boss room and fight the SpiderBear

1. Keycard gives access to the "Conference room".
2. Keycard gives access to the "Animal room".

4.4) Tutorial Level detailed progression:

The player spawns into a 10 unit by 10 unit testing chamber with a locked door in front of the player. The UI will display a message hinting at the player to use the portal to travel to another time in order to escape the room. Once the player has gone through the portal and into the future instance of the the player will be exit through the door which is now jammed open. Upon exiting the player will be in a 30 by 10 unit hallway, in the past instance the door at the end will be locked while in the future it will be open but a fallen pipe will be blocking the way. The UI will display a message informing the player of their ability to jump, which will be used to pass the fallen pipe. After the hallway the player will enter a 40 unit by 20 unit reception area. Once in the room a message will display telling the player to explore the area for weapons and other pickupables. On a table in the reception area will be a pistol that the player can pick up if they choose to. Upon receiving and equipping the pistol a message will display telling the player what the input for shooting is. At the end of the reception area is a door that is impassible in the future but opens when the player approaches it in the past instance. After exiting the room the player will experience the first enemy, a flying snake, which will be in the future but not the past.

Eliminating the hostile is encouraged as the hallway is locked in the past but the door is jammed open in the future. Once the player exits this hallway they will be sent to the next level.

4.5) Level 1 detailed progression:

The starting area of the first level is a 10 by 30 unit hallway which leads up to a research room. Once into the research room the player will be informed that the door is locked and hinted that the necessary key can be found in the safe at the back end of the room. The safe is locked in the past instance of the level but opened in the future. After retrieving the key card the player can also pick up a toolbox which is used in another puzzle later in the level and the rifle which is propped up against a desk in the back part of the room. The player must then go through the door exiting the research area in the past where the door will now open upon recognizing the keycard in the player's inventory. After the research area the player will be in a 10 by 20 unit hallway that turns to the left with two available doors which both open only in the past. These doors lead to the generator room and the server room. The generator room is a 10 by 20 unit room that features the generator which is necessary to exit the server room. The player must acquire the toolbox to open the generator door in the future instance and oil to fix the gears which have been jammed for over 20 years. The toolbox is in the research room and the oil can be found in the server room. The server room is a 20 unit by 30 unit room featuring servers and computers, as well as the rail gun laying against a table. Flying snakes are prevalent in both the past and the future. The door on the west wall of the room is locked off until the player fixes the generator in the previous room. After exiting this room the player will be enter a 20 unit by 40 unit main hallway which has snakes in both instances and upon reaching the ex4it the door can be opened in the past which leads to the second level.

4.6) Level 2 detailed progression:

After finishing the first lab, the player spawns into level two in a 4 unit by 8 unit hallway capped by doors on the far ends. The player can only exit through the north door. Upon exiting the player is given the objective: "find way into lab 2". 24 units and 36 units north into level 2 are two doors leading into the "animal room". 44 units north and 8 units west from the starting hallway of level 2 is a door leading into the power room. These 3 doors will have UI conveyance to the player. In order to enter lab 2, the player must use the portal to travel to the future to find that the door to the power room has been knocked down. Upon reentering the past inside the power room, the player can interact with the power switch game object, and restore power to lab 2. The player is then given the objective to move into the lab. When the player passes through the air lock, UI conveyance instantiates, enticing the player to find the "main observation room". The player will explore the lab at this point searching for the "main observing room". Upon entering the room, the player will be greeted by enemies in the past. While inside of this room, is a keycard that is used on the conference room door. Upon obtaining the keycard, the player would need to move to the conference room to further

progress the story. There are 3 flying snakes in the conference room. There is another keycard on the conference room table (for use on the "animal room"). Picking this up, will prompt the player to find a use for it. The keycard will open the "animal room" doors and prompt the player to search for clues. After looking around, the player will stumble upon a note on one of the desks. Interacting with this note brings up a Canvas which enhaces the readability of the note. The player can exit the noteCanvas by hitting the "back" button. On the paper is computer login information and hints that the player should find Dave's computer and "grant his final wish". The player will then have to find Dave's computer, and login. Upon logging in, a keypad access code is given to the player. The player is then given the objective to find out what is behind the keypad door. When the player interacts with the keypad, the boss door will unlock, and the player will be face to face with the Spider Bear. The player must kill the Spider Bear and then exit through the far door to win the game.

Section 5: Enemies

Enemy Name	Height (in meters)	Length (in meters)	Health Points	Damage to Player per hit (in Health points)	Attack style	Attack animation length (in seconds)	Particle effect
Spider Bear	7	5	200	20	Swipe/ Lunge	2	None
Flying Snakes	1	5	100	10	Lunge	1	None
Flying Electric Snakes	1	5	100	15	Shock Lunge	1	Lightnin g/Electri c shock