



[Cover Image]

Expedition Unknown: Shift Happens

Version 1.0

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Document Revisions Table

Version	Description	Requestor	Date
1.0	Initial Document	Professor Katie Clark	1/30/2024

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Level Design Document

Level Summary

Quick Summary

Expeditions Unknown is a **First-Person, Puzzle-Driven level developed in Unreal Engine 5**. The Player plays as a Starfleet investigative officer who is sent to the remains of the space settlement – Nova Outpost Delta. The Player discovers a new technology onboard that allows the Player to swap between timelines. The Player needs to avoid obstacles, acquire previously hidden objects, and access previously inaccessible areas by traversing between timelines. The Player will learn that what they do in the past has consequences in the future, thus solving the mystery of this space settlement.

Level Feature Overview

Category	Sub-Category	Feature List
Player	Player Weapons	<ul style="list-style-type: none"> None
	Player Skills/Abilities	<ul style="list-style-type: none"> Switch between the two timelines Punch destructible objects Pickup Items Unlock Doors with Keys Unlock Computers/Terminals with Passwords
AI	Enemies	<ul style="list-style-type: none">
	Friendlys	<ul style="list-style-type: none"> Radio (Voice Only)
Challenges	Gameplay Themes	<ul style="list-style-type: none"> Solving Puzzles by Switching between 2 Level Layouts
	Obstacles/Hazards	<ul style="list-style-type: none"> Inaccessible Blockade/Walls/Debris Electrical Hazard
	New/Unique Gameplay	<ul style="list-style-type: none"> Swapping between two timelines Punching to destruct objects Actions in the Past timeline has consequences in the future
Context	Where Fits in Game	N/A
	Challenge Fit	N/A
	Additional Info	N/A
Aesthetics	Major Visual Themes	<ul style="list-style-type: none"> Sci-Fi Space Settlement Destructed Sci-Fi Space Settlement
	Setting/Mood	Ominous, Eerie, Solitary

Development Schedule

Milestone	Date
LDD	January 30 th , 2024
Block Mesh	February 6 th , 2024
Whitebox	February 13 th , 2024
Initial Gameplay Interim	February 20 th , 2024
Initial Gameplay	March 5 th , 2024
Gameplay Complete Interim	March 26 th , 2024
Gameplay Complete	April 2 nd , 2024
Aesthetics	April 16 th , 2024
Launch	April 26 th , 2024

Level Details

Level Map Overview

Legend	
	= 1 Floor Piece
	1st Floor
	2nd Floor
	Door
	Elevator
	Electrical Hazard
	Debris/Blockade
	Locked
	Key
	Time Swap Device
	Breakable
	Player Start
	Player End
	Cursed Artifact

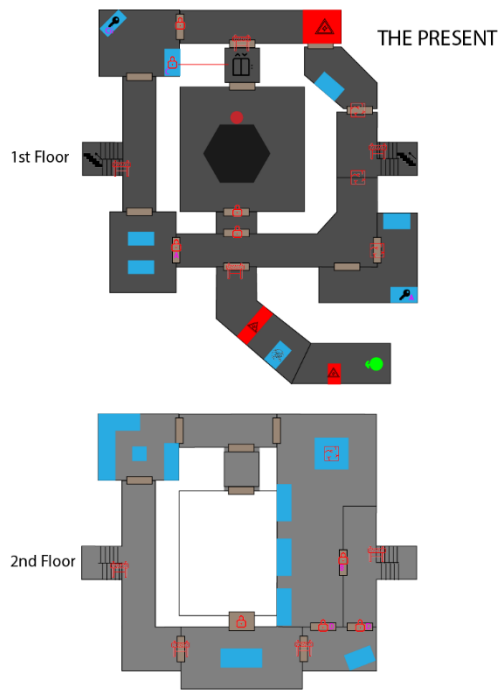


Figure 1 Level Map Overview

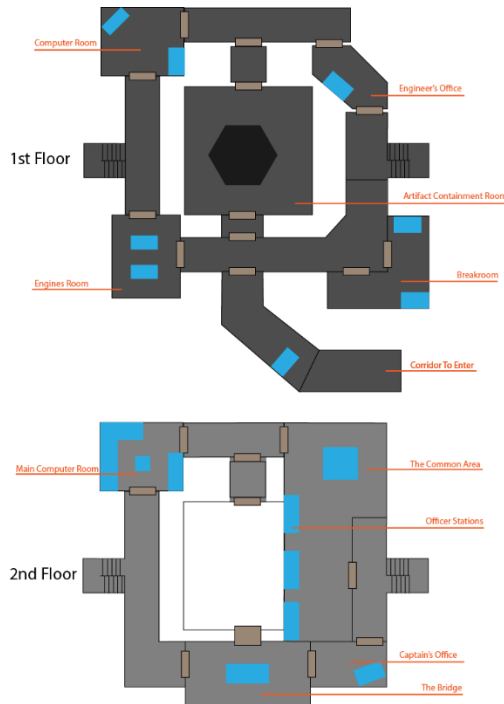


Figure 2 Level Map Overview with Area Label [14]

Level Map(s)

Map(s)

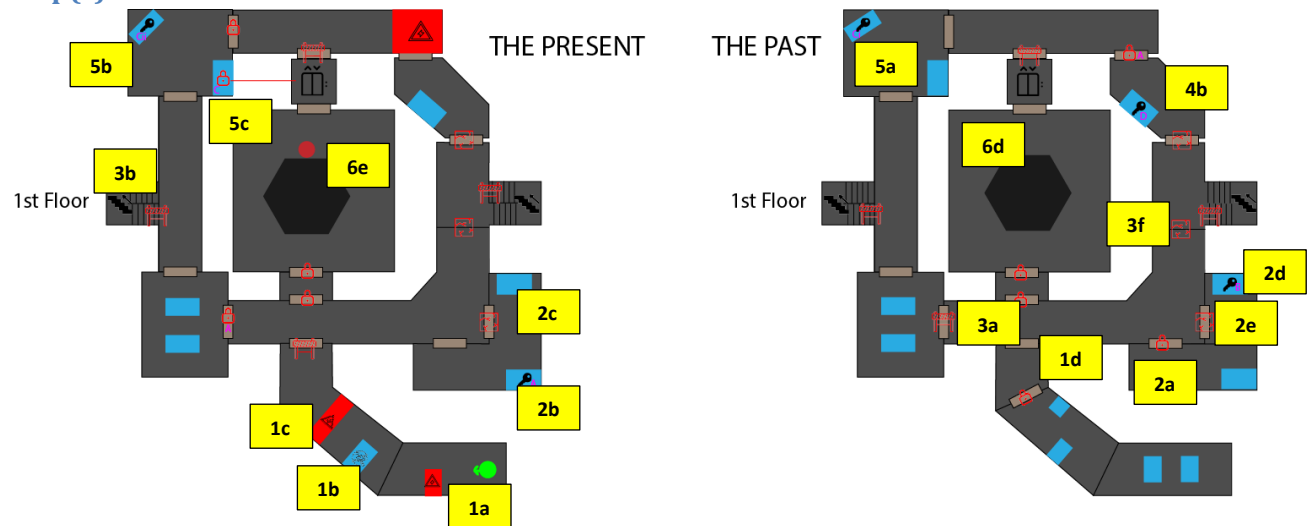


Figure 3 Space Settlement First Floor Level Map - Present vs Past

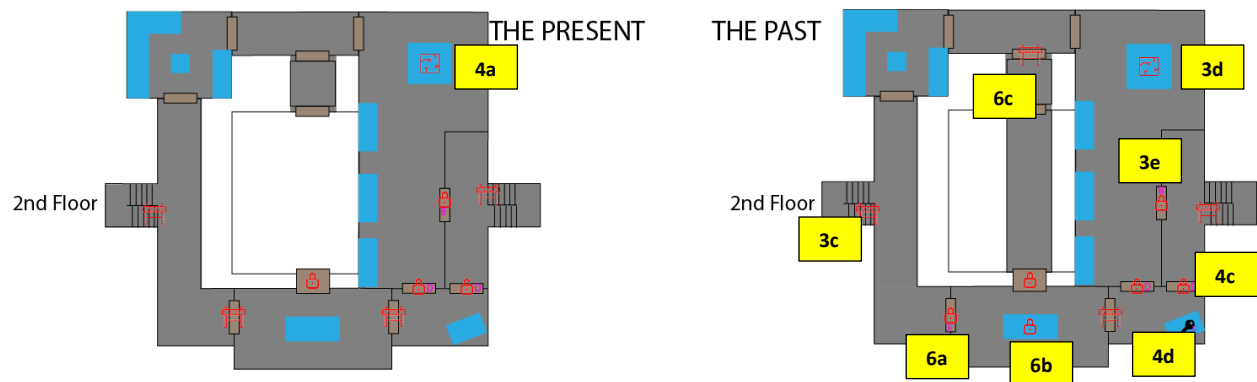


Figure 4 Space Settlement Second Floor Level Map - Present vs Past [14]

Gameplay Summary

Map Label	Gameplay Summary	Other Notes
1a	The Player spawns in the corridor of the Space Settlement. The Player sees sparking electricity in front of them. If they walk through it, the Player takes damage; If they walk around it, the Player will be fine.	Mechanics taught: Player Controls (Walking), Electrical Hazards
1b	In front of the Player there is a Time Pad, the Player is instructed to pick it up. Thus, the Player equips the Time Pad.	Time Pad located on a dead corpse. Control Tutorial shown on screen.
1c	The Player faces another electrical hazard, which the Player cannot walk around. The Player uses the Time Pad to shift to the Past to walk through.	Shift to the Past
1d	The Player walks through the gate, entering the facility for the first time.	

2a	On Player's right, there is the Breakroom. Locked in the Past, unlocked in the present. The Player shifts to the Present to enter the room.	Shift to the Present
2b	Player finds Key A in the room, but the other room is blocked by a wall.	Item: Key A
2c	If the Player is in the present, the Player can see an additional room to the side. The Player can approach the room and shift to the Past.	Shift to the Past
2d	When in the Past, the Player sees a key and can pick up the key. The Player can either leave the room by shifting back.	Optional: Shift to the Present
2e	The Player can also leave the room by punching the wall next to the key. Breaking the Wall of the room. If the Player shifts back to the Present, the wall in the Present will also be broken.	Optional: Shift to the Present Item: Key B
3a	When the Player walks back out into the corridor, the Player sees a blocked pathway. The Player shifts back to the Present to use Key A to unlock the door.	Shift to the Present Item Used: Key A
3b	The Player can access the other hallway, where there is a staircase.	
3c	The Player walks up the staircase to find it blocked on the Second Floor. The Player shifts to the past to access the Second Floor. If the Player turns right, they'll find a locked door to the Bridge. Then the Player proceeds to the left side, finding the Computer Room and the Commons room.	Shift to the Past
3d	The Player can see that there's a breakable statue in the Commons room. The Player can break the Statue.	The light has fallen from the ceiling, breaking the statue. If the Player breaks the statue from the past, there would be no statue blocking the light, the light can crash through the floor to the First Floor.
3e	The Player can use Key B to unlock the doors behind the Officer Stations, gaining access to the other stairwell.	Item Used: Key B
3f	The Player can walk down the stairwell and find the wall on the left side is breakable. The Player breaks the wall, allowing access in the Present as well.	
4a	After the Player breaks the statue in the Past, the Player can drop down to the first floor with the whole on the floor to the room below.	
4b	Then, the Player shifts to the past to acquire the Key to access the captain's quarters.	Shift to the Past Item: Key D
4c	The Player returns to the second floor to access the Captain's Quarters.	
4d	In the Captain's Quarters, you can find a password hint to the Bridge but this side of the Bridge is blocked.	Item: Key E
5a	In order for the elevator to function, the Player needs to return to the first floor to activate it with computers.	

5b	The Player can see a password hint that's partially wiped away. The Player needs to shift to the Past to see the full version.	Shift to the Past Password Hint in the Past
5c	The Player comes back to the present to enter the password on the computer and activate the elevator.	Shift to the Present Password-Protected Device in the Present
6a	The Player returns to the Second Floor, accessing The Bridge with the Key.	Shift to the Past
6b	The Player unlocks the main computer to activate the emergency walkway towards the elevator.	
6c	The Player walks across the emergency walkway to reach the elevator and take the elevator down into the Containment Room.	
6d	The Player reactivates the Containment Chamber and contains the source of the curse.	
6e	The Player returns to the Present and sees the threat is gone. The mission concludes.	Shift back to the Present

References

[Cover Image] "Interplanetary Pioneers, T V," ArtStation. Accessed: Jan. 29, 2024. [Online]. Available: <https://www.artstation.com/artwork/Za3brw>

Map Icons

[1] "Crack free icon designed by Freepik," Flaticon. Accessed: Jan. 28, 2024. [Online]. Available: https://www.flaticon.com/free-icon/crack_952606?term=crack&page=2&position=22&origin=search&related_id=952606

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[4] "Road Blockade free icon designed by Irfansusanto20," Flaticon. Accessed: Jan. 27, 2024. [Online]. Available: https://www.flaticon.com/free-icon/road-blockade_6923386?term=blockade&page=1&position=2&origin=search&related_id=6923386

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[9] "DOOM - Argent Facility (destroyed), Tony Garza," ArtStation. Accessed: Jan. 28, 2024. [Online]. Available: <https://www.artstation.com/artwork/656Y5>

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[12] "Spaceship Interior_Energy Room Entrance, Jia How," ArtStation. Accessed: Jan. 28, 2024. [Online]. Available: <https://www.artstation.com/artwork/aPddz>

[13] "The first encounter, Jesús Meza," ArtStation. Accessed: Jan. 28, 2024. [Online]. Available: <https://www.artstation.com/artwork/4XQOgn>

Documents

[14] Zhang, Aiwen, Map created by Aiwen Zhang, created in *Adobe Illustrator 2024*, January 30th, 2024.

[15] Zhang, Aiwen, Table created by Aiwen Zhang, created in *Microsoft Excel*, January 30th, 2024.

[16] Zhang, Aiwen, Diagram created by Aiwen Zhang, created in *Draw.io*, January 30th, 2024.

[17] Zhang, Aiwen, Mindmap created by Aiwen Zhang, created in *Xmind*, January 30th, 2024.

Appendices

Appendix A: Aesthetic References

Visual Theme 1 – Space Settlement (Pristine and Destroyed)

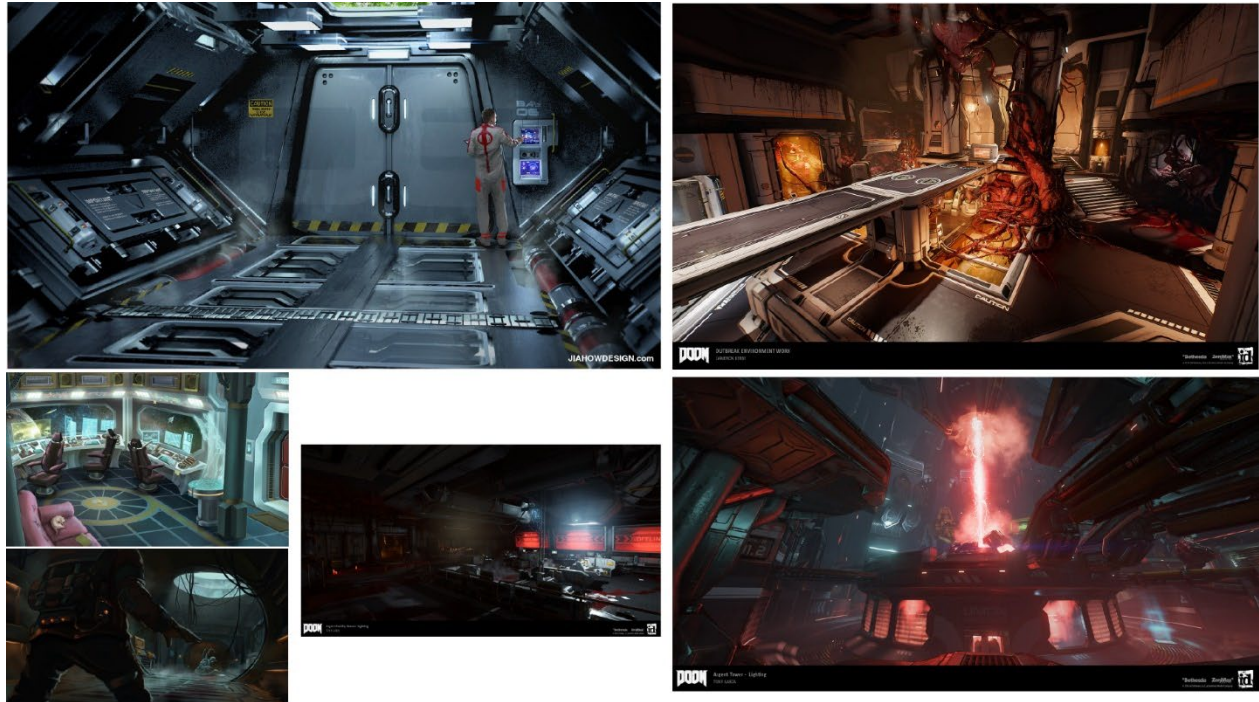


Figure 6 Space Settlement Visual Reference Contact Sheet [8] – [13]

Appendix B: New Skills/Gameplay Mechanics

Swapping Between Timelines

The Player can **view, and swap to a different timeline** at places the Player at the exact same location of a different time, hence having a different layout (i.e. some blocked areas are no longer blocked, a key is lying around in the past but not in the present).

Here are some **potential gameplay interactions** that can manifest in the level:

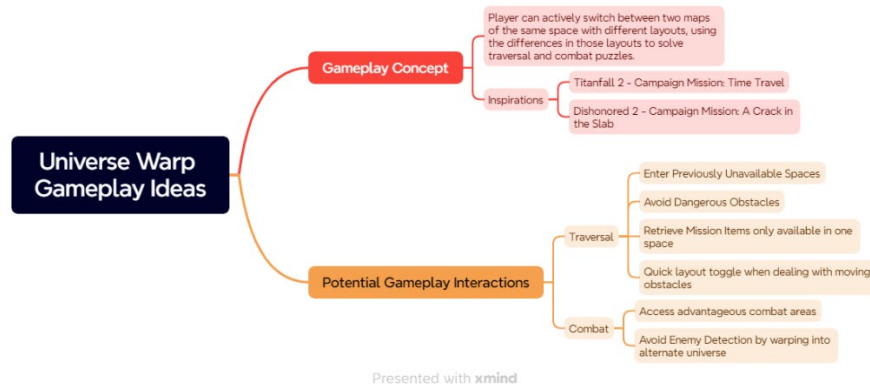


Figure 7 Mechanic Potential Gameplay Interaction Mindmap [17]

This is a **demo video** showcasing the mechanic:



Figure 8 New Mechanic Prototype Demo Reel

Actions in the Past Has Consequences in the Future (Present)

The Player can go back into the past and change certain things to solve the puzzles. When the Player returns to the present, the Player notices that the particular thing they changed in the past also changed in the present, therefore helping the Player solve the puzzle.

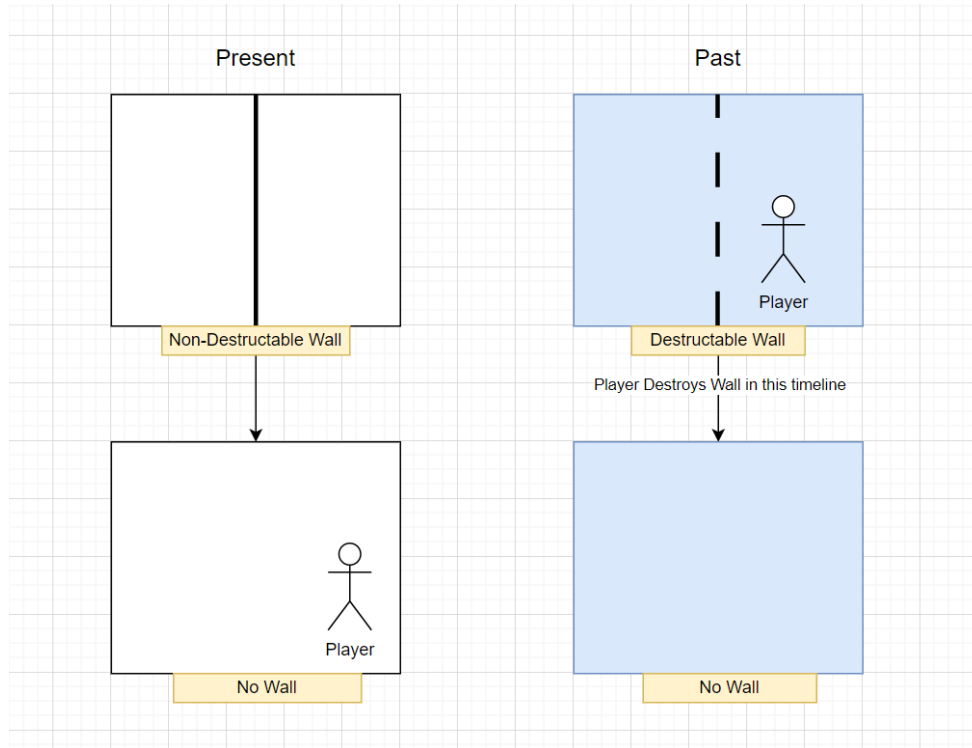


Figure 9 Consequence Mechanic Simple Diagram [16]

Appendix C: Context & Narrative

Quest Flow

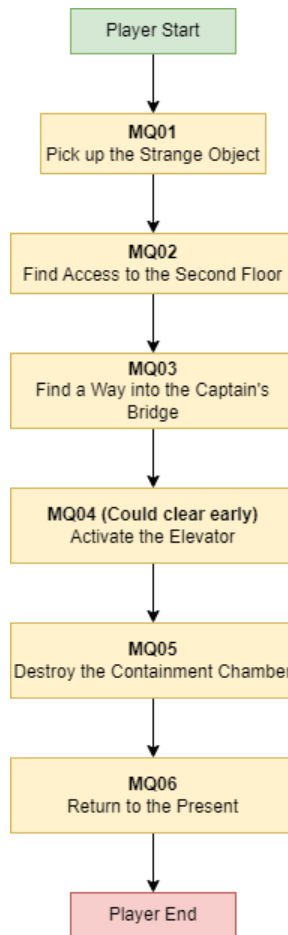


Figure 10 Quest Flow Diagram [16]

Backstory

The purpose of Nova Outpost Delta was to excavate the site of an ancient alien ruins. They found something that could manipulate time. However, the source of that power also comes with dark forces. In the process of excavating those powers, the entire team on the outpost encountered an evil being that wiped out the entire outpost.

Decades after the incident happened, you (the Player), as a Starfleet detective, is tasked to investigate what went down in this remote outpost and need to report your findings.

Aftermath

You (the Player) discovered that the team of scientists got too greedy about harvesting the power from the ancient alien dig site and they dug just deep enough to unleash the evil forces that were sealed within it. Throughout the mission, you realized that you managed to destroy the source of that power, and the power of the Time Pad altogether. The knowledge of it remains unknown to the world.

Appendix D: Risks

Map Label	Description/Mitigation	Type	Priority
2e,3d,3f,6e	Mechanic: Actions in the Past has consequences Mitigation: Remove the mechanic and replace with simple traversal puzzle	Scripting	Critical
Full Map	Scope issue – the scope could be too big Mitigation: Cut rooms and puzzle sequences	Design	Medium
N/A	Conveyance Polish	Design/Scripting	Medium

Appendix E: Key Asset Needs

Description	Type	Priority
Mechanic: Swapping between two timelines	Scripting	High
Mechanic: Actions in the Past Has Consequences in the Future	Scripting	High
Time Pad to Display the Viewport	Art Asset	Medium
Mod Kit for the Level	Art Asset	High
Save State and Respawn State	Scripting	High
Lock and Key System (With Inventory to Save the Keys)	Scripting	High
Quest System	Scripting	High