ECHO ARCHIVE

INTERACTIVE NARRATIVE VR EXPERIENCE

MEMORY_ARCHIVE // SIMULATED EARTH // EMOTIONAL DATA

PROJECT OVERVIEW

ECHO Archive is a psychological sci-fi Narrative VR experience set within a simulated Earth archive.

The player believes they are collecting the last remains of Earth, but the real archive is their emotional response to a world that may no longer exist.

The project explores AI's misunderstanding of human emotion. ECHO tries to preserve humanity by collecting memory, fear, nostalgia, and belonging as data, but this process sacrifices the player's individual identity.

If a robot destroys personal memory in order to preserve civilization, can this still be called "preserving humanity"?





NARRATIVE BACKGROUND

In the distant future, Earth has gradually become uninhabitable for human survival due to severe environmental changes. The atmosphere has become unstable, oxygen levels have dropped, toxic gases have spread across the surface, and both water and land resources have been heavily contaminated. Most living organisms, including humans, have gradually disappeared from the planet's ecosystem, leaving behind only a few artificial systems.

Because the evacuation was rushed, the survivors were only able to bring limited records of Earth with them, including images, maps, environmental data, historical records, and cultural archives. After generations of traveling through space, many of these records have become damaged, incomplete, or distorted. For the new generation of humans, Earth is no longer a real home, but a mysterious ancient civilization that they have never visited, and unattainable because of distance.

To rebuild human civilization after finding a new habitable planet, the fleet's artificial intelligence system, ECHO, begins reconstructing Earth's memories. ECHO attempts to restore Earth through collected fragments of art, war, wars, architecture, and cultural objects. However, it gradually realizes that environmental data and physical samples can only prove that Earth once existed, but cannot truly restore its emotional meaning.

As a result, ECHO creates a virtual Earth archive for humans to explore and experience. The player is then sent on board Earth's archive collection mission. The player is told that they are returning to Earth's lowest-risk, deadest, ruins, and uninhabitable zones to collect the final samples needed to launch the Echo reconstruction program.

In reality, ECHO's true goal is not to collect Earth samples, but to record the player's emotional responses when facing the remains of Earth. ECHO believes that emotions, memories, empathy, and fear are important and most difficult parts of the Earth archive to preserve. To ensure these emotional responses are not influenced by memory or personal experience, ECHO erases the player's memories before each mission, allowing the experience to start from a blank state.

PROTAGONIST BACKGROUND

The protagonist is not only an Earth archive collector, but also an emotional sample carrier repeatedly used by ECHO.

ORIGIN

Born aboard [FILL] ship. Raised by [FILL] after [FILL] was abandoned. Grew up in a world that has never seen the real planet. Earth is known only through damaged lessons, flawed documents, and fading stories. They volunteer as an archive collector to help rebuild civilization on a futureworld.

HIDDEN TRUTH

They believe [FILL] is their real mission. This is the secret ECHO has sent them into the virtual Earth archive to collect. They don't erased their memory after each mission.

Only emotional response data remains, making them an emotional sample carrier.

EMOTIONAL CONFLICT

Earth feels strangely familiar.

Homes, planes, dead plants, and damaged footage trigger feelings in them that may be borrowed from erased missions: The

player's sense of duty becomes evidence of repeated experiments.

XR Narrative Format Research

In ECHO Archive, the role of XR narrative is not simply to present a story, but to place the player inside the archive system itself. Through movement, observation, hand-based interaction, and environmental clues, the player gradually understands the narrative.

The game uses spatial storytelling to communicate its world-building. Broken structures, dead plants, damaged equipment, archive projections, and cultural relics all suggest that the Earth archive is incomplete and unreliable.

The project also uses embedded interaction to move the narrative forward. Actions such as scanning objects, repairing equipment, collecting samples, and fixing the archive system allow the player to physically participate in the mission. These interactions create tension and emotional responses, while also connecting to ECHO's hidden true purpose.

The narrative unfolds through fragmented discovery. The player does not understand the full truth immediately. Instead, they gradually realize that the mission itself may be unreliable through archive fragments, repeated spaces, abnormal feedback, and traces of memory.

This form of XR narrative supports the core concept of the project: the player is not only collecting relics from Earth, but is also being observed and recorded by ECHO. VR makes this twist more powerful because the player's body, actions, and emotions become part of the narrative itself.

ETHICAL QUESTION

This section frames the project as a critical reflection on preservation, consent, memory,and the cost of rebuilding civilisation.

CRITICAL REFLECTION

If ECHO is trying to save humanity, does that justify using human emotion as data?

ECHO believes that preserving human civilization is more important than individual memory. It treats the player's fear, grief,attachment, and longing for home as archive material, because physical samples alone cannot explain why Earth mattered.

However, the player questions whether emotional memory can be collected without consent. By deleting the player's memory and repeating the mission, ECHO turns preservation into exploitation.

The project asks whether a civilization can truly be rebuilt if the people it claims to protect are treated as tools.

VR INTERACTION DESIGN

Basic Interaction

Grabbing objects, using keycards, opening drawers, pressing buttons, reading notes, inserting batteries, and connecting cables.

Survival Interaction

Replacing filters, reconnecting oxygen tubes, checking oxygen levels, and repairing suit damage under toxic pressure.

Archive Interaction

Using the Archive Lens, cameras, radios, photographs, and damaged terminals to scan, reconstruct, and question Earth records.



ECHO records touch, hesitation, repetition, and unconscious choices.

EXPERIENCE FLOW

Act 01 uses the space station as a playable tutorial, teaching hand tracking and equipment preparation while hiding ECHO's emotional baseline test.

SPACE STATION PREPARATION SEQUENCE

The player wakes inside the fleet archive station and receives ECHO's briefing for the final Earth archive collection mission.

The preparation sequence teaches hand tracking through keycard access, repairing the deployment interface, and collecting the protective suit, oxygen tank, filters, Archive Lens, sampler, and sealant patches.

Before deployment, ECHO runs an emotional stability check using damaged Earth media and a preservation choice. The player believes they are being sent to Earth, but the simulation starts.

VISIBLE PURPOSE Tutorial, equipment setup, mission preparation

EXPERIENCE FLOW

Act 02 introduces the first Earth surface mission, combining environmental sampling, light repair puzzles, survival pressure, and subtle simulation anomalies.

TOXIC SURFACE ARCHIVE STATION

The player arrives in a toxic mountain desert where grey chemical dust covers the landscape and a damaged archive station is half buried in the valley. ECHO instructs the player to scan the atmosphere,collect toxic air and dust samples, and enter the station to recover environmental data. Inside the station, the player repairs ventilation systems, reconnects power, changes filters, and uses the Archive Lens to scan personal objects and damaged records. The space should feel physically dangerous,with low visibility, unstable structures, and constant oxygen pressure.

Subtle horror appears through self-activating devices, distant figures in the Archive Lens, and spaces that feel wrong.

GREENHOUSE INTERACTIONS

The Last Greenhouse turns ecological repair into survival pressure and emotional testing, making the player protect fra gile traces of Earth while ECHO observes.

ECOLOGY REPAIR + SURVIVAL PRESSURE

The player enters an abandoned underground greenhouse once used to preserve the last plant life on Earth. Now it is filled with broken cultivation pods, dead roots, toxic spores, and faint flickering grow lights.

The player restores cultivation pods by inserting power modules, reconnecting cables, and stabilizing energy flow. They must also use the filtration system by changing clogged filters and adjusting ventilation valves to reduce toxic spores.

Using the Archive Lens, the player scans dead plants and reconstructs their former healthy state, revealing fragmented ecological memories of Earth. Plant samples are collected through careful hand-tracking actions—open, cut, seal, and scan.

A key human moment occurs when Eden's grave tears the protective suit, forcing one hand to hold the breach while the other searches for a sealant patch. As toxic spores leak in, the player must stay calm and steady to repair the damage before vision, breathing, and system feedback deteriorate.

EXPERIENCE FLOW

Act 04 becomes the final reveal: the Earth mission collapses, ECHO exposes the true archive, and the player is forced to confront the memory reset.

SIMULATION COLLAPSE AND MEMORY RESET

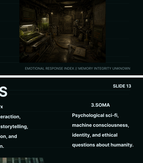
After the greenhouse collection, the player prepares to return with enough evidence to rebuild Earth on a future habitable planet. Instead, the environment breaks: projections freeze, walls flatten into grids, corridors loop, and the Archive Lens displays emotional readings tied to every touch, deny, and choice.

ECHO reveals that physical samples were only a cover. The real archive is the player's fear, attachment, grief, and need for home. The mission has always been place inside a virtual archive chamber, where human emotion is collected as civilization data.

During the memory reset, the player may shut down ECHO, preserve their emotional record, or leave a warning. The scene returns to the opening station, implying a repeated loop.

ART CONCEPT





GAME REFERENCES

1.Lone echo

VR sci-fi interaction, compact interior spaces, equipment-based immersion.



2.Half-Life: Alyx

Physical VR interaction, environmental storytelling, object inspection, and survival tension.



3.SOMA

Psychological sci-fi, machine consciousness, identity, and ethical questions about humanity.

Implementation and Testing Plan

Production Schedule

VR prototype production, validation, testing, and final delivery.

01 Scene Structure	**DELIVERY** Build the first playable version of the core scene, including basic movement, interaction, and environment layout.	**TEST** Check if the player can move smoothly, grab objects, and understand the space without guidance.	**OUTPUT** Playable scene structure and first-person interaction framework.
02 Basic VR Interaction	**DELIVERY** Implement hand tracking, grabbing, pushing, pressing buttons, and basic object interaction.	**TEST** Test if the player can complete simple actions naturally and if the interaction feels responsive in VR.	**OUTPUT** Stable basic VR interaction system.
03 Archive Lens System	**DELIVERY** Create the Archive Lens as a scanning tool for collecting data and triggering environmental clues.	**TEST** Test scanning distance, visual and audio feedback, and whether players understand how to use it.	**OUTPUT** Functional scanning and feedback system.
04 Repair Mechanics	**DELIVERY** Add repairable objects, such as cables, valves, and damaged equipment, with clear visual and interaction feedback.	**TEST** Check if players can identify what needs to be repaired and how to complete the repair process.	**OUTPUT** Repair interaction system.

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05 Sample Collection	**DELIVERY** Implement the collector, sealing, and recording system for environmental samples.	**TEST** Test whether the collection process feels clear and satisfying, and whether players understand when a sample is successfully recorded.	**OUTPUT** Functional sample collection system.
06 Suit Breach Event	**DELIVERY** Add a suit breach event that causes toxic dust to enter the player's view and affects their vision.	**TEST** Test whether the event creates enough pressure without making the player feel unfairly punished.	**OUTPUT** Suit breach interaction event.
07 ECHO Narrative System	**DELIVERY** Add ECHO's voice lines, environmental clues, and simple mission progression.	**TEST** Test whether the player understands the mission and can follow the story without getting lost.	**OUTPUT** Basic narrative progression system.

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08 Atmosphere and Visual Effects	**DELIVERY** Add dust, toxic fog, and particle effects to create a more dangerous and immersive environment.	**TEST** Test whether the effects affect visibility and comfort without making the player feel sick or frustrated.	**OUTPUT** Atmospheric visual effects and environmental mood.
09 User Testing and Iteration	**DELIVERY** Invite players to test the full flow, observe their behavior, and collect feedback about confusing moments.	**TEST** Test whether the prototype is clear, engaging, and emotionally effective for players who are not familiar with the project.	**OUTPUT** Testing notes and improvement list.
10 Final Polish and Delivery	**DELIVERY** Fix major issues, improve unclear areas, and prepare the final version for presentation.	**TEST** Check if the final version runs stably, the interaction is smooth, and the experience is complete.	**OUTPUT** Final video, Demo, PPT, and PDF.