

Reflection Log – Milestone 2

Title: *Echoes of the Observer*

Developer: Danila

Milestone: 2 – Game Systems and Aesthetics

Period: July 14 – August 1, 2025

What I Accomplished

- Gameplay integration: Successfully linked cinematic and interactive gameplay into one functional game loop.
 - Visual polish: Planet rendering, Niagara fog transitions, and lighting systems now deliver a cinematic-quality presentation.
 - Optimization of Sequencer workflow: Using asset grouping and visibility tracks removed the complexity of level streaming during cinematics.
 - Death system implementation: Physics-driven ragdoll with proper input handoff completed a key gameplay mechanic.
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Challenges Faced

- Niagara fog culling: Required extreme fixed bounds and debugging to prevent premature particle disappearance at orbital scale.
 - Character possession bugs: Early duplication and loss of input were resolved by revising GameMode spawn logic.
 - Translucency sorting issues: Multiple layered spheres (Earth, clouds, shadows, atmosphere) needed adjusted material priorities to eliminate flickering.
 - Sequencer variable binding: Initially failed to control Niagara parameters until using direct component binding.
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What I Learned

- Abandoning level streaming for cinematics increased stability and eliminated transition hitches.
 - Niagara bounds must be aggressively scaled for planetary effects; engine defaults are insufficient for large-scale VFX.
 - Tag-driven visibility control simplified complex cinematic lighting setups.
 - Breaking cinematics into clearly organized Sequencer folders reduced iteration time.
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Next Steps (Milestone 3)

- Finalize Niagara fog blending and camera-based transitions for space scenes.
- Add MetaSounds-based audio to bridge cinematics and atmospheric environments.
- Refine boat ride cinematic and Mission 1 environment.
- Implement UI for objectives and player feedback.
- Record polished gameplay footage for milestone review.