

HANDOFF DOCUMENT · PROTOTYPE SHIPPED

SOURCE ENGINE 2013 · MAPBASE · VSCRIPT

GOLIATH

Next steps — what the prototype proved, and what it still needs

The first loop stands up and demonstrates the concept. This document records the design intent, the six systems that remain to be built, and the technical debt measured during the final debugging sessions — so none of it has to be rediscovered.

01 WHAT THE FIRST LOOP TEST PROVES

Recording the video made it possible to look at the prototype from the outside.

PROVED

THE LOOP WORKS

The player's actions alter the world, and those alterations survive his death. The action-flag architecture carries a decision taken in the canal all the way through the stormdrain.

NOT PROVED

THE PLAYER PERCEIVES IT

MAKING THE LOOP LEGIBLE — The line between what carries over and what resets must be drawn by something the player can watch. The citizen replaying his death each run until the weapon saves him is the clearest instrument.

⌚ READING CONVENTION

A RUN IS ONE CYCLE FROM SPAWN TO DEATH

The three axes that follow take precedence over the technical work detailed in the rest of this document.

02 THREE AXES BEFORE THE SYSTEMS

What the player understands, rather than what the engine does. These come before the six systems that follow.

◎ AXIS 1

MAKING THE SPACE LEGIBLE

Rooms resemble one another too closely to serve as landmarks, and the canal's main axis does not stand apart. Asserting both turns exploration into a reading of the layout.

✦ AXIS 2

MAKING THE LOOP LEGIBLE

The player must be able to tell what persists from one run to the next from what progresses toward a resolution. The NPC saving event is the clearest things to expose it. Actually it is underexposed.

✦ AXIS 3 · THE LARGEST UNDERTAKING

THE ANTAGONIST

A character the player releases, who betrays him and then hunts him across subsequent runs: laying traps, sabotaging the level, cutting the lights during combat. It is the most demanding undertaking and the most rewarding — it alone feeds all three pillars at once, giving exploration an adversary, survival a source of pressure, and narrative a continuity between runs.

03 WHAT GOLIATH SETS OUT TO PROVE

Goliath is a prototype built to create gameplay loops resting on three pillars. The player moves through an interconnected environment they are tasked with opening as they progress.

♦ PILLAR 1

EXPLORATION

♦ PILLAR 2

NARRATION

♦ PILLAR 3

SURVIVAL

THE FOUR WAYS A SPACE IS GATED

AN ITEM

Something to find before the door gives way.

A WEAPON

Force as a key — the space opens to capability.

A NARRATIVE BEAT

The story moves, and so does the geometry.

DIFFICULTY

No key at all: the space is simply too dangerous yet.

The last one is the most interesting and the least explored: it is not opened with a key, but with knowledge and preparation.

04 SIX SYSTEMS TO BUILD

The first loop demonstrates the concept. These are what it takes to actually test it.

01 THE INITIAL HARD GATE

Force the first death. It teaches the respawn loop and moves the plot.

02 SPAWNING SYSTEM

Stabilise it, and allow several scenarios inside one progression.

03 REWARD / LOOT

Move to item_item_crate — native, one entity instead of seven.

04 HAZARDS

Anticipable through knowledge, spread holistically across the level.

05 LIGHT & DARKNESS

Darkness as a readable danger system, not a local effect.

06 NAMING CONVENTION

One homogeneous nomenclature across the whole project.

05 THE INITIAL HARD GATE

The most structural gap. The player must be made to die once.

◎ REASON ONE

TEACH THE LOOP

Respawn is the heart of Goliath. A player who never dies never meets the system that defines the game, and reads the level as a straight line.

✦ REASON TWO

MOVE THE PLOT

Death is a narrative event, not a failure state. The intrigue advances precisely because the player was torn out of the dream.

◁ EXISTING ANCHOR

THE FIRST-DEATH MESSAGE IS ALREADY WRITTEN

ShowDreamRule() fires once per playthrough, on the black screen, after the player asks to return. It states the rule of the world in two lines and is built for exactly this moment:

“THE DREAM IS NEVER THE SAME, NEVER ANOTHER / SOME THINGS PERSIST. SOME CANNOT BE UNDONE”

06 SPAWNING & REWARD

02 · SPAWNING

SEVERAL SCENARIOS PER PROGRESSION

Spawners are driven by player actions, but remain fragile: triggering still bugs out, and one action can only ever open one configuration.

The same action must be able to produce different outcomes depending on context — that is the condition for the player to build a meta rather than memorise a path.

03 · REWARD

MOVE TO `item_item_crate`

The current loot crate is a hand-built assembly of seven entities: prop, logic_case, three makers, template, spawner.

HL2 ships a native entity that does all of it in one, more robustly. This was already logged as a regret when the system was first wired.

⚠ WHAT TO WATCH

THE EDICT BUDGET

Around 1278 of 2048 edicts at the start of the project — before the four tripmine batches, which reach 306 entities on their own. Every crate converted to `item_item_crate` gives six back. Measure with `report_entities` in the heaviest state before adding anything.

07 HAZARDS & DARKNESS

04 · HAZARDS

ANTICIPABLE, AND HOLISTIC

- Readable through the player's knowledge of the world, rather than suffered
- A coherent theme spread across the whole level, not isolated pockets
- Today radiation works, but behaves as a switch tied to the valve

05 · LIGHT

DARKNESS AS A SYSTEM

- Darkness must make the environment more dangerous — and the player must understand that
- More light generators the player can operate
- Readable zones of darkness, in the spirit of Prey: Mooncrash or Amnesia: The Bunker

♦ FIRST MILESTONE ALREADY IN

THE STORAGE DARK-SPAWN

Creatures appear in the Storage once the valve cuts its lighting: four spawn points, a shuffled draw, a cry two seconds ahead of the creature, and an enemy finder that goes blind up close so the player can still hide.

It works — but it stays local, and the rule it embodies is never stated anywhere the player can read it.

08 ONE NAMING CONVENTION

The project grew by accretion. Conventions coexist without ever having been unified.

`Logic_Relay_*`

Mixed casing, inconsistent position of the type

`Volume_*` / `Trigger_*`

Two prefixes for the same kind of entity

`SD_*`

Stormdrain prefix kept on functions that now live in the canal

`spawner_*` / `maker_*`

Two names for `env_entity_maker`

*To be done in one pass, against a written convention — and to be done **FIRST**: it is the only task whose cost grows mechanically with every entity added before it.*

09 POTENTIAL BLOCKERS

Surfaced in the logs during the final sessions. None of these were in the original list.

`info_target 'checkpoint_respawn'`

MISSING FROM THE CANAL

Reported at every load. The player respawns where they stood instead of the intended point.

`DI_Zombie_to_Human01`

INTERACTION NOT FOUND

The rescue scene's dynamic interaction fails. Tied to male_09.mdl, which also reports ACT_DISARM missing.

`report_entities`

EDICT BUDGET UNMEASURED

Never checked in the heaviest state — after the suit, with batches C and D both alive.

10 WORK FROZEN FOR THE DEMO

* FROZEN

ASYMMETRIC NPC VISION CONE

FlInViewCone override in CAI_BaseNPC with goliath_vccone_* ConVars. Written and checked against the sources — never applied.

* FROZEN

SOURCE / MOD ARCHITECTURE MIGRATION

Eight-step plan with an NTFS junction and a \$GAMENAME change. Postponed.

* FROZEN

RENAMING THE STATE KEYS

Tables still use [1] and [3] with a gap. They are labels now — "valve closed" and "valve open" — but renaming touches eight ApplyRunXxx functions and runNumber.

* FROZEN

useActionFlags ESCAPE HATCH

Set to false, the old death-counter behaviour comes back. To be removed once confidence is earned.

Also to remember: chapter1.cfg points at the stormdrain for the shoot, and must go back to the canal.

11 WHAT MUST NOT BE BROKEN

The action-flag architecture is the main gain of this phase. It replaced a "run" system that counted deaths and made the world feel arbitrary.

© TWO FLAGS · goliath_flags.txt

SHARED BY BOTH LEVELS

valve_lowercanal — the lower-canal crank was turned

hazard_suit — the anti-toxic suit was picked up

⚙ HOW IT CROSSES

A FILE, NOT A TABLE

VScript tables survive a transition and get stuck in the wrong state. Files do not — which is how an action taken in the canal is still true in the stormdrain.

FOUR TABLES TURN A FLAG INTO CONSEQUENCES

respawnRearmTriggers	Re-armed while a flag is NOT set
respawnFlagTriggers	Opened by a flag
respawnRetireTriggers	Closed for good — applied LAST, wins over everything
flagExtraTriggers	The same, on state application

Adding a consequence takes one line in the right table. That is the frame the meta will be built on.

12 RULES NOT TO RELEARN

The five costliest, from the "Traps and lessons" sheet of the command workbook.

1

Hammer eats double quotes, Squirrel rejects single ones

Always write a parameterless wrapper function.

2

An unticked VisGroup is not compiled at all

The entity exists in the .vmf and not in game. `find_ent` proves it in two seconds.

3

The I/O delay decides, not the order of the calls

When two systems drive one entity, the winner needs the higher delay.

4

Num. of NPCs = -1 means EXHAUSTED, not unlimited

And Enable on an `npc_maker` fires a spawn by itself.

5

An animated light Appearance costs CPU every frame

Invisible to every rendering convar — that was the run 2 stutter.

13 SUGGESTED ORDER OF RESUMPTION

1

NAMING CONVENTION

First — everything else builds on it, and it is the only task that gets more expensive with time.

2

FIRST-DEATH HARD GATE

It is what makes the loop testable at all.

3

`item_item_crate`

Mechanical swap. Immediate gain in robustness and edicts.

4

LIGHT / DARKNESS SYSTEM

The largest design effort — to be done on a clean base.

5

SEVERAL SCENARIOS PER ACTION

Depends on step 4: that is where variety starts to mean something.

6

ASYMMETRIC VISION CONE

The patch is ready; apply it when there is time to balance it.

14 WHERE EVERYTHING LIVES

`checkpoint_manager.nut`

CANAL

State resolution, flags, respawn, death screen, the rescue scene and the betrayal, the four tripmine batches, hazards, gloves.

`stormdrain_manager.nut`

STORMDRAIN

Death and transition back to the canal, flag-driven radiation, ambiance watcher, loot crate 08.

`Goliath_console_commands_EN.xlsx`

DOCUMENTATION

Four sheets: console commands, persistent files, test sequences, and the traps that cost time.

`goliath_flags.txt`

SHARED STATE

The two action flags. Everything the world does is resolved from this one file.

END OF HANDOFF

THE PROTOTYPE STANDS UP.

What it needs next is not more systems, but the two or three that make the ones already there legible to the player.