

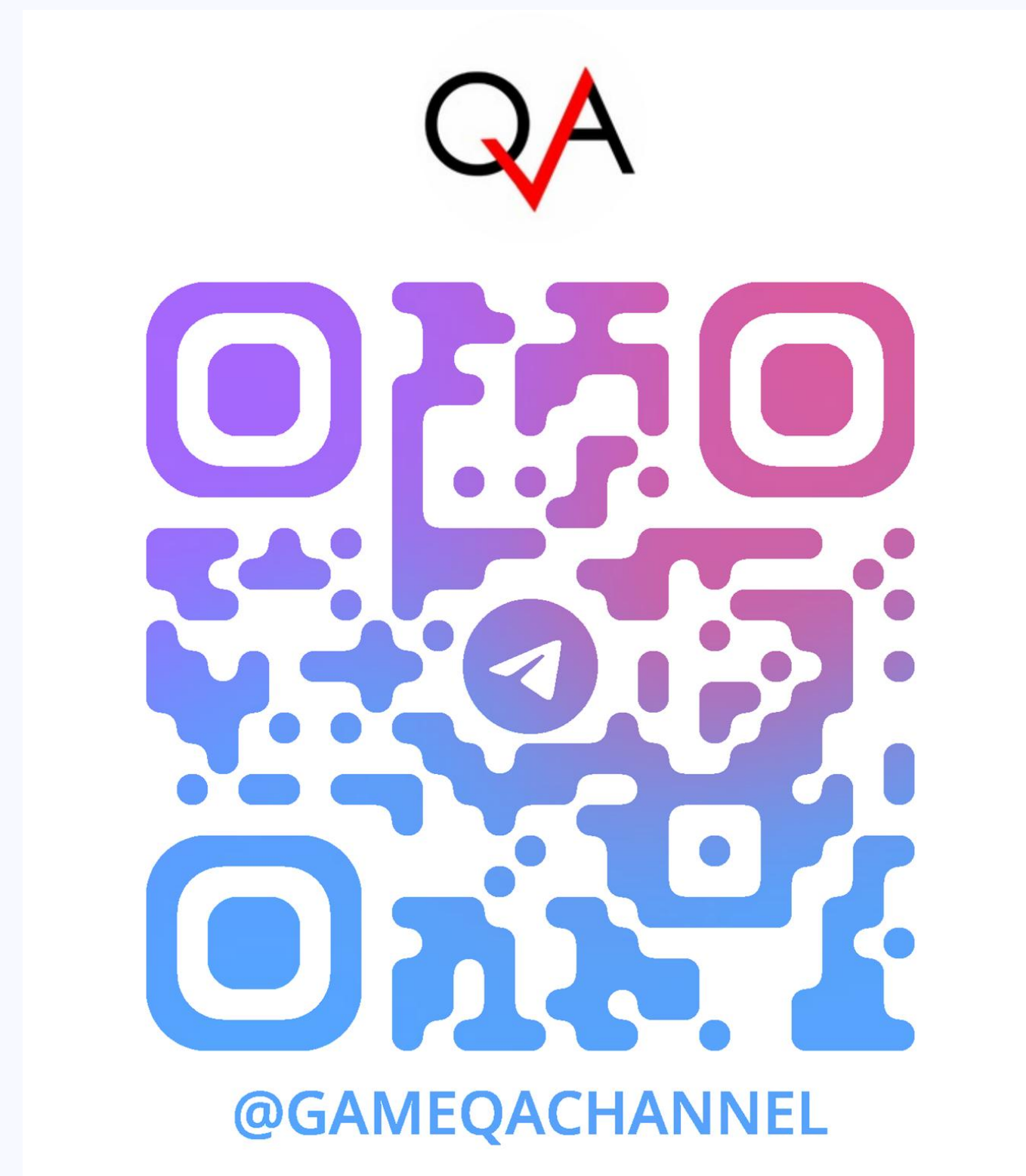
ИГРЫ ПО ПРАВИЛАМ

ТЕСТ-ДИЗАЙН В МИРЕ ХАОСА ГЕЙМДЕВА



Алексей Симкин

- QA Manager / QA Tech Architecture
- 7+ лет в GameDev
- 12+ лет в IT









ASIMO
Алексей Симкин 2025



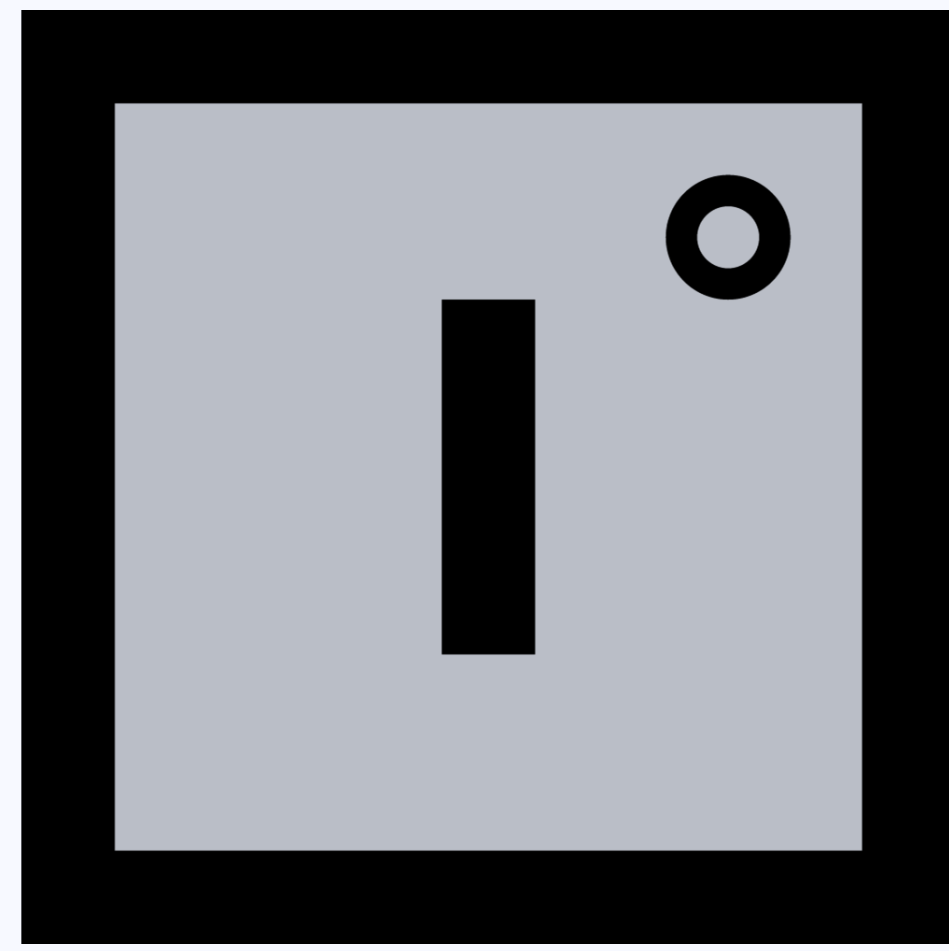
ПОРТФОЛИО



ELECTRONIC ARTS



SQUARE ENIX



IMPROBABLE

A close-up shot of Brad Pitt in a military cockpit, smiling broadly as a hand in a flight suit reaches in to light a cigarette for him. The scene is dimly lit with a blueish tint, and smoke is visible in the air. The background shows various cockpit instruments and a window with a view of the sky.

Лучшая работа в мире



HEISENBUG

2024 Autumn

Поиграть в игру !=
протестировать игру



VK Видео



Youtube



Алексей
Симкин

**TALKING
ABOUT GAME
DEVELOPMENT**

VS

**WORKING
IN GAME
DEVELOPMENT**

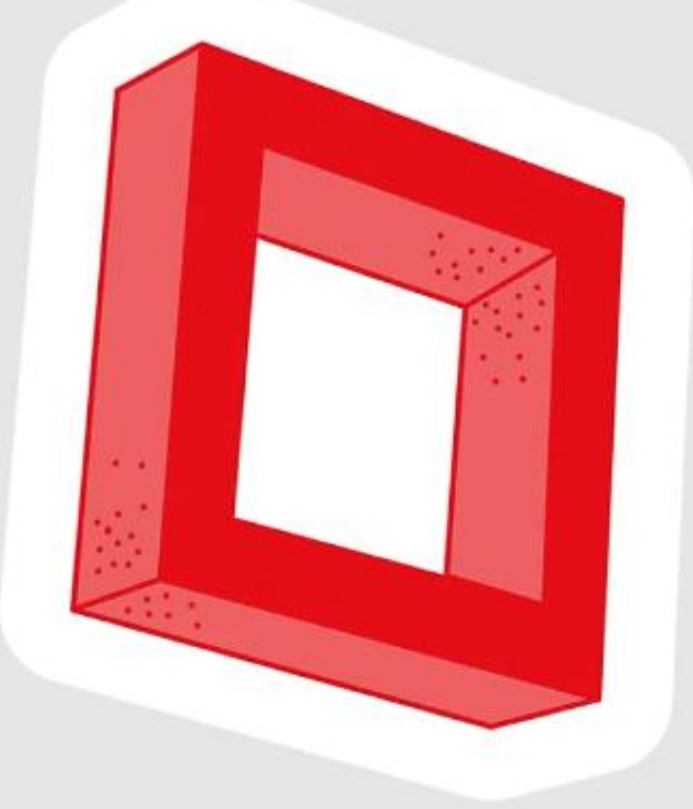
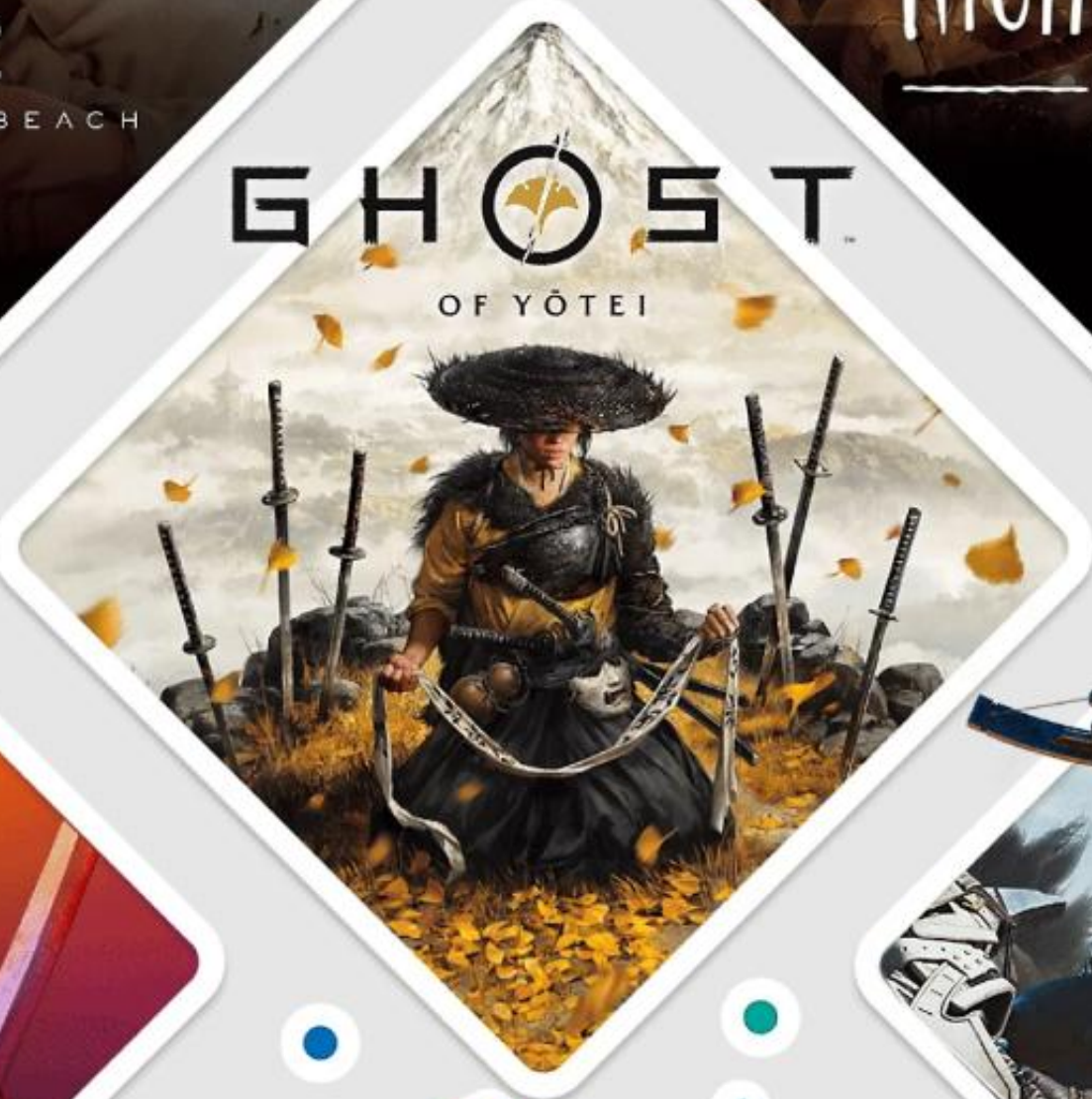


ТЕСТИРОВАНИЕ



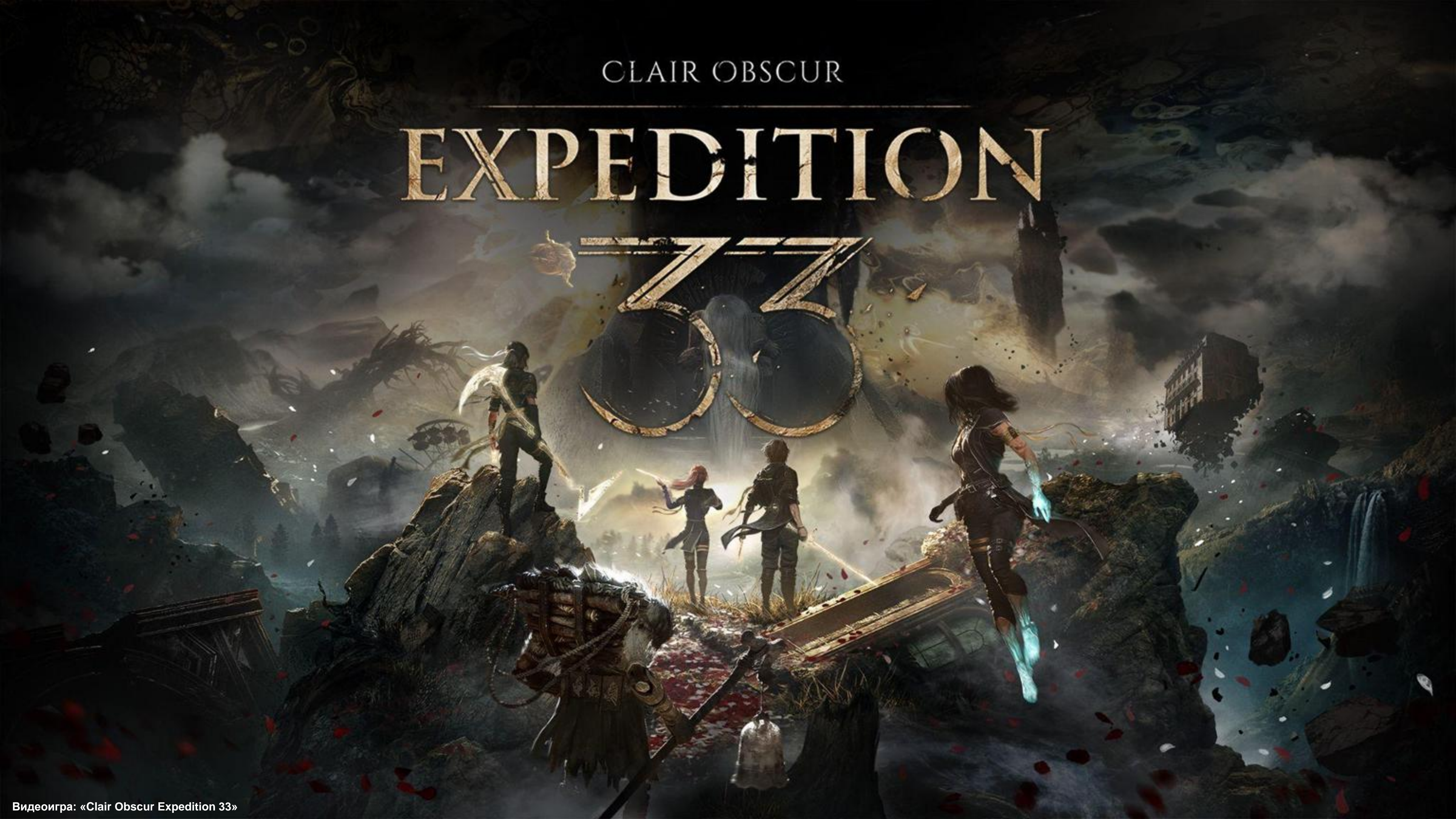
ЭТО ВЕСЕЛО

2025



CLAIR OBSCUR

EXPEDITION





UBISOFT



CD PROJEKT RED®



XBOX
GAME STUDIOS



Electronic Arts

SQUARE ENIX



Sony
Interactive
Entertainment



CRYENGINE®



UNREAL ENGINE



Unity



n°rthlight®
REMEDY STORYTELLING TECHNOLOGY



UNREAL ENGINE

Stations: [Welcome](#) | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16

Welcome to Unreal Engine



Welcome to Unreal Engine - a powerful tool for creating 3D interactive experiences. This level is designed to help introduce you to the major features of UE and help to acclimate you to moving around inside the interface.

ON THIS PAGE

- Welcome to Unreal Engine
- Interface**
- Navigation

Interface

The Unreal Engine interface has the following elements:



Outliner

Levels

Search

Item Label	Type
Lvl_IntroRoom (Editor)	World
↳ Bridge_001	Folder
↳ Blocking Volume	Blocking Volume
↳ SM_Cube12	Static Mesh
↳ SM_Cube36	Static Mesh
↳ SM_Cube65	Static Mesh
↳ SM_QuarterCylinder8	Static Mesh
↳ SM_QuarterCylinder9	Static Mesh
↳ SM_QuarterCylinder10	Static Mesh
↳ SM_QuarterCylinder11	Static Mesh
↳ SM_QuarterCylinder12	Static Mesh
↳ SM_QuarterCylinder13	Static Mesh
↳ SM_Ramp7	Static Mesh

405 actors (384 loaded)

Details

Select an object to view details

Content Drawer

Output Log

Cmd Enter Console Command

Trace

Diagnostics

Zen Server

All Saved

Revision Control

Content Browser

Search Assets

7 items

- Characters
- DemoTemplate
- Developers
- FirstPerson
- Input
- Level Prototyping
- Localization

UECasts.com - UE5 Editor HotKey Cheat Sheet

Viewport Navigation	Keys
Movement - Standard	LMB/RMB + Drag
Movement - GameStyle	RMB + WASD
Movement - Maya	Alt + LMB/RMB
Zoom	Mouse Wheel

Viewport Transformation	Keys
Translate	W
Rotate	E
Scale	R
Toggle Transform Mode	Spacebar
Clone Active Object	Alt + (Translate or Rotate)
Vertex Snapping	V

Viewport Shortcuts	Keys
Focus on Selection	F
Wireframe View	Alt + 2
Unlit View	Alt + 3
Lit View	Alt + 4
Grid Size Decrease	[
Grid Size Increase]
Rotation Size Decrease	Shift + [
Rotation Size Increase	Shift +]
Mouse Cursor in Play Mode	Shift + F1

Miscellaneous	Keys
Live Code Recompile	Ctrl + Alt + F11
Detach from Viewport Play	F8

Modeling Mode	Keys
Accept / Complete	Enter
Cancel active tool	Esc
Toggle Gizmo	A

Protip: Add spacebar hotkey for "Accept / Complete"

Modeling - Cube Grid Tool	Keys
Flip Selection	T
Decrease Power of Two	Ctrl + Q
Increase Power of Two	Ctrl + E
Toggle Gizmo	A

Modes	Keys
Select / Placement	Shift + 1
Landscape	Shift + 2
Foliage	Shift + 3
Mesh Paint	Shift + 4
Modeling	Shift + 5
Fracture	Shift + 6
Brush Editing	Shift + 7
Animation	Shift + 8

Level Editor	Keys
Hide Selected Object	H
Unhide All Hidden Objects	Ctrl + H
Editor FullScreen	Shift + F11
Immersive Mode	F11
Game View	G
Find in Blueprint	Ctrl + K
Snap to Floor	End
Snap Pivot to Floor	Alt + End
Snap Origin to Grid	Ctrl + End
Snap Bounds to Floor	Shift + End
Command Console	~
Clear Selection	ESC

Camera Shortcuts	Keys
Perspective View	Alt + G
Front View	Alt + H
Side View	Alt + K
Top View	Alt + J
Set Camera Bookmark	Ctrl + 0-9
Jump to Camera Bookmark	0-9

Modeling - Shared Shortcuts	Keys
Decrease Brush Falloff	Ctrl + Shift + [
Increase Brush Falloff	Ctrl + Shift +]
Decrease Brush Size	[
Increase Brush Size]
Decrease Brush Strength	Ctrl + [
Increase Brush Strength	Ctrl +]
Decrease Line Width	=
Increase Line Width	Shift + =

UECasts.com - UE5 Blueprint Cheat Sheet

Blueprint Types	Description
Level Blueprint	Each level has its own Level Blueprint which can reference and manipulate Actors within the level, control cinematics, manage level streaming, checkpoints and other level-related tasks. The Level Blueprint can also interact with Blueprint Classes placed in the level, such as reading/setting any variables or triggering custom events they might contain.
Blueprint Class	Blueprint Classes are ideal for making interactive assets such as doors, switches, collectible items, and destructible scenery. Typically used to extend a C++ class to allow for customization.
Widget Blueprint	Extends UUserWidget to create User Interface components for game menus, user HUD, etc.

Common Blueprint Classes	Blueprint Class Description	Data Pin	Color	Description
Actor	An Actor is an object that can be placed or spawned in the world.	Bool	Red	Boolean values of True or False
Pawn	A Pawn is an Actor that can be controlled and receive input from a Controller.	Integer	Cyan	Integer number (whole numbers) ex: 5, 7, 10
Character	A Character is a Pawn that includes the ability to walk, run, jump, and more.	Float	Light Green	Floating arithmetic number ex: 3.14
Player Controller	A Player Controller is an Actor responsible for controlling a Pawn used by the player.	String	Pink	String of text and characters ex: "My String"
Game Mode Base	A Game Mode defines the game being played, its rules, scoring, and other faces of the game type.	Transform	Orange	Location, rotation and scale transformation
Actor Component	An ActorComponent is a reusable component that can be added to any actor.	Vector	Yellow	Vector of (X, Y, Z)
Scene Component	Component that has a scene transform (location, rotation, scale) and can be attached to other scene components.	Linear Color	Blue	RGBA value of a color
		Rotator	Purple	Roll (X), Pitch (Y), Yaw (Z)

Common Blueprint Events	Event Description
Event ActorBeginOverlap	Called when a collision/overlap between two actors with Generate Overlap Events enabled is detected.
Event ActorEndOverlap	Called when two actors previously overlapped stopped overlapping.
Event BeginPlay	Called for all Actors when the game/level is started. Any Actors spawned after game start have this called immediately.
Event EndPlay	Event to notify blueprints this actor is being deleted or removed from a level.
Event Tick	Called on every frame of gameplay. (Can be computationally expensive)
Event Destroyed	Called when the Actor is destroyed. Note: Deprecated, use Event EndPlay.
Event Hit	Called when collision settings of one or more Actors involved have Simulation Generates Hit Events enabled.
Event AnyDamage	Called when general damage is to be dealt. Ex: Environmental damage.
Event PointDamage	Represents damage dealt by projectiles, hit scan weapons, or even melee weaponry.
Event RadialDamage	Called when parent Actor receives Radial Damage. Ex: Explosion damage or indirect damage.
Event ActorBeginCursorOver	Called when using the mouse interface and cursor is moved over an Actor.
Event ActorEndCursorOver	Called when using the mouse interface and cursor is moved off an Actor.

Node Creation HotKeys	Keys
Branch Node	B + LMB
Comment Box Node	C
Delay Node	D + LMB
Sequence Node	S + LMB
Gate Node	G + LMB
For Each Loop Node	F + LMB
Multi-gate Node	M + LMB
Do 'N' Times Node	N + LMB
Do Once Node	O + LMB
EndPlay Event	E + LMB

- Green represents the Y axis.
- Blue represents the Z axis.

You can use transformation gizmos to move, rotate, or scale actors. You can choose which type of gizmo you want to use by clicking its icon in the **Level Viewport** toolbar, which is located in the upper-right section of the viewport. With one or more actors selected, you can toggle between the different types of gizmos by pressing the Space Bar on your keyboard.



You can toggle the visibility of transformation gizmos on and off from the Main Toolbar's Settings menu by enabling or disabling the Show Transform Widget option.

Station Example

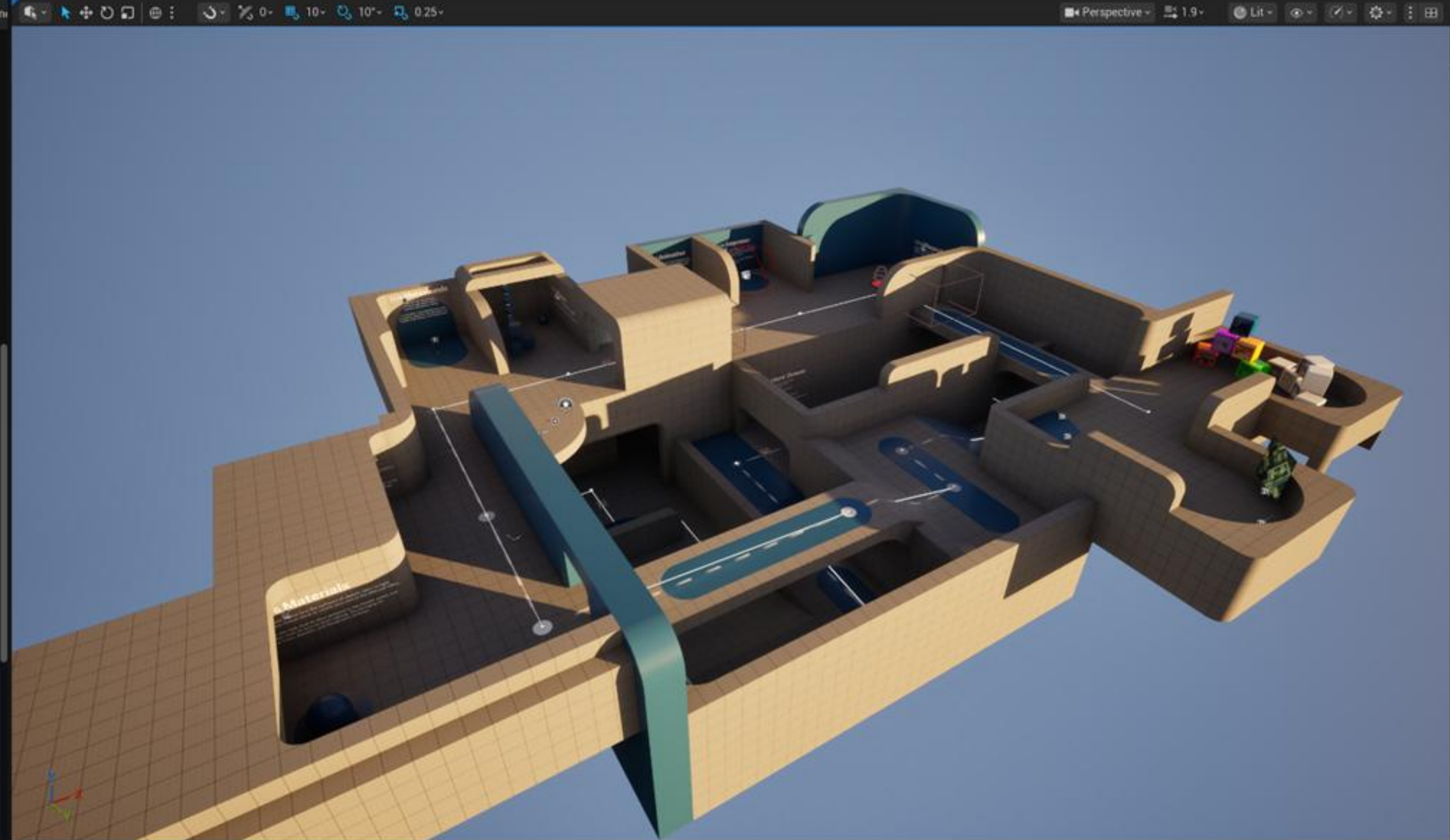
In this station, there are three cubes you can move around. Click one of the cubes, choose a transform by using a hotkey or clicking its icon in the viewport toolbar, then drag the colored gizmo.

To learn more about moving objects, see [Transforming Actors](#).

- Ask questions and help your peers [Developer Forums](#)
- Write your own tutorials or read those from others [Learning Library](#)

UNREAL ENGINE

X f d i y r



Outliner

Search

Item Label

- Lvl_IntroRoom (Editor)
 - Room_Templates&Samples
 - BP_TemplateCube0
 - BP_TemplateCube7
 - BP_TemplateCube8
 - BP_TemplateCube9
 - BP_TemplateCube10
 - BP_TemplateCube11
 - Plane
 - Plane2
 - Plane3
 - Plane4
 - SM_Cube19
 - SM_Cube45

413 actors (392 loaded)

Details

Select an object to view details

Content Drawer

Content Drawer 1 x Content Drawer 2

Blueprint

BP_DoorFrame_Unlockable

BP_DoorTrigger

BP_Light

M_Light

4 items (1 selected)

Content Drawer

Output Log

Cmd

Enter Console Command

Trace

Diagnostics

Zen Server

11 Unsaved

Revision Control

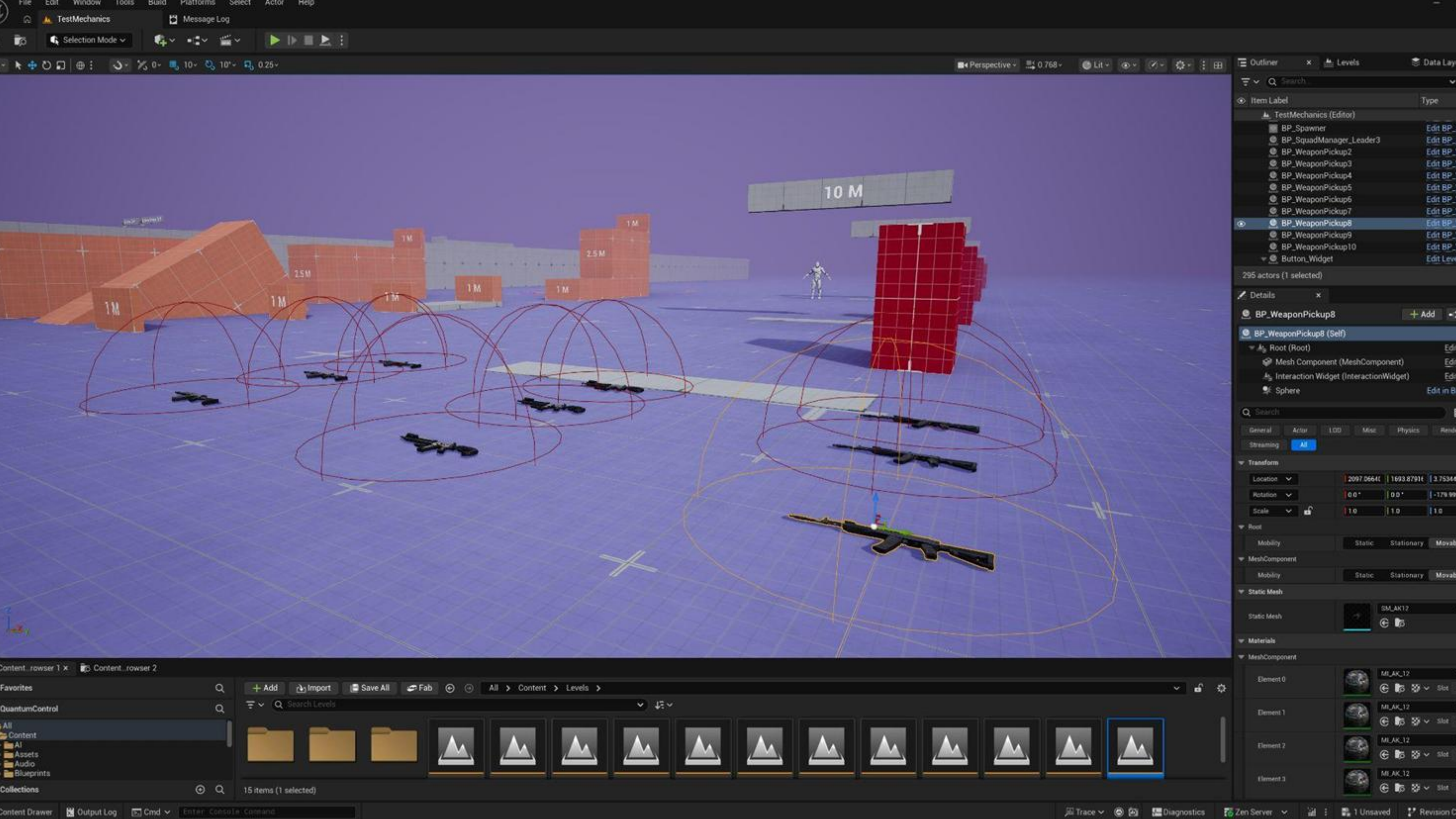
Trace

Diagnostics

Zen Server

11 Unsaved

Revision Control



- Green represents the Y axis.
- Blue represents the Z axis.

You can use transformation gizmos to move, rotate, or scale actors. You can choose which type of gizmo you want to use by clicking its icon in the **Level Viewport** toolbar, which is located in the upper-right section of the viewport. With one or more actors selected, you can toggle between the different types of gizmos by pressing the Space Bar on your keyboard.



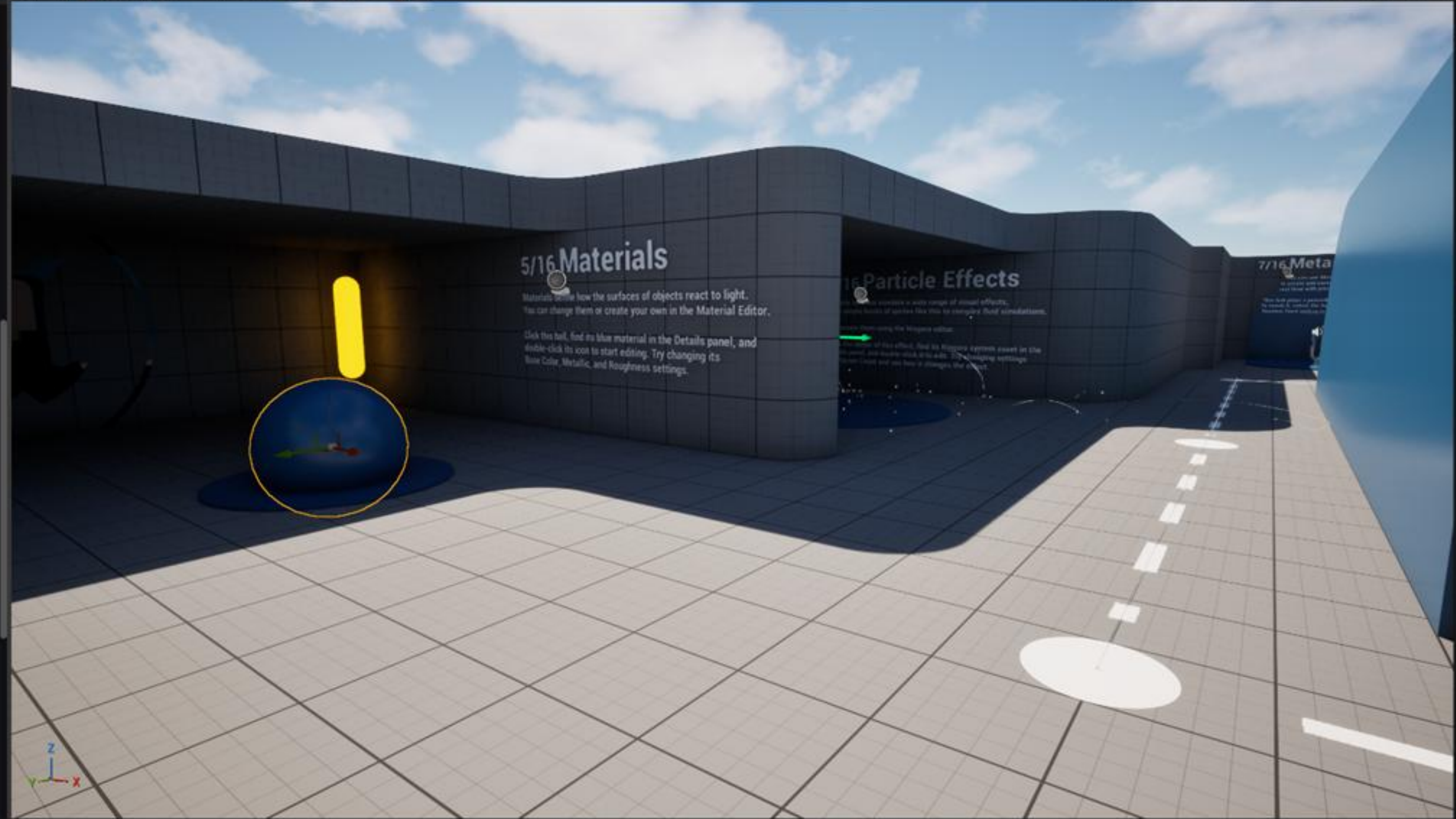
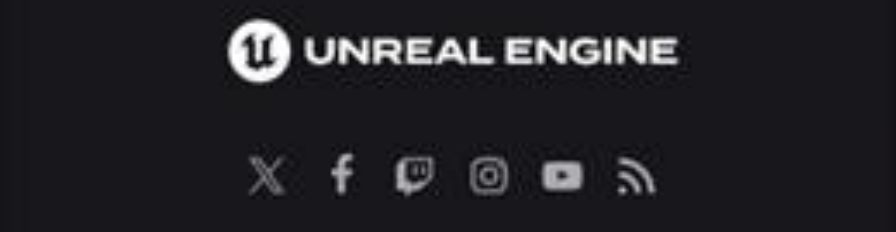
You can toggle the visibility of transformation gizmos on and off from the Main Toolbar's Settings menu by enabling or disabling the Show Transform Widget option.

Station Example

In this station, there are three cubes you can move around. Click one of the cubes, choose a transform by using a hotkey or clicking its icon in the viewport toolbar, then drag the colored gizmo.

To learn more about moving objects, see [Transforming Actors](#).

- Ask questions and help your peers [Developer Forums](#)
- Write your own tutorials or read those from others [Learning Library](#)



Outliner

- block
- Lvl_IntroRoom (Editor)
 - Bridge_001
 - Blocking Volume
 - Room_Physics
 - BP_DangleBlock

Showing 2 of 406 actors

Details

Sphere8

Sphere8 (Instance)

- StaticMeshComponent (StaticMeshComponent0)

Search

General Actor LOD Misc Physics

Streaming All

Transform

Location	-1700.0	300.00000	950.0
Rotation	0.0°	0.0°	89.9°
Scale	2.0	2.0	2.0

Mobility: Static Stationary

Static Mesh

Static Mesh: Sphere

Advanced

Materials

Element 0	MI_Intro_Colorway
-----------	-------------------

Advanced

Physics

Simulate Physics: []

Mass (kg): 520.643029

Linear Damping: 0.01

Angular Damping: 0.0

Enable Gravity: [x]

Constraints

Gravity Group Index: 0

Content Drawer

Content Browser

Search: Search_Core

MI_Gradient_Vertical

MI_Intro_Colorway

T_CoinRender_Text

UI_InGame

21 items (1 selected)



Flames of War

◆ Reach the castle entrance

W

N

Mibuno Castle



33m



**Я на глубине 300
метров, здесь на меня
оказывается
сильнейшее
давление**



**Посмотри техники
тест дизайна**



Техники Тест дизайна

План

Классы эквивалентности

Граничные значения

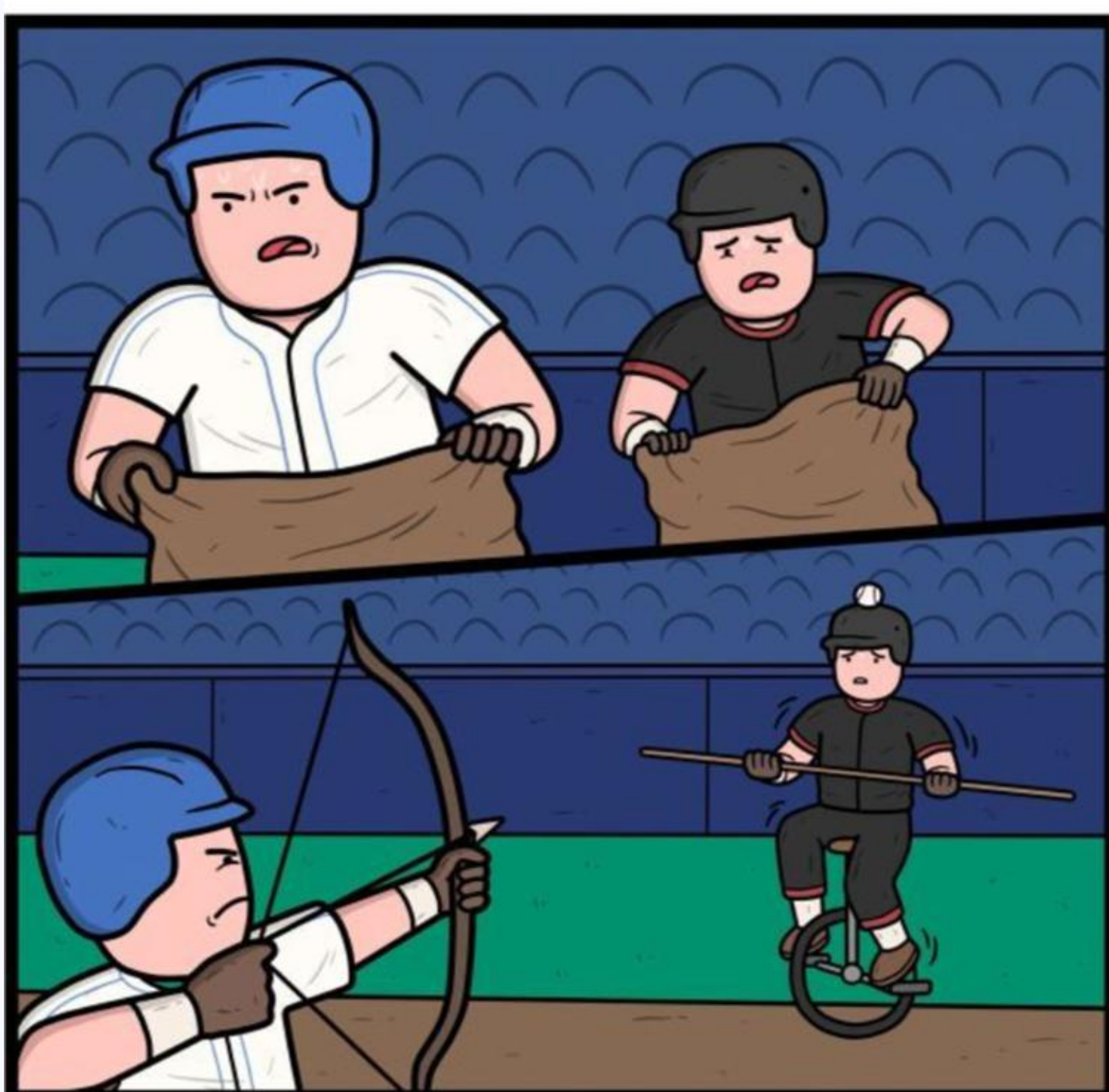
Метод попарного тестирования

Таблица принятия решений

Диаграмма состояний и переходов

Метаморфическое тестирование

Исследовательское тестирование



Flames of War

◆ Reach the castle entrance

W

N

Mibuno Castle



33m



Update Health State
Custom Event

UI Widget — Target — Health Bar

f Set Percent
Target is Progress Bar

Target
In Percent

Previous Health — Max Health — \div — Add pin (+)

Current Health — Max Health — \div — Add pin (+)

f FInterp To

Current
Target
Delta Time
Interp Speed [50.0]

Return Value

f Get World Delta Seconds

Return Value

Current Health — SET — Previous Health [0.0]

Decrease Health

Health Damage

Current Health — — Add pin (+)

f Clamp (Float)

Value
Min [0.0]

Return Value

SET — Current Health

NORMAL

DYING

**DEAD
SPACE™**



Классы эквивалентности

DOOM 1993



Классы эквивалентности



80% - 200%

COMPLETELY HEALTH



60% - 79%
BLOODY NOSE,
HAIR SLIGHTLY MUSSED



40% - 59%
FACE SWOLLEN,
GRAMICING



20% - 39%
EYES SLIGHTLY
BLOODSHOT,
FACE DIRTY AND BLEEDING



1% - 19%
SIMILAR TO 20-39%,
BUT EVEN BLOODIER

Классы эквивалентности



0%
DIED STATE



JAM KURADOBERI



KY KISKE

ROUND TIME
97

BURST

BURST



TENSION



INTERFACE

ARTICLES

ABOUT



Adventure

112 GAMES



Card Game

14 GAMES



Fighting

17 GAMES



FPS

67 GAMES

Полезные ресурсы:

<https://interfaceingame.com>

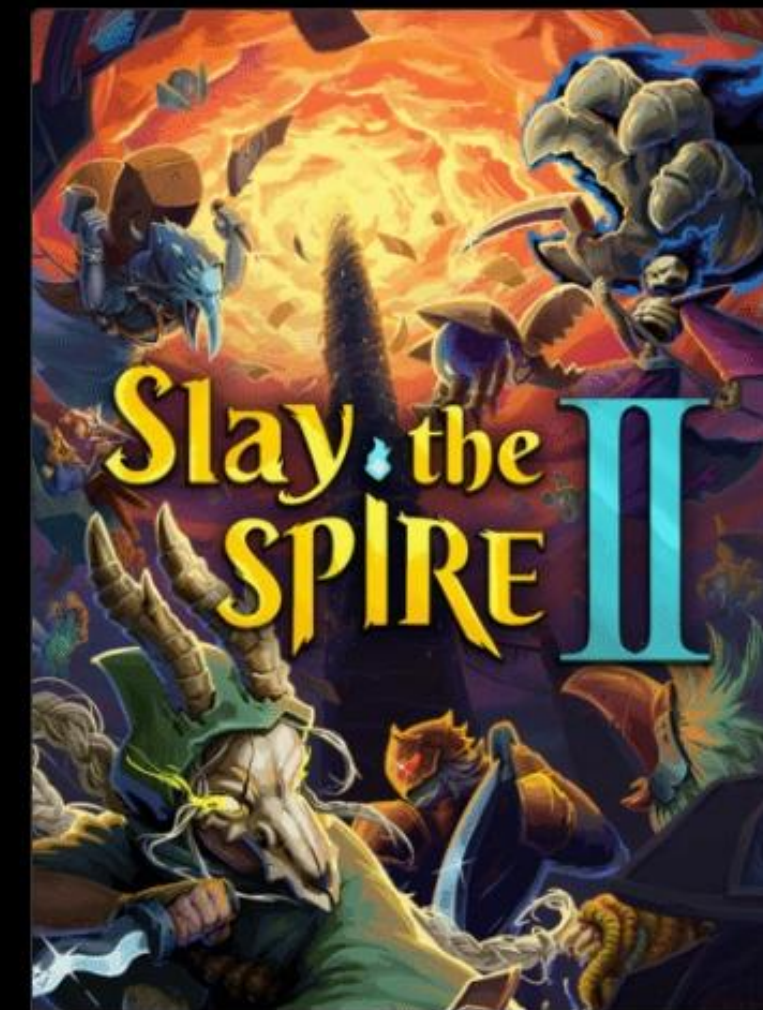
<https://www.gameuidatabase.com>



Doom: The Dark ...

MAY 13, 2025

FPS



Slay The Spire 2

MARCH 10, 2026

CARD GAME



Reanimal

FEBRUARY 13, 2026

ADVENTURE

ACTION

ЧИТ ПАНЕЛЬ

Console Commands

FPS

Unit

Stat Game

Stream PS 0

Show Collision

Show NavMesh

DebugBasicHUD

Ability System

Audio DebugInfo

SwitchShowCombo

Quest System

Reset

Immortality_Hits

Immortality_NoHits

Cheat Codes



Trade

Trade Barter

Kassia
Lv 3 Druid



AC 17

Attack Bonus
Damage

Persuasion: +1

Melee
+4
3-8

Ranged
+2
3-10

Type

10,756

44,589

Offer Value 1586 Demand Value 1586

Add Wares to Offer

BARTER

Arron
Lv 3 Lightfoot Halfling

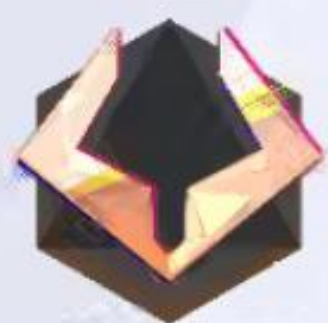
The trader will be pleased with this offer



Discount: -16%

Rank and Season Rewards

60 FPS



BRONZE
Tier III-I



SILVER
Tier III-I



GOLD
Tier III-I



PLATINUM
Tier III-I



DIAMOND
Tier III-I



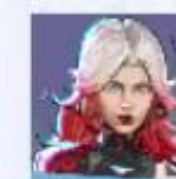
GRANDMASTER
Tier III-I



CELESTIAL
Tier III-I



ETERNITY
UNRANKED !
RACK UP POINTS



ONE ABOVE ALL
UNRANKED !
RACK UP POINTS



Players in Gold and below can team up freely without any restrictions. For those in Gold I to Celestial tiers, teaming is limited to a maximum range of three divisions. Players in Eternity or One Above All tiers can team with Celestial II tier players within 200 points. However, if they exceed 200 points, the point difference must be less than 200.



GALACTA'S PROMOTION

Rack up points with every win and hitting 100 points will level up your rank. Reach Eternity and you'll need to keep active or face the penalty of losing points.



CHRONO SHIELD

Amidst the entangled timestreams, the cosmos grants you Chrono Shields against a rank descent. Only when these are depleted will you truly fall to the lower rank.



GAME MODE

The game can have multiple rounds, and the team that wins the most rounds wins the game. Cosmic Selection: When all players in the match are Diamond III or above, each team gets to ban 2 heroes before the match starts.



SEASON CONCLUSION

Upon season conclusion, rewards are given based on the highest rank achieved. Players in the top 500 at the time of seasonal settlement will receive the "One Above All" Crest of Honor reward.

Show NPC

Disposition



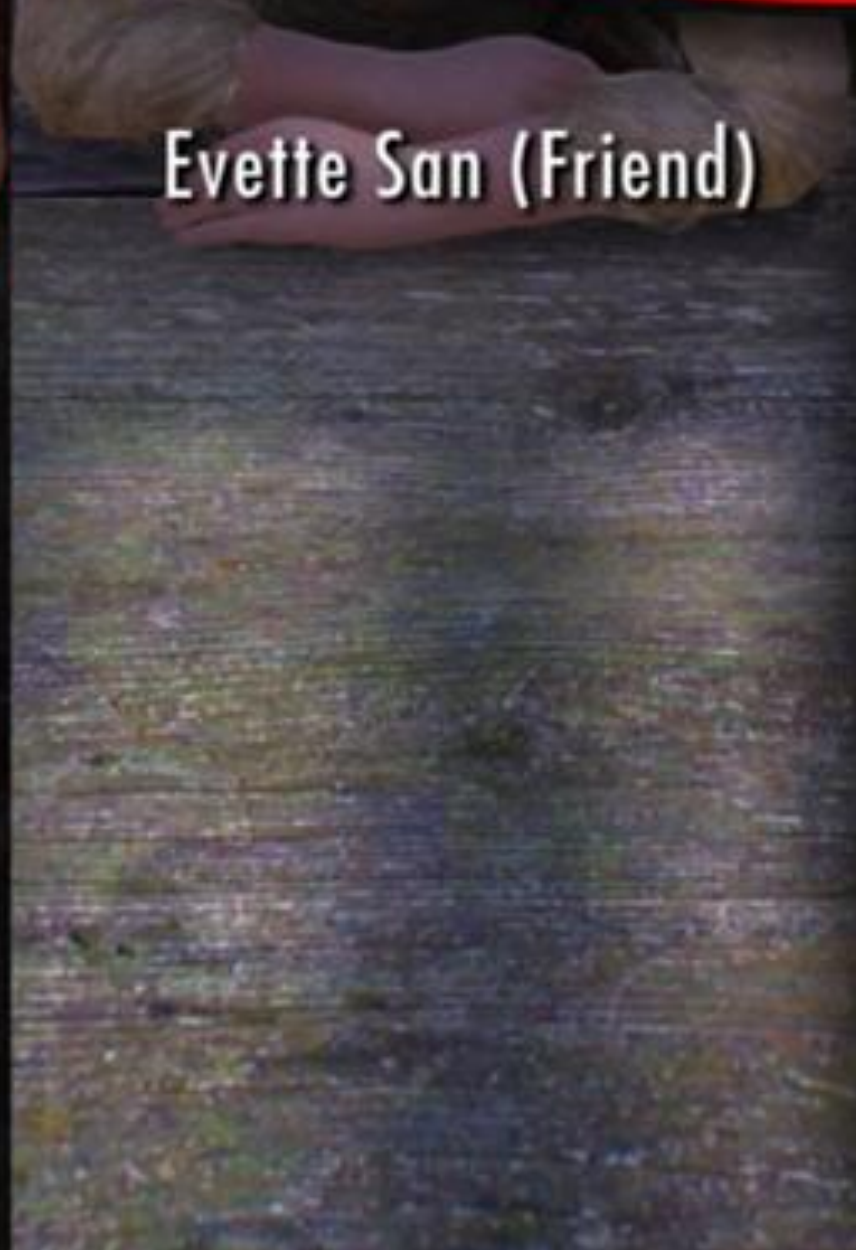
Inigo (Ally)



Noster Eagle-Eye
(Friend)



Noster Eagle-Eye
(Friend)



Evette San (Friend)



Falk Firebeard (Friend)



Erdi (Confidant)



Auri (Ally)

DEVICES FEATURES



ADJUSTABLE
TRIGGER STOPS
AND **DEAD ZONES**



TUNABLE
STICK SENSITIVITY
AND **DEAD ZONES**



1% - 19%
SIMILAR TO 20-39%,
BUT EVEN BLOODIER



Граничные значения



ХП до
минимального уровня

Минимальный
уровень ХП





Empty Shells (26m)
Age: 1 Sec.

0

Trollfaceo0





0:35 3 4 4

0 23 0

4 | 457 |||

THE FOUNDATION'S MK-SEVEN ASSAULT RIFLE



Классы эквивалентности Граничные значения

- ☞ Все «полоски» в игре: HP, stamina, mana
- ☞ Система прогрессии (LVL, Ранг)
- ☞ Скрытые «полоски» (система симпатии, накопление опыта для предметов и т.п.)
- ☞ Интеграция игровых фишек с игровыми девайсами
- ☞ Уникальные механики, касающиеся граничных значений

FALLGUYS

SHOW SUMMARY

SHOW REWARDS

ROUND 1

ROUND 2

ROUND 3

ROUND 4

ROUND 5



1

90/160

2

500





Reprimanding Perfect Indiction Lvl 32
 Assault Rifle
 1,008 DPS

257 90% 2.1s 5.9/s 24

- Hyperion-Licensed Amp Shield - Damage to Gun Shields amplifies Gun Damage
- [Alt Fire] Atlas-Licensed Underbarrel - Fires Tracker Darts, tagging enemies that your Projectiles will home in on for 10s
- Order - Can charge up to fire multiple rounds at once












ORDER \$ 22,316

Equip Y Inspect R Compare Mark


Weapon Slot 2

Sort: Manufacturer Filter: 27

The Order	The Order	Maliwan
Maliwan	Maliwan	Maliwan
Maliwan	Maliwan	Jakobs
Jakobs	Jakobs	Jakobs
Daedalus	Daedalus	Daedalus

Rarity	Name	Weapon Type	Manufacturer	Elements	Content	Source
	ARC-TAN	Shotgun	Torgue	     	Stone Demon	Vault Card: Stone Demon World Wide
	Acey May	Shotgun	Daedalus	     	Base Game	Arjay Upper Dominion Shotgun Pool World Wide
	Aching Roil	SMG	Ripper	     	Mercenary Day	Vault Card: Mercenary Day World Wide
	Aegon's Dream	Assault Rifle	Vladof		Base Game	Horace Hungering Plain AR Pool World Wide
	Anarchy	Shotgun	Tediore	     	Base Game	Primordial Guardian Radix Vault of Radix
	Asher's Rise	Sniper	Maliwan	   	Base Game	The Oppressor Dissected Plateau Sniper Pool World Wide
	Birt's Bees	SMG	Vladof	     	Base Game	Sludgemaw Idolator's Noose SMG Pool World Wide
	Bloody	Assault	Daedalus	  	Base Game	Foundry Freaks Idolator's Noose AR Pool World Wide







Filters





Rarity

Legendary
 Pearlescent

Elements

Weapon Type 

Manufacturer 

Daedalus
 Jakobs

Maliwan
 Order

Ripper
 Tediore

Torgue
 Vladof

Splash Damage

Биография
По выбору

Раса
Тифлинг

Подраса
Тифлинг Асмодея

Класс
Варвар

Происхождение
Скиталец

Способности
27/27

Раса



Эльф



Тифлинг



Дроу



Человек



Гитьянки



Дварф



Полуэльф



Полурослик



Гном



Драконо-



Полуорк

Тифлинг

Тифлинги происходят от дьяволов Девяти кругов ада. В Фаэруне к ним относятся с недоверием. К счастью, мистические способности помогают им выжить.

Особенности расы



Тифлинг Асмодея
Уровень 1 Варвар

СИЛ	ЛВК	ВЫН	ИНТ	МДР	ХАР
17	13	15	8	12	10



Фокусы



Действия



Умения

Оружие - Простое оружие,
Боевое оружие

Броня - Легкая броня,
Средняя броня, Щиты

Навыки - Атлетика, Дрессировка,
Внимание, Выживание



Настроить внешность

Продолжить

Тип тела

Случайная внешность

Биография
По выбору

Раса
Тифлинг

Подраса
Тифлинг
Мефистофеля

Класс
Паладин

Подкласс
Клятва древних

Происхождение
Скиталец

Способности
27/27

Класс



Варвар



Бард



Жрец



Друид



Воин



Монах



Паладин



Следопыт



Плут



Чародей



Колдун



Волшебник

Паладин

Подробности

Вы принесли клятву защищать справедливость и праведность.
Вы – луч надежды в эти темные времена.

Действия



Особенности класса



Тифлинг Мефистофеля
Уровень 1 Паладин
Клятва древних

СИЛ	ЛВК	ВЫН	ИНТ	МДР	ХАР
17	12	13	8	10	15

+1

11

Фокусы



Действия



Умения

Оружие - Простое оружие,

Боевое оружие

Броня - Легкая броня,

Средняя броня, Тяжелая броня,

Щиты

Навыки - Атлетика, Выживание,

Запугивание, Убеждение

Тип тела



Случайная внешность



Настроить внешность

Продолжить

Биография
По выбору

Раса
Тифлинг

Подраса
Тифлинг
Мефистофеля

Класс
Паладин

Подкласс
Клятва возмездия

Происхождение
Ремесленник

Способности
27/27

Происхождение



Послушник



Шарлатан



Преступник



Артист



Народный
герой



Ремесленник



Аристократ



Скиталец



Ремесленник

Хорошее владение ремеслом обеспечило вам место в гильдии, дав привилегии, защиту и возможность заниматься любимым делом. Вы находите вдохновение, восстанавливая сломавшиеся вещи и созерцая редкие ремесла.

Навыки - Проницательность,
Убеждение

Настроить внешность

Продолжить



Тифлинг Мефистофеля
Уровень 1 Паладин
Клятва возмездия

СИЛ	ЛВК	ВЫН	ИНТ	МДР	ХАР
17	12	13	8	10	15

+1

11

Фокусы



Действия

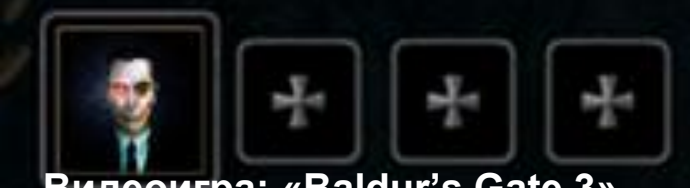


Умения

Оружие - Простое оружие,
Боевое оружие
Броня - Легкая броня,
Средняя броня, Тяжелая броня,
Щиты
Навыки - Атлетика,
Проницательность, Запугивание,
Убеждение

Тип тела

Случайная внешность



Метод попарного тестирования

The screenshot displays the Unreal Engine 4 interface. On the left, a table lists various Data Assets with their properties. On the right, the 'Vendor Item Data' configuration panel is open, showing settings for items to sell and buy.

Name	Type	Native Class	Can Stack	Item Cost
ComplexAxe	Data Asset	DataInUnreal.Com	false	5,000.0
ComplexSword	Data Asset	DataInUnreal.Com	true	3,200.0
ComplexShortSword	Data Asset	DataInUnreal.Com	false	200.0
Item_Axe	Data Asset	DataInUnreal.Regis	False	200
Item_Sword	Data Asset	DataInUnreal.Regis	False	200
Item_Potion	Data Asset	DataInUnreal.Regis	True	50
ComplexHealthPotion	Data Asset	DataInUnreal.Com	true	50.0
ComplexEnergyPotion	Data Asset	DataInUnreal.Com	true	50.0
Item_SimpleAxe	Data Asset	DataInUnreal.Inver		
DataCurveExample	Data Asset	DataInUnreal.Curv		
Item_SimpleSword	Data Asset	DataInUnreal.Inver		

Property	Value
Male Head Override	DA_Default_Race
Female Head Override	DA_Default_Race
Male Torso Override	DA_Default_Race
Female Torso Override	DA_Default_Race
Right Arm Override	DA_Default_Race
Left Arm Override	DA_Default_Race
Right Leg Override	DA_Default_Race
Left Leg Override	DA_Default_Race
Male Accessory Override	None
Female Accessory Override	None

Index	Item	Price	Amount	RandomChanceToSpawn	RandomMinAmount	RandomMaxAmount
Index [0]	DA_Medkit	25	25	1.0	0	0
Index [1]	DA_Ammo_9mm	5	100	1.0	1	1
Index [2]	DA_Shotgun	6000	1	1.0	1	1
Index [3]	DA_Air_Combat_00_Accretion_Disk	100	1	1.0	0	0
Index [1]	DA_Medkit					

Общее

- Видеорежим: Безрамочный оконный режим
- Курсор в границах окна:
- Видеоадаптер: NVIDIA GeForce RTX 3070 Ti
- Монитор: BenQ PD2700U
- Соотношение сторон экрана: 16:9
- Разрешение: 3840 x 2160
- Частота обновления: 60 Hz
- Верт. синхр.: Тройная буферизация
- Тип масштабирования: Выкл.
- Режим масштабирования: Нет
- Резкость масштабирования:
- Сглаживание: Нет
- Усиление резкости FidelityFX:

Верт. синхр.

Предпросмотр



Выкл.

Вкл.

Включите, чтобы синхронизировать частоту обновления кадров в игре с частотой развертки монитора и снизить подергивание изображения. Тройная буферизация стабильнее, но требует большего объема выделенной памяти.

Назад

Сбросить



 **PC BUILDING
SIMULATOR**

NZXT WORKSHOP DLC

Конфигурации ПК

пов: if someone decided to switch to pc gaming



Конфигурации ПК

Pairwise Pict Online

An online service that easily generates pair-wise test cases.

It's powered by [Microsoft Pict](#) under the hood.

$$2 \times 5 \times 3 \times 4 \times 2 \times 2 \times 2 = 960$$

```
OS: Win10, Win11
CPU: Intel i3, Ryzen 3, Intel i7, Ryzen 9, Intel i9
RAM: 16, 32, 64
GPU: GeForce 1060, GeForce 4090 Super, Radeon 6500, Radeon 9600
HardDisc: SSD, HDD
Monitor: 4K, Ultra-Wide
InputDevice: keyboard, gamepad
```

```
if [GPU] = "GeForce 1060" then [CPU] = "Intel i3";
if [GPU] = "GeForce 4090 Super" then [CPU] = "Intel i9";
```

**При использовании PICT:
19 конфигураций ПК / тестов**

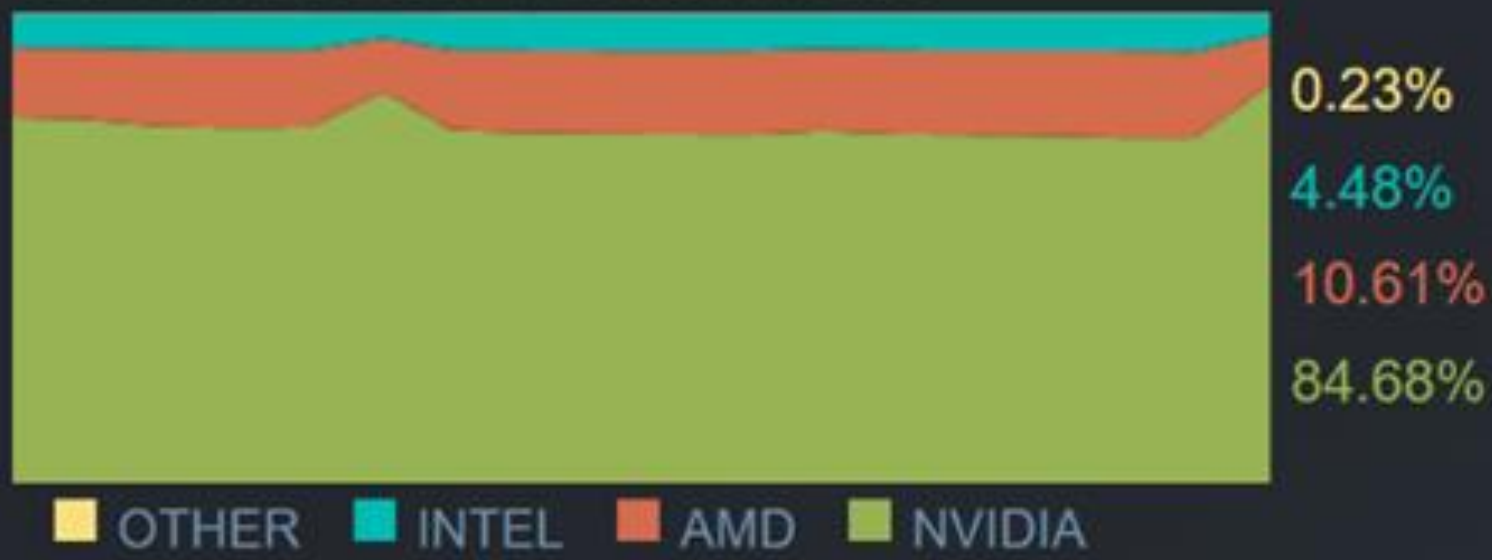
OS	CPU	RAM	GPU	HardDisc	Monitor	InputDevice
Win10	Ryzen 9	32	Radeon 6500	HDD	Ultra-Wide	keyboard
Win11	Intel i9	64	Radeon 9600	SSD	4K	gamepad
Win10	Intel i9	32	GeForce 4090 Super	SSD	4K	keyboard
Win11	Intel i7	32	Radeon 9600	HDD	Ultra-Wide	gamepad
Win11	Intel i3	64	GeForce 1060	HDD	Ultra-Wide	keyboard
Win10	Ryzen 3	32	Radeon 6500	HDD	4K	gamepad
Win10	Intel i3	16	GeForce 1060	SSD	4K	gamepad
Win11	Intel i7	16	Radeon 6500	SSD	Ultra-Wide	keyboard
Win11	Ryzen 9	16	Radeon 9600	HDD	4K	gamepad
Win10	Ryzen 3	64	Radeon 9600	SSD	Ultra-Wide	keyboard
Win11	Ryzen 3	16	Radeon 6500	HDD	Ultra-Wide	gamepad
Win10	Ryzen 9	64	Radeon 6500	SSD	Ultra-Wide	gamepad
Win11	Intel i9	16	GeForce 4090 Super	HDD	Ultra-Wide	gamepad
Win10	Intel i3	32	Radeon 6500	HDD	4K	keyboard
Win10	Intel i9	16	Radeon 6500	HDD	Ultra-Wide	keyboard
Win10	Intel i3	32	GeForce 1060	HDD	4K	keyboard
Win10	Intel i7	64	Radeon 6500	SSD	4K	keyboard
Win10	Intel i9	64	GeForce 4090 Super	HDD	Ultra-Wide	keyboard
Win10	Intel i3	16	Radeon 9600	SSD	4K	keyboard

Steam Hardware & Software Survey: February 2026

Steam conducts a monthly survey to collect data about what kinds of computer hardware and software our customers are using. Participation in the survey is optional, and anonymous. The information gathered is incredibly helpful to us as we make decisions about what kinds of technology investments to make and products to offer.

PC VIDEO CARD USAGE BY MFG

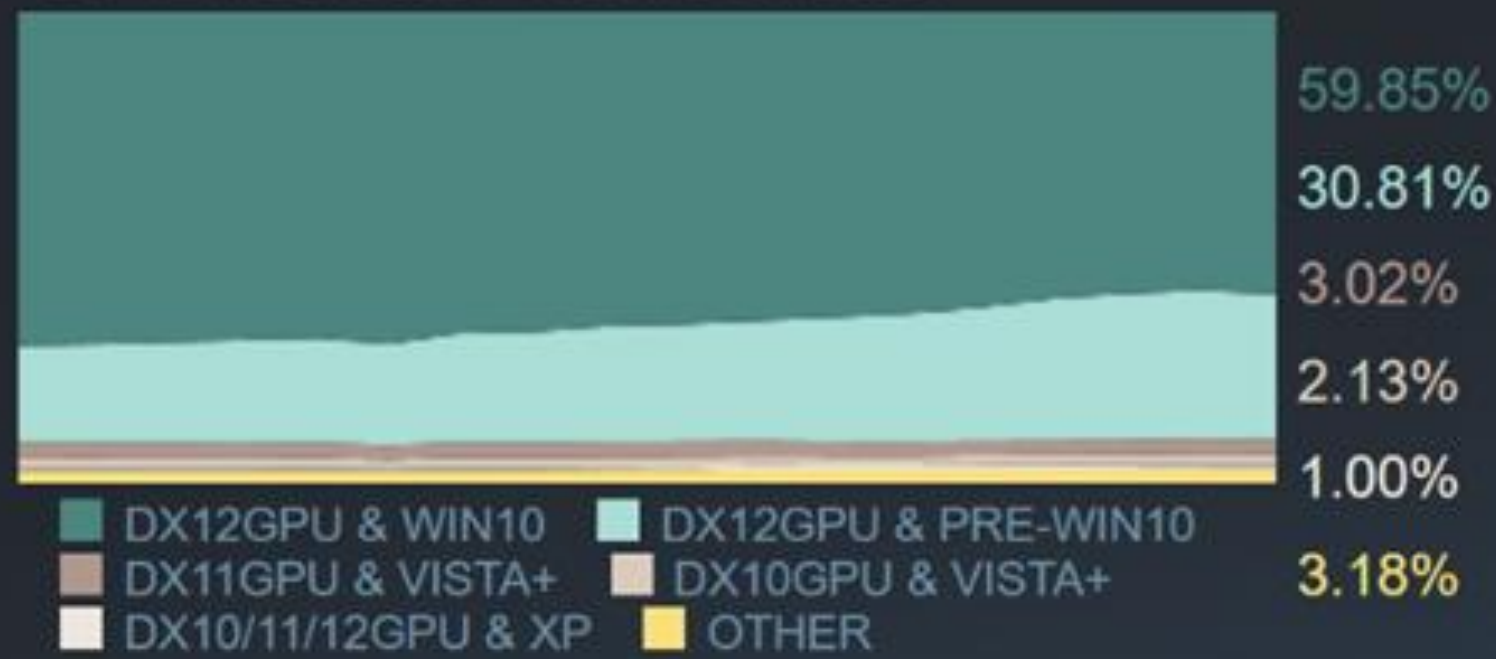
SEPTEMBER 2024 - FEBRUARY 2026



[CLICK FOR MORE INFO](#)

DX10/11/12 SYSTEMS

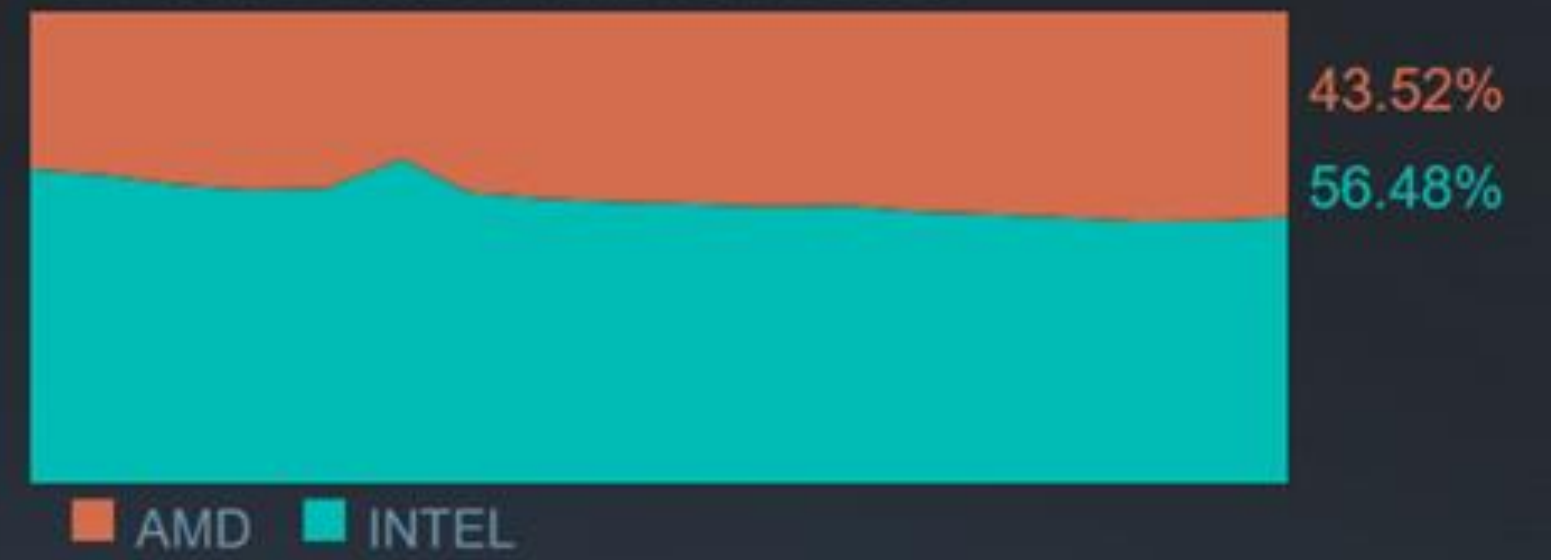
SEPTEMBER 2024 - FEBRUARY 2026



[CLICK FOR MORE INFO](#)

PC PROCESSOR USAGE BY MANUFACTURER

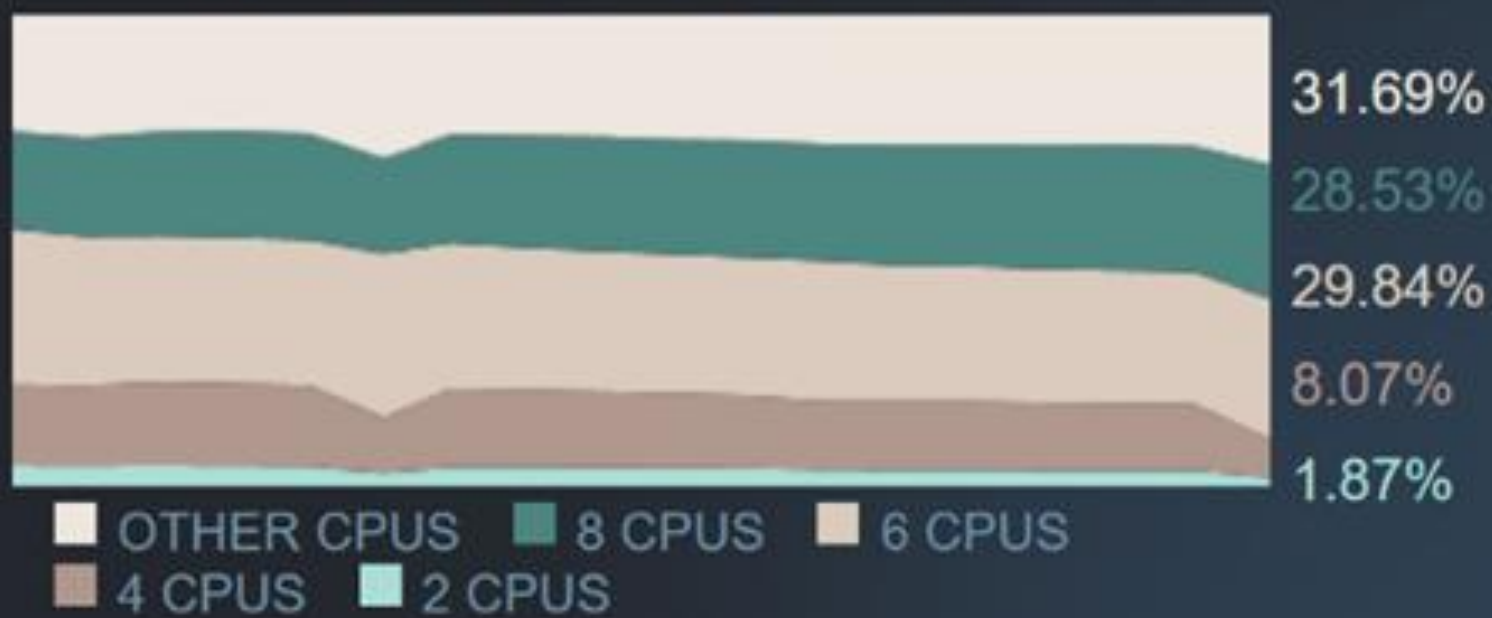
SEPTEMBER 2024 - FEBRUARY 2026



[CLICK FOR MORE INFO](#)

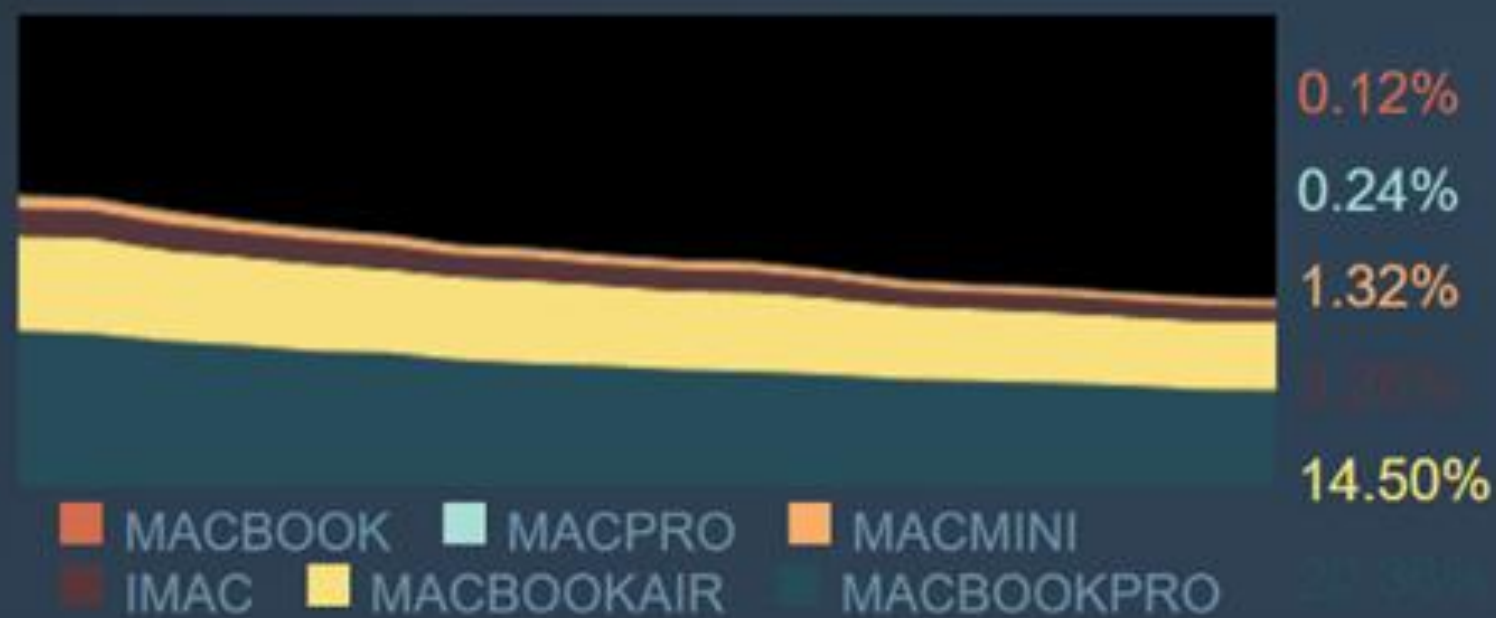
PC NUMBER OF CPUS PER COMPUTER

SEPTEMBER 2024 - FEBRUARY 2026



MAC HARDWARE OWNERSHIP

SEPTEMBER 2024 - FEBRUARY 2026



VR HEADSETS

SEPTEMBER 2024 - FEBRUARY 2026

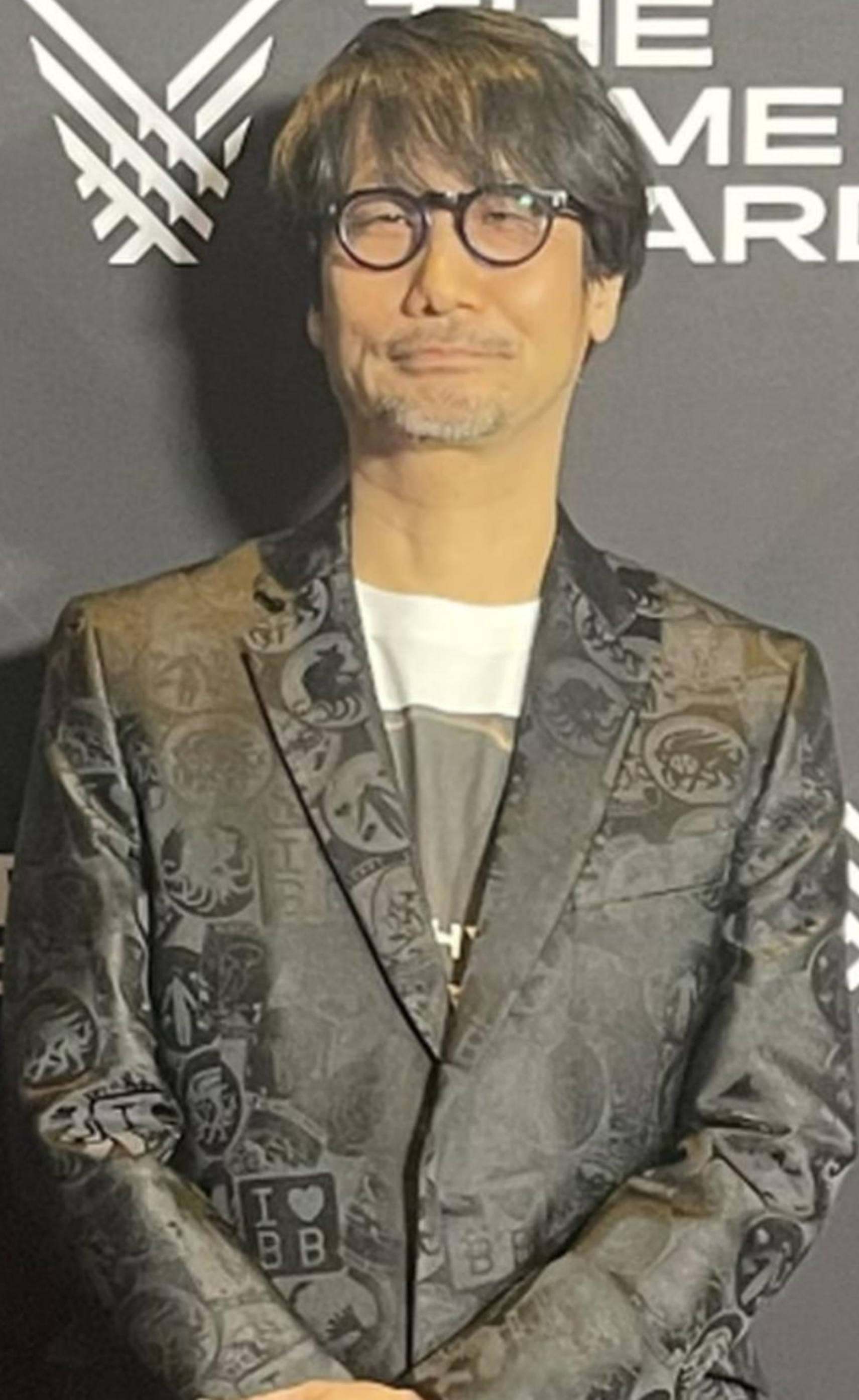


Метод попарного тестирования

-  Кастомные инструменты и данные:
Data Tables, Blueprints settings
-  Системы со множеством атрибутов:
редактор персонажа, боевая система,
элементарные реакции
-  Инвентарь и система крафта
-  Большое или около бесконечное кол-во
игровых предметов и/или локаций
(процедурная генерация)
-  Сборка конфигураций игровых девайсов



THE
GAME
AWARDS



THE
GAME
AWARDS



THE
GAME
AWARDS




КРИТИЧНЫЙ

УРОВЕНЬ СТРЕССА



95%



Do you want to spend time with Lune?

+ Yes

+ No



Next ▶



Разветвление сюжета



Таблица принятия решений

	A	B	C	D	E	F
1	Условия / Правила	Правило 1	Правило 2	Правило 3	Правило 4	Правило 5
2	Труп имеет при себе полезную информацию?	Да	Да	Да	Да	Нет
3	Тело не повреждено?	Да	Да	Да	Нет	—
4	Убийца - это текущий персонаж?	Да	Да	Нет	—	—
5	Используется "Маскировка"?	Да	Нет	—	—	—
6						
7	Действия (Actions)					
8	Успешный диалог	X		X		
9	Труп отказывается говорить с убийцей		X			
10	Труп слишком сильно поврежден				X	
11	Мертвец не хочет разговаривать					X
12						



Lord Enver Gortash: You seek Gortash? His soul is already suffering at my hands. That is the fate of all those who fail me.

1. If you're not Gortash, then who are you?
2. Let him suffer, then. Isn't that the fate he deserves?
3. You're much more coherent than most corpses. Why's that?
4. Leave.

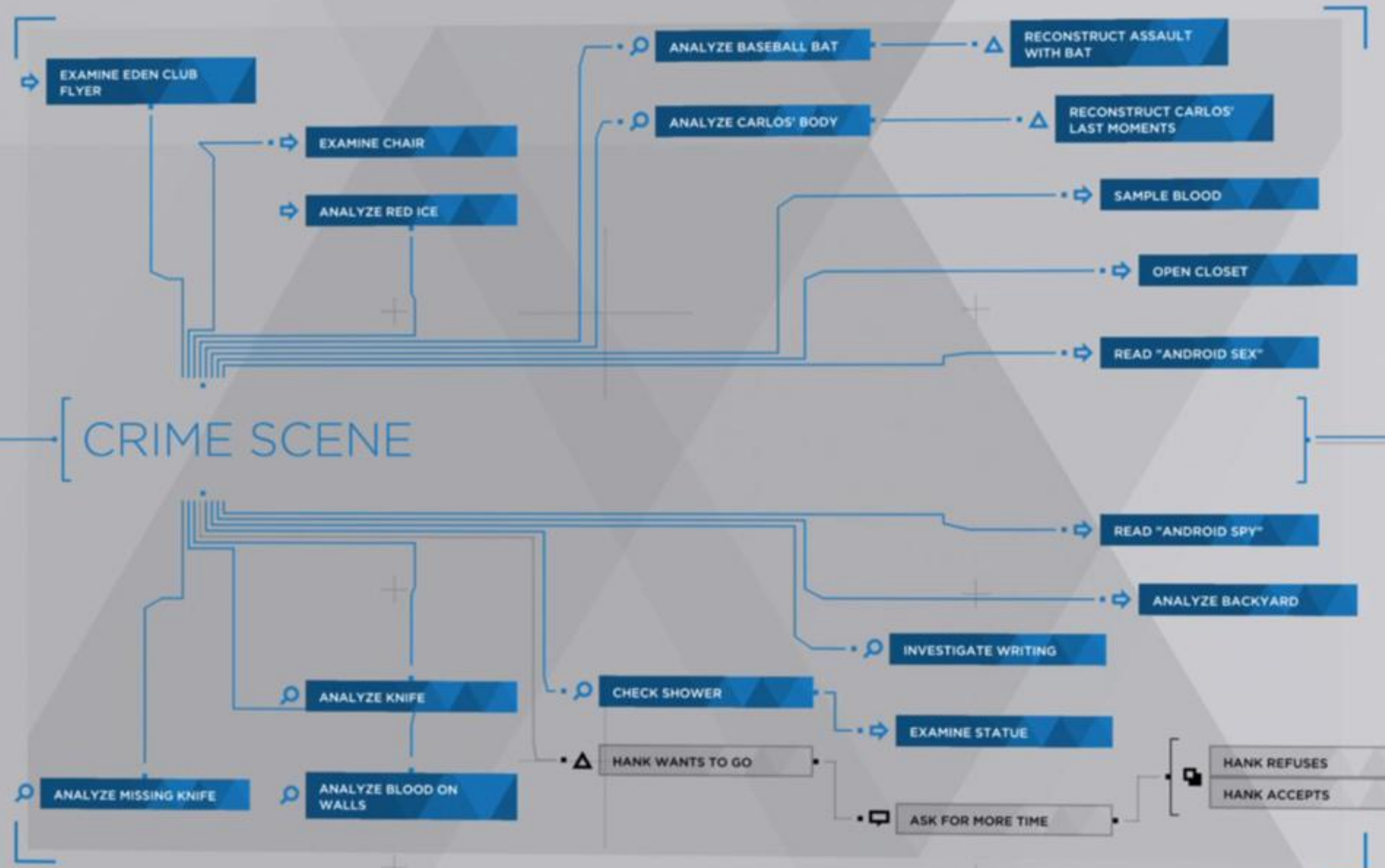
Таблица принятия решений

Baldur's Gate 3

	А	В	С	Д	Е	Ф
1	Условия / Правила	Правило 1	Правило 2	Правило 3	Правило 4	Правило 5
2	Труп имеет при себе полезную информацию?	Да	Да	Да	Да	Нет
3	Тело не повреждено?	Да	Да	Да	Нет	—
4	Убийца - это текущий персонаж?	Да	Да	Нет	—	—
5	Используется "Маскировка"?	Да	Нет	—	—	—
6						
7	Действия (Actions)					
8	Успешный диалог	Х		Х		
9	Труп отказывается говорить с убийцей		Х			
10	Труп слишком сильно поврежден				Х	
11	Мертвец не хочет разговаривать					Х
12						



CONNOR AND HANK
ARRIVE AT SCENE



- WORLD'S STATS
- SHOW LEGEND
- SCROLL
- ZOOM
- CONTINUE



Radiate

Lux reacts with Pyro to create Radiate. Radiate leaves the target ablaze, periodically afflicting them with additional dots of damage, more frequently than Pyro itself. Radiate lasts 10 seconds but can be refreshed with another application of Lux. All enemies resistant to Pyro damage will take no damage from radiate.



Shimmer

Lux reacts with Cryo to create Shimmer. Shimmer builds upon the target in a meter each time it is instanced, the meter's fill speed is dependent on the targets health (more health longer fill time etc). When the meter is filled the target is forcefully dazed for 3 seconds. After a target is affected by Shimmer they cannot be affected by Shimmer again for 45 seconds.



Luster

Lux reacts with Hydro to create Luster. While under the effect of Luster, all elemental effects are negated until Luster dissipates or target is hit with a critical hit. Luster lasts for 10 seconds.



Bloom

Lux reacts with Dendro to create Bloom. Bloom generates a healing pulse that heals for 30% of the damage done. Bloom will not heal targets under the effect of Pyro or Radiate.



Squall

Lux reacts with Anemo to create Squall. Squall creates a small pillar at the reaction point. If the pillar comes into contact with Hydro/Pyro/Cryo/Electro. It will begin applying additional elemental statuses of that type. Squall pillars lasts for 5 seconds each.



Fossilize














Lux reacts with Geo to create Fossilize. Fossilize generates an EMPOWERED CRYSTAL to fall to the ground. Picking up the crystal increases damage against targets affected by singular status effect.



Fluorescence

Lux reacts with Electro to create Fluorescence. Fluorescence links the affected target to surrounding targets (up to 3 targets per instance). Linked targets will all start suffering from the same status effects for a short time. Fluorescence lasts for 7 seconds before turning into Luster to everyone linked.

Таблица принятия решений

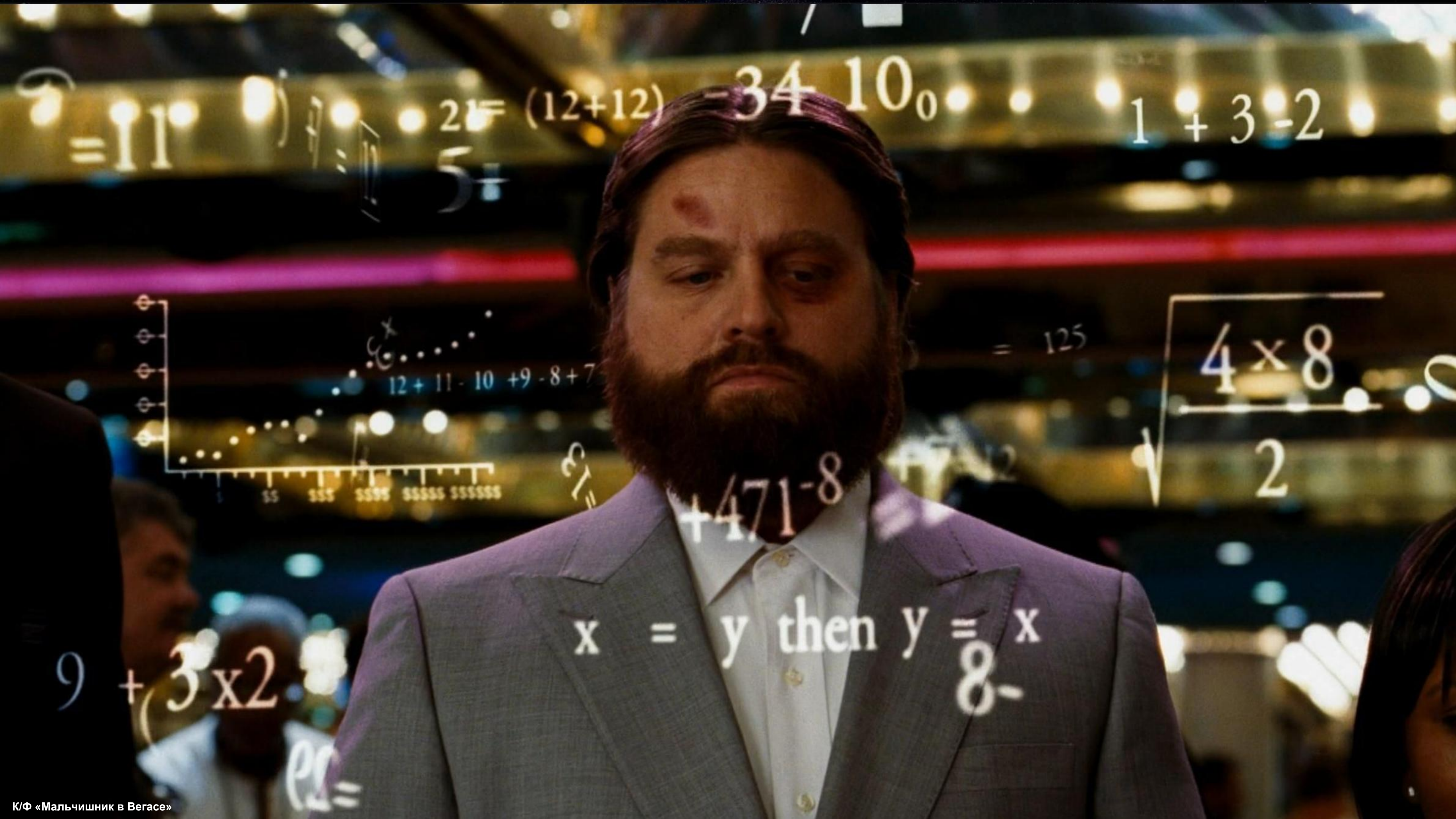
ELEMENTAL REACTION 						
Second Element	First Element					
						
	-	Reverse Vaporize (1.5x DMG)	Overload	Melt (2x DMG)	C r y s t a l l i z e	S w i r l
	Vaporize (2x DMG)	-	Electro-Charged	Frozen		
	Overload	Electro-Charged	-	Superconduct		
	Reverse Melt (1.5x DMG)	Frozen	Superconduct	-		
	Crystallize					-
	Swirl					

[HoyoLab Link](#)



Видеоигра: «Mass Effect»

alSHOCKER





Роман с Йеннифер

	A	B	C	D	E	F
1	Условия / Правила	Ветка Йеннифер	Френдзона	Double Trouble	Ветка Трисс	Отказ обеим
2	Завершил "Последнее желание"	Да	Да	Да	-	-
3	Признался в любви Йеннифер	Да	Нет	Да	Нет	Нет
4	Признался в любви Трисс	Нет	Нет	Да	Да	Нет
5						
6	Действия (Actions)					
7	Сцена на единороге	X				
8	Сцена в Каэр Морхене	X	X	X		
9	Истинная любовь с Йеннифер	X				
10	Любовь с Трисс		X		X	
11	Скрытый квест "Танго втроем"			X		
12	Геральт остается абсолютно один					X
13						



Роман с Трисс

	А	В	С	Д	Е
1	Условия / Правила	Ветка Трисс	Попытка с обеими	Ветка Йеннифэр	Отказ обеим
2	Поцеловать Трисс в лабиринте	Да	Да	-	-
3	Сказать Трисс "Я люблю тебя"	Да	Да	Нет	Нет
4	Сказать Йеннифэр "Я по-прежнему люблю тебя"	Нет	Да	Да	Нет
5					
6	Действия (Actions)				
7	Романтическая сцена на маяке с Трисс	X	X		
8	Истинная любовь с Трисс	X			
9	Истинная любовь с Йеннифэр			X	
10	Скрытый квест "Танго втроем"		X		
11	Геральт остается абсолютно один				X



Таблица принятия решений



Боевые механики: расчёт бафов и сопротивлений, модификатор критического урона, логика статусных эффектов



Скрытность и исследование: взлом замков или терминалов (наличие расходников, навыков, бафов), срабатывание ловушек



Экономика, инвентарь, крафт: успех крафта, динамическое ценообразование, износ снаряжения



Нарратив и состояние мира: ветвление диалогов, нелинейность сюжета, отношение фракций и НПС, разблокировка навыков в дереве развития

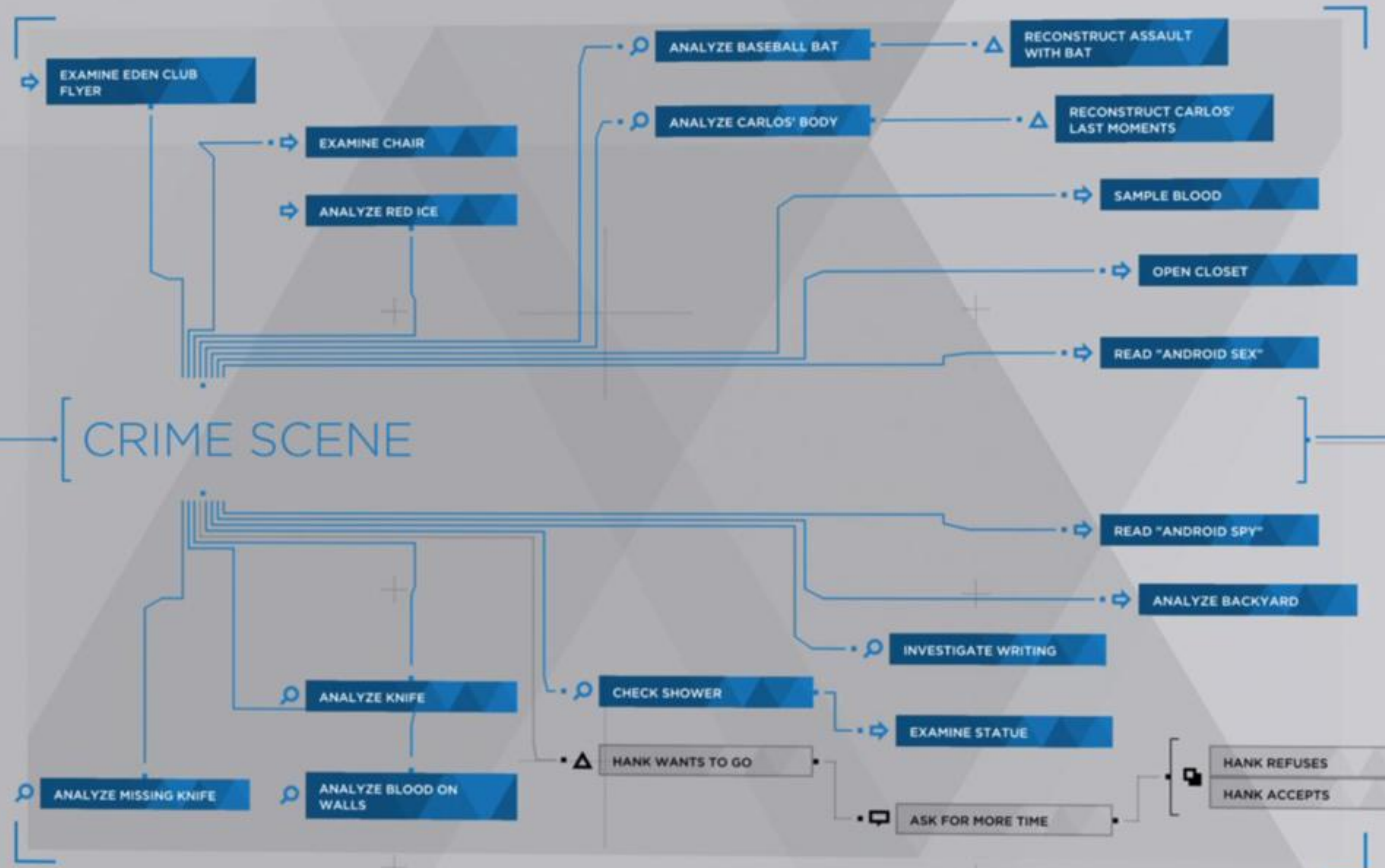


Системные и мета-механики: валидация сохранений (версия патча, наличие DLC и т.п.), триггеры обучения, логика матчмейкинга





CONNOR AND HANK ARRIVE AT SCENE



AI NPC BEHAVIOR STATES

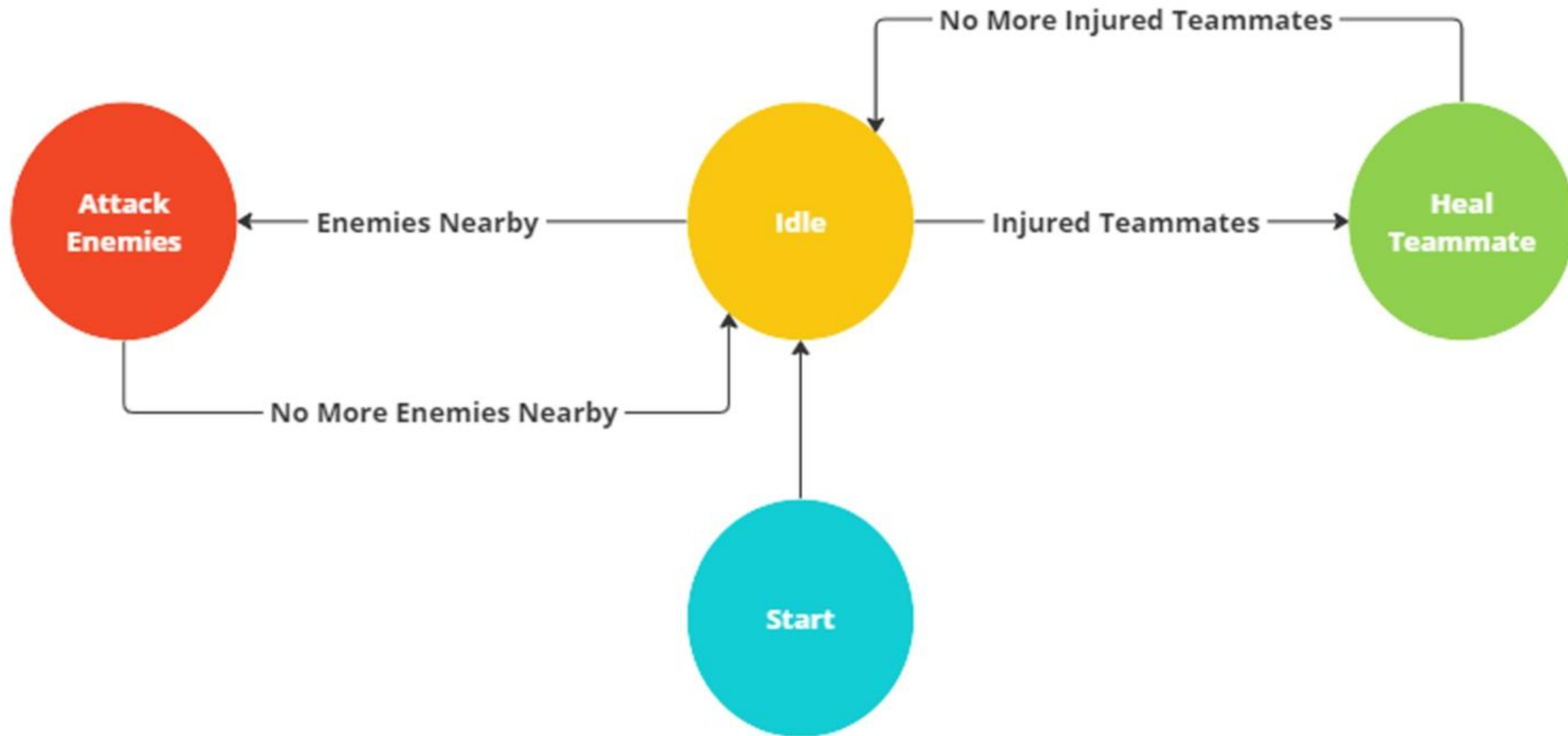
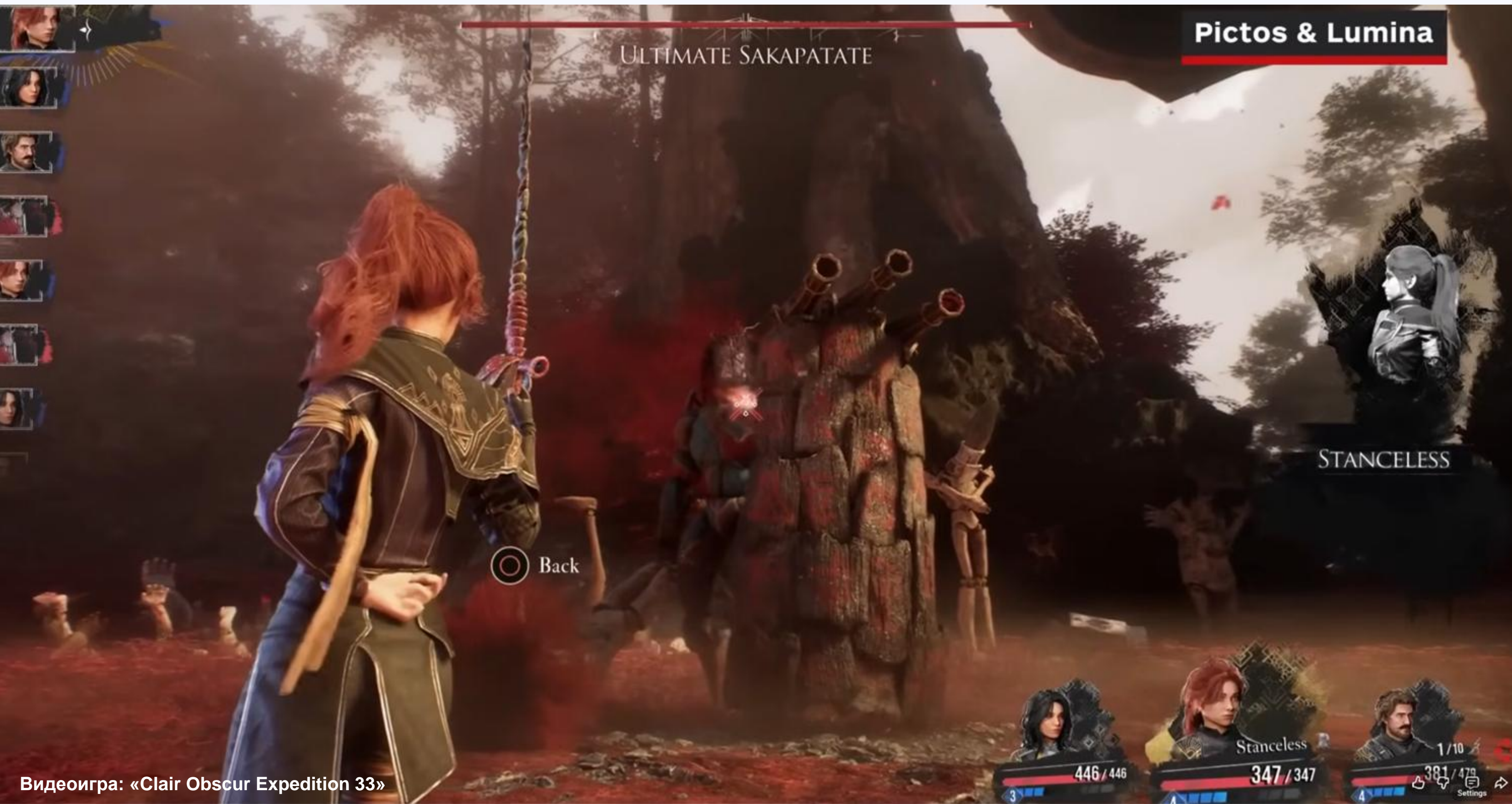


Диаграмма состояний и переходов

Состояния персонажа (Locomotion & Actions)

- **Состояния перемещения:** Idle → Walk → Run → Sprint → Jump → Falling → Landed
- **Боевые стойки:** Обычная стойка → Блок → Парирование → Контратака
- **Система укрытий:** Вне укрытия → Вход в укрытие → Стрельба из-за угла → Перебежка между укрытиями



FALLOUT SHELTER

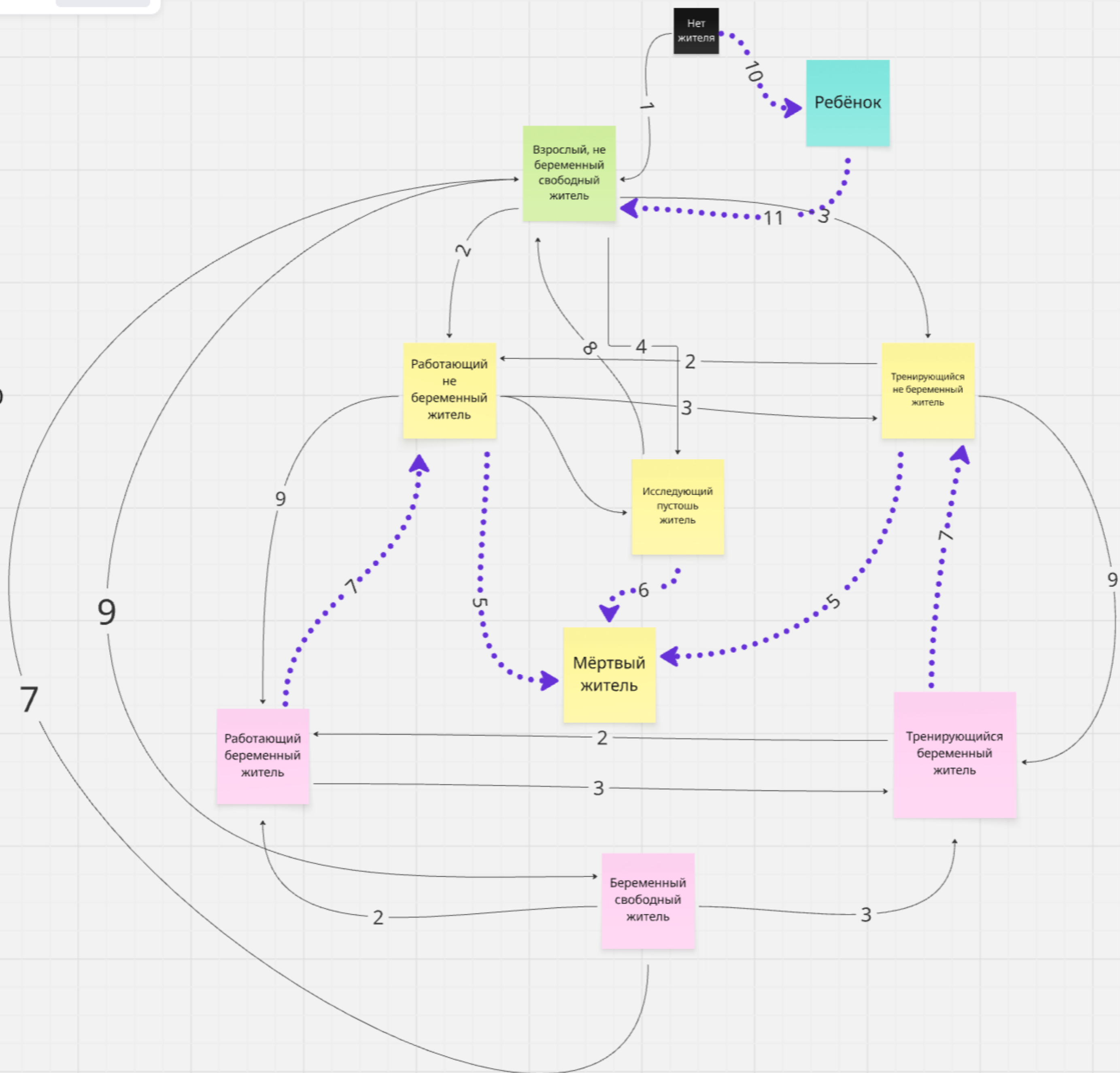
Объект - житель взрослый, свободный. не беременный.

Принадлежность действий:

- системы (фиолетовый пунктир)
- играющего

Условные обозначения:

- объект
- персонаж женского пола
- ребёнок
- жителя нет



1. Создание убежища
2. Добавить в производственную комнату
3. Добавить в тренировочную комнату
4. Отправить исследовать пустошь
5. Не пережить нападение противников либо пожар в убежище
6. Умереть в пустоши
7. Родить
8. Вернуть жителя пустоши
9. Добавить в жилую комнату к мужскому персонажу (только женский персонаж)
10. Родиться (только для нового жителя, от родителей из убежища)
11. Вырасти (только для ребёнка)



- [Portrait of a woman with dark hair]
- [Portrait of a woman with brown hair]
- [Portrait of a woman with blonde hair]
- [Portrait of a man with a beard]
- [Portrait of a woman with dark hair]

LP AIM

- 4
- Y ITEMS
- X SKILLS
- A ATTACK



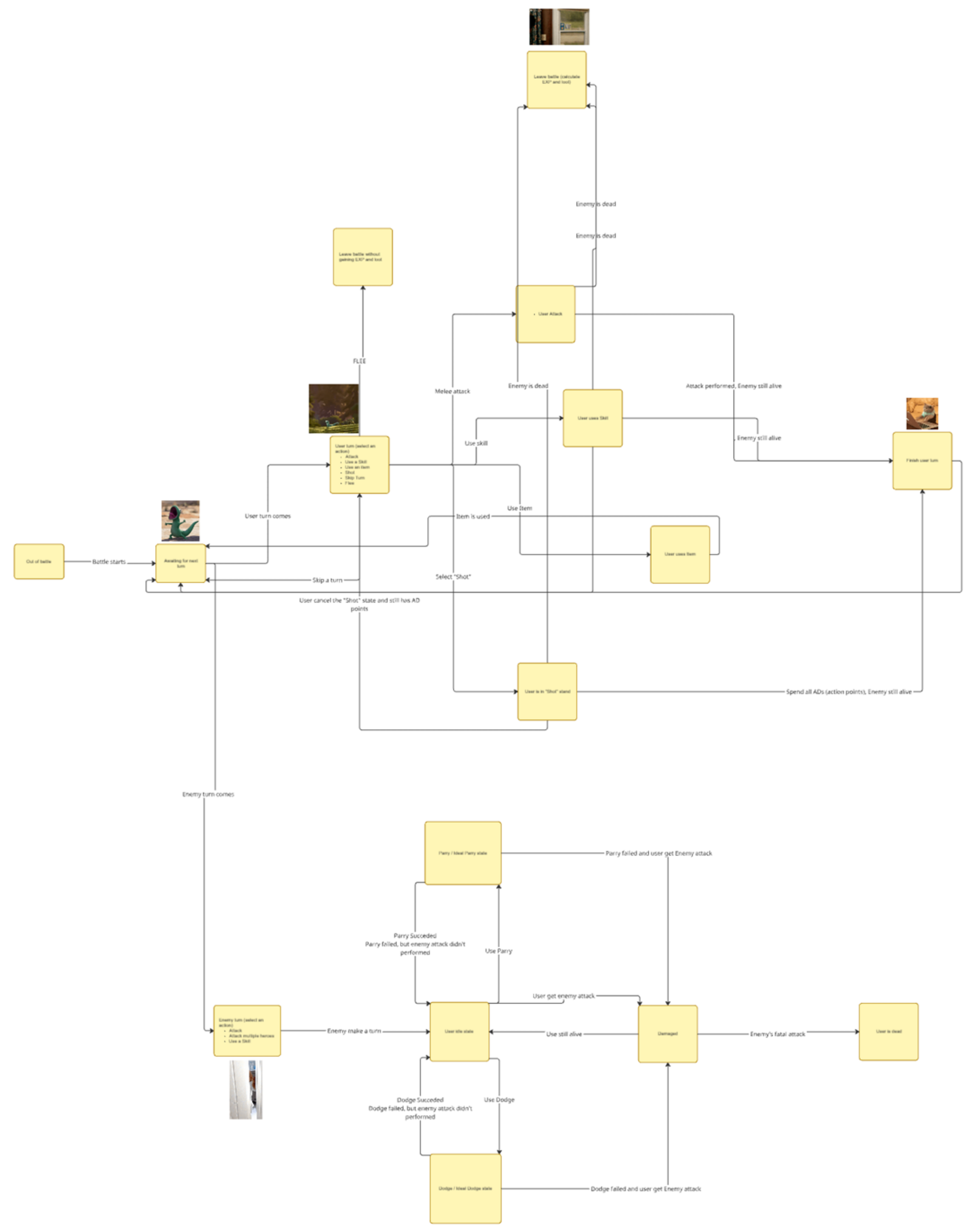
722 / 722

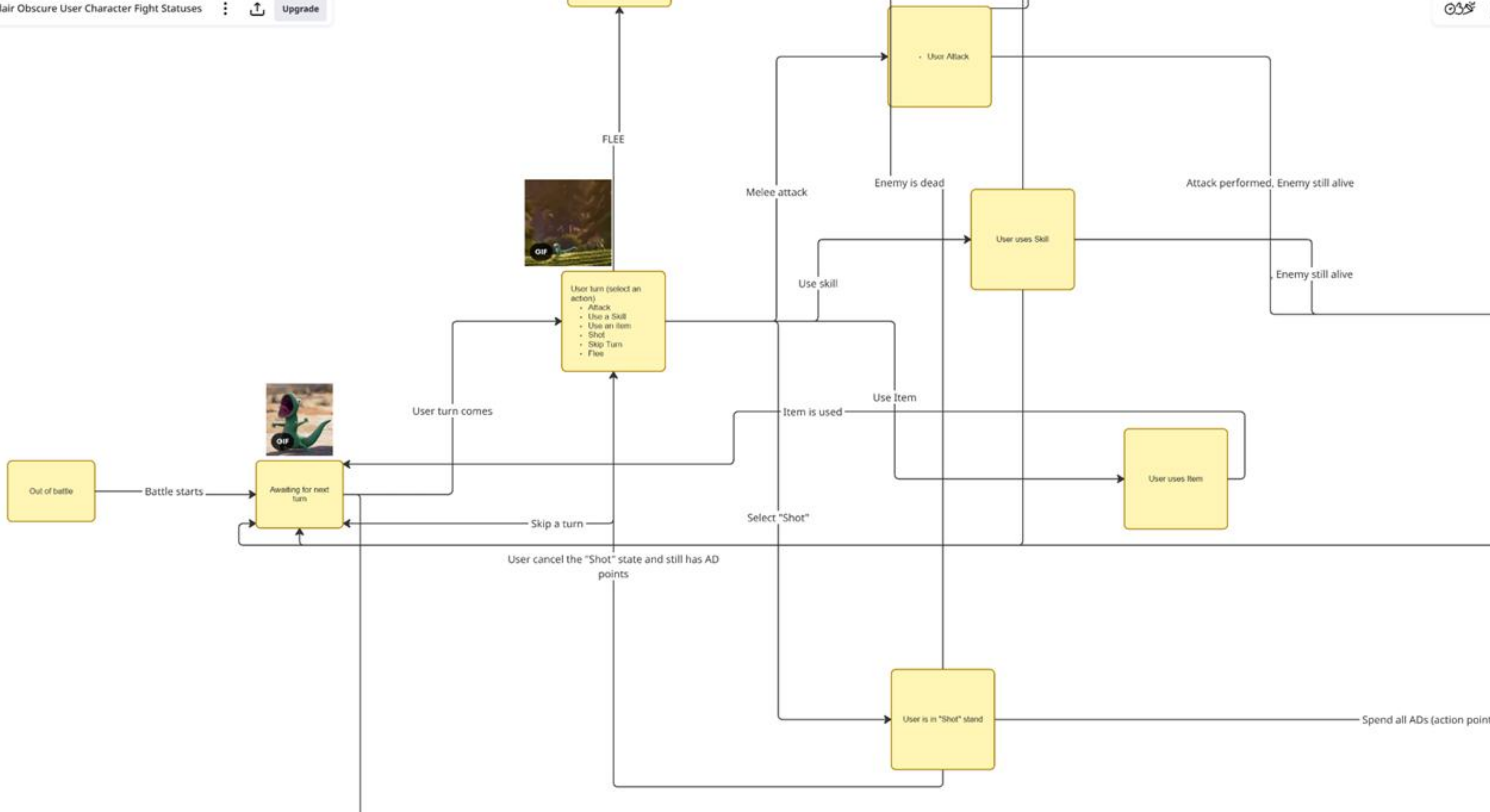


574 / 574



67







LEFT 4 DEAD 2

Диаграмма состояний и переходов



Состояния персонажа: передвижение, траверсал, состояния скрытности



Боевая система: эффекты контроля, стойки, комбо, защитные механики



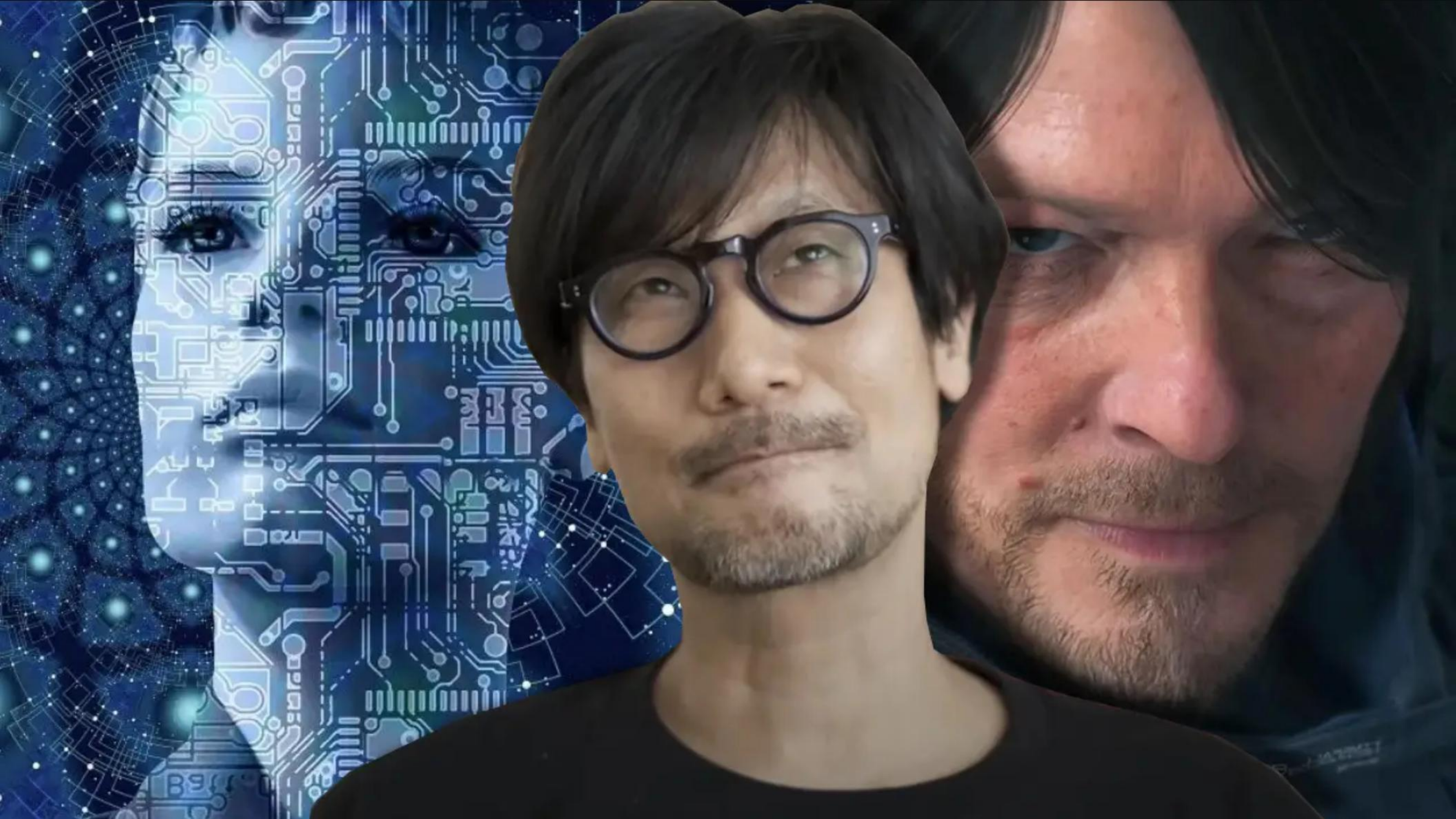
Игровой AI: поведение врага, ИИ режиссёр, агро-система, система диалогов (переходы нод)



Квесты и прогрессия: жизненный цикл квеста, система достижений



Взаимодействия с миром: интерактивные объекты, смена времени суток, погода



RecastNavMesh-Default (DynamicModifiersOnly)
 AgentRadius 35.0, AgentHeight 144.0
 CellSizes 38.0/19.0/19.0, CellHeights 10.0/10.0/10.0, AgentMaxStepHeight 35.0/35.0/35.0 (low/default/high)
 Region part Watershed, Layer part Watershed

NavData count: 1
 MainNavData: RecastNavMesh-Default
 Custom NavLinks count: 15
 Using cluster links



Outliner

Levels

Search Levels

Level

Persistent Level

1 levels

Details

SKM_Manny_Simple

SKM_Manny_Simple (Instance)

SkeletalMeshComponent (SkeletalMesh)

Search

General Actor Animation LOD

Physics Rendering Streaming

Transform

Location -1800.0 -5970.0

Rotation 0.0° 0.0°

Scale 1.0 1.0

Animation

Animation Mode Use Animation Blueprints

Anim Class None

Disable Post Process

Advanced

Mesh

Skeletal Mesh Asset SKM_Manny_Simple

Skin Cache Usage 0 Array element

Materials

Element 0 MI_Manny

Element 1 MI_Manny

Physics

Simulate Physics

Linear Damping 0.01

Content Drawer

Output Log

Cmd

Enter Console Command

QuantumControl

All

Content

AI

Assets

Audio

Blueprints

Brushify

Characters

Collections


+ Add Import Save All Fab

All > Content > Levels > QA_Levels

Search QA_Levels

QA_TestLevel

1 item (1 selected)

A close-up shot of a middle-aged man with a mustache, looking directly at the camera with a wide-eyed, surprised expression. He is wearing a grey suit jacket over a light-colored shirt. His right hand is raised, with his index finger pointing upwards. The background consists of a wooden wall on the left and a plain wall on the right with a calendar or document pinned to it.

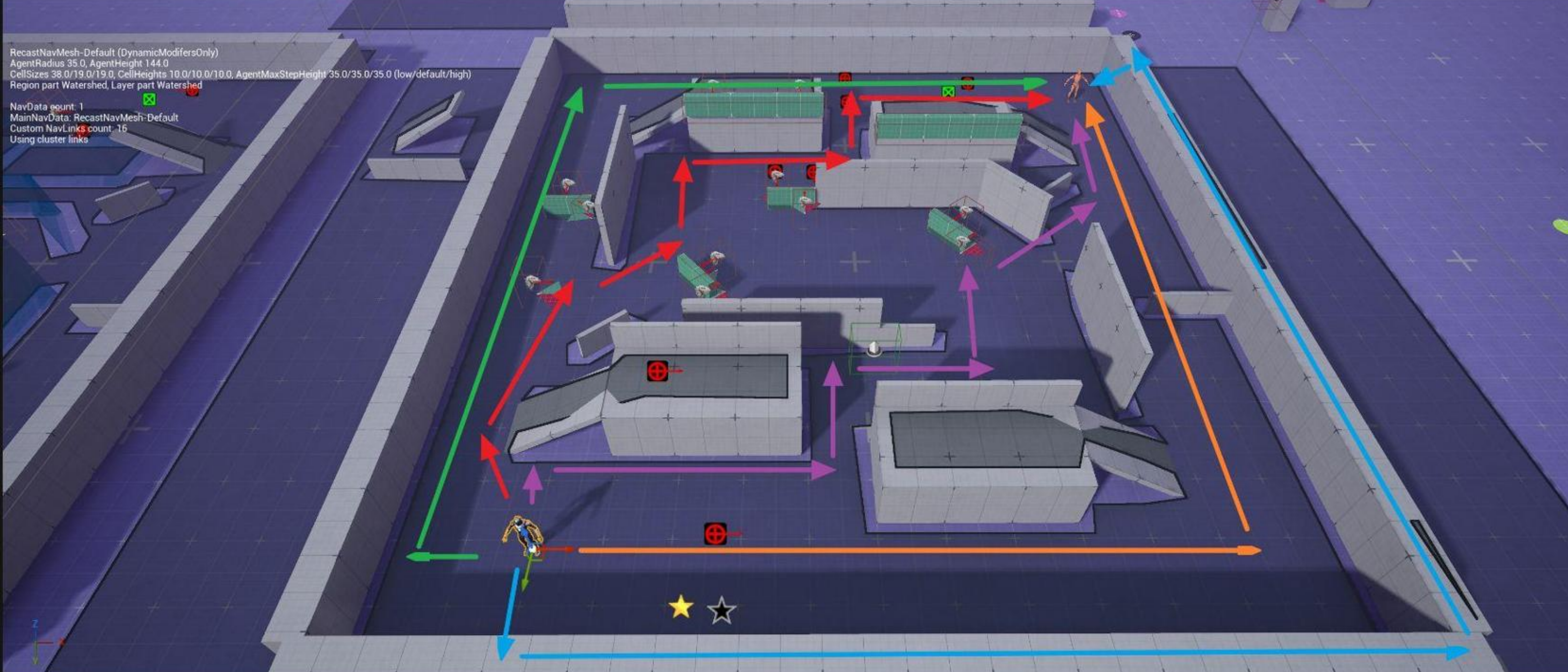
Никакого ответа он,
конечно же, не дал



Content Drawer Favorites QuantumControl All Content AI Assets Audio Blueprints Brushify Characters Collections 1 item (1 selected)

Content Drawer Import Save All Fab All > Content > Levels > QA_Levels Search QA_Levels QA_TestLevel

Content Drawer Output Log Cmd Enter Console Command Trace Diagnostics Zen Server 2 Unsaved



Outliner Levels

Search Levels

Level Persistent Level

1 levels

Details

SKM_Manny_Simple + Add

SKM_Manny_Simple (Instance)

SkeletalMeshComponent (SkeletalM

Search

General Actor Animation LOD

Physics Rendering Streaming

Transform

Location -1800.0 -5970.0

Rotation 0.0° 0.0°

Scale 1.0 1.0

Animation

Animation Mode Use Animation Blueprint

Anim Class None

Disable Post Process...

Advanced

Mesh

Skeletal Mesh Asset SKM_Manny

Skin Cache Usage 0 Array element

Materials

Element 0 MI_Manny_

Element 1 MI_Manny_

Physics

Simulate Physics

Linear Damping 0.01

Content Drawer

Output Log

Cmd

Enter Console Command

QuantumControl

All

Content

- AI
- Assets
- Audio
- Blueprints
- Brushify
- Characters

Collections

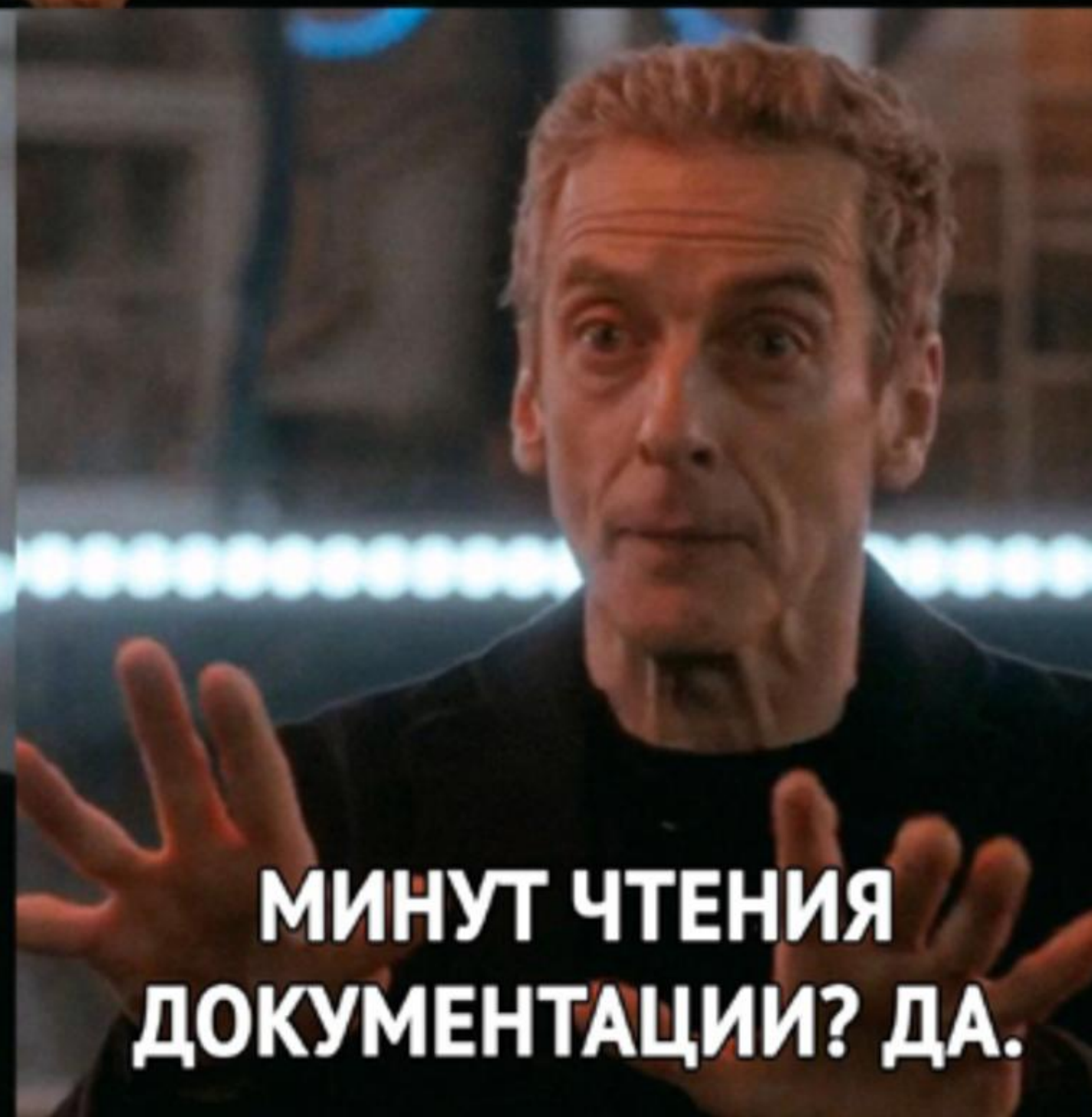
+ Add Import Save All Fab

All > Content > Levels > QA_Levels

Search QA_Levels

QA_TestLevel

1 item (1 selected)



Search Classes

Recently Placed

- Empty Actor
- Empty Character
- Empty Pawn
- Point Light
- Player Start
- Cube
- Sphere
- Cylinder
- Cone
- Plane
- Box Trigger
- Sphere Trigger

Basic

Lights

Cinematic

Visual Effects

Geometry

Volumes

All Classes



Commands Camera Grid Pathfinding

Actions

- Select Tile
- Show Tile Neighbors
- Select / Find Path
- Include Diagonals

Debug

- Show Indexes On Tiles

Search

Label	Type
L_Entry (Play In Editor)	World
DefaultStuff	Folder
L_Lighting	Folder
AtmosphericFog	AtmosphericFog
Light Source	DirectionalLight
PostProcessVolume	PostProcessVolume
SkyLight	SkyLight
L_Pretty_Triangle	Folder
Combat	Folder
Grid	Folder
Modifiers	Folder
Obstacles	Folder
BP_GridModifier3	Edit BP_GridMod
BP_GridModifier4	Edit BP_GridMod
BP_GridModifier5	Edit BP_GridMod
BP_GridModifier6	Edit BP_GridMod
BP_GridModifier7	Edit BP_GridMod
BP_GridModifier8	Edit BP_GridMod
BP_GridModifier9	Edit BP_GridMod
BP_GridModifier10	Edit BP_GridMod
BP_GridModifier11	Edit BP_GridMod
BP_GridModifier12	Edit BP_GridMod
BP_GridModifier13	Edit BP_GridMod
BP_GridModifier14	Edit BP_GridMod
BP_GridModifier15	Edit BP_GridMod
BP_GridModifier18	Edit BP_GridMod
BP_GridModifier19	Edit BP_GridMod
BP_GridModifier20	Edit BP_GridMod
BP_GridModifier21	Edit BP_GridMod
BP_GridModifier22	Edit BP_GridMod
BP_GridModifier23	Edit BP_GridMod
BP_GridModifier24	Edit BP_GridMod
BP_GridModifier25	Edit BP_GridMod
BP_GridModifier26	Edit BP_GridMod

164 actors View Options

Select an object to view details.

Search Paths

Content

- Art
- Blueprints
- Core
- Grid
- GridShapes
- Utilibes
- LevelLoading
- Player
- Actions
- Grid
- Pathfinding
- Utilities
- DebugMenu

Filters Search Tabs

- Tab_Camera
- Tab_Console Commands
- Tab_Grid
- Tab_Pathfinding

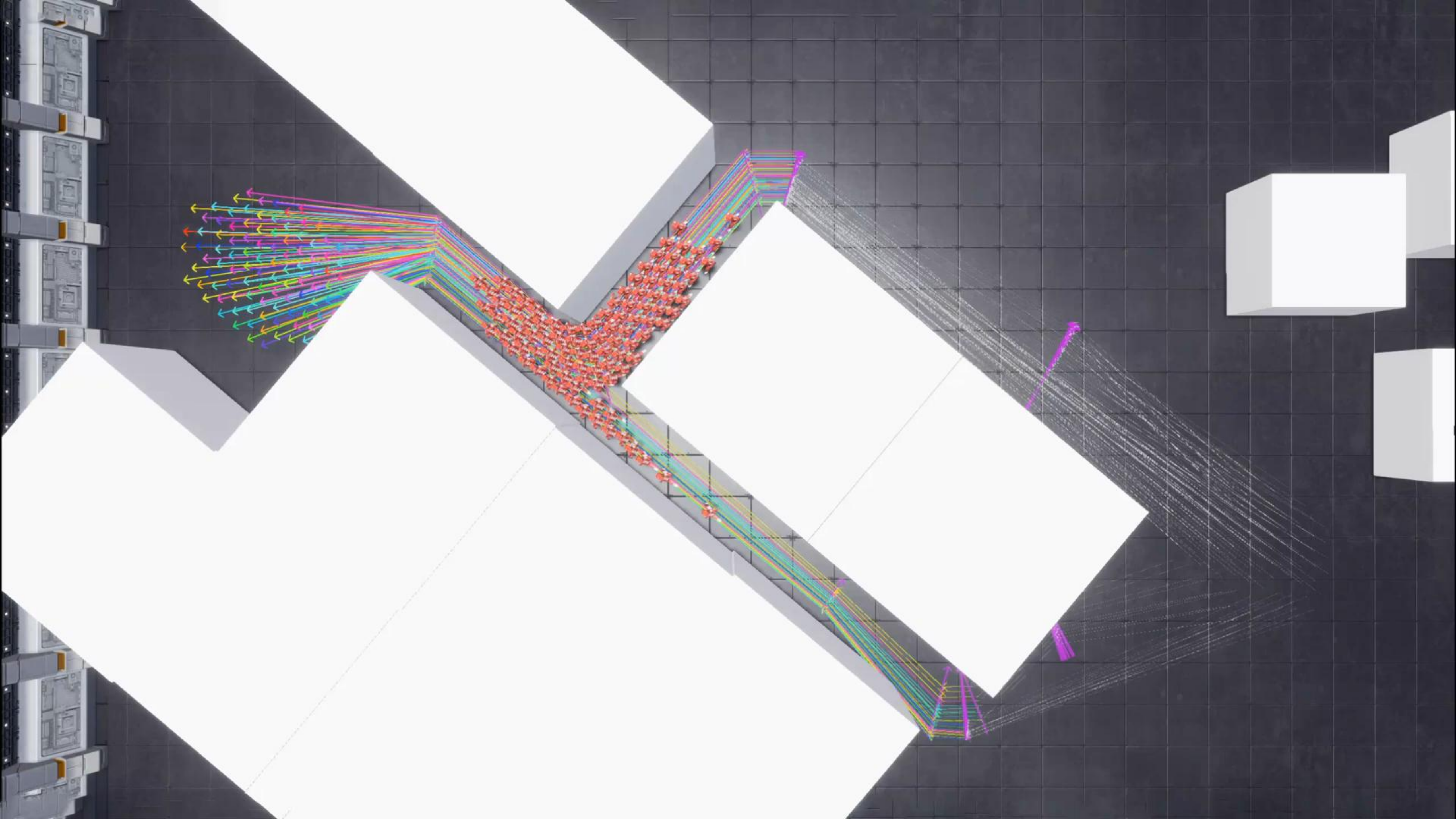
4 items (1 selected) View Options

Filters Search Log

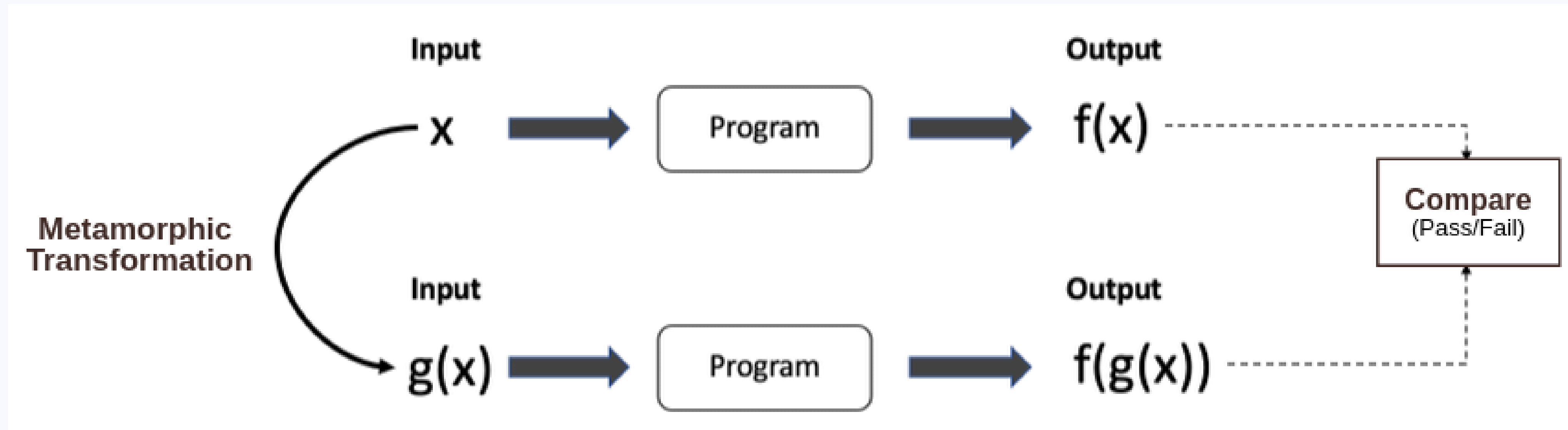
```

LogRenderer: Reallocating scene render targets to support 1804x912 Format 10 NumSamples 1 (Frame:1092).
LogRenderer: Reallocating scene render targets to support 1804x932 Format 10 NumSamples 1 (Frame:1093).
LogRenderer: Reallocating scene render targets to support 1804x956 Format 10 NumSamples 1 (Frame:1094).
LogRenderer: Reallocating scene render targets to support 1804x972 Format 10 NumSamples 1 (Frame:1095).
LogRenderer: Reallocating scene render targets to support 1804x988 Format 10 NumSamples 1 (Frame:1096).
LogRenderer: Reallocating scene render targets to support 1804x992 Format 10 NumSamples 1 (Frame:1098).
LogRenderer: Reallocating scene render targets to support 1804x1008 Format 10 NumSamples 1 (Frame:1352).
LogRenderer: Reallocating scene render targets to support 1804x1016 Format 10 NumSamples 1 (Frame:1353).
LogSlate: WidgetSwitcher ('None') active index changed to 4
LogSlate: WidgetSwitcher ('None') active index changed to 3
LogObjectHash: Compacting FUObjectHashTables data took 3.87ms
LogSlate: WidgetSwitcher ('None') active index changed to 4
LogSlate: WidgetSwitcher ('None') active index changed to 3
LogStreaming: Display: UWorld::AddToWorld: updating components for /Game/Maps/Sublevels/UEDP1E_0_L_Triangle
LogObjectHash: Compacting FUObjectHashTables data took 3.22ms
LogSlate: WidgetSwitcher ('None') active index changed to 4
  
```

Cmd - Enter Console Command View Options



Метаморфическое тестирование



ARMOR


B-27 FORTIFIED COMMANDO

This armor set first appeared in the music video for the summer anthem 'Our Love is Like (Indestructible)'.

STATS

ARMOR RATING	↑	■■■■■■■■	200
SPEED	↓	■■■■■■■■	450
STAMINA REGEN	↓	■■■■■■■■	050

ARMOR PASSIVE

 **EXTRA PADDING**
Provides a **higher armor rating**.

ARMOR

SC-37 LEGIONNAIRE

This armor is based on the antique uniforms of the 'Super Earth Legion' the Helldivers.

STATS

ARMOR RATING	■■■■■■■■	050
SPEED	■■■■■■■■	550
STAMINA REGEN	■■■■■■■■	125

ARMOR PASSIVE

 **SERVO-ASSIST**
Increases throw
Provides **+50%** li

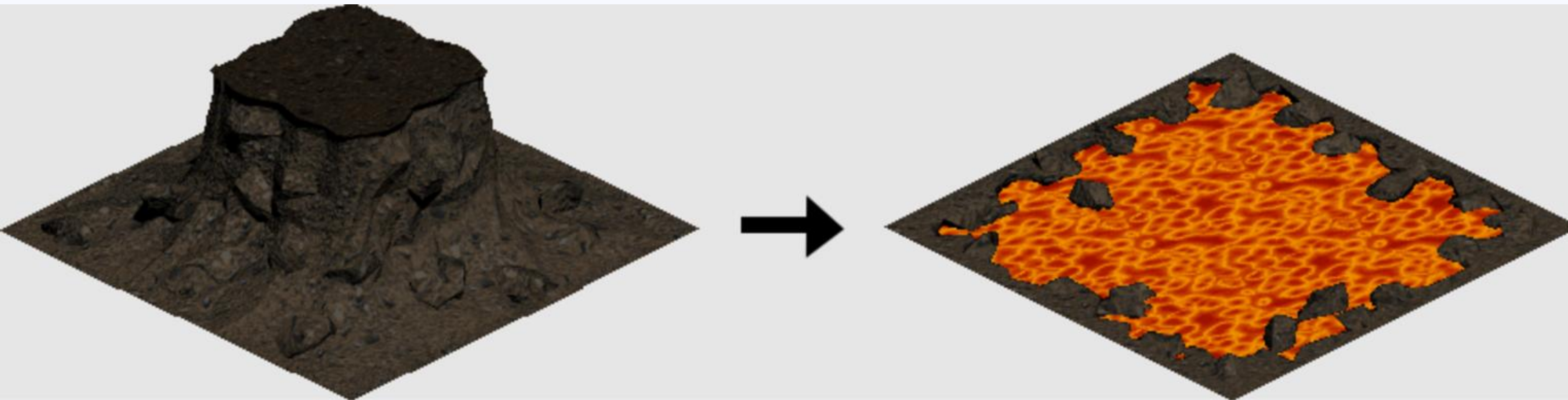
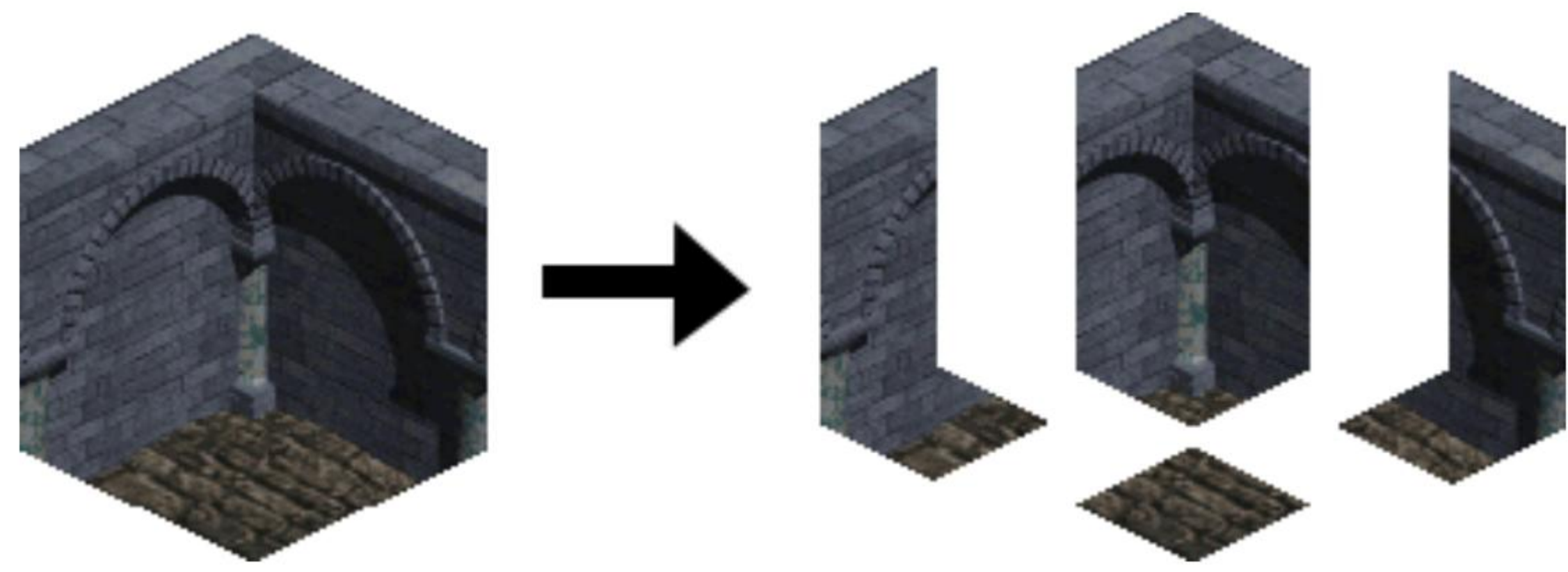
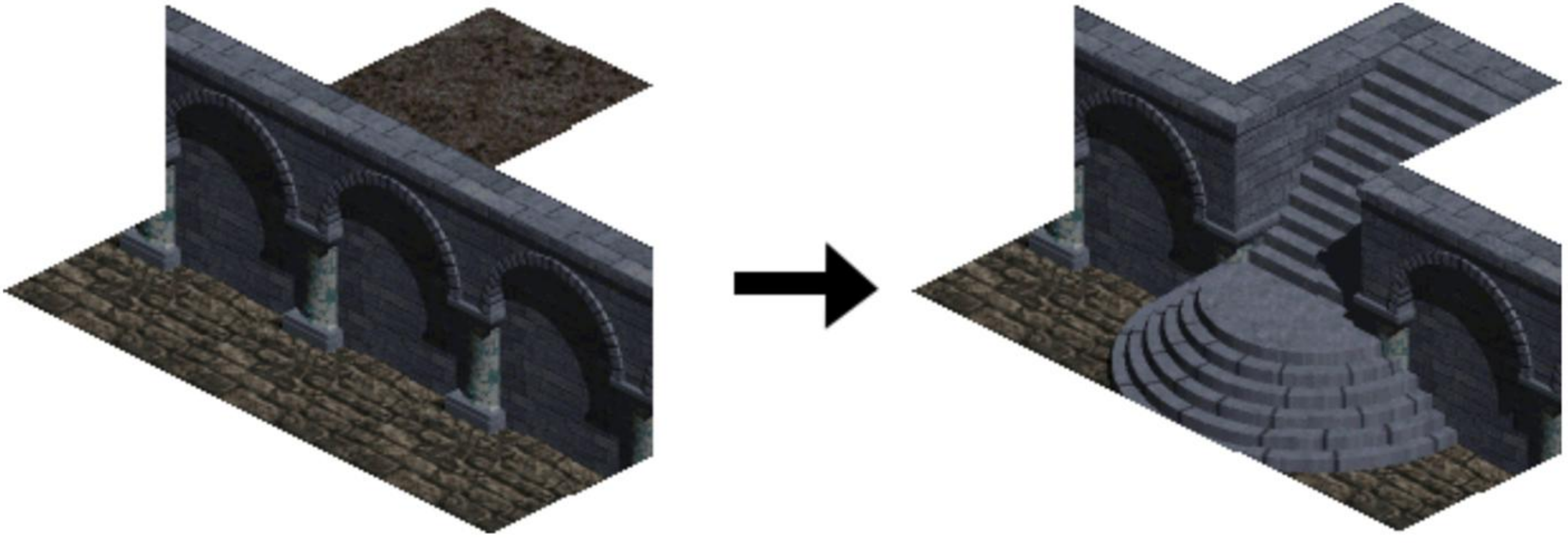


The image shows a portion of the game's inventory UI. It features a dark red background with several items listed in a grid-like fashion. From top to bottom, the items are: a Grenade (G), a Medkit (x3/4), Ammo (x5/7), a Pistol, F1 (F1), a Health bar (partially filled), and a Syringe (x2/4). The items are arranged in two rows, with the top row containing the Grenade, Medkit, Ammo, and Pistol, and the bottom row containing F1, the Health bar, and the Syringe.

Метаморфическое тестирование

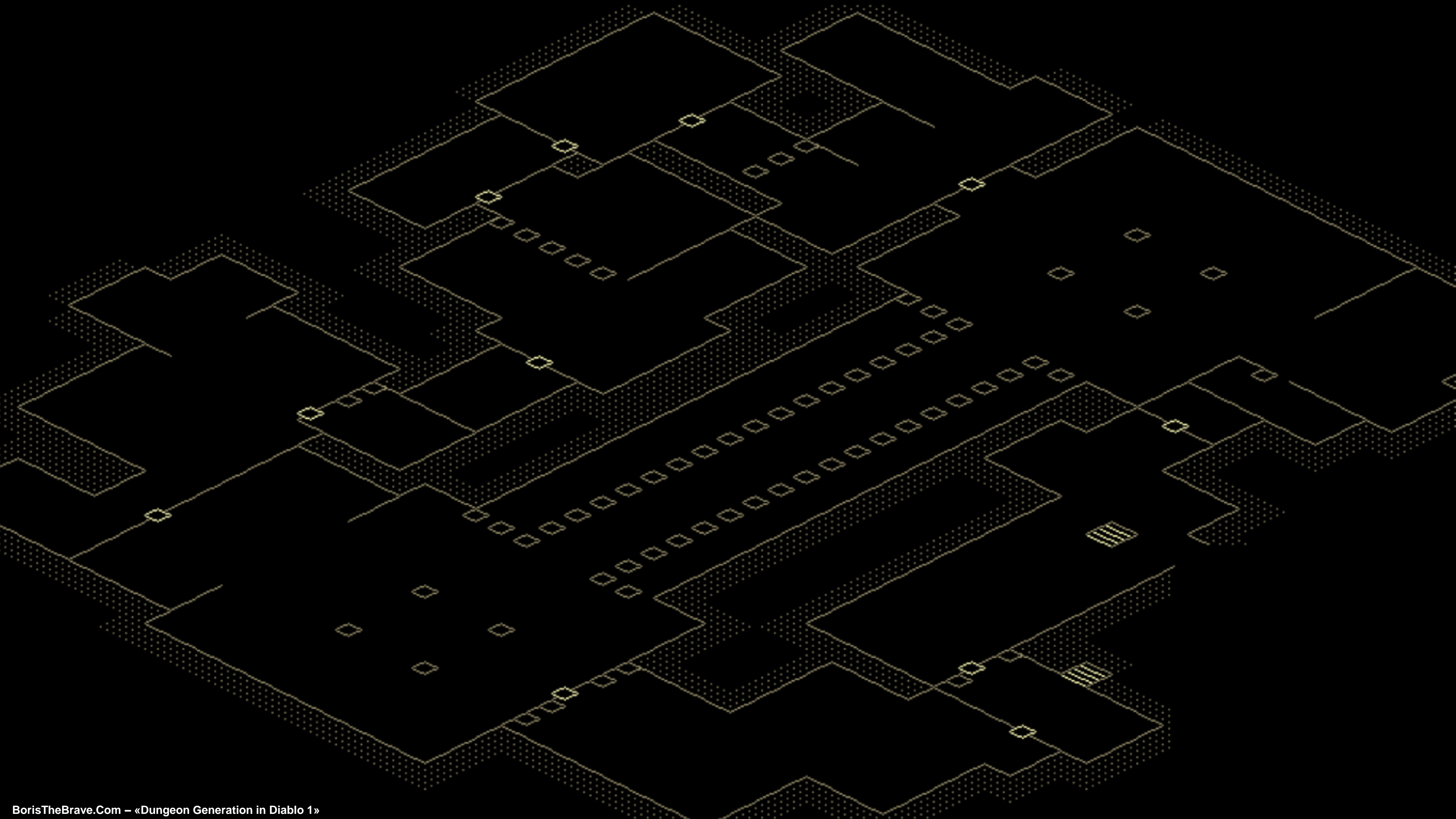


<p>DRY STEPPES</p>  	<p>ANCIENT'S LAMENT</p> 	<p>CHAMPION'S DEMISE</p> 	<p>DARK RAVINE</p> 	<p>GUULRAHN CANALS</p> 	<p>GUULRAHN SLUMS</p> 	<p>ONYX HOLD</p> 
<p>FRACTURED PEAKS</p>  	<p>BLACK ASYLUM</p> 	<p>CULTIST REFUGE</p> 	<p>KOR DRAGAN BARRACKS</p> 	<p>LOST ARCHIVES</p> 	<p>MAULWOOD</p> 	<p>ZENITH</p> 
<p>HWEZAR</p>  	<p>BLIND BURROWS</p> 	<p>EARTHEN WOUND</p> 	<p>MAUGAN'S WORKS</p> 	<p>SERPENT'S LAIR</p> 	<p>SHADOWED PLUNGE</p> 	<p>WITCHWATER</p> 
<p>KEHJISTAN</p>  	<p>ABANDONED MINEWORKS</p> 	<p>CONCLAVE</p> 	<p>CRUSADER'S CATHEDRAL</p> 	<p>PRISON OF CALDEUM</p> 	<p>RENEGADE'S RETREAT</p> 	<p>SHIVTA RUINS</p> 
<p>SCOSGLEN</p>	<p>ALDURWOOD</p>	<p>DEMON'S WAKE</p>	<p>FERAL'S DEN</p>	<p>RAETHWIND WILDS</p>	<p>SUNKEN RUINS</p>	<p>WHISPERING PINES</p>



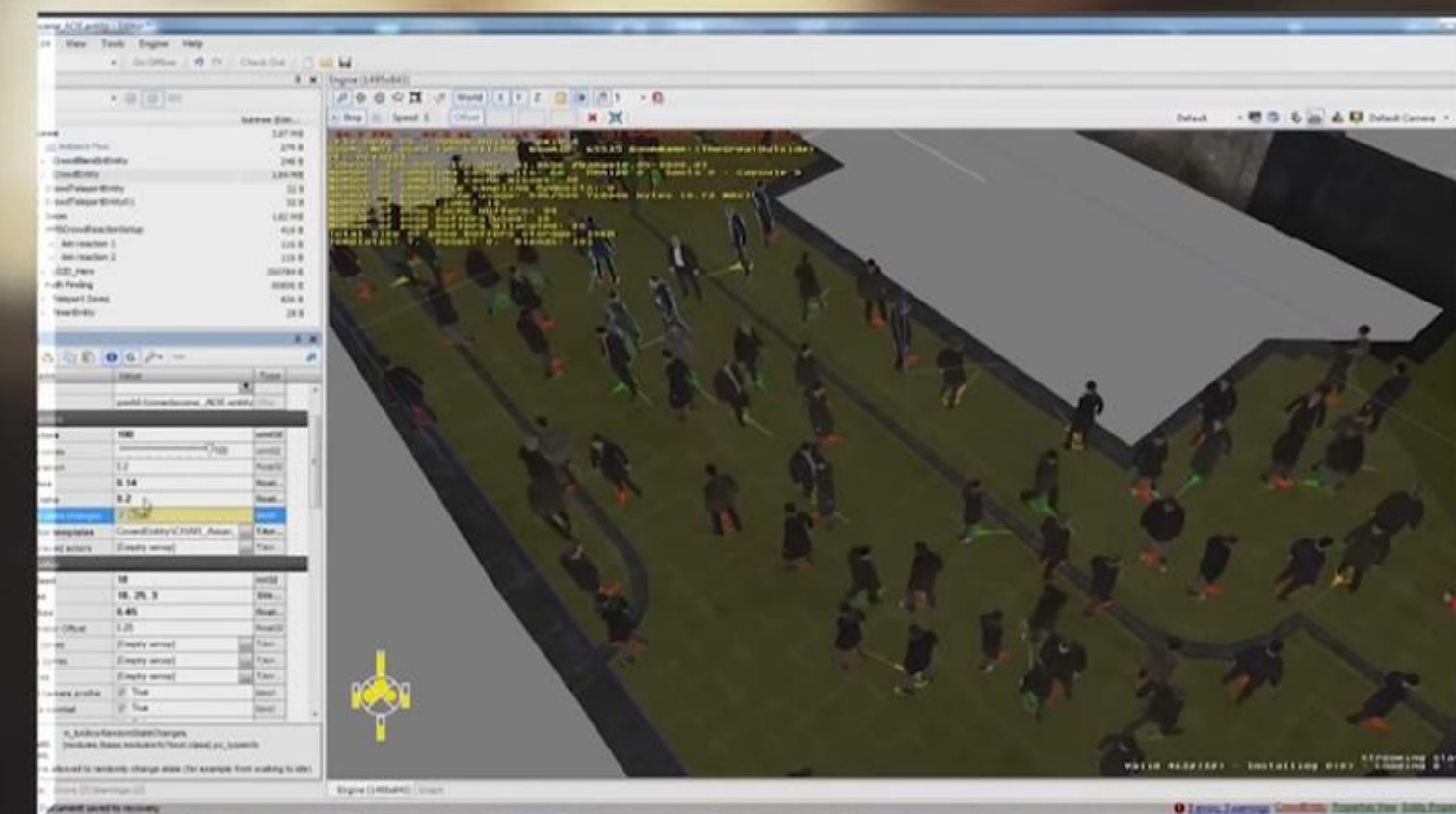






Half-Life: Alyx Physics Lets You Juggle





**A SITUATION-DRIVEN
BEHAVIOR TREE
SYSTEM**

**BODYGUARD AND
SECURITY SYSTEM**

**POWERFUL CROWD
BEHAVIOR
MANAGEMENT**

Метаморфическое тестирование



Процедурная генерация: генерация ландшафта, генерация предметов, построение путей, распределение объектов (лута)



AI: механика агрессии ботов, принятие решений, симуляция толпы, приоритизация целей, стелс



Физика и перемещение: траектория снарядов, урон от падения, от врагов (в зависимости от экипа), применение физики к регдоллу, транспорт



Экономика и прогрессия: начисление опыта (в том числе на разных уровнях сложности), заточка экипа, лутбоксы, конвертации объектов, скалирование характеристик



THE
GAME
AWARDS

HIDEO KOJIMA
CONFIRMED
AS PRESENTER







Исследовательское тестирование



Исследовательское тестирование



Исследовательское тестирование

-  Физика и взаимодействия: траверсал, рэгдолл, перемещение по сложной геометрии, манипуляции с динамическими или интерактивными объектами
-  AI и стейт машины: прерывание анимаций и переходов, Pathfinding, фракции, взаимодействие с компаньонами
-  UI и HUD: спам навыков, действий в инвентаре, одновременное использование разных инпут устройств, «активация за момент до»
-  Геймплей: быстрое применение контрастных эффектов, триггеры катсцен в необычных условиях, быстрое перемещение, переходы между зонами
-  Прогрессия, экономика: переполнение значений, пропуск обязательных сюжетных триггеров, Save/Load, начисление опыта в разных условиях

SCORE<1> HI-SCORE SCORE<2>

1010

0000



3



CREDIT 00







Habr



DTF



VK Видео

#THEGAMEAWARDS



Проблематика тестирования в геймдеве

Testers
executing
detailed
protocols and
reporting no
more bugs..



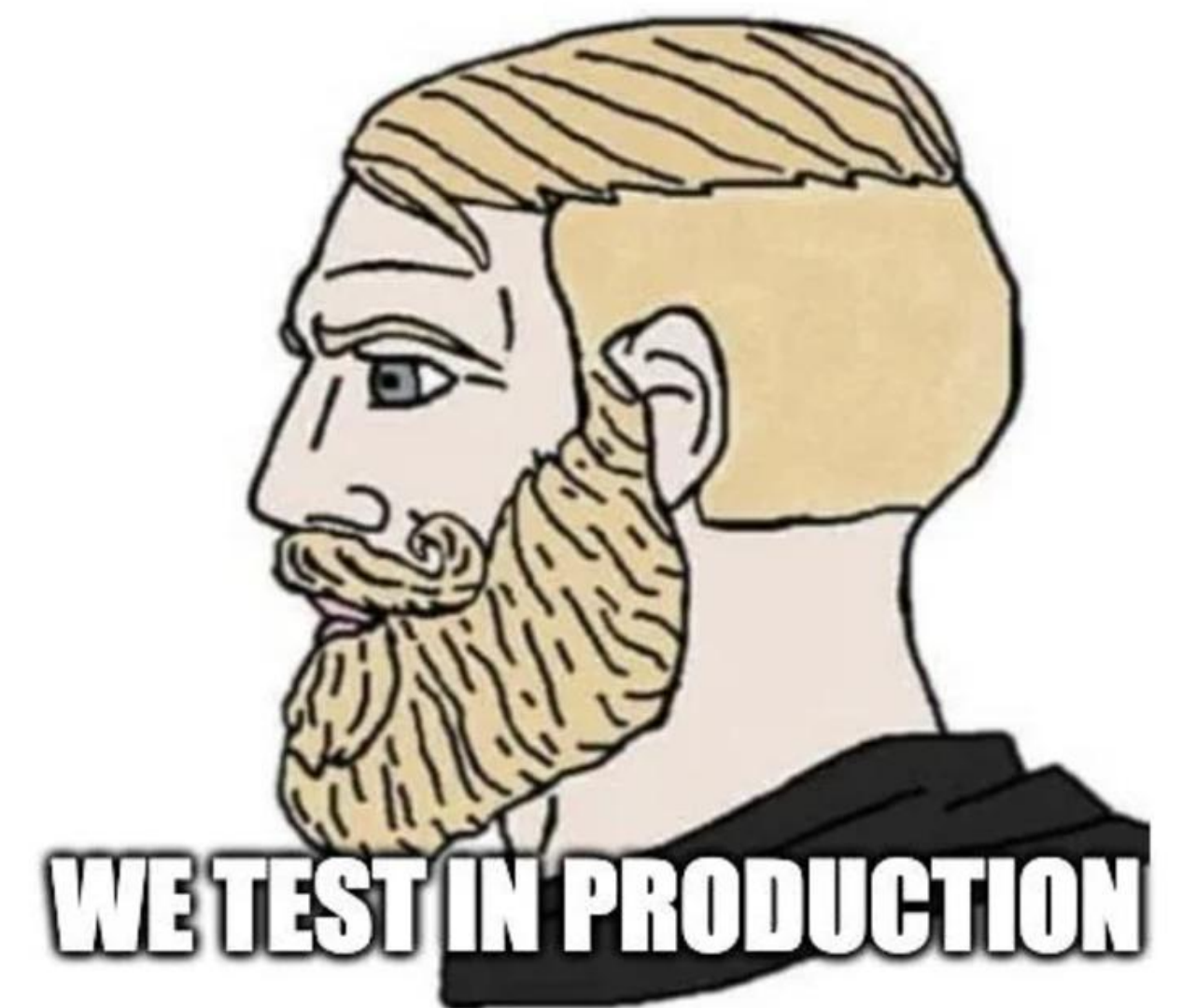
Random user
casually
reports 10+
bugs on 1st
day of
production
release..



SOFTWARE ENGINEER



GAME DEVELOPER



«Business Logic» vs ...



«Business Logic» vs «Fun Factor»



0 x01

WORLD
1-1

TIME
382

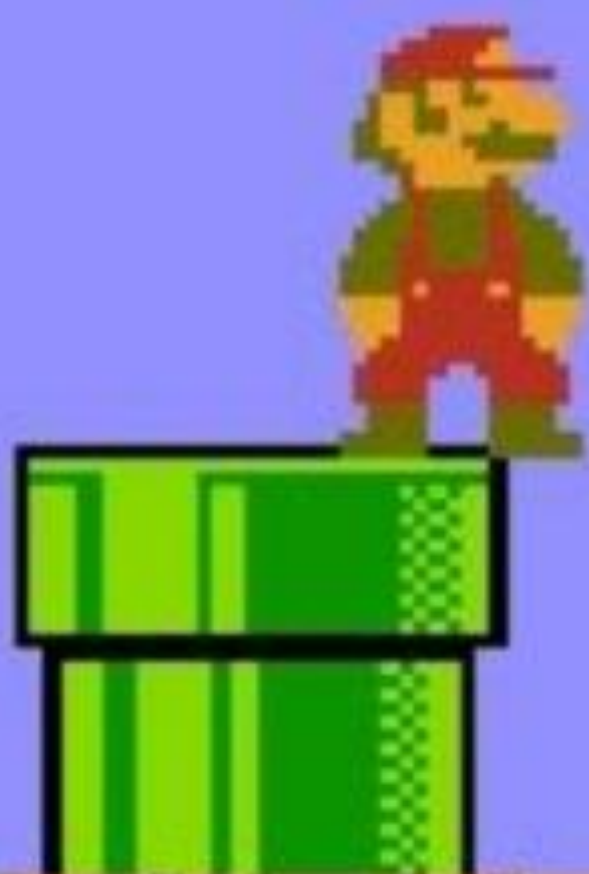


0
00

0 x01

WORLD
1-1

TIME
32





GUSTAVE



SWORD | PISTOL

"For those who come after"

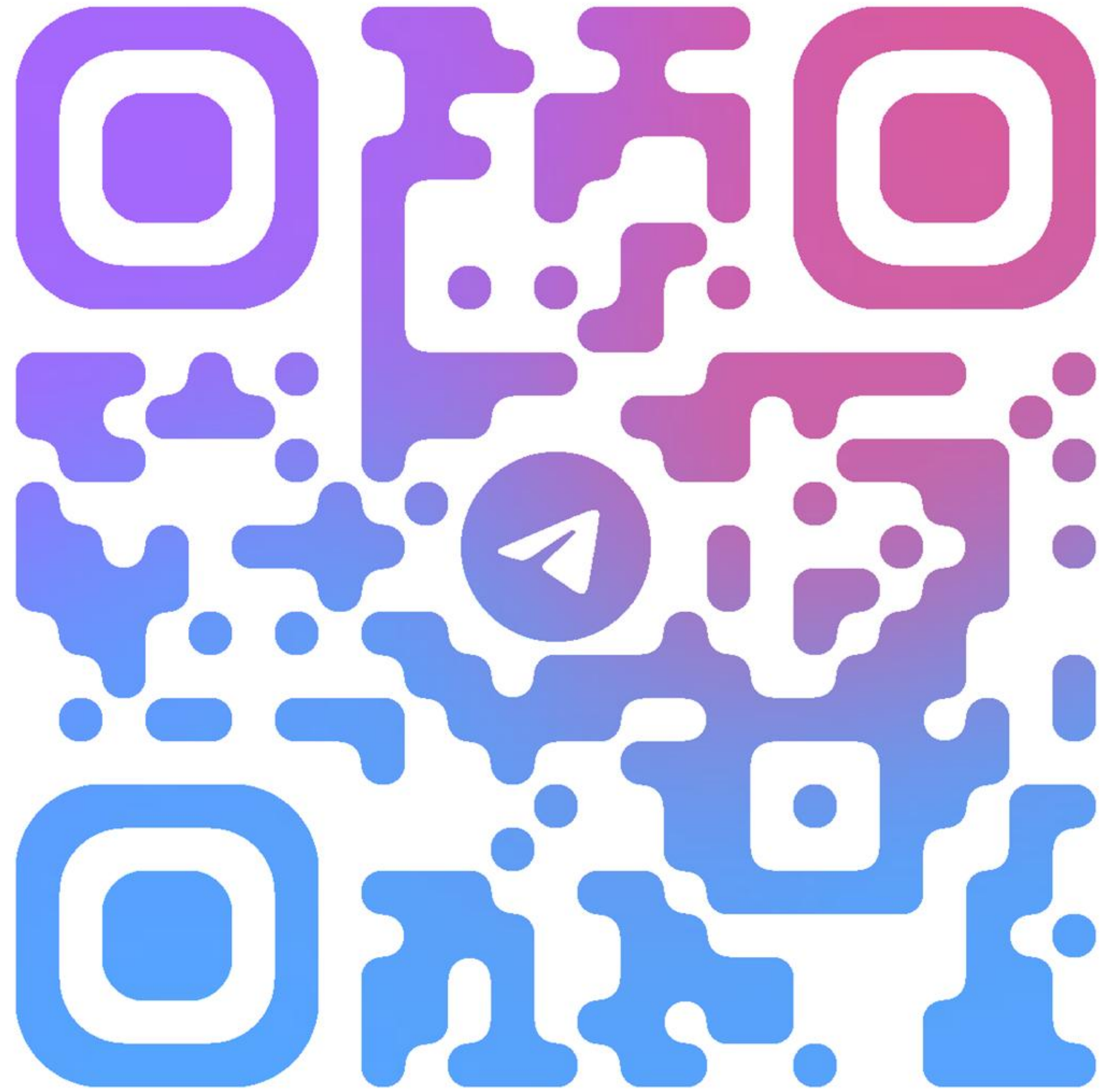
CLAIR OBSCUR

EXPEDITION



DELUXE EDITION
UPGRADE

QA



@GAMEQACHANNEL