



GEOPORTALS

DOCUMENTATION

Abstract

This is the full documentation of the game. It discusses each aspect of the game with the design decisions, internal specs, gameplay mechanics and more.

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PREMISE:

In the near future where portals are used to travel within the earth, a portal is accidentally opened to another world which brings dangerous alien creatures to the earth. After accidentally opening a portal to another world, alien creatures occupy the earth and bring with them a hostile gas that makes oxygen toxic to human beings. The game follows one of the scientists from the organization that is responsible for creating portals as a means of transportation on earth. This scientist must follow the portal path to find the source of the portal to the alien world in order to shut it down. On her way there, she must survive alien creatures that can kill her as she makes her way from one portal to another.

GAMEPLAY:

The gameplay largely revolves around shooting monsters and running/sneaking from them. There are occasionally also environment puzzles where the player has to find a way around blocked entrances. The game plays from a third-person perspective.



The game has a HUD displaying the player health in green and the stamina in blue. Health decreases when enemies attack the player and stamina decrease as the player sprints. Both of these regenerate automatically. Health regenerates faster if it is below 40.



PORTALS:

Portals are what teleport the player from one map to the other. They can be found at the start of the map, implying the player has passed through it, and cannot go back and at some point, at the end of the map where the player can teleport to the next map by walking through it. The portal is just a window frame from Unreal's Starter Content.

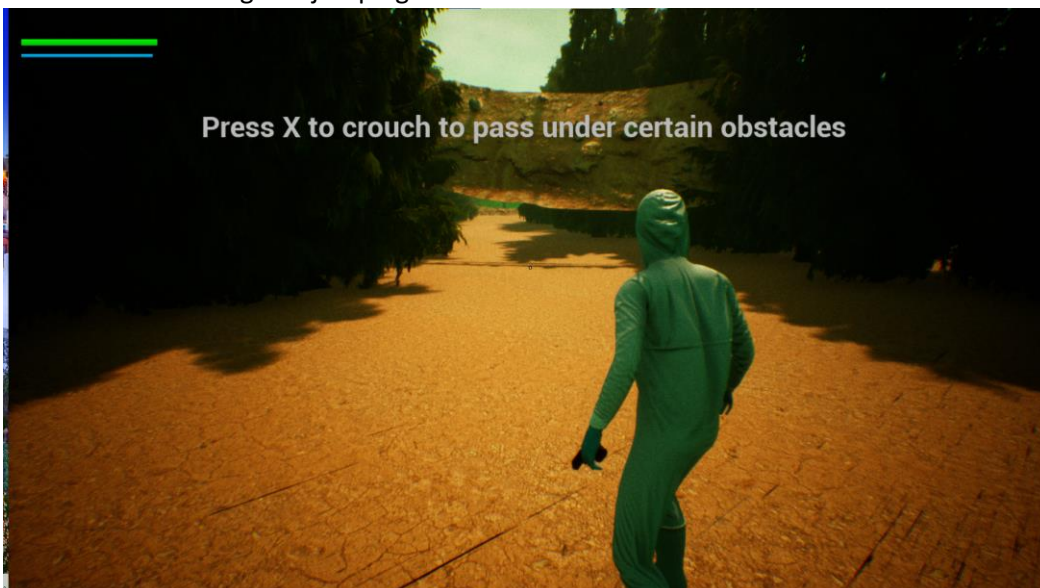


MAPS:

There is a total of X maps in the game. Each map is a different level, and progress is saved at the end of each one.

1. Entry:

This is the first map the player is dropped into. This map offers the player a chance to get a hang of the movement controls and the overall feel of the game. The player can experiment with shooting and other mechanics before jumping in. It is a simple, linear pathway to the portal and introduces crouching and jumping.



2. Forest:

This is the first real level. The player is teleported to the middle of a forest, and right at the start is greeted with Grux, the first enemy type so the player can start shooting to get familiar with the combat. This is also a small level and serves as an introduction to the combat and enemy AI. It is a bog-standard forest with a little pond and bushes and vegetation.



3. Desert:

The desert introduces new enemies and is longer than the previous level. It has very little in the way of vegetation and is comprised more of rocks and boulders.



4. Drylands:

This is just the map provided with the Marketplace asset Rural Australia. Trees, rocks and bird sounds. This is possibly the most difficult level apart from the final one because of the number of enemies the player encounters early on.



5. Winnipeg:

Pretty much just Winnipeg.



6. Cold desert

This the penultimate level. Introduces a boss fight with the most powerful enemy in the game. It has bushes and rocks.



7. Ruins

This the final level. Shortest but toughest level. Has the strongest enemies of the game.



ENEMIES:

The game currently has 6 main enemy types, and each enemy type has several variants. All enemy models and names are taken from Epic's Paragon assets, available for free on the Unreal Marketplace. Note that these names are just used internally for development, they do not have names in-game.

Stats:

Max Health: The amount of health the enemy has

Stun Chance (0-1): The likelihood of the enemy being stunned (temporarily disables attack) by the player's attack

Base Damage (0-100): The amount of damage the enemy inflicts on the player with each attack

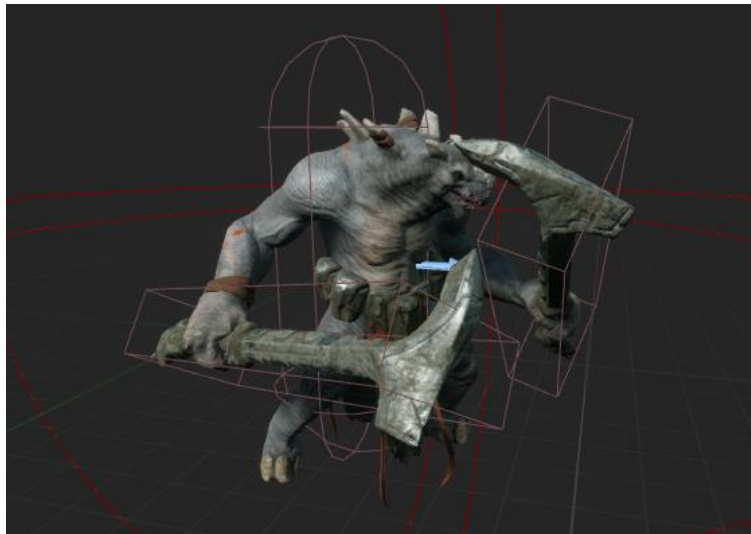
Attack Wait Time: Wait time between each attack (Randomized at runtime according to value)

The different enemies in the game and their variants are as follows:

1. **Grux**

Description: The most common enemy in the game. The easiest one to defeat. He is known for his brute force but is not very tactical.

- Base:



Max Health: 100

Stun Chance: 0.8

Base Damage: 10

Attack Wait Time: 0.5

- Halloween



Max Health: 200
Stun Chance: 0.7
Base Damage: 30
Attack Wait Time: 0.4

- War Chief



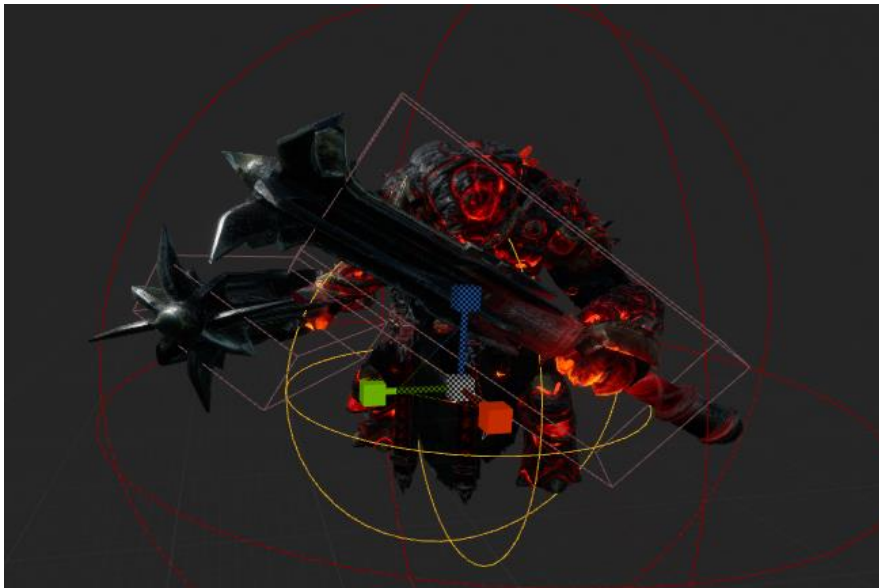
Max Health: 500
Stun Chance: 0.5
Base Damage: 40
Attack Wait Time: 0.6

- Chestplate



Max Health: 600
Stun Chance: 0.4
Base Damage: 50
Attack Wait Time: 0.7

- Beetle Molten



Max Health: 800
Stun Chance: 0.2
Base Damage: 60
Attack Wait Time: 0.4

- Beetle Red:



Max Health: 600
Stun Chance: 0.4
Base Damage: 40
Attack Wait Time: 0.2

- Qilin:



Max Health: 400
Stun Chance: 0.6
Base Damage: 30
Attack Wait Time: 0.2

2. Kallari

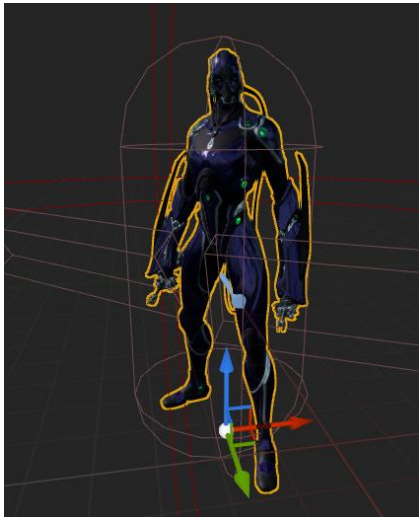
Description: Strength in numbers. Low max health overall but very agile and low attack wait time. Overall, lower stun chance than Grux.

- Base:



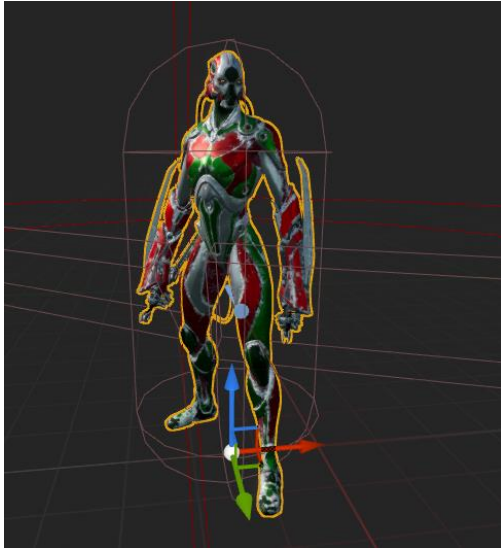
Max Health: 50
Stun Chance: 0.3
Base Damage: 10
Attack Wait Time: 0.3

- Death Lotus



Max Health: 60
Stun Chance: 0.3
Base Damage: 10
Attack Wait Time: 0.3

- Peppermint



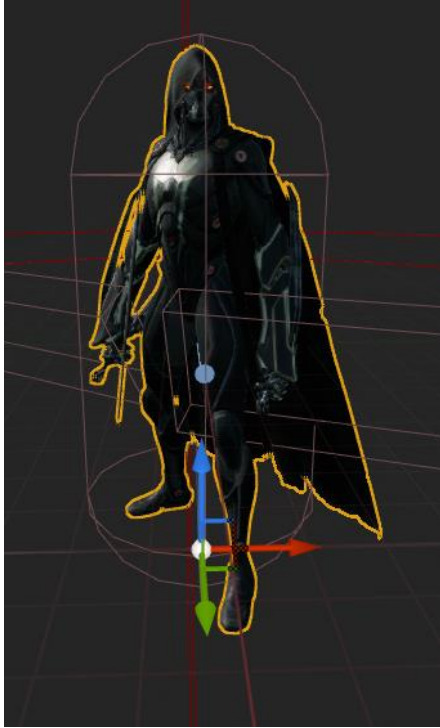
Max Health: 40
Stun Chance: 0.5
Base Damage: 8
Attack Wait Time: 0.4

- Red Death



Max Health: 80
Stun Chance: 0.3
Base Damage: 20
Attack Wait Time: 0.2

- Rouge



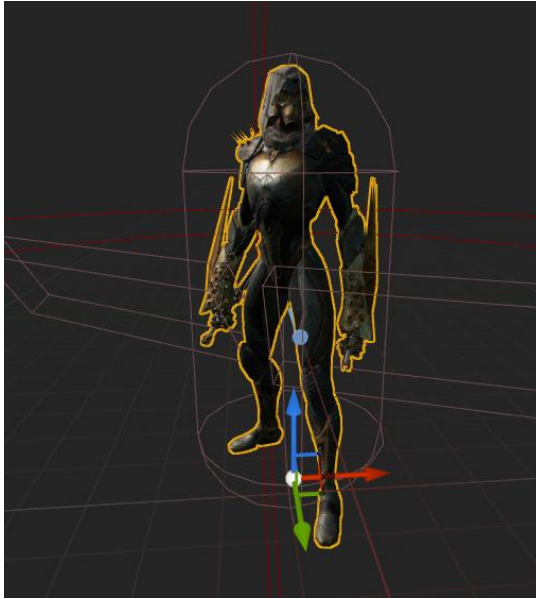
Max Health: 70
Stun Chance: 0.1
Base Damage: 30
Attack Wait Time: 0.1

- Tough



Max Health: 100
Stun Chance: 0.3
Base Damage: 40
Attack Wait Time: 0.3

- Wasteland



Max Health: 80

Stun Chance: 0.2

Base Damage: 50

Attack Wait Time: 0.4

3. **Khaimera**

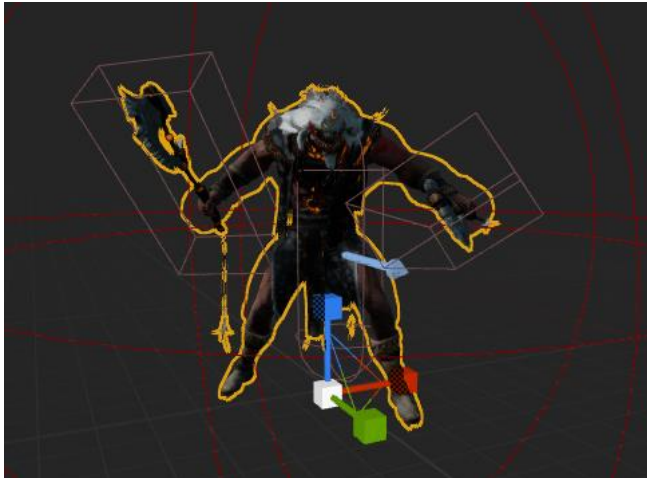
Description: Certified badass. Low attack wait time and a reasonable amount of damage, but high stun chance. Prefers attacking alone rather than in packs.

- Base:



Max Health: 100
Stun Chance: 0.7
Base Damage: 30
Attack Wait Time: 0.4

- Halloween



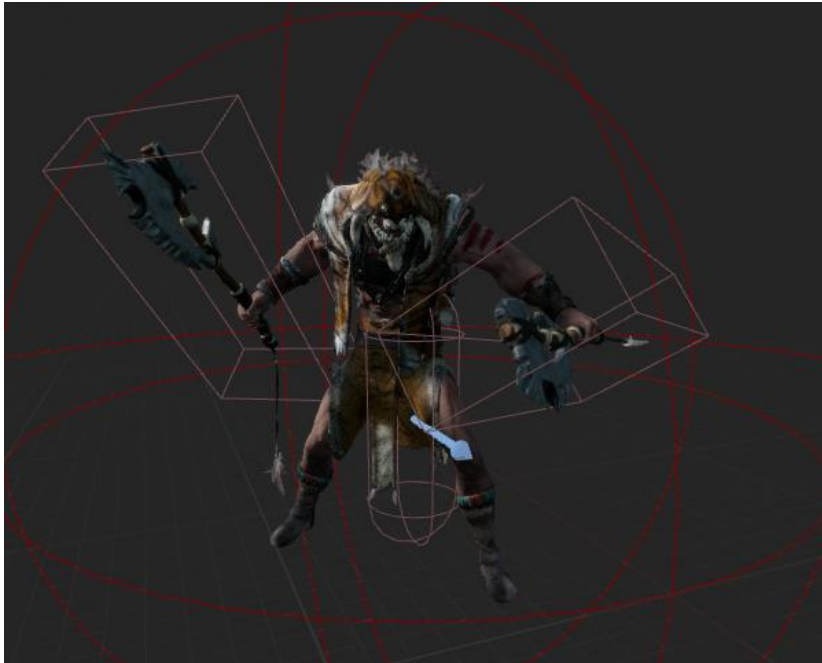
Max Health: 120
Stun Chance: 0.6
Base Damage: 30
Attack Wait Time: 0.4

- Snake



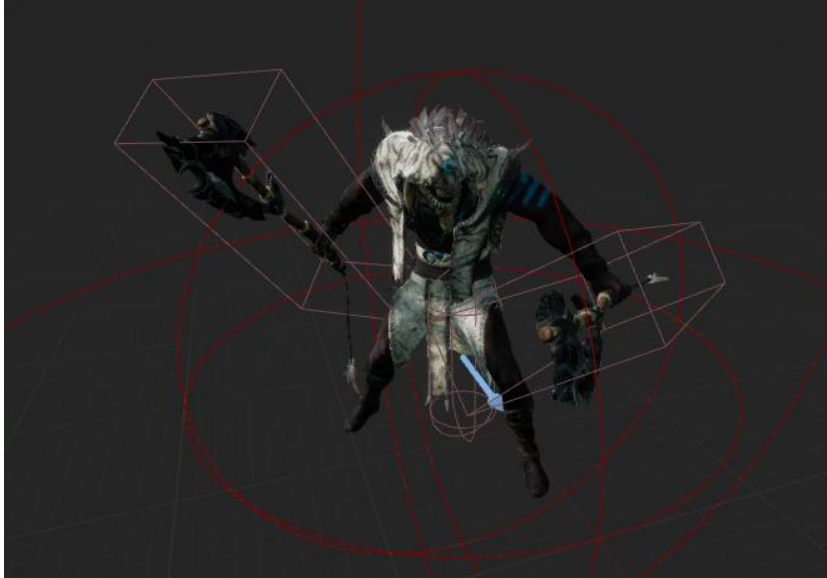
Max Health: 150
Stun Chance: 0.4
Base Damage: 20
Attack Wait Time: 0.3

- Bengal



Max Health: 100
Stun Chance: 0.6
Base Damage: 40
Attack Wait Time: 0.2

- White Tiger



Max Health: 80
Stun Chance: 0.7
Base Damage: 30
Attack Wait Time: 0.5

4. **Narbash**

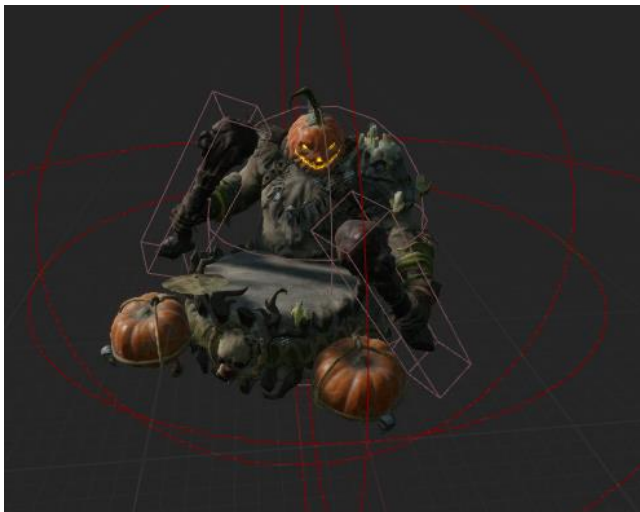
Description: Whacky and quirky, Narbash comes with a drum. He is far less intimidating than he looks, with large attack wait times, stun chance and a disappointing base damage. His greatest strength is being a goofball.

- Base



Max Health: 80
Stun Chance: 0.8
Base Damage: 10
Attack Wait Time: 0.6

- Bash O Lantern



Max Health: 50
Stun Chance: 0.7
Base Damage: 15
Attack Wait Time: 0.5

- Ginger Jamz



Max Health: 40
Stun Chance: 1
Base Damage: 25
Attack Wait Time: 0.4

- Tribal Vibe

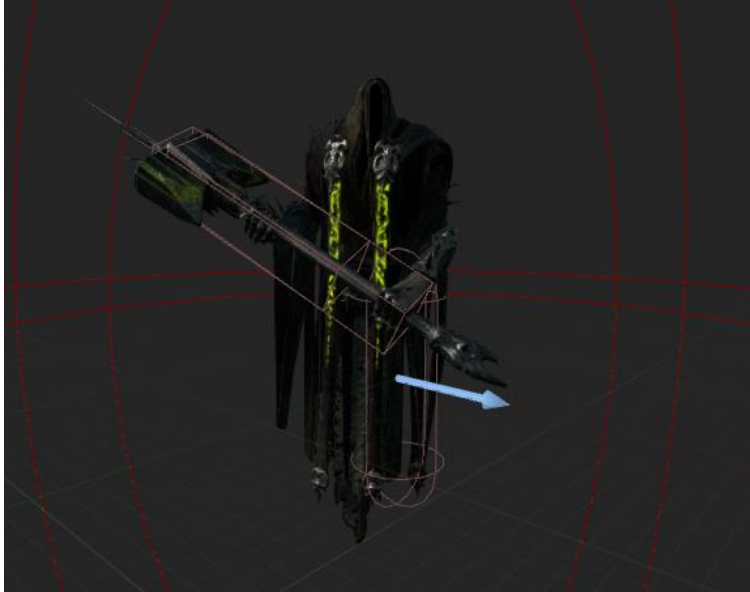


Max Health: 30
Stun Chance: 0.6
Base Damage: 20
Attack Wait Time: 0.5

5. Sevarog

Description: Probably the most threatening of them all, Sevarog knows only one thing: inflict pain. With his creepy attire and a lack of flesh, with the added massive axe that kills the player in two hits, Sevarog needs to be avoided at all costs.

- Base



Max Health: 400
Stun Chance: 0.1
Base Damage: 120
Attack Wait Time: 0.2

- Chronos



Max Health: 500
Stun Chance: 0
Base Damage: 180
Attack Wait Time: 0.3

- Red



Max Health: 400
Stun Chance: 0.2
Base Damage: 80
Attack Wait Time: 0.2

- Masked Reaper



Max Health: 600
Stun Chance: 0
Base Damage: 190
Attack Wait Time: 0.2

6. **Wukong**

Description: A primate-cyborg hybrid. Low base damage and max health, but also low stun chance and attack wait time. Really agile and quick. Often attacks in pairs.

- Base



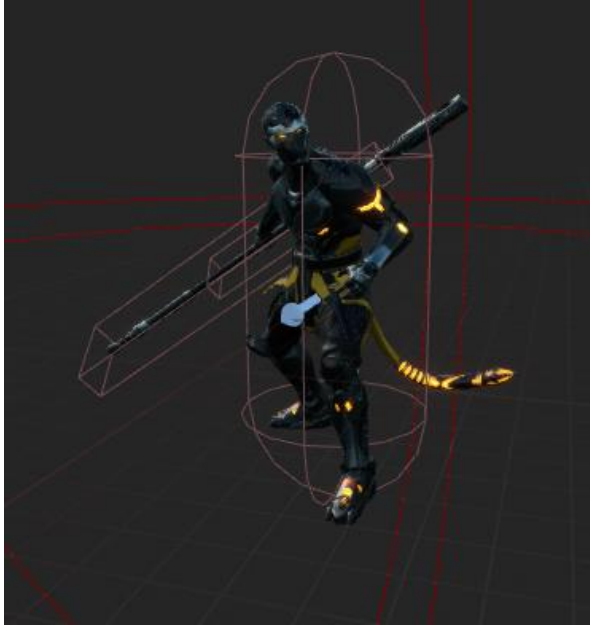
Max Health: 40
Stun Chance: 0.2
Base Damage: 10
Attack Wait Time: 0.1

- Fury



Max Health: 40
Stun Chance: 0.1
Base Damage: 15
Attack Wait Time: 0.1

- Future King



Max Health: 50
Stun Chance: 0.1
Base Damage: 20
Attack Wait Time: 0

- Great Sage



Max Health: 70
Stun Chance: 0
Base Damage: 40
Attack Wait Time: 0

- Infernal



Max Health: 60
Stun Chance: 0.2
Base Damage: 30
Attack Wait Time: 0.2

- Royal



Max Health: 70
Stun Chance: 0.1
Base Damage: 50
Attack Wait Time: 0