

# Ar 'n' Dungeon

*Alpha*

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# 1 Functional Minimum

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## 1.1 User Interface

The Graphical User Interfaces of the game were extended by an actual Main Menu and the Action HUD during the gameplay were revised.

### 1.1.1 Main Menu

The new Main Menu has moving buttons and display the important actions a player can take.

When a player selects 'New Game' the screen fades to the 'Player Join'-screen formally known as 'Start Menu'



### 1.1.2 Action HUD

The desired Action HUD now has a nice background for better determination between GUI and 3D graphics and has a Level Indicator

The skills are ordered such that first skill is always near to the Level Indicator. For player #2 and #4 this might be confusing and will probably be changed in the future.

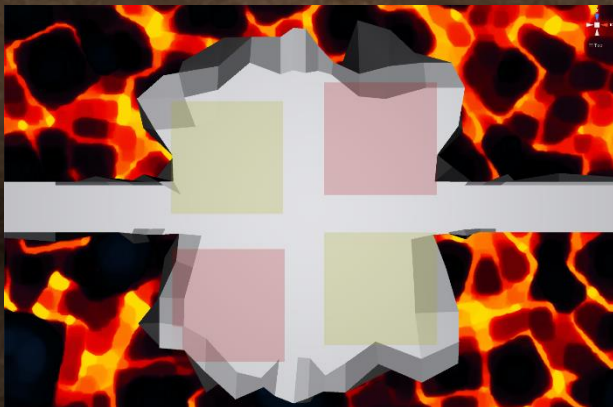


## 1.2 Level Generation

The variety of type that spawn got increased to match the full feature of Enemies, Traps, Loot and Decoration.

In the coloring of the spawn areas is as follows:

- Enemies are **red**
- Traps are **magenta**
- Loots are **yellow**
- Decorations are **green**



## 2 Low Target

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### 2.1 Models

#### 2.1.1 Player

The best candidate for the alpha player character got chosen.

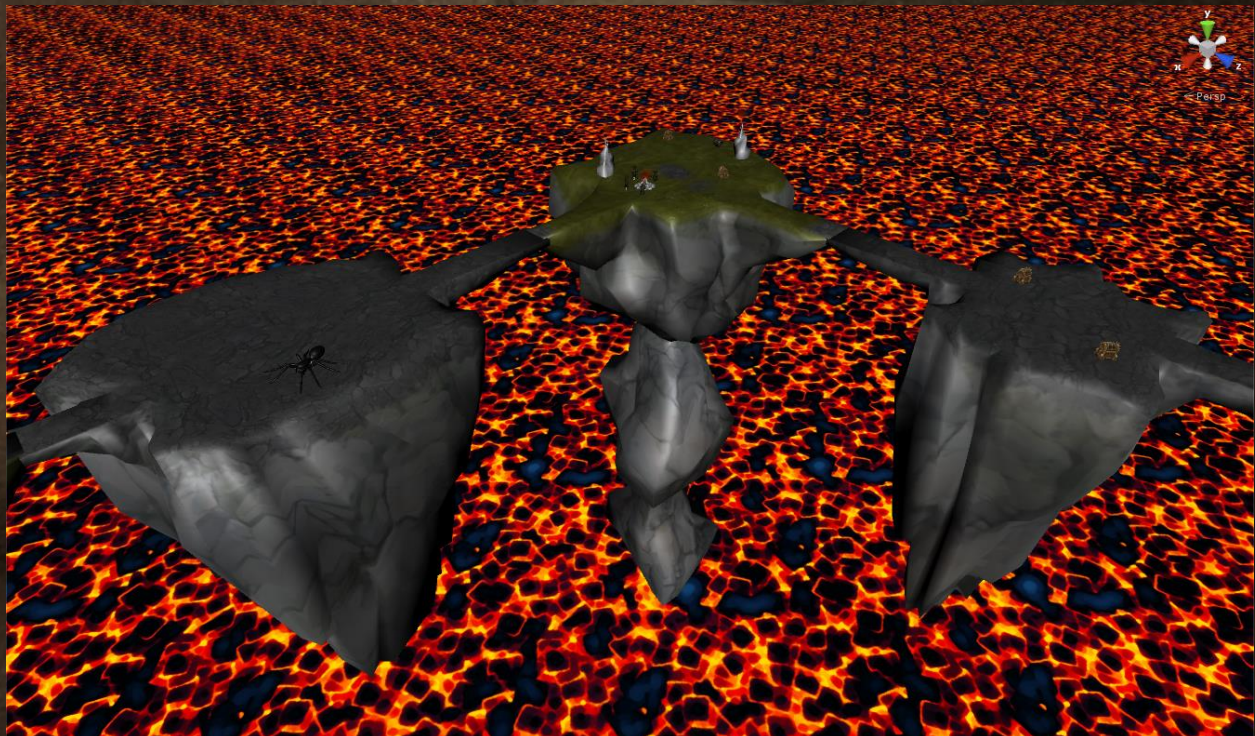
The model contains custom animations for the actions which are required in the game like several attacks and running.

The next step is to texture the model with suiting materials and textures.



#### 2.1.2 Islands

The alpha models of the islands got also introduced with basic textures. At the moment there are only three types: Two types for the straight island and one for the corner island.



### 2.1.3 Decoration

The Decorations got a lot of additions:









## 2.2 Balancing

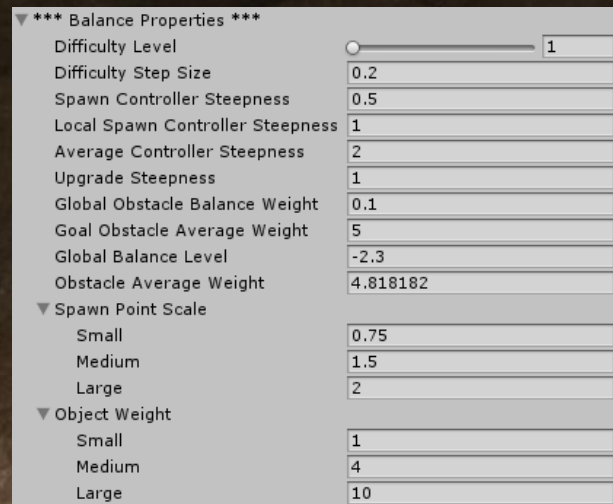
The more advanced balancing is done by a forward convergence approach.

The difficulty value is determined by a basic constant that is scaled linearly.

The balance is given by spawn areas (see [Level Generation](#)) with certain weights which in the end should add up to a global 0. Since the spawning is done with probabilities its very likely that the result is not 0.

The local result of each island is carried on to the next and the spawn probabilities are adjusted trying to reach the optimal global 0.

The adjustment speed of the graph is given by a custom steepness value which can be tweaked.



*** Balance Properties ***	
Difficulty Level	1
Difficulty Step Size	0.2
Spawn Controller Steepness	0.5
Local Spawn Controller Steepness	1
Average Controller Steepness	2
Upgrade Steepness	1
Global Obstacle Balance Weight	0.1
Goal Obstacle Average Weight	5
Global Balance Level	-2.3
Obstacle Average Weight	4.818182
▼ Spawn Point Scale	
Small	0.75
Medium	1.5
Large	2
▼ Object Weight	
Small	1
Medium	4
Large	10

## 2.3 Skills

The skill got also revised.

### 2.3.1 Invincibility

The invincibility skill was too simple and did not add anything interesting to the gameplay. Therefore, it got replaced by an [invisibility](#) skill.

The clue with the invisibility skill is that the human player can also only hardly see his character and thus might run off the edge.

### 2.3.2 Damage Boost

The damage boost ability suffered from the same problems as the invincibility: Too simple.

The new skill is called [shockwave](#) and applies an outgoing force to all units within a certain radius even affecting other players.

This helps a player if he is surrounded by a lot of monsters but also might kick his friends off the island.

## 3 Design revisions and Challenges

Creating the models, textures and animations took a lot longer than expected. The pathfinding also needs to be tweaked.

The realization of the test results which will be in next week will be interesting as well.