

## 1. Defuzzification

Default set to the **Blending** of the Calm, Average and Aggressive rule totals. The second drop-down option is the **Highest** of the 3 rule totals. **Blending** will lead to more stable values to allow consistent competition but the **Highest** will allow a possibility to break a tie breaker faster where few units are present on the field.

# 2. Arena Boundary

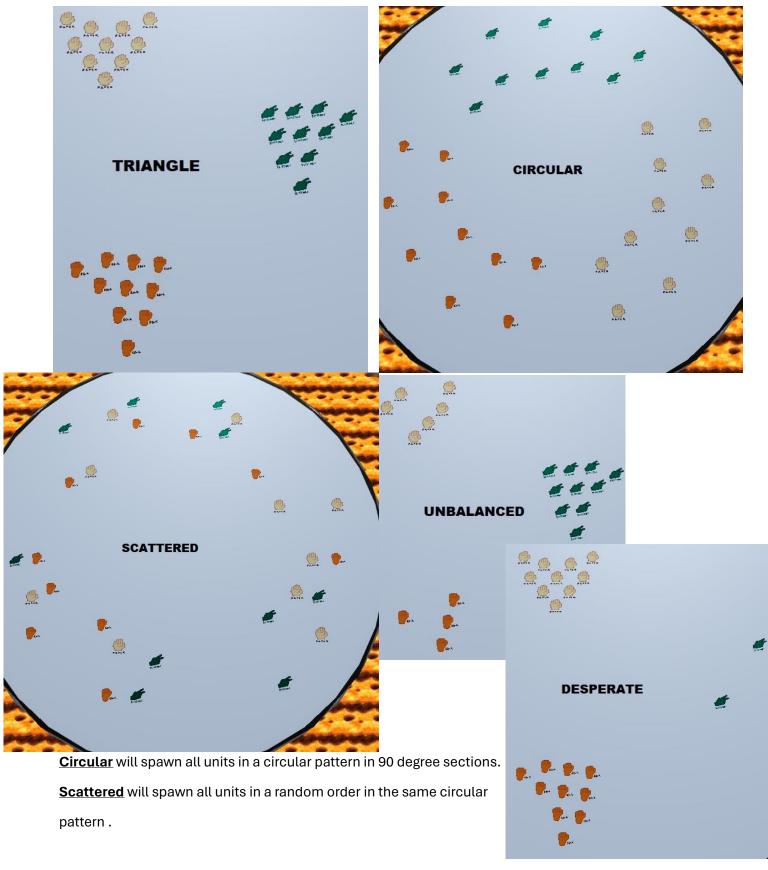
Default set to the <u>Wrap-Around</u> which causes the unit to teleport to the other edge of the map when they go out of bounds. The second drop-down option is <u>Destruction</u> which causes the units to die when they run out of bounds.

### 3. Unit Formation

There are 5 different options for testing the units in different environments. Changing the **Unit Formation** will reset the game with new units arranged in the desired formation.

Triangle, Circular, Scattered, Unbalanced, and Desperate. (See images below)

Triangle, Circular and Scattered have 1 units for each faction. Unbalanced and Desperate have some reduced numbers on some factions to show the Rule Evaluation Results.



## 4. Game Speed

There are 4 options that modifies the Time.timeScale for  $\underline{x1}$ ,  $\underline{x2}$ ,  $\underline{x3}$ ,  $\underline{x4}$  to play through the level more quickly.

#### 5. Reset Game Button

Resets the game with the same selected options.

#### 6. Current Values

Shows the selected GameManager and GroupAi values for the Deffuzification type, Arena Boundary Type and the Aggressiveness and remaining units for the 3 factions.

#### 7. The Arena

The Arena will constantly shrink according to the Time.deltaTime and the Camera will slowly zoom in as well.

#### 8. Bonuses

- There is an additional Rule added for evaluation to increase the speed for a desperate faction.
- Units that die by colliding with an enemy will explode and leave a tombstone of their color at their location before demise.
- When the Arena Boundary is set to **Wrap-Around**, the unit will leave a particle effect from their previous and new position when moving across the arena.
- When the Arena Boundary is set to **Destruction**, the unit will leave a fire at the point of demise.
- When the Arena Boundary is set to <u>Wrap-Around</u>, chasing units will have a 2 second attention span to chase the target out of bounds to try to follow the target to the other end of the map.

# **Credits:**

The "Laval Flowing Shader" background by "Moonflower Carnivore" and "SIMPLE PARTICLES FX" the particle effects by "INDIAN OCEAN ASSETS" are both taken from the Unity Asset store.

TexMeshPro was also used