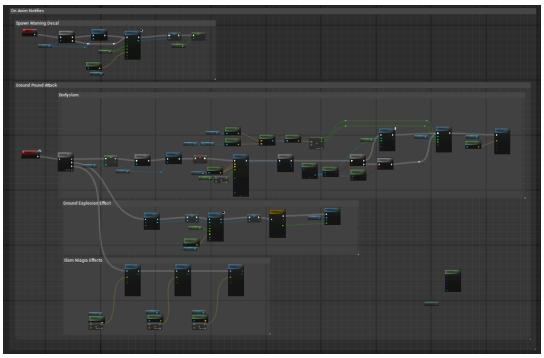
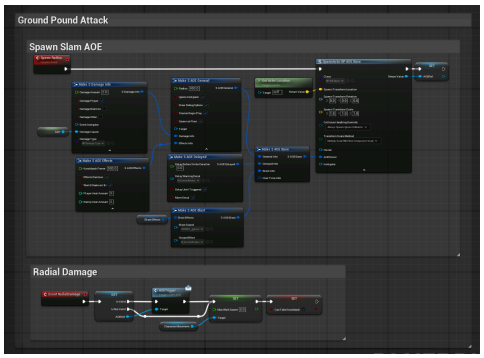
-Last Updated 1/19/2025.
Video Demo: https://youtu.be/gkKAZlaDzts

Overgrown AOE Base Class Documentation

The AOE base is a configurable Actor Blueprint used to streamline the creation and iteration of "Areas of Effect". It can be found in Dynamic, Blueprints, Enemies, AOE.

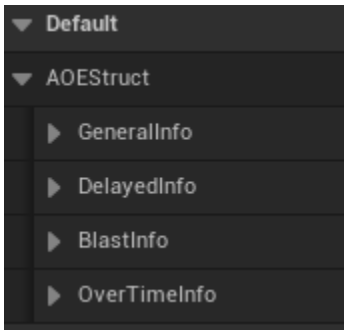




Example of the same functionality before and after integrating the AOE spawner

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The actor has 4 main input categories: General, Delay, Blast, and Over-time.



Variables in the **General** category will apply to every AOE and will have more detailed documentation below. It contains the sub-categories **DamageInfo** and **Effects Info**. **Delay, Blast,** and **Over-time** are each optional. Your AOE can have one, two, or all three of these functionalities. If you do not fill out their variables, they simply will not play.

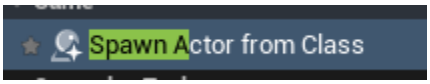
Delay delays the spawning of the sphere overlap. You can input the length of the delay and add an optional ground decal.

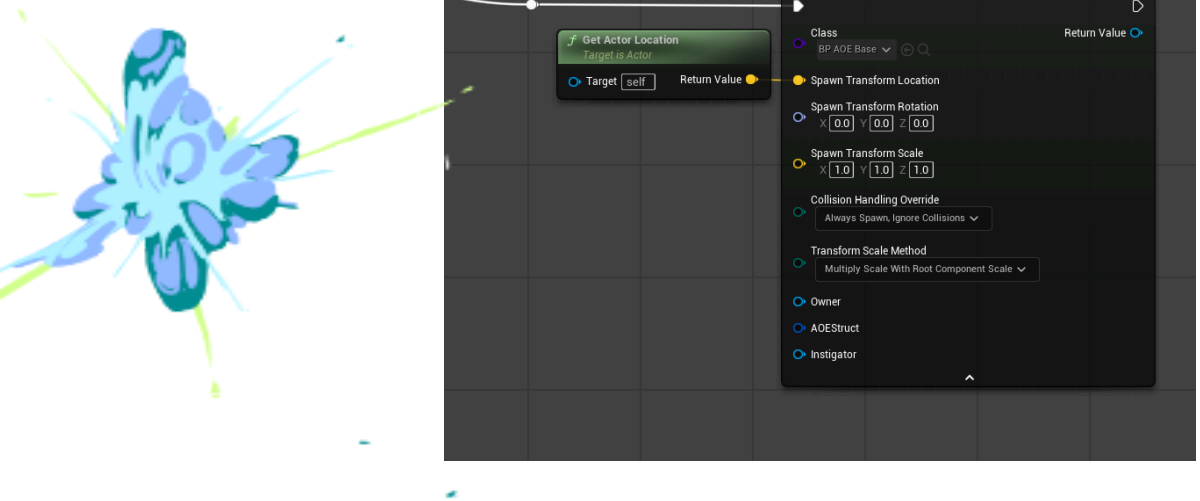
Blast gives you options for effects and sounds that will play once when the AOE goes off. The effects are stored in an array of structs, meaning you can add as many as you'd like, and specify location offsets for each.

Over-time extends the life of the AOE and gives you options for the duration, update interval, and an emitter. For example, a pool of slime on the ground that may damage the player every .5 seconds they stand on it and fades after 10 seconds.

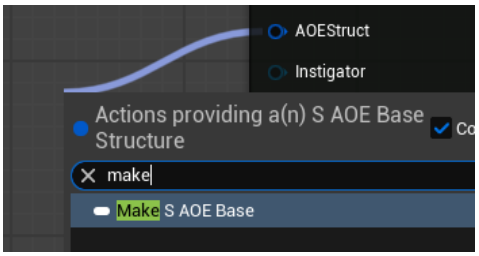
HOW TO USE THE AOE BASE

When you would like to spawn an AOE from inside a blueprint, select Spawn Actor From class. In the class dropdown menu, choose ***BP AOE Base***.

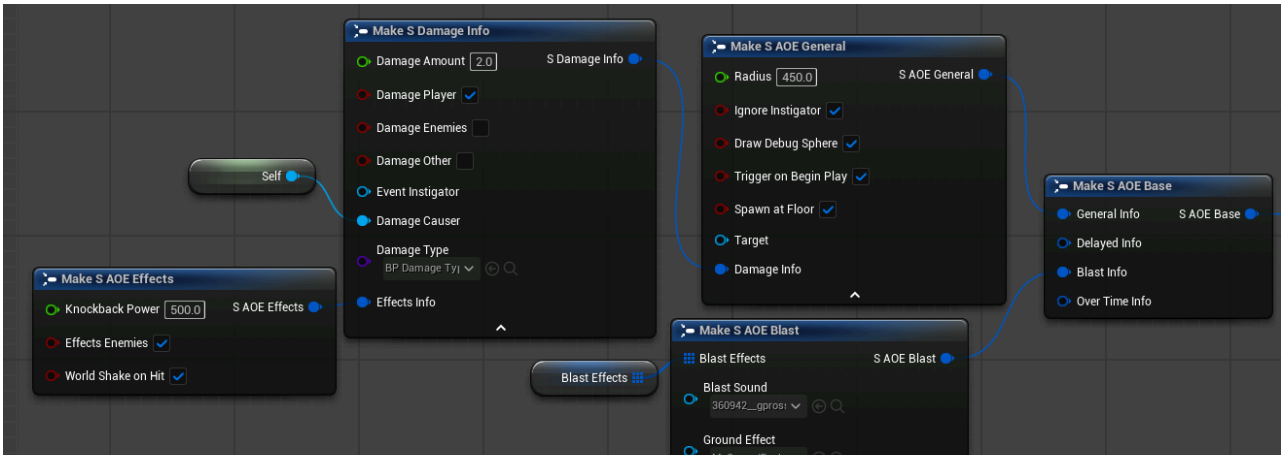




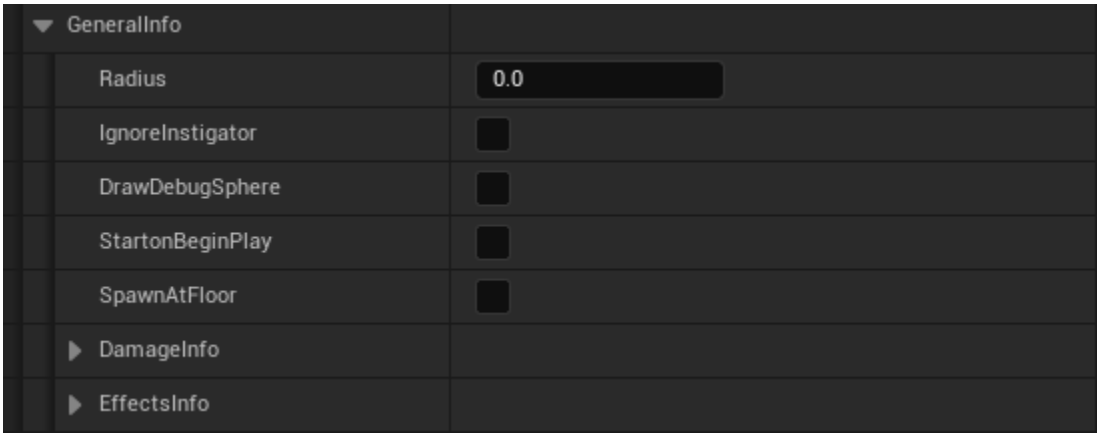
An AOEStruct input node should appear. Drag off from this and search "***Make S AOE Base***".



Do the same for each of the nested structs you want to access. Fill them out to taste.



OPTIONS GUIDE



General Info:

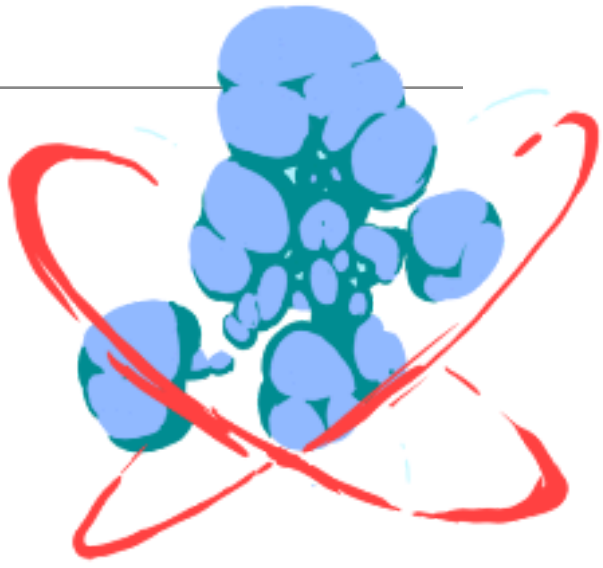
Radius-
size of the AOE sphere overlap. This also affects the size of a delay decal or blast ground decal.

Ignore Instigator-
determines whether the sphere overlap counts the instigator.

Draw Debug Sphere-
Toggles drawing the Debug sphere

Start On Begin Play-
Determines whether the AOE will start its logic when spawned. Usually set this to true unless you want to bind to the dispatcher *OnAoeOverlap*.

SpawnAtFloor-
Will move the AOE actor to the floor.



Damage Info:



Many of these plug in to the master *Apply Damage* function.

Damage Player Amount-
The amount of damage that will be done to the player on sphere overlap. Keep this low for over-time AOE's, since it will apply at every update interval.

Damage Enemies Amount-
The amount of damage that will be done to enemies on sphere overlap.

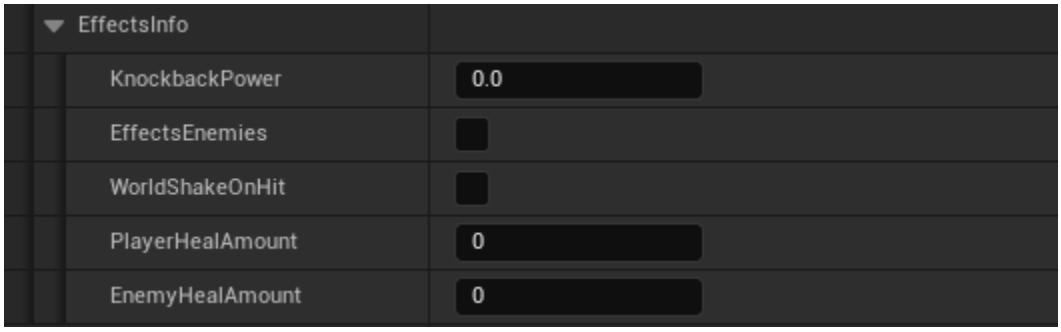
Damage Other Amount-
The amount of damage that will be done to other actors with the damageable interface

Event Instigator-
refers to the actor controller. Usually unimportant

DamageCauser-
Typically a reference to self, if the AOE is spawned by an enemy.

Damage Type-
This may be important if we ever do anything with damage types.

Effects Info:



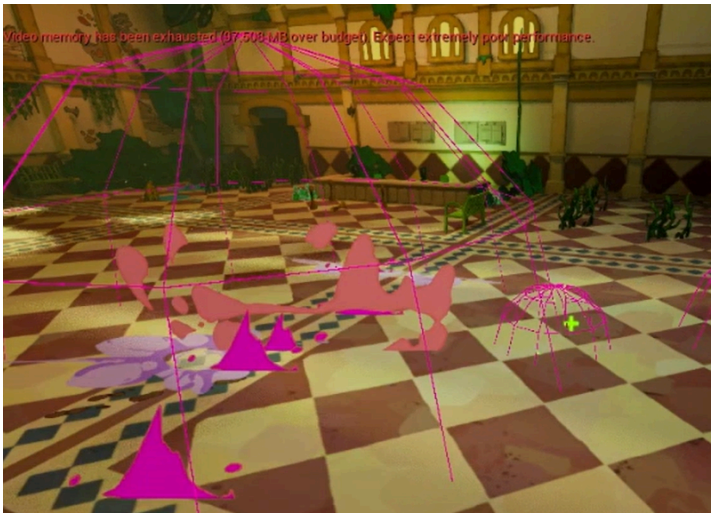
Knockback Power-
If this is set to 0, no knockback will happen. A small knockback is around 500.

Effects Enemies-
Toggles enemies getting knocked back along with the player.

World Shake On Hit-
Toggles whether the world shake function will play if the player character is hit. This is currently non-functional.

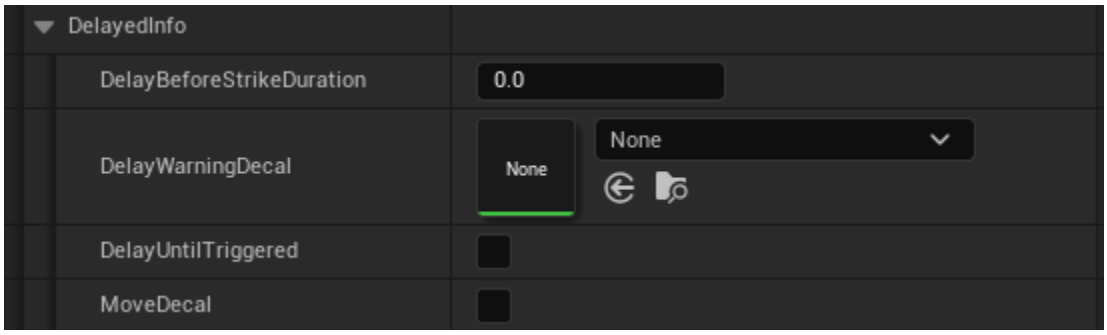
Player Heal Amount-
How much the player will heal on AOE overlap. If 0, the heal function will not play.

Enemy Heal Amount-
How much the enemy will heal on AOE overlap. If 0, the heal function will not play.



Wow!

Delayed Info:

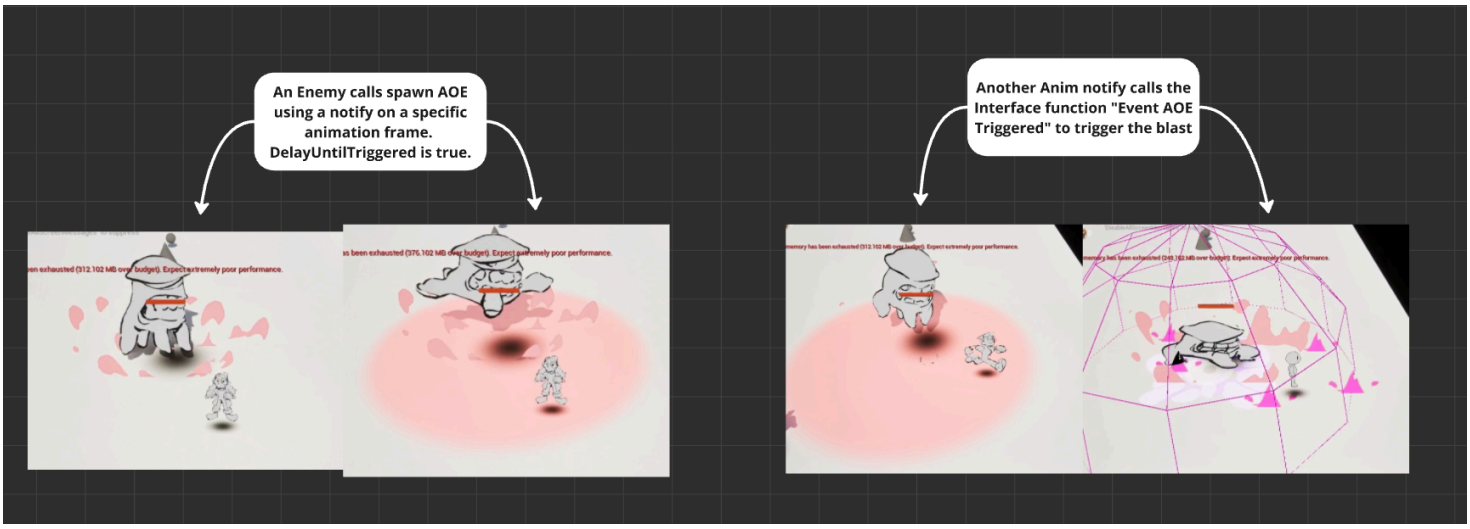


Delay Before Strike Duration-
Amount of time the AOE will delay before executing a sphere overlap event.

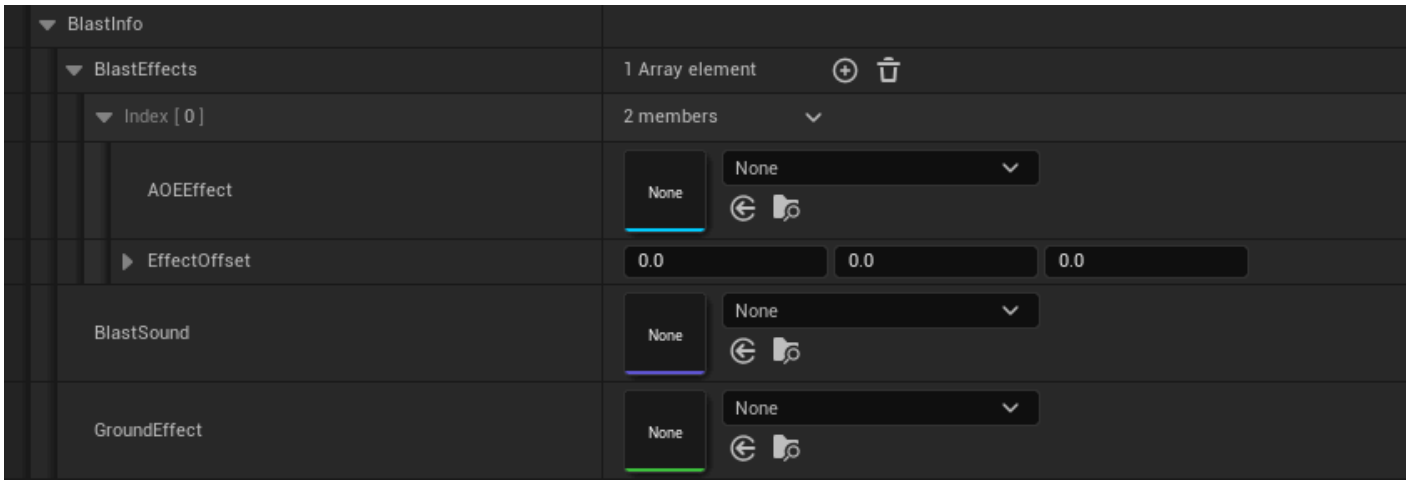
Delay Warning Decal-
Possible ground decal to foreshadow the AOE impact

DelayUntilTriggered-
This will overwrite the delay duration and instead set the AOE to delay indefinitely unless another actor calls its **interface function "*AoeTrigger*".**

MoveDecal-
Allows the warning decal to move with the AOE's root location on tick. Moving the AOE root is the responsibility of the actor spawning it in.



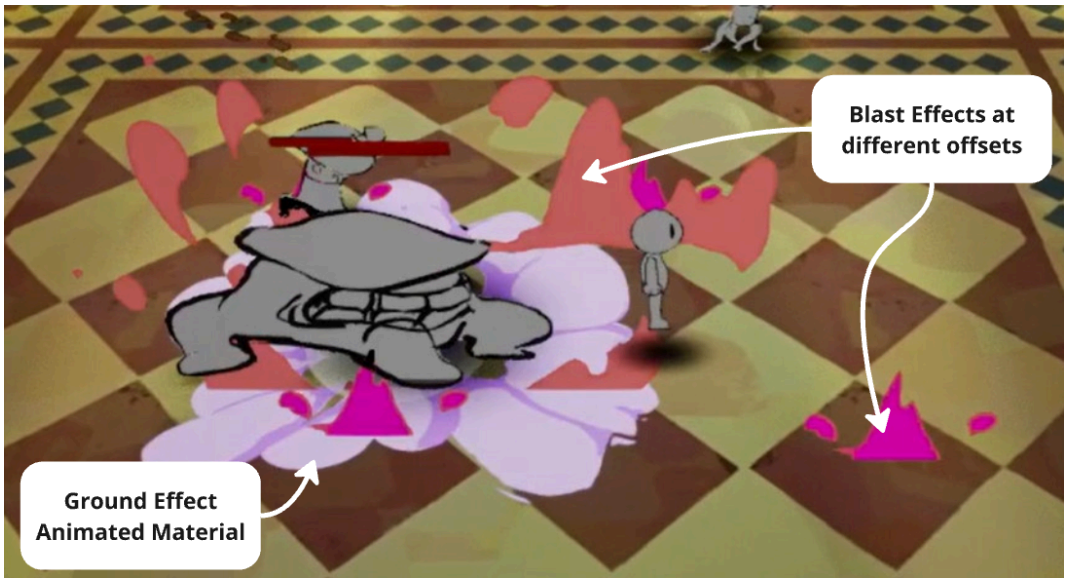
Blast Info:



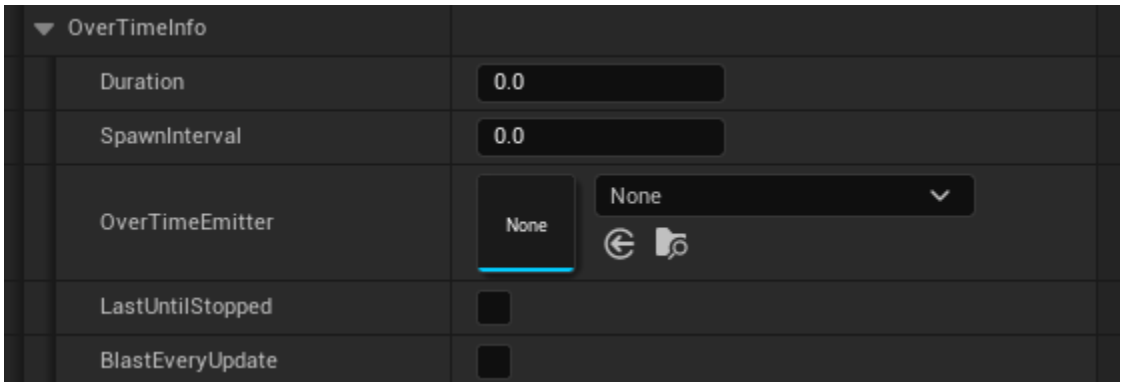
Blast Effects-
An array of structs, each containing a Niagara System reference and an offset vector. This is so that many effects can be layered and offset from one another. For example, parts of a 2D explosion playing in front of and behind the actor spawning it in.

BlastSound-
A sound that plays at impact.

Ground Effect-
An animated Material Instance that will play on the ground at impact. Note that this may only work if the AOE is set to spawn at the floor.



Over-Time Info:



Duration-
How long the AOE will last after it was activated (does not count the delay before blast)

SpawnInterval-
How often the AOE will update within its lifespan. If the AOE does damage or knockback, it will do this at each interval.

OverTimeEmitter-
A Niagara system ref to spawn an emitter that will disappear when the AOE despawns.

LastUntilStopped-
Similar to the Delay's "Delay Until Triggered", this overrides the duration so that the AOE will last indefinitely until another actor calls the **Interface function "AOEKill".**

Blast Every Update-
The blast effects will go off every time the AOE sphere is spawned.

