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Attack



Moves to the closest target and starts attacking as soon as the agent is within distance.

targetGroup

The objects to attack. If blank the targetTag will be used

targetTag

The tag of the objects to attack. Will be used if targetGroup has no elements

waitTime

The amount of time to wait until the group starts to form

independent

Does this agent act independently?

Charge



Charges towards the target. The agents will start attacking when they are done charging.

targetGroup

The objects to attack. If blank the targetTag will be used

targetTag

The tag of the objects to attack. Will be used if targetGroup has no elements

waitTime

The amount of time to wait until the group starts to form

independent

Does this agent act independently?

agentsPerRow

The number of agents that should be in a row

separation

The separation between agents

attackDistance

The distance to stop charging and start attacking

Marching Fire



Move towards the target. The agents will start attacking when they are within distance.

targetGroup

The objects to attack. If blank the targetTag will be used

targetTag

The tag of the objects to attack. Will be used if targetGroup has no elements

waitTime

The amount of time to wait until the group starts to form

independent

Does this agent act independently?

agentsPerRow

The number of agents that should be in a row

separation

The separation between agents

attackDistance

The distance to stop marching fire and continue attacking

Flank



Flanks the target from the left and right.

targetGroup

The objects to attack. If blank the targetTag will be used

targetTag

The tag of the objects to attack. Will be used if targetGroup has no elements

waitTime

The amount of time to wait until the group starts to form

independent

Does this agent act independently?

dualFlank

Should the agents flank from both the left and right side?

attackDelay

The amount of time the left and right groups should wait after the center group has started to attack

approachDistance

Optionally set an extra distance that the agents should first move towards. This will prevent the agents from crossing in front of the enemies

separation

The distance that the agents should be separated while attacking

Ambush



Wait for the group of targets to pass before attacking.

targetGroup

The objects to attack. If blank the targetTag will be used

targetTag

The tag of the objects to attack. Will be used if targetGroup has no elements

waitTime

The amount of time to wait until the group starts to form

independent

Does this agent act independently?

attackDelay

The number of seconds to wait after the enemies have passed before the agents start attacking

minAmbushDistance

The minimum distance that the agents can attack

Shoot and Scoot



Attacks the target and moves position after a short amount of time.

targetGroup

The objects to attack. If blank the targetTag will be used

targetTag

The tag of the objects to attack. Will be used if targetGroup has no elements

waitTime

The amount of time to wait until the group starts to form

independent

Does this agent act independently?

agentsPerRow

The number of agents that should be in a row

separation

The separation between agents

timeStationary

The amount of time that should elapse before moving to the next attack point

minMoveAngle

When moving positions the agents will move based on a new random angle. The minimum move angle specifies the minimum random angle

maxMoveAngle

When moving positions the agents will move based on a new random angle. The maximum move angle specifies the maximum random angle

minAttackRadius

When moving positions the agents will move based on a new random radius. The minimum attack radius specifies the minimum radius

maxAttackRadius

When moving positions the agents will move based on a new random radius. The maximum attack radius specifies the maximum radius

Leapfrog



Search for the target by forming two groups and leapfrogging each other. Both groups will start attacking as soon as the target is within sight.

targetGroup

The objects to attack. If blank the targetTag will be used

targetTag

The tag of the objects to attack. Will be used if targetGroup has no elements

waitTime

The amount of time to wait until the group starts to form

independent

Does this agent act independently?

separation

The horizontal separation between agents within the group

groupSeparation

The horizontal separation between the two groups

leapDistance

The distance of one leap

Surround



Surrounds the enemy and starts to attack after all agents are in position

targetGroup

The objects to attack. If blank the targetTag will be used

targetTag

The tag of the objects to attack. Will be used if targetGroup has no elements

waitTime

The amount of time to wait until the group starts to form

independent

Does this agent act independently?

radius

The radius of the agents that should surround the target

Retreat



Retreats in the opposite direction of the target

targetGroup

The objects to attack. If blank the targetTag will be used

targetTag

The tag of the objects to attack. Will be used if targetGroup has no elements

waitTime

The amount of time to wait until the group starts to form

independent

Does this agent act independently?

safeDistance

The distance away from the targets that is considered safe

Defend



Defends the object within a defend radius. Will seek and attack a target within a specified radius.

targetGroup

The objects to attack. If blank the targetTag will be used

targetTag

The tag of the objects to attack. Will be used if targetGroup has no elements

waitTime

The amount of time to wait until the group starts to form

independent

Does this agent act independently?

defendObject

The object to defend

radius

The radius around the defend object to position the agents

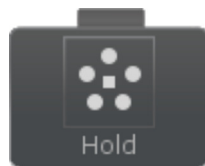
defendRadius

The radius around the defend object to defend

maxDistance

The maximum distance that the agents can defend from the defend object

Hold



Defends the object within a defend radius. Will seek and attack a target for as long as it takes.

targetGroup

The objects to attack. If blank the targetTag will be used

targetTag

The tag of the objects to attack. Will be used if targetGroup has no elements

waitTime

The amount of time to wait until the group starts to form

independent

Does this agent act independently?

defendObject

The object to defend

radius

The radius around the defend object to position the agents

defendRadius

The radius around the defend object to defend

Request Reinforcements



Requests reinforcements.

Reinforcements Response



Responds to a reinforcement request. Will move towards the requesting agent and start attacking as soon as the target is within distance.

targetGroup

The objects to attack. If blank the targetTag will be used

targetTag

The tag of the objects to attack. Will be used if targetGroup has no elements

waitTime

The amount of time to wait until the group starts to form

independent

Does this agent act independently?

listenForReinforcements

A list of agents that may call for reinforcements

Follow Orders



Tells the leader that the current agent is ready to follow its orders

leader

The leader to follow

Interfaces

One of the initial design decisions that we had to make with the Tactical Pack was to define what it means to attack and take damage. Attacking and taking damage means different things to different games. For example, attack could mean to shoot a gun or throw a melee punch. Our goal with the Tactical Pack is to make the code as generic as possible. To solve this we added two interfaces, `IAttackAgent` and `IDamagable`. This allows you to define exactly what it means to attack or take damage for your game while still being able to use the Tactical Pack.

Included with the demo scene is one implementation of `IAttackAgent` and `IDamagable`. When the agent

attacks they will instantiate a bullet prefab and that bullet will travel in the direction of the target. When the bullet hits the target it will call the IDamagable implementation to do the actual damage. It is expected that you will implement your own IAttackAgent and IDamagable components that fit your game. By structuring the Tactical Pack this way it succeeds in having a generic pack that works with any type of game.

The following methods need to be implemented with IAttackAgent:

```
// Returns the furthest distance that the agent is able to attack from.
float AttackDistance();

// Returns the amount of time that it takes before the agent can attack again.
float RepeatAttackDelay();

// Returns the maximum angle that the agent can attack from.
float AttackAngle();

// Does the actual attack.
void Attack(Vector3 targetPosition);
```

The following methods need to be implemented with IDamagable:

```
// Take damage by the specified amount.
void Damage(float amount);

// Is the object currently alive?
bool IsAlive();
```

Support

We are here to help! If you have any questions/problems/suggestions please don't hesitate to ask. You can email us at support@opsive.com or post on the [forum](#).