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Behavior Designer Movement Documentation

Thank you for your purchase! The most recent documentation (with better formatting) can be found online. If you have any questions feel free to post on the Unity forums or email support@opsive.com.

Move Towards

The Move Towards task will move the agent towards the target (without pathfinding).

Name	Description
speed	The speed of the agent
arriveDistance	The agent has arrived when the square magnitude is less than this value
lookAtTarget	Should the agent be looking at the target position?
maxLookAtRotationDelta	Max rotation delta if lookAtTarget is enabled
targetTransform	The transform that the agent is moving towards
targetPosition	If target is null then use the target position

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Rotate Towards

The Rotate Towards task will rotate the agent towards the target.

Name	Description
rotationEpsilon	The agent is done rotating when the square magnitude is less than this value
maxLookAtRotationDelta	Max rotation delta
targetTransform	The transform that the agent is rotating towards
targetRotation	If target is null then use the target rotation

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Seek

The Seek task will move the agent towards the target with pathfinding.

Name	Description
speed	The speed of the agent
angularSpeed	Angular speed of the agent
arriveDistance	The agent has arrived when the square magnitude is less than this value
targetTransform	The transform that the agent is moving towards
targetPosition	If target is null then use the target position

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Flee

The Flee task will move the agent away from the target with pathfinding.

Name	Description
speed	The speed of the agent
angularSpeed	Angular speed of the agent
fleedDistance	The agent has fleed when the square magnitude is greater than this value
lookAheadDistance	The distance to look ahead when fleeing
targetTransform	The transform that the agent is fleeing from
targetPosition	If target is null then use the target position

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Pursue

The Pursue task is similar to the Seek task except the Pursue task predicts where the target is going to be in the future. This allows the agent to arrive at the target earlier than it would have with the Seek task.

Name	Description
speed	The speed of the agent
angularSpeed	Angular speed of the agent
arriveDistance	The agent has arrived when the square magnitude is less than this value
targetDistPrediction	How far to predict the distance ahead of the target. Lower values indicate less distance should be predicated
targetDistPredictionMult	Multiplier for predicting the look ahead distance
targetTransform	The transform that the agent is pursuing

Evade

The Evade task is similar to the Flee task except the Evade task predicts where the target is going to be in the future. This allows the agent to flee from the target earlier than it would have with the Flee task.

Name	Description
speed	The speed of the agent
angularSpeed	Angular speed of the agent
fleedDistance	The agent has fleed when the square magnitude is greater than this value
lookAheadDistance	The distance to look ahead when fleeing
targetDistPrediction	How far to predict the distance ahead of the target. Lower values indicate less distance should be predicated
targetDistPredictionMult	Multiplier for predicting the look ahead distance
targetTransform	The transform that the agent is evading

Patrol

The Patrol task moves from waypoint to waypint.

Name	Description
speed	The speed of the agent
angularSpeed	Angular speed of the agent
arriveDistance	The agent has arrived when the square magnitude is less than this value
waypoints	The waypoints to move to

Cover

The Cover task will move the agent into cover from its current position.

Name	Description
speed	The speed of the agent
angularSpeed	Angular speed of the agent
arriveDistance	The agent has arrived when the square magnitude is less than this value
maxCoverDistance	The distance to search for cover
maxRaycasts	The maximum number of raycasts that should be fired before the agent gives up looking for an agent to find cover behind
rayStep	How large the step should be between raycasts
coverOffset	Once a cover point has been found
lookAtCoverPoint	multiply this offset by the normal to prevent the agent from hugging the wall
rotationEpsilon	Should the agent look at the cover point after it has arrived?
maxLookAtRotationDelta	The agent is done rotating to the cover point when the square magnitude is less than this value

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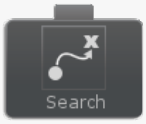
Wander

The Wander task moves the agent randomly throughout the map with pathfinding.

Name	Description
speed	The speed of the agent
angularSpeed	Angular speed of the agent
arriveDistance	The agent has arrived when the square magnitude is less than this value
wanderDistance	How far ahead of the current position to look ahead for a wander
wanderRate	The amount that the agent rotates direction

Search



The Search task will search the map by wandering until it finds the target. It can find the target by seeing or hearing the target.

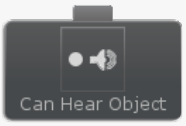
Name	Description
speed	The speed of the agent
angularSpeed	Angular speed of the agent
arriveDistance	The agent has arrived when the square magnitude is less than this value
wanderDistance	How far ahead of the current position to look ahead for a wander
wanderRate	The amount that the agent rotates direction
fieldOfViewAngle	The field of view angle of the agent (in degrees)
viewDistance	The distance that the agent can see
senseAudio	Should the search end if audio was heard?
hearingRadius	How far away the unit can hear
objectLayerMask	The LayerMask of the objects that we are searching for
linearAudibilityThreshold	The furtuer away a sound source is the less likely the agent will be able to hear it. Set a threshold for the the minimum audibility level that the agent can hear
objectFound	The object that is within sight

Can See Object

The Can See Object task is a conditional task that returns success when it sees an object in front of the current agent.

Name	Description
fieldOfViewAngle	The field of view angle of the agent (in degrees)
viewDistance	The distance that the agent can see
objectLayerMask	The LayerMask of the objects that we are searching for
objectInSight	The object that is within sight

Can Hear Object



The Can Hear Object task is a conditional task that returns success when it hears another object.

Name	Description
hearingRadius	How far away the unit can hear
objectLayerMask	The LayerMask of the objects that we are searching for
linearAudibilityThreshold	The furtuer away a sound source is the less likely the agent will be able to hear it. Set a threshold for the the minimum audibility level that the agent can hear
objectFound	The object that is within sight

Flock

The Flock task moves a group of objects together in a pattern.

Name	Description
speed	The speed of the agent
angularSpeed	Angular speed of the agent
neighborDistance	Agents less than this distance apart are neighbors
lookAheadDistance	How far the agent should look ahead when determine its pathfinding destination
alignmentWeight	The greater the alignmentWeight is the more likely it is that the agents will be facing the same direction
cohesionWeight	The greater the cohesionWeight is the more likely it is that the agents will be moving towards a common position
separationWeight	The greater the separationWeight is the more likely it is that the agents will be separated
agents	All of the agents that should be flocking

Leader Follow

The Leader Follow task moves a group of objects behind a leader object.

Name	Description
speed	The speed of the agent

angularSpeed	Angular speed of the agent
neighborDistance	Agents less than this distance apart are neighbors
leaderBehindDistance	How far behind the leader the agents should follow the leader
separationDistance	The distance that the agents should be separated
aheadDistance	The agent is getting too close to the front of the leader if they are within the aheadDistance
leader	The leader to follow
agents	All of the agents that should be following

Queue

The Queue task will move a group of objects through a small space in an organized way.

Name	Description
speed	The speed of the agent
angularSpeed	Angular speed of the agent
neighborDistance	Agents less than this distance apart are neighbors
leaderBehindDistance	The distance that the agents should be separated
separationDistance	The distance the the agent should look ahead to see if another agent is in the way
maxQueueAheadDistance	The radius that the agent should check to see if another agent is in the way
maxQueueRadius	The multiplier to slow down if an agent is in front of the current agent
slowDownSpeed	The target to see towards
seekPosition	All of the agents that should be queuing
agents	

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 Unity forums.