



# **WORQ MEDIA STUDIOS**

## **DESTINATION**

### **ADVANCED WAYPOINT SYSTEM**

Thank you for purchasing this product. For questions regarding any of our products, and further inquiries, please contact us via the email [worqmedia@gmail.com](mailto:worqmedia@gmail.com)

**Some of our other products include:**

- **Advanced Enemy AI** : Complete AI system for your game enemy. Includes patrol, detect, sight, hearing, chase, retreat, investigate.
- **Enemy Hearing Mechanism**: Give hearing abilities to your game entities
- **Enemy Sight And Vision**: Give Seeing abilities to your game entities, allow them to see whatever you allow them to see.
- **Advanced Visual Player Prefs**: This was created to simplify and expand the use player Preferences. It expands upon the default unity Player Prefs by adding more datatypes such as Bools, Color, Vector2s and Vector 3s. Advanced Player Prefs also comes with a powerful visual editor so that users can easily view, manipulate and modify preferences right from the comfort of the Unity Editor
- **Ultimate Utility Pack**: A collection of several tools to make work in unity much easier and to save production time. Tools such as multi object renamer, selector, delete(Find and delete objects by name, tag or layer), playmode clipboard (allows you to copy settings that you alter whilst in playmode and apply to editor mode permanently), and many other tools.

# HOW TO SETUP

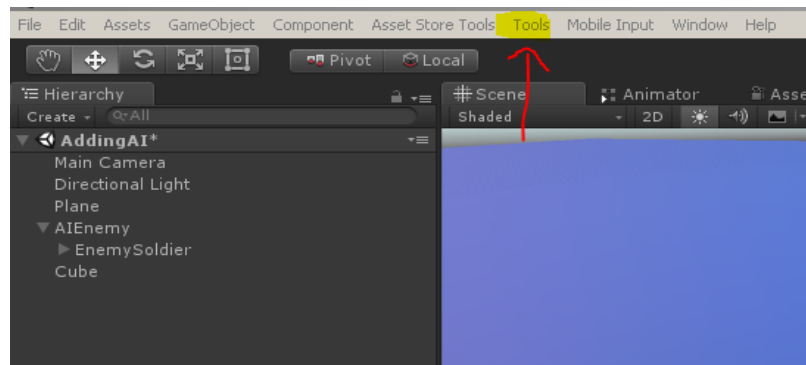
Before proceeding, please ensure that you have baked a navigation mesh that the AI entities will be walking/patrolling on. This system depends on the default unity Navigation mesh.

Going forward, the term AWS is short for Advanced Waypoint System.

## Section A (Importing)

1. Import Destination (Advanced Waypoint System) .unity package into your project.

You should now have the AWS menu appear under “Tools/Worq” menu.



Should in case you don't find the menu, follow the following steps:

2. Open the Main AWS folder and locate the Editor folder
3. Move the contents of the Editor folder into your root Editor folder. (if you do not have a root editor folder, create a new folder in your main assets directory and name it Editor).
4. The AWS sub-menu should now appear on your menu bar under “Tools/Worq” menu

## Section B (Setting up)

Below is a summary of the steps we need to take to fully setup this waypoint system:

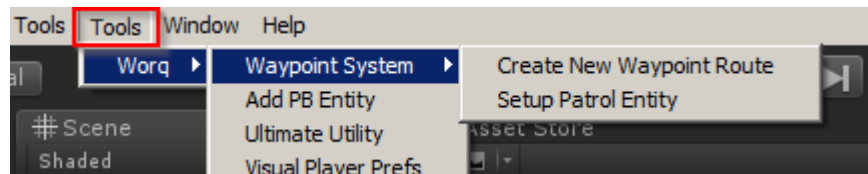
1. Add a manager (This is added automatically when the steps below are followed).
2. Create a new waypoint route
3. Create waypoints
4. Create a new patrol entity
5. Link the newly created patrol entity to a waypoint route

**The above steps are fully explained below**

**NB:** Please ensure you have a ground for your entities to move on, and that a NavMesh has been baked on the scene.

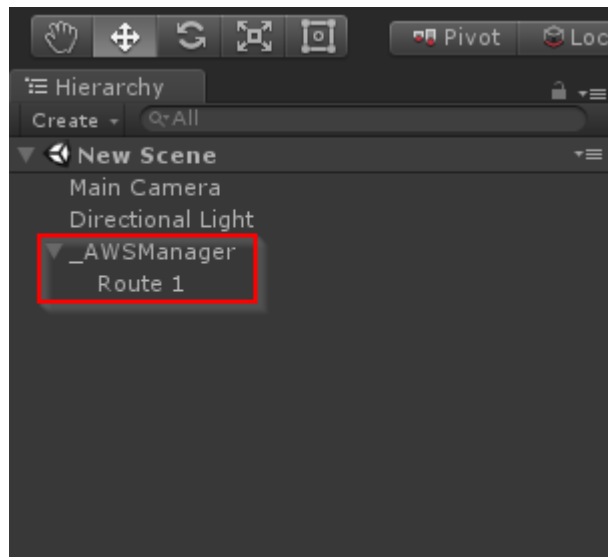
The first step to take towards setting up this system is to create a patrol manager. This process has been simplified as it is now done automatically when you create your first waypoint route, so no worries there, Worq has got you covered.

Setting up a waypoint route should take no more than one click on the “Create Waypoint Route” located under Tools/Worq/WaypointSystem menu.



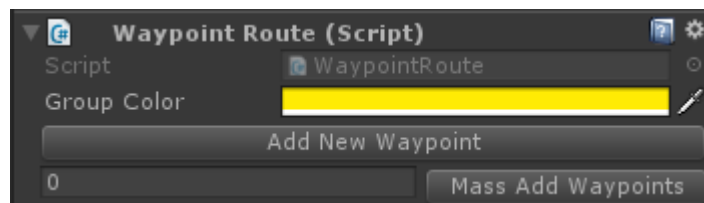
Click on “Create New Waypoint” and voila! You have successfully added a new waypoint route for patrol entities to follow. You can adjust the position of the waypoint using default unity transform tools.

Upon doing so, a patrol waypoint will be added to your scene, coupled in the patrol manager GameObject.



### **Adding way points to a waypoint route:**

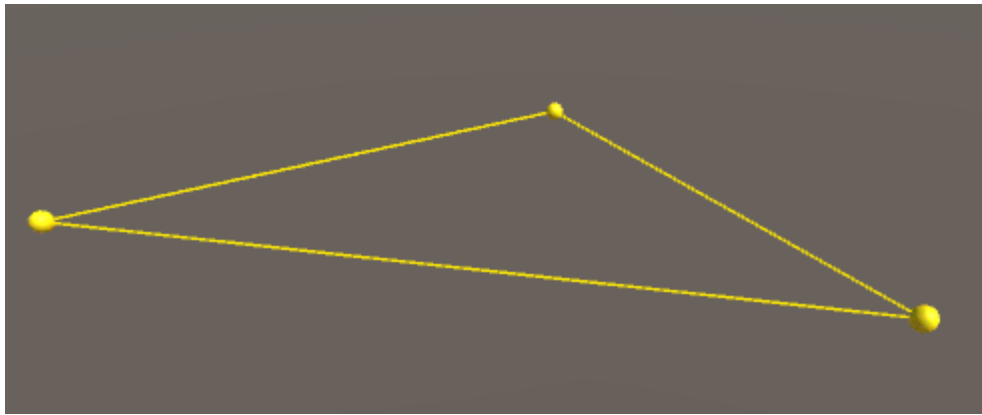
Select your newly created Waypoint Route and on its inspector you'll find attached a component "Waypoint Route (Script)"



There are 3 main sections to this component:

1. Group Color: This is a color used to identify your waypoint routes. Only intended for visual purposes and quick identification of routes.
2. "Add New Waypoint" button: As the name implies, clicking on this button creates a new waypoint and adds to the selected waypoint route.
3. "Mass Add Waypoints" button: Adds a number of waypoints equal to the number specified in the textfield to it's left.

With that in mind, click on the "Add new Waypoint" a couple of times to create a few waypoints for this test. By doing so, the waypoints visually appear in your editor as seen in the image below.

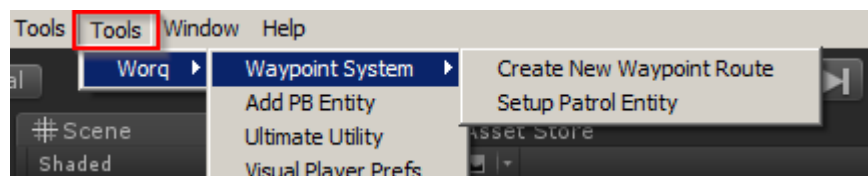


The above shows 3 waypoints created and added to the scene view of your game. You may also wish to try using the “Mass Add Waypoints” option for adding multiple waypoints quickly.

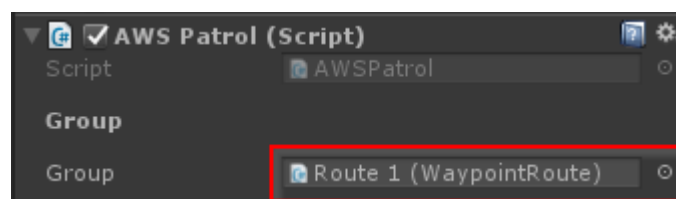
**NB:** *Position of waypoints may be freely changed using normal unity transform tools*

### **Creating and adding a new patrol entity**

To setup an entity for patrol, please first ensure that the entity is present in the scene. Now select the entity/entities from the hierarchy and click on “Setup Patrol Entity” located under Tools/Worq/WaypointSystem menu.



Your patrol entity should now be setup and ready to be used with this waypoint system. A script titled AWS Patrol (Advanced Waypoint System Patrol) is added to the entity. This script contains all settings regarding to that particular entity. In order to get the patrol system working, please drag the previously created waypoint group into the group slot of the script as shown below.



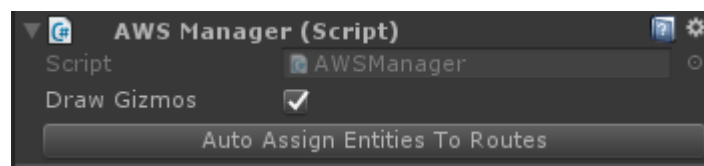
By doing so, you have associated the waypoint route titled “Route 1” to this entity. This means that this entity will follow this route. This entity will patrol on this route.

Now hit play and watch as the entity navigates from one waypoint to the next.

## Section B (Scripts And Settings)

### AWS Manager Script

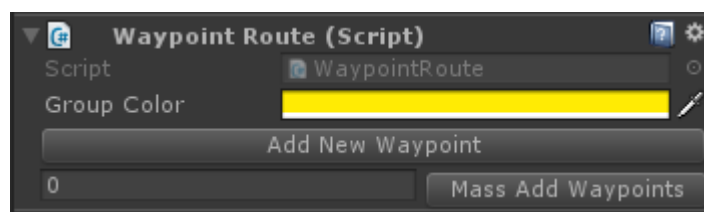
The “AWS Manager” script is attached to the “\_AWS Manager “ gameObject found in your hierarchy (Refer to the section above to set this up).



The AWS Manager script contains only two settings.

- 1- Draw Gizmos: This toggles on/off the waypoint route gizmos in the scene view. Disabling this option will boost performance for CPU intensive games/projects.
- 2- Auto Assign Entities To Routes: When this button is clicked, all patrol entities will be assigned available routes. Will repeat routes if the number of entities exceed the number of available routes.

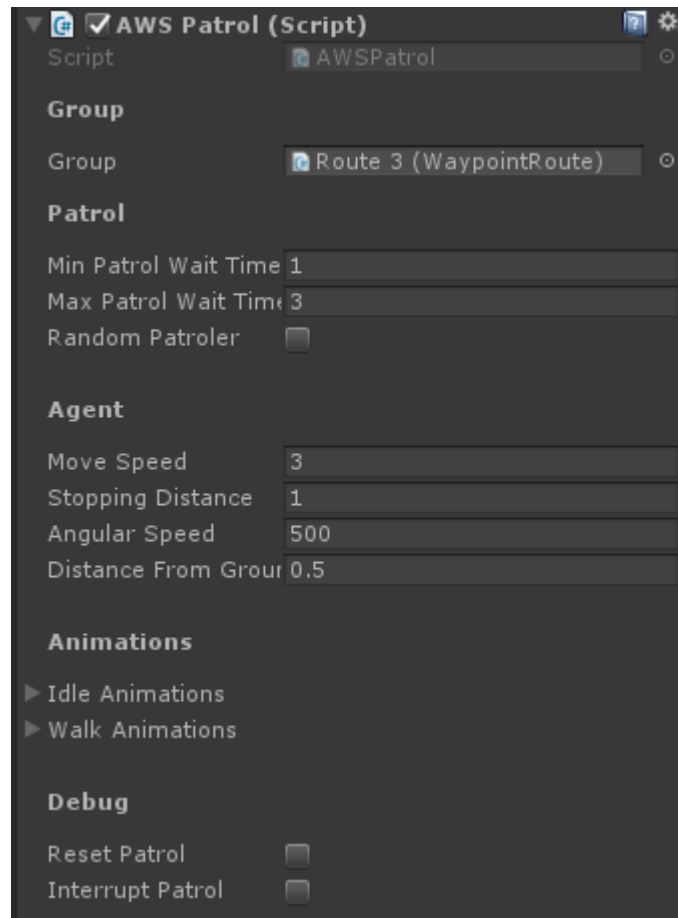
### Waypoint Route Script



The “Waypoint Route” script is attached to waypoint routes (waypoint groups). This script allows you to add waypoints to the selected route, as well as set a color to that

particular route (group) for visual purposes. The Mass Add Waypoints button at the bottom of the scripts allows you to add multiple waypoints at once. The number to be added should be typed in the text box on the bottom left.

### Waypoint Patrol Script



On this script, you will find all settings and tweaks that can be used to modify a patrol entity's behavior.

- 1- **Group:** This is used to define the waypoint route that an entity should patrol.
- 2- **Min Patrol Wait Time:** Minimum amount of time to wait before moving to next patrol point.
- 3- **Max Patrol Wait Time:** Maximum amount of time to wait before moving to next patrol point.
- 4- **Random Patroller:** Defines if or not all entities patrol waypoints at random or in sequence



- 5- **Idle Animations:** Animations to play when the agent is in idle position (Selects one at random if multiple are inserted).
- 6- **Walk Animations:** Animations to play when the agent is Walking/moving (Selects one at random if multiple are inserted).
- 7- **Interrupt Patrol:** Tick this checkbox to immediately stop patrol. By ticking this, the patrol entity stops at its current position. This can also be called from script by invoking the InterruptPatrol() function. Patrol only resumes if the reset patrol checkbox is ticked, or ResetPatrol() function is called from script.
- 8- **Reset Patrol:** Tick this checkbox to reset the patrol of the selected entity. This means that the entity will restart patrol from the beginning. This can be called from script by invoking ResetPatrol() function.

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