



User Manual

Version 2.0

Table of Contents

- Introduction
- Quick Start
- Inspector Explained
- FAQ
- Documentation

Introduction

Map-ity allows you to use any real world locations by providing access to OpenStreetMap data. Use it to get all kinds of map data into your scenes.

How does it works?

Based on location data provided, Map-ity queries OpenStreetMap(OSM) data servers and downloads all the data for that location. It then parses that data and gives you access to it via our API.

Quick Start

- Import the Map-ity package to your scene.

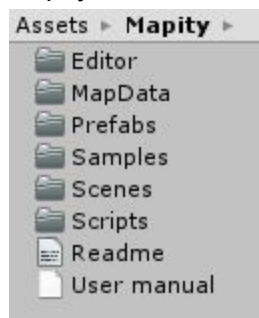
You will see two folders in the project window:



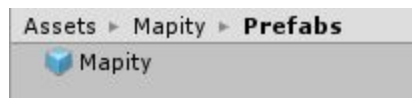
Gizmos just contains the textures we use to render our custom scene gizmos.



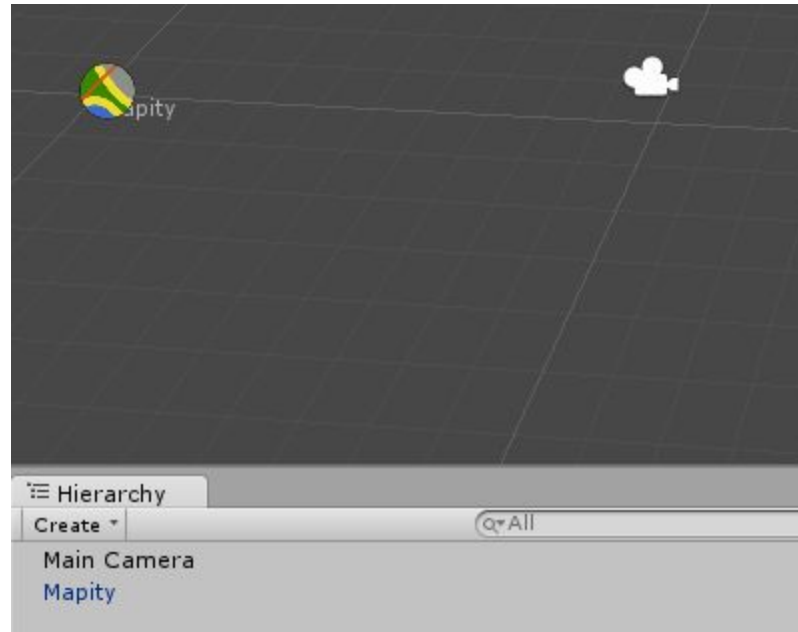
Mapity contains all the code, prefabs and samples



- Navigate to the prefabs folder and add the Mapity prefab to your scene.



The gizmo will render at the object location



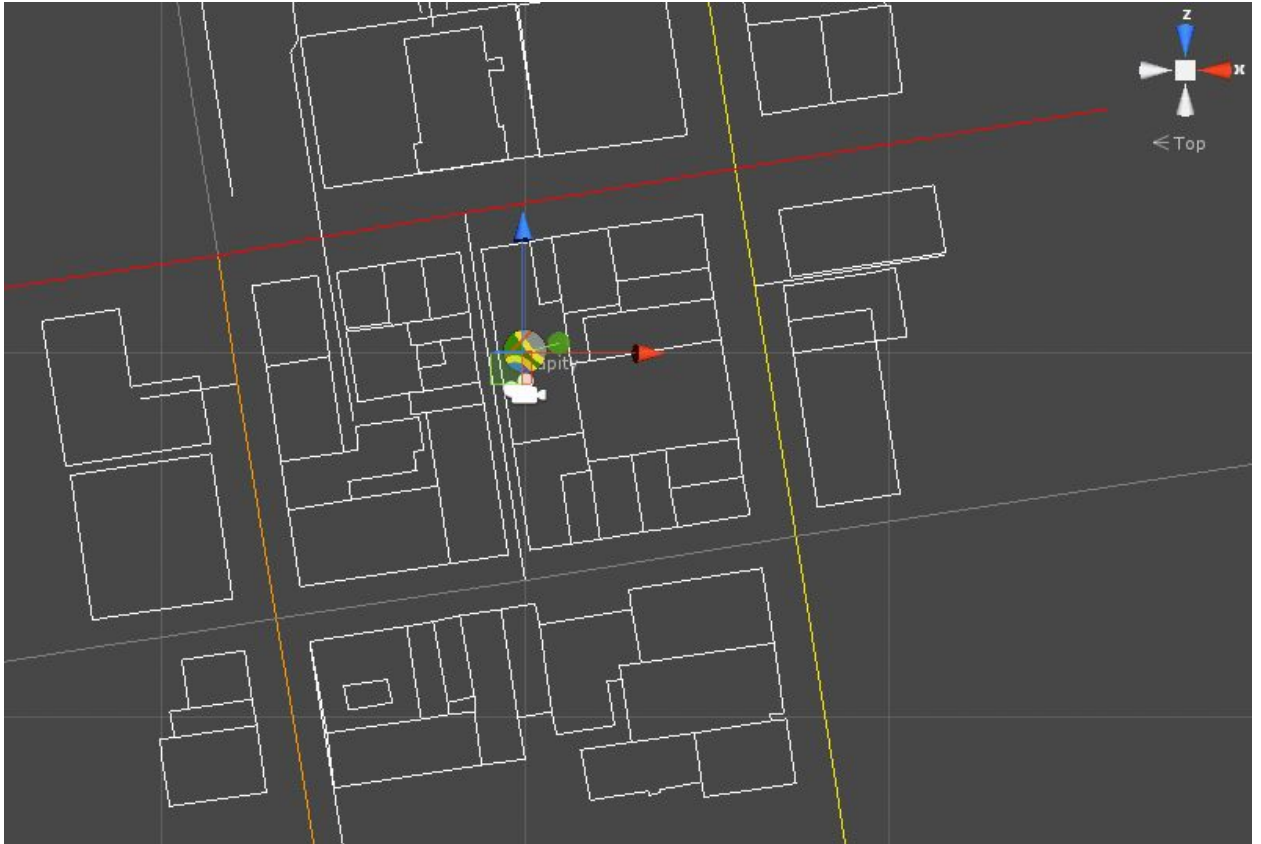
- Select the game object and you will see the various options available to you to configure Map-ity in the Inspector



- In the Scene Editor section click the Build Map button



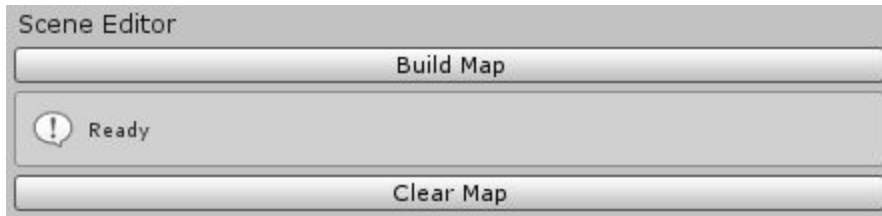
- You will now see a map appear in your scene rendered using 2D line gizmos (Deselecting the Map-ity gameObject will hide the lines)



Inspector Explained

We'll cover each Inspector group in detail here:

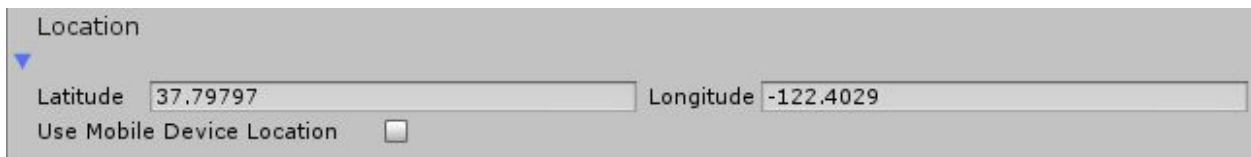
Scene Editor:



Build Map: This will load the map data and render it in the scene view.

Clear Map: This will stop rendering and clear the map data in the scene view.

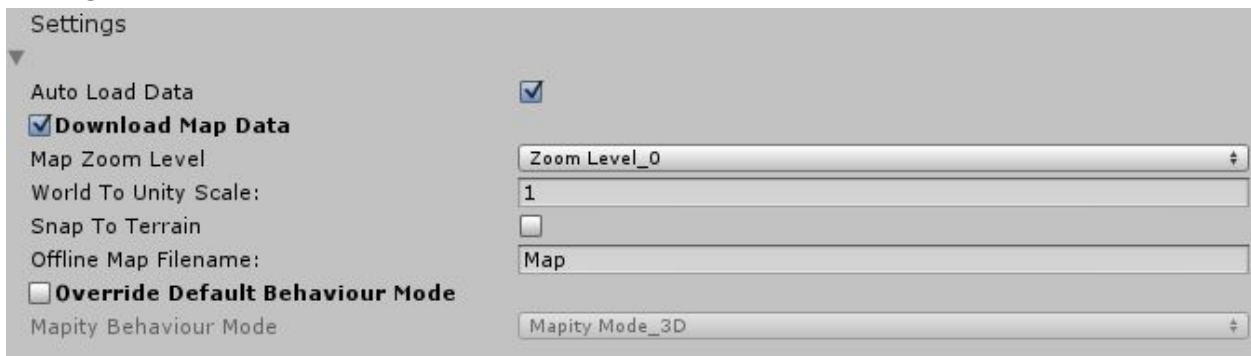
Location:



This group contains the location based settings.

- **Latitude & Longitude:** Center of the map area in degrees
- **Use Mobile Device Location:** Enable this option and when run on a mobile device it will activate it's location services and use the devices current location as the center of the map area.

Settings:



This group contains the common settings.

- **Auto Load Data:** Enable to load the map data automatically in the Start() method. Disable to wait for a manual call to Load().
- **Download Map Data:** Enable to download map data or Disable to use the local *.mapity data.
- **Map Zoom Level:** Controls the size of the area we gather data from. Lower levels mean less data. **Caution !** Higher Zoom Levels contain a lot of data.

- *World to Unity Scale*: Changes the scale for world coordinates to Unity coordinates e.g. when 1.0f, 1 meter = 1 unity unit.
- *Snap to Terrain*: Enable to have the map nodes snap to any terrain height at the same location. Disable and Map-ity will set all map nodes height to 0.
- *Offline Map Filename*: The name of the file (without any extension) to load when *Download Map Data* is disabled.
- *Override Default Behaviour Mode*: Map-ity will detect if your Unity project was opened in 2D or 3D mode and default to the same view mode, Enable this option to override that behaviour, e.g. 2D Map rendering in a 3D scene.
- *Mapity Default Behaviour Mode*: MapityMode_2D - In 2D mode Longitude is on the X axis, Latitude is on the Y axis and Elevation is on the Z axis. MapityMode_3D - In 3D mode Longitude is on the X axis, Elevation is on the Y axis and Latitude is on the Z axis.

Open Street Map:

Open Street Map

Api URL:

This group contains the Open Street Map based settings.

- *Api URL*: The URL which Map-ity uses to query map data.

Geonames:

Geonames

Api URL:

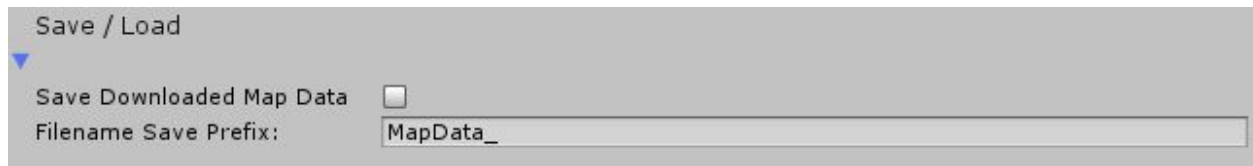
Username:

Query Height Data

This group contains the Geonames based settings.

- *Api URL*: The URL which Map-ity uses to query Geonames data. This is only required when *Query Height Data* is Enabled.
- *Username*: Geonames account user name. This is only required when *Query Height Data* is Enabled.
- *Query Height Data*: Enable to query height values for each map node using the Geonames.org's web api. Requires an account(Free). The free account is limited to 20 point requests at a time therefore this is a slow process.

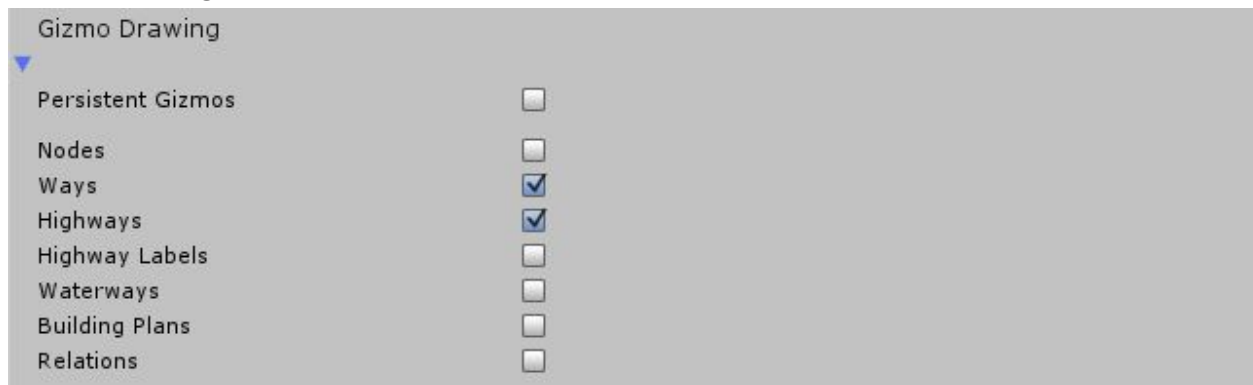
Save / Load:



This group contains the saving and loading based settings.

- *Save Downloaded Map Data*: Enable to save the downloaded map data to a file prefixed with the *Filename Save Prefix* and appended with a timestamp.
- *Filename Save Prefix*: Prefix for the saved map data file if *Save Downloaded Map Data* is Enabled.
-

Gizmo Drawing:



This group contains the Gizmo drawing settings.

- *Persistent Gizmos*: Enabled this option to always render Map-ity's Gizmos. Disable to only render Map-ity's Gizmos when the game object with the Map-ity script is selected.
- *Nodes*: Enable to render a Pin icon at every map node. (If there are a lot of nodes Unity may fail to render them and result in an error)
- *Ways*: Enable to render the map ways in color
- *Highways*: Enable to render the highways in color
- *Highway Labels*: Enable to render the highways labels
- *Waterways*: Enable to render the waterways in color
- *Building Plans*: Enable to render the building plans in color
- *Relations*: Enable to render the map relations in color

(The code to render these options are a good example of using Map-ity)

Debug:



This group contains the debug settings.

- *Enable Mapity Logs*: Enabled this option to turn on verbose Map-ity logging to the console. Useful for debugging data errors.
- *Open Temp Download Location*: Opens the folder where Map-ity downloads temporary map data to. This data is deleted when the map is unloaded.

FAQ

Does Map-ity load map dynamically?

- **No**. However this is a planned feature.

Does Map-ity contain any samples?

- **Yes**. Map-ity provides two code samples. The first demonstrates how to access all the highways in the current data set and access the tags. The second demonstrates how to access all the buildings in the current data set and access the tags.

Can Map-ity be used in commercial products?

- **Yes**. Map-ity is covered by the Unity Asset Store EULA and the OSM data is covered by the credit in our read me. More information can be found here here:
<http://www.openstreetmap.org/copyright>

Does Map-ity draw map tiles?

- **No**. However this is a planned feature.

Can I access all the OSM tags?

- **Yes**. All available tags can be accessed. See the code sample for how to do this.

Does Map-ity support Unity 2D?

- **Yes**. Map-ity will swap the Y & Z axis to support Unity's 2D mode.

Does Map-ity download building heights?

- **Yes**. If the map data contains a height value it will be accessible. However this data is sparse.

Does Map-ity create roads?

- **No**. It provides access to the data about roads e.g. Classification, Size, Name, Speed Limit etc. which you can use to create the roads.

Does another road creation asset work with Map-ity?

- **Yes.** Road Architect provides an API which allows you to pass data which can be used to create roads.

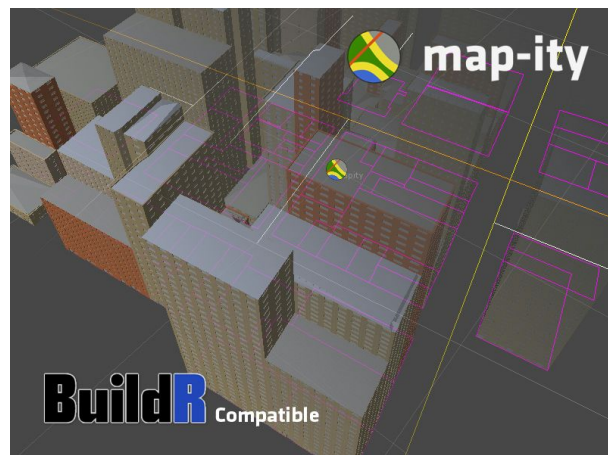


Does Map-ity create buildings?

- **No.** It provides access to the data about buildings e.g. Type of building, Height, Name, etc. which you can use to create the buildings.

Does another building creation asset work with Map-ity?

- **Yes.** BuildR provides an API which allows you to pass data which can be used to create buildings.

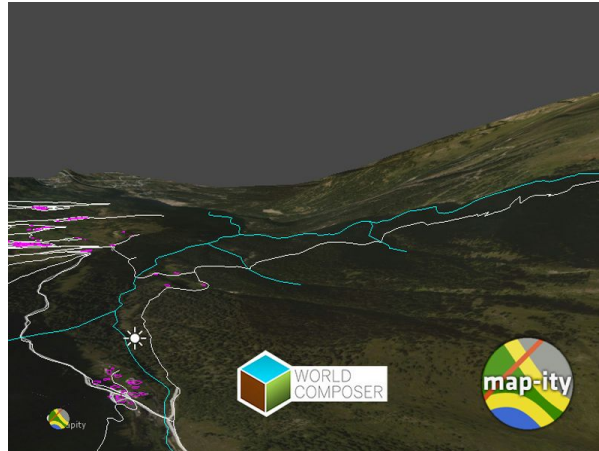


Does Map-ity create terrain?

- **No.** It can provide point height data via the Geonames web API.

Does another terrain creation asset work with Map-ity?

- **Yes.** World Composer creates terrain which Map-ity data can be overlaid on. Map-ity auto centers to the active World Composer region for ease of use.



Documentation

Our documentation can be found online via our Map-ity product page where we link to the latest and all previous Mapity documentation. http://www.rewindgamestudio.com/?page_id=123

Alternatively we provide a link directly from the Inspector:

