Online maps

Version 1.6

Description

The component is designed for viewing online / offline maps in Unity.

Usage

Select the menu item «**Component / Infinity Code / Online maps / Online Maps**», to add a component to a selected GameObject.

In section «**Create texture**» select size and click «Create».

Select a texture provider and type that you want to use.

Add texture to **GUITexture** or **Material**.

To become an interactive map, click on the menu item «**Component / Infinity Code / Controls**».

In section «**Advanced**» select «**Redraw on Play**».

Run the scene.

Move the map area to the right place.

Add markers (for details, see «**Working with markers**»).

To save the current state, press «**Save state**».

Stop the scene.

IMPORTANT

«**Online maps**» uses WWW class, for which there are security limitations. For this reason, for Webplayer, all tile providers download through the site **infinity-code.com**.

Read more about the limitations of security, you can read here:

http://docs.unity3d.com/Documentation/Manual/SecuritySandbox.html

Controls

Map control is similar to that in the online services.

Click and drag the mouse to change the position.

Use mouse wheel to zoom.

Double click zoom in map under the cursor.

Press «**M**», to add a new marker.

Hold down «**Left Control**», to enable movement of markers.

Target for map

«**Online Maps**» supports two modes:

1. **Drawing in texture**. In this mode, map and 2D markers drawn on the texture.
2. **Tileset**. It is procedurally generated mesh. This mode is faster and requires less memory than drawing in texture. Support 3D-markers and elevation data.

Getting Started with NGUI, DF-GUI and iGUI

Add the desired control on the GameObject with the card. Enable support by pressing «Enable NGUI (DF-GUI or iGUI)».

For NGUI: To become an interactive map, add Collider on GameObject (**NGUI \ Attach \ Collider**).

Work on mobile devices

For optimal performance on mobile devices, we recommend that you use Tileset.

If you want to draw a map in the texture, we recommend using the texture size not more than 512x512.

Source of map tiles

Online maps can receive the tiles:

- **Online** - from provider site.
- **Resources** - from the folder «**Resources**».
- **Resources and Online** - if possible tiles will be loaded from the folder «**Resources**». If the tile is missing, it will be downloaded from provider site.

If you want to load the tiles from the folder «**Resources**», then place tile images in «**Resources / OnlineMapsTiles / {ZOOM} / {TileX} / {TileY} .png**».

Preparation of tiles using GMapCatcher

To prepare the tiles convenient to use GMapCatcher.

With GMapCatcher, download the desired area of the map.

In Online Maps click «**Import From GMapCatcher**».

All downloaded tiles are placed in the folder «**Resources / OnlineMapsTiles**», in the format required for use.

Elevation data

To obtain elevation data used Bing Maps Elevation API.

To make a map with the real-world elevation data, use Tileset Control.

Enable «**Use Elevation**» and enter your Bing Maps API key. If you do not have the key, press the «**Create Bing Maps API key**».

Description of fields

Source - a source of tiles (Online, Resources, Resources and Online).

Provider - provider of texture tiles.

Type - the type of texture.

Label - display the names of objects on the map.

Language – language names on the map.

Latitude / Longitude - position the center point.

Zoom - the current zoom level.

Target - where will be drawn map (Texture or Tileset).

Texture - texture, which will draw the map.

Save state - saves the current view. Available only in playmode.

Markers – markers that are added to the map.

Create texture - allows you to create a new texture, which will draw the map.

Advanced - additional settings:

> **Redraw on play** - specifies whether the texture is redrawn immediately or only after changing the position or zoom.

> **Traffic** - display layer with information on traffic congestion.

> **Smart texture** - creates a smaller virtual texture used when the user move the map.

> **Empty color** - the color used until the texture is not loaded.

> **Skin** - design for the tooltip of marker.

> **Default marker** - marker icon used by default.

> **Markers align** – marker alignment used by default.

> **Show marker tooltip** - when should show tooltip (on hover, always, or never).

> **Default tile** - an image that is used until the tile is not loaded.

Working with markers

In section «**Markers**» you can see all the markers.

If you specify «**Label**», then when you hover over the icon in the playmode, will pop up message.

To add markers in playmode:

Place your cursor in the place where you want to add a marker and press the «**M**». In that place there will be created a new marker, with the default settings.

You can drag the marker on the map, hold down the «**Left Control**».

After making changes in the playmode, press «**Save state**».

Important: Marker texture should be formatted **ARGB32**, and enabled «**Read / Write Enabled**». These parameters can be found in the Import Settings textures.

Working with 3D markers

Important: 3D markers are only supported on Texture Control or Tileset Control.

Working with 3D markers similar to working with 2D markers. You can create a 3D marker on map in the specified location by pressing «**N**».

All created 3D markers can be found in the component «**OnlineMapsTextureControl**» or «**OnlineMapsTilesetControl**».

Using the Location Service

For mobile devices available determination of the location by GPS. To enable the determination of the location, add a script «**OnlineMapsLocationService.cs**» or select «**Component / Infinity Code / Online Maps / Plugins / Location Service**».

When a user interacts with a map, automatic location update will be disabled. To turn it back on, set the variable «**updatePosition = true**» in the script service.

Integration with Real World Terrain

You can see on the map the position, based on the result of the Real World Terrain. Add «**Component / Infinity Code / Online Maps / Plugins / Real World Terrain Connector**», to object generated by Real World Terrain (near Real World Terrain Container), and select connector mode.

Management of C# code

Detailed information about all the available classes, methods, and variables can be found in API Reference.

Examples of using Online Maps API you can find in the folder «**Examples (API usage)**».

Changes to source code of Online Maps

We do not recommend you to make changes to source code of Online Maps, because they will be lost when you update version.

We tried to make the API as open for use and extension. Most problems can be solved using the API or extend the class of the corresponding Control.

If for your application you must make changes to source code of Online Maps, please send us the modified code. We will try to apply your code into the mainline project, or offer you the best solution.

Working with Open Street Map Overpass API

Using Open Street Map Overpass API, you can get information from Open Street Maps, for example: buildings, roads, rivers.

Full list of objects:

http://wiki.openstreetmap.org/wiki/Map_Features

Documentation of Overpass API:

http://wiki.openstreetmap.org/wiki/Overpass_API/Language_Guide

Use «**OnlineMapsOSMAPIQuery.Find** (Overpass QL request)», to query the Overpass API.

You can test your queries using:

http://overpass-turbo.eu/

Updating versions

In the Unity Asset Store, we will send only the stable version. Renewal period is several months.

Online Maps has built-in update system, using which you can get early access to all versions and updates.

Click «**Component / Infinity Code / Online Maps / Check Updates**», to open the window checking for updates. Enter your Invoice Number, select a channel of updates and click «**Check New Versions**».

If updates are available, you can read the list of changes and download the update.

If you have any problems with installing the update, then:

1. Open an empty scene.

2. Delete the folder «**Infinity Code / Online Maps**».

3. Import the new version of Online Maps to the project.

Links

Product page: http://infinity-code.com/en/products/online-maps

Support: support@infinity-code.com