

Getting Started

Installation: Copy the Assets folder to the Assets folder of your project.

Painting prefabs

First you will need to add a GeoPainter object to your project. You can do so by selection the menu option GameObject -> Add GeoPainter. This will add an object to your Hierarchy view titled "GeoPainterSys".

Select the GeoPainterSys object in the Hierarchy view and then look in your inspector view.

Creating a group

Before you can start painting prefabs you will need to create a new group which will contain all the objects that are painted. To add a group, click on the + button underneath the GROUPS heading in the GeoPainterSys Inspector view.

Click on the text field and enter a name for your group. To select the group, click on the edit button. You will see the words (EDIT) next to the group that is currently active.

Adding objects to a group

To paint prefabs, you will need to add an object to your group. Underneath the LIBRARY heading in the GeoPainterSys Inspector view click on the "Add Object" button. Next click on the gear symbol next to the object field that is currently empty (Object #0). In the Select Game Object window that opens select a game object that you want to add to this group for painting. Alternatively, you can drag and drop an object to the game object field. Keep adding objects until you have all the objects you would like to paint at once in this group.

Start Painting

To start painting prefabs, click on the "Start Painting" button underneath the "PAINT" heading in the GeoPainterSys Inspector view. Next move your mouse into the scene. On objects that you can paint on you will see a Red/Green/Blue circle that follows your cursor and orients to the surface. If you cannot paint on a surface the circles will not appear. The green circle represents the spray area which is where an object can potentially be painted. You can change the green circles radius using the S and SHIFT-S keys. You can also type a value in the edit field next to the (S, SHIFT+S) label. The blue circle represents the distance area. Objects must be that distance away from each other before another one will be painted. Think of it as the spacing between objects. You can change the blue circles radius using the D and SHIFT-D keys. You can also type a value in the edit field next to the (D, SHIFT+D) label. Which surfaces you can paint on is determined by their layer name as well as what the "Paint Layer" settings are underneath the "PAINT" heading. Once you see the circle hold down the CTRL key and then left click where you want to paint. While the CTRL key is held down the word "Paint" is displayed next to the circle to let you know you are in paint mode. This can be turned off by toggling the "Draw debug slope and altitude" checkbox underneath the "GROUPS" heading.

Erase paintings

To erase objects, you have painted hold down the SHIFT key and left click where you want to erase objects. While the SHIFT key is held down the word “Clean” is displayed next to the circle to let you know you are in the erasing mode. Any objects within the red circle’s radius will be erased when the left mouse button is held down. You can change the radius of the red circle by using the C and SHIFT-C keys to grow/shrink the red circles radius. You can also type a value in the edit field next to the (C, SHIFT-C) label underneath the “PAINT” heading. Alternatively, if you want to erase all of the objects in this group that have been painted you can click on the “Clean Painting” button underneath the “PAINT” heading. Upon pressing the “Clean Painting” button a confirmation dialogue box will appear asking you to confirm that you want to delete all of the objects that have been painted for this group. Make sure you have the right group selected and that you want to delete all of these objects. If you click Yes, all of them will be deleted.

Configure settings for painting

There are many settings you can configure to control how prefabs are painted in the environment. You can change the slope, altitude, position, rotation, and scale of a painted object.

Slope limits

Slope limits define the min and max angles that an object can be painted on. An object can be painted on any slope with an angle greater than the min angle and any angle less than the max angle. You can see the angle of a slope by making sure the “Draw debug slope and altitude” check box is checked underneath the “GROUPS” heading and holding down the CAPS-LOCK key while in painting mode. While doing this when the circles are displayed you will also see the values for the slope of the point and the altitude of the paint displayed next to the circles. This is helpful for determining the min/max slope, and min/max altitude you want to paint on.

Altitude limits

Altitude limits define the min and max heights that an object can be painted on. An object can be painted on any height greater than the min altitude and any height less than the max altitude. You can see the height of a point by making sure the “Draw debug slope and altitude” check box is checked underneath the “GROUPS” heading and holding down the CAPS-LOCK key while in painting mode. While doing this when the circles are displayed you will also see the values for the slope of the point and the altitude of the paint displayed next to the circles. This is helpful for determining the min/max slope, and min/max altitude you want to paint on.

Use normal

The “Use Normal?” check box controls if the painted object is oriented to the normal of the surface point it is painted on or if it draws straight up/down before rotational randomizations/offsets are applied.

Position/Rotation/Scale

You can offset and randomize the X/Y/Z axis position/rotation/scale of an object that is painted. An offset is useful if you want to bury a trees trunk slightly in the ground when it is painted. To do so you would set the Y offset to a negative value. Each object painted has it’s offset applied and then the randomizations applied.

The scale options have an extra checkbox titled “Uniform”. If this checkbox is checked only an offset and a min/max edit box is displayed. In this situation the object will be scaled uniformly the same amount on each axis.

You can change the options underneath the “RANDOMIZE” heading anytime before or after painting. If you change the settings after you have painted the objects you can choose to Auto Update them by pressing the “Auto Update” button. If the “Auto Update” button is turned on anytime you change one of the Randomize settings the objects will be randomly changed again to represent that change. If the “Auto Update” button is not on you can make changes to the Randomize fields and no changes will be made to the painted objects until you click on the “Randomize” button.

Copying Group Settings

When creating a new group you may want to copy settings from a previous group to this new group to save time. To do so select a group from the drop down box underneath the “COPY & PASTE FROM GROUP” heading. Once you have the correct group selected click the “COPY” button and the settings from the group in the drop down field will be copied to your currently selected group.

Changing Seed

Underneath the RANDOMIZE header you can change the seed value by entering one in the edit box or by dragging the slider. The seed value changes the behavior of the randomization.

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Paint Masking

You can use objects to mask areas you want to paint to. If an object has a tag of “paintMask” the GeoPainter system will not paint objects inside that area.