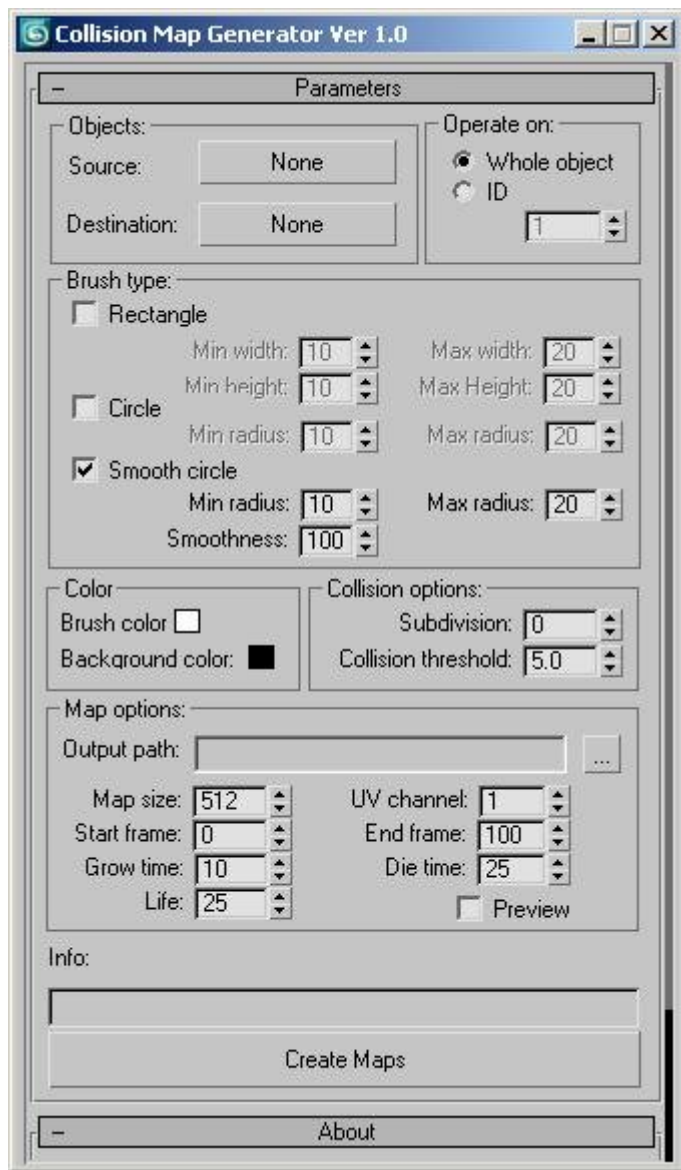


**-Collision map gen** is a script that generates maps based on the collision of an object with another object.

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## **-Parameters:**

### **[Object] group of controls:**

**Source:** Click this button to select the animated object that will hit the surface of another object.

**Destination:** Click this button to select the object that will be hit by the animated object, and maps will be generated based on this object UV Channel check box.

**IMPORTANT:** Be sure to unwrap your destination object so it has clear UV with no intersection between faces to get the maps the way you expect.

### [Operate on] group of controls:

**Whole object:** select this option to fire rays from all the object faces, The ray will be fired from the center of the face with the face normal direction.

Note: by default the script will fire one ray per face, if you want to increase the number of rays fired you may increase the "Subdivision" spinner.

**ID:** when you select this option the ID spinner become active and you can make the script operate only on the faces with the ID in the ID spinner.

### [Brush type] group of controls:

There are three types of brushes you can use at this time.

**Rectangle:** select this option to paint on the object with a rectangle type of brush.

**Min width:** this is the minimum or the start size for the width of the brush when a ray hits the object.

**Max width:** this is the maximum size the width of the brush can reach when it reaches the final frame of it's "Grow time". Or by another mean, if a ray hits the object it will create a spot with the minimum size, then it will keep growing in number of frames defined by the "Grow time" spinner till it reaches it's Maximum size.

**Min height:** the same as min width.

**Max height:** the same as max width.

**Circle:** select this option to paint on the object with a circle type of brush.

**Min radius:** the same as rectangle min width and height.

**Max radius:** the same as rectangle max width and height.

**Smooth Circle:** select this option to paint on the object with a smoothed edge circle type of Brush.

**Min radius:** the same as rectangle min width and height.

**Max radius:** the same as rectangle max width and height.

**Smoothness:** use this spinner to control the smoothness of the circle brush, a value of 100 will make the brush 100 % smooth and the value of 0 will make it like the normal circle brush.

### [Color] group of controls:

**Brush color:** click this color picker to select the brush color.

**Background color:** click this color picker to select the background color.

### [Collision options] group of controls:

**Subdivision:** the script will subdivide each face of your object the number of times in the subdivision spinner and will fire a ray from each new face with the face normal direction. The maximum value is 10.

**IMPORTANT:** the subdivision spinner is the most dangerous option in the script. Be aware not to increase this value too much cause it may hang your PC ! And again don't think that cause

you don't have enough spots on your map, that you have to increase this value to get more rays and more spots. NO there is a lot of options you can try before increasing this number for example I recommend increasing the brush size to cover empty areas between spots to get a smooth blended paint, you can also select more faces and assign an ID to them and use them only to fire rays.

Note: if you know the faces that will going to collide with the destination object you can select them and assign an ID to them and use the ID option for speed. I recommend starting by doing this, for example: a character walking on sand, only the bottom faces of his foot needs to be selected and tested for collision. I recommend also using a proxy object instead of using the high res object for speed.

**Collision threshold:** this is the most important option in the script. This is the option that responsible of creating maps and doing all the stuff. A ray will be fired from each face of your object and when it hits the destination object it's length will be compared to the "Collision threshold" value if the ray length is less than or equal to this value it will create a spot with the selected brush type. The maximum value is 100.

IMPORTANT: the default setting is varied from scene to scene, if you run the script and it generate maps with only the background color, then the first thing to think about is that your Threshold value is too low, try increasing the threshold value.

Note: you can approximate your threshold by creating an object near one of the collision faces and another object near the object that will collide with, and use the "Distance" function in max script between the two objects you created to approximate your threshold needed for the collision.

### **[Map options] group of controls:**

**Output path:** click the button to select where to save generated maps.

Note: the maps will be generated as tga.

**Map size:** this is the size of the generated maps.

**UV channel:** the destination object's UV channel that will be used for Map creation.

Note: be sure to unwrap your model so it has nice UV with no intersection between faces to get the generated maps working as you expect.

**Start Frame:** the start frame of the calculation.

**End Frame:** the end frame of the calculation.

Note: when you run the script, it will initialize the start and end frames from your scene time.

**Grow time:** when a ray hits the destination object it will create a spot on the destination object's UV this spot size will be the minimum size defined in the brush minimum size, and the spot will keep growing in this "Grow time" number of frames till it reaches it's full or maximum size defined in the maximum size of the brush.

Note: if you want your brush not to grow and to be in it's maximum size when it's born use 0 as Grow time.

**Die time:** after the spot reaches it's life defined by the "Life" spinner it will die in this number of frames.

Note: if you don't want your brush to die and want it to be exist till the end frame, use 0 as your Die time.

**Life:** the spot will remain exist this number of frames.

**Preview:** check this option if you want to view the generated maps.

**Create maps:** after adjusting your settings click this button to start creating maps.