# USER MANUAL FOR SUPER SOURCE FALLOFF

Version 1.05 – please see section 6 for changes in this version

1. Installation

1. Unzip the contents of the plugin download (available at www.curiousanimal.tv) into your Cinema 4D plugin folder.
   - *Your plugin folder location may vary, but common places to find it are: 'C:\Program Files\MAXON\CINEMA 4D R13\plugins\' on Windows, and: '/Applications/MAXON/CINEMA 4D R13/plugins/' on OSX.*
2. Start Cinema 4D – it will ask you to enter your Super Source falloff serial. Enter either your purchased licence number or 'demo' into the textbox to the right of 'CA Super Source Falloff'.
   - *You can purchase a licence at www.curiousanimal.tv*
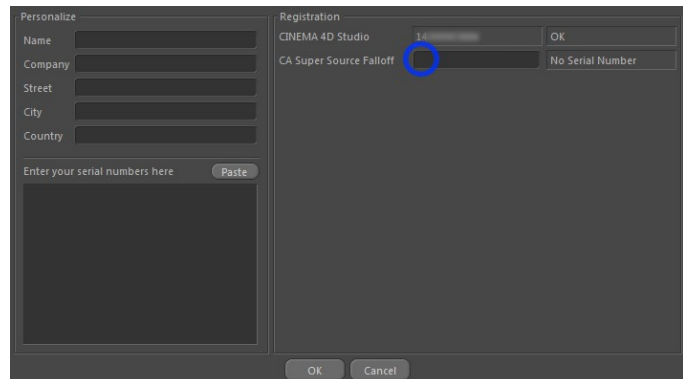
2. The Basics

Super Source Falloff works by measuring the distance from your cloners (or points for deformers) to the surfaces or splines you choose to form the inside and outside edges of your falloff.

1. You can access Super Source Falloff in the **'Falloff'** tab included in the Mograph Effectors and some of the newer built in deformers (eg Surface, Morph and Collision).
2. Select **'CA Super Source Falloff'** from the **'Shape'** dropdown box.
3. Link the polygon, spline or primitive objects you'd like to form the inner edges of your falloff into the **'Inside links'** boxes, and the polygon or primitive object you'd like to form the outer edge into the **'Outside link'** box.
   - *The 'Inside links' determine where the effector or deformer has the most influence, and the 'Outside link' where the effector or falloff has least influence.*
   - *New in v1.05 – Spline primitives (eg Circle, Star and Helix) as well as Spline Masks, Mosplines and Tracer splines now work with Super Source Falloff.*
   - *If you only add to 'Inside links', or only to 'Outside link', the **'Default falloff distance'** setting will be used to define the other edge of your falloff.*
4. Move, animate, deform or alter the linked objects as you like to create your desired falloff shape.
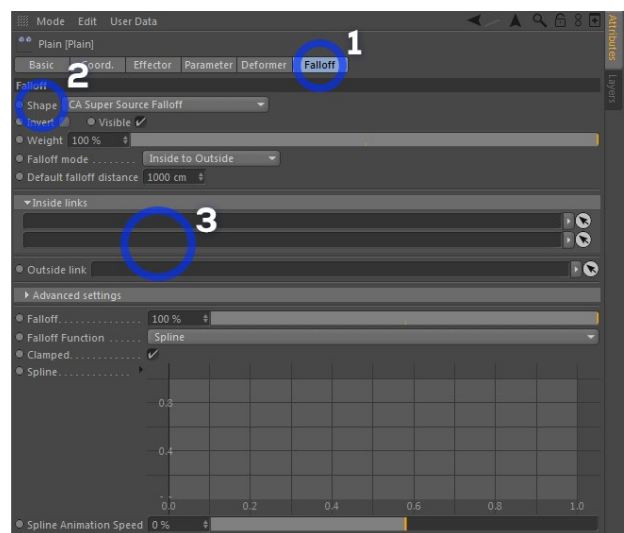
3. Falloff mode

1. The default falloff mode is **_'Inside to Outside'_** – this mode acts similarly to the built in falloff shapes like 'Box' and 'Sphere', where clones inside the 'Inside links' are most effected, and clones outside the 'Outside link' are least effected. Everything between those links receives some effect depending on their distance from each.

   - _The 'Inside to Outside' mode can only determine if an object is inside or outside a polygon or primitive object – you can still use splines for the inside links but only the distance from the clone to the spline will be tested._

2. The other falloff mode is **_'Distance only'_** – this mode does not test whether your clones are inside or outside the links. Your falloff shapes will now be determined purely based on the distance from your clones to the surfaces of your linked objects. In this mode you can define more than one outside link, and these can include spline objects.
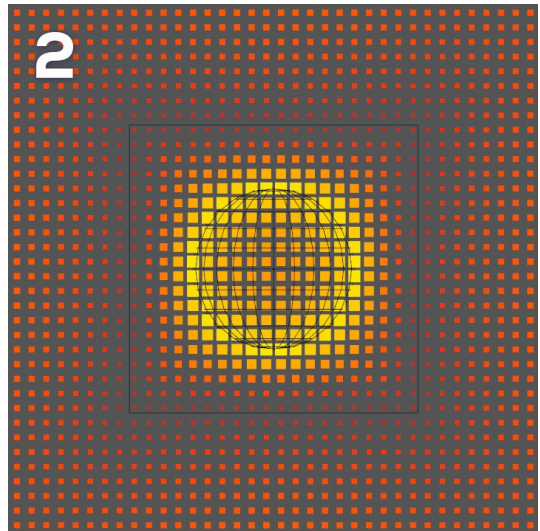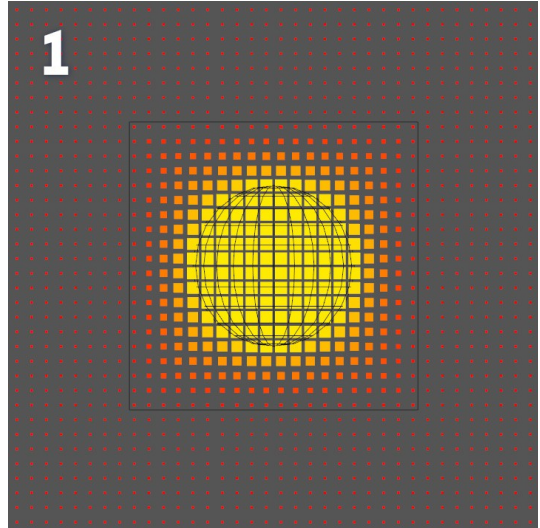

4. Advanced settings

1. Spline accuracy – these settings determine how many tests along the length of each spline are performed to find the correct falloff distance. If you're using more than one spline the **_'Initial'_** accuracy is also used to find the closest spline, so only one spline will be tested to the **_'Final'_** accuracy.

   - _Lower accuracies may be fine for simple spline shapes, higher accuracies take longer but may be required for more complex shapes._
   - _For splines with lots of bends you may need to have a high 'Initial' as well as 'Final' accuracy._

2. Geometry accuracy – these settings are used to balance the accuracy and speed of testing polygon and primitive objects.

   - **_'Test polygons'_** – this option is only visible in 'Distance only' mode (polygons are always tested in 'Inside to Outside' mode). Testing polygons allows the surface of your falloff objects to be tested for more accuracy, if you turn this off only points are tested, similar to the built in 'Source' falloff shape.

- *'Test -all- polygons (slow!)'* – by default Super Source Falloff only tests the surfaces of polygons attached to the point closest to your cloners. This compromise was made to give faster results - it works in most cases but may sometimes give incorrect results, for example:
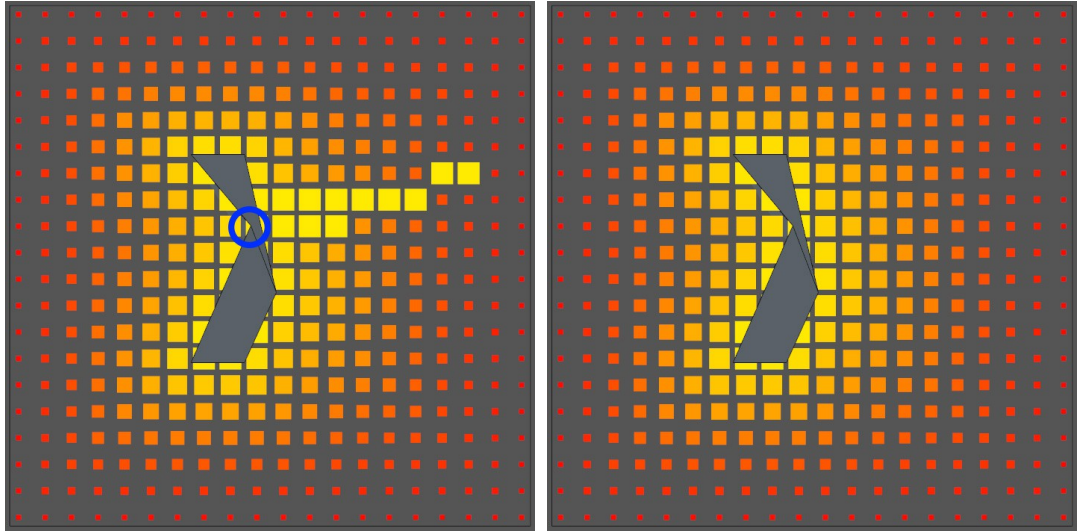
The image to the left has 'Test all polygons' turned off. There is an odd line of cloners that have an incorrect falloff value because Super Source Falloff is only testing the polygons of the falloff link attached to their closest point (marked with a blue circle), which don't include the polygon that is actually closest to those clones. In the image to the right this is fixed by turning 'Test all polygons' on.

An alternative solution is to even out the density of your meshes – in this image some extra points were added, giving the correct result without having to test all the polygons. This will usually be quicker, especially when working with high-density meshes.
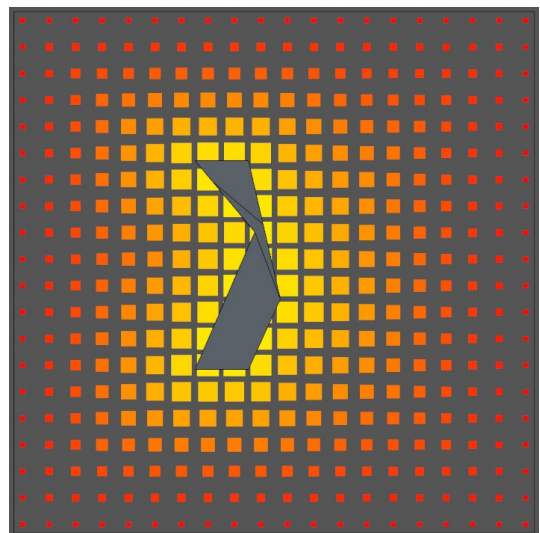
5. Support and Bugs

If you find any bugs or need technical support, you can email us at support@curiousanimal.tv – please remember to send support requests from the email address you registered when purchasing Super Source Falloff.

6. Changes in version 1.05

This update focuses on improved spline support:
1. All segments of multi-segment splines are now tested (previously only the first segment was tested).
2. Support for Cinema 4D's built in spline primitives, as well as Spline Masks, Mosplines and Tracer splines, without having to make them editable.
3. 'Advanced settings' › 'Spline accuracy' – these settings are now shown as a percentage value (from 50% to 100%) instead of a value from 0.5 to 1. The 'Initial' setting is capped at 99.9%, but it's now easier to enter higher accuracy numbers in the 'Final' setting if required (however please remember that higher accuracies will take longer to calculate). Existing scenes will update automatically.

7. Copyright and Licence

Super Source Falloff, including the software, this manual and all accompanying files, is the copyright of Curious Animal Limited.
Your licence agreement is included in the download, and is available online at:
http://www.curiousanimal.tv/licences/softwarelicence/

For more information about Super Source Falloff or Curious Animal Limited, visit www.curiousanimal.tv

©2013 Curious Animal Limited