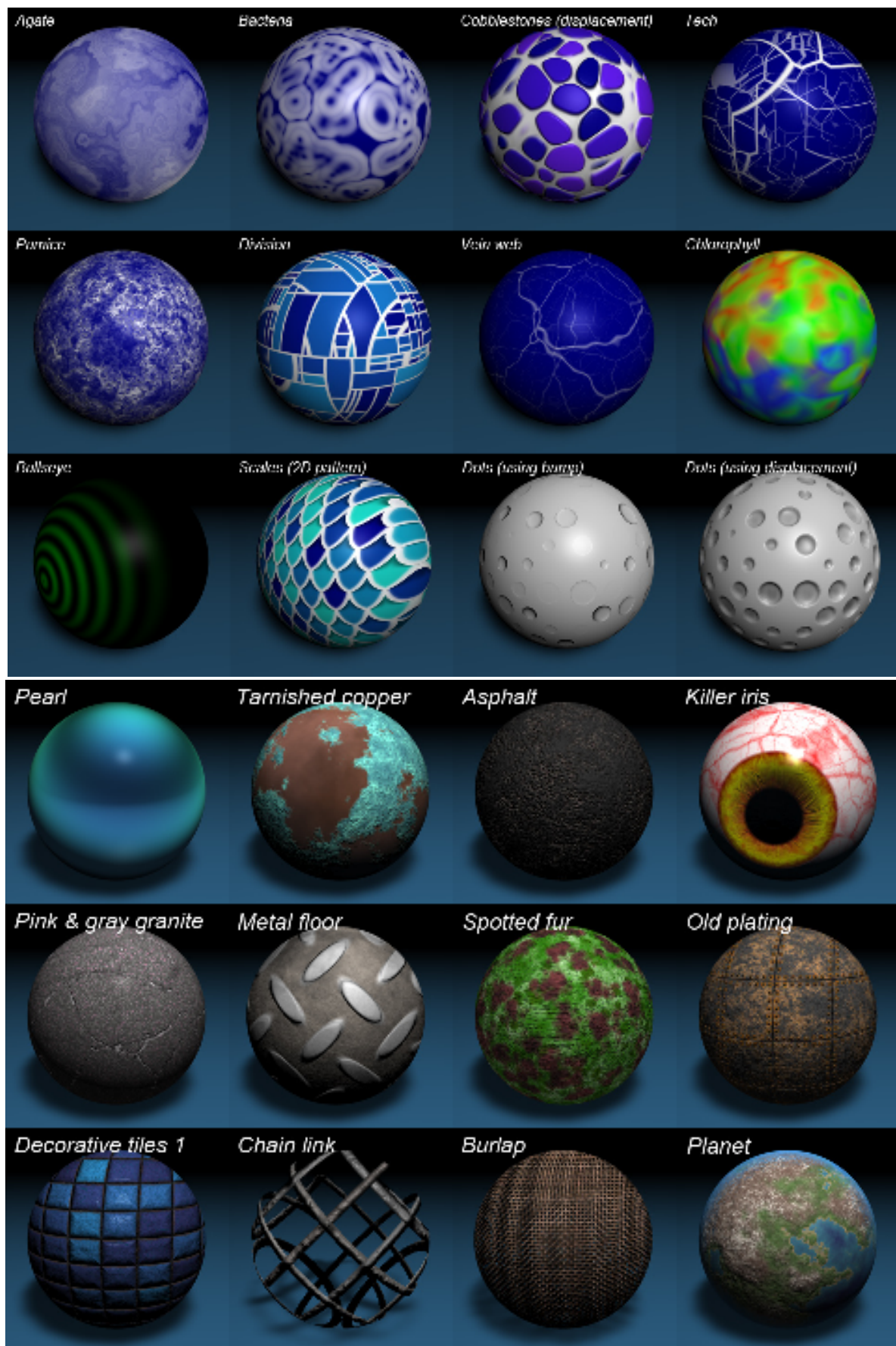


## The DarkTree Simbiont for Cinema 4D



## Contents

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What is Dark Tree? .....	3
System requirements.....	3
Installation .....	3
New shaders .....	5
The Dark Tree files .....	6
2D versus 3D patterns .....	8
Tweaks .....	8
Animation .....	8
Using the Simbionts .....	9
The channel shader .....	9
The Shader tab .....	11
The Tweaks tab .....	12
The volume shader .....	14
Other points.....	15
Known issues .....	15
Future developments .....	18
Other places to find DarkTree files.....	18
Contact details .....	19
Acknowledgements .....	19
Copyright .....	19
Legal disclaimer .....	20
Donations.....	20

# Dark Tree shader system plugin for Cinema 4D

Thank you for downloading this plugin, which utilises the DarkTree shader system to produce procedural shaders for Cinema 4D.

## What is DarkTree?

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DarkTree is an application developed by Darkling Simulations (<http://www.darksim.com>) to produce a variety of procedural shaders which provide a significant extension to the shaders available in C4D. The application, which can be found at the Darksim web site, utilises a series of components, provided as a library in the form of several Windows DLLs, to produce the final shader. The components are in effect mathematical functions, and do not include any code to provide a user interface. In order to use the shaders with a 3D application such as C4D, a plugin is necessary to pass the shader data to the DarkTree engine and return the result to the renderer.

The components themselves consist of 12 Windows DLL files, and these can be found in sub-folders of the plugin folder; these sub-folders are named 'components' (for 32-bit systems) and 'components64' for 64-bit systems.

The actual plugins are known as 'symbionts' and at one time were available for all the major 3D apps, but in recent years only the symbiont for 3DS Max has been updated. In fact, until now the C4D symbiont was only available up to C4D release 8.5, and not since. The purpose of this plugin is to bring the symbiont up to date and make it usable in recent versions of Cinema from R10 onwards.

Example results from some of the dark trees in the free archive downloaded from the Darksim site can be seen on the title page of this document. In addition, sample renders of all the dark trees in the free archive can be found on my web site at <http://www.microbion.co.uk/graphics/c4d/dtshader.htm>.

## System requirements

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The channel and volume Symbionts will run in any release of Cinema 4D 10.111 or later on a Windows system. You do not need any additional modules for versions prior to R12, and in R12 they will run in all versions.

It is **NOT** necessary to purchase the DarkTree application to use this plugin. You only need to do that if you want to develop your own shaders. There are currently 316 dark trees in the archive at Darksim, and since most of these contain parameters ('tweaks') which you can alter with the plugin, you may find that the shader archive does all you could want. However, DarkTree itself is still available and can be purchased from Darksim.

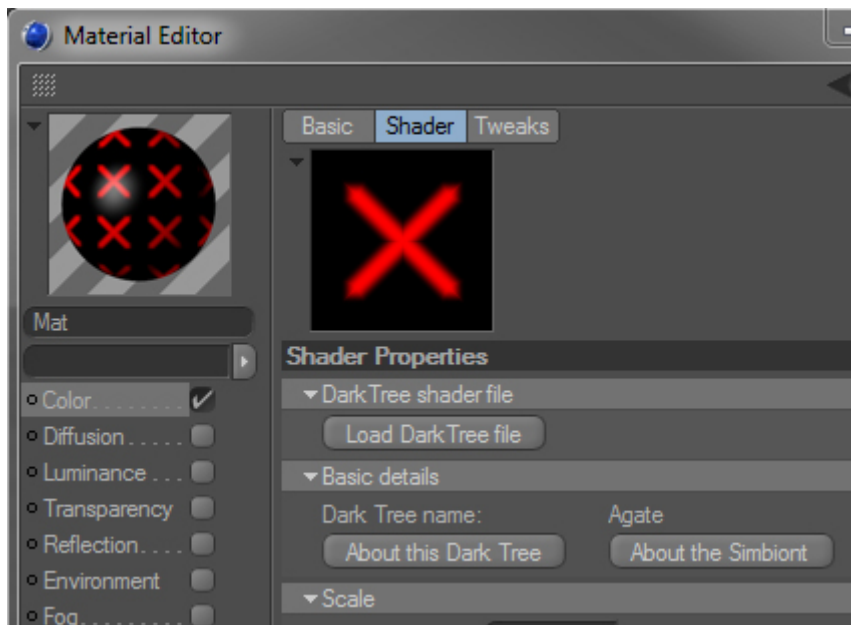
The component libraries are supplied with the plugin but were only compiled for PC (32- and 64-bit). There is currently no Mac library, so this plugin is not usable on the Mac unless you run Windows on it and use Cinema in that environment.

## Installation

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The symbiont is provided as a standard C4D plugin, and is installed in the usual way. Simply unzip the supplied archive into your C4D plugins folder. As stated in the introduction, after installation the folder

/plugins/Simbiont contains two folders called 'components' and 'components64'. These folders hold the actual component library. If you delete them, or move them to another location, the plugin won't work. It will still load, but as soon as you load a dark tree file, you will see a preview image like this:



This indicates that the plugin cannot find the component DLLs, and therefore that something is wrong with the installation.

#### IMPORTANT NOTE

The plugin uses the Visual C++ 2008 runtime libraries. If you have a recent version of C4D, or Windows itself, or a recent edition of other software such as Photoshop, you almost certainly have these libraries on your machine. If not, then when you install the plugin and run C4D you will get a message (which appears before Cinema finishes loading) that the program cannot run because a file such as 'msvcp90.dll' or 'msvcr90.dll' are not installed on your computer.

In this case the 'program' refers to the plugin and **NOT** to C4D itself, which will continue to run perfectly happily – it just won't be able to run the plugin.

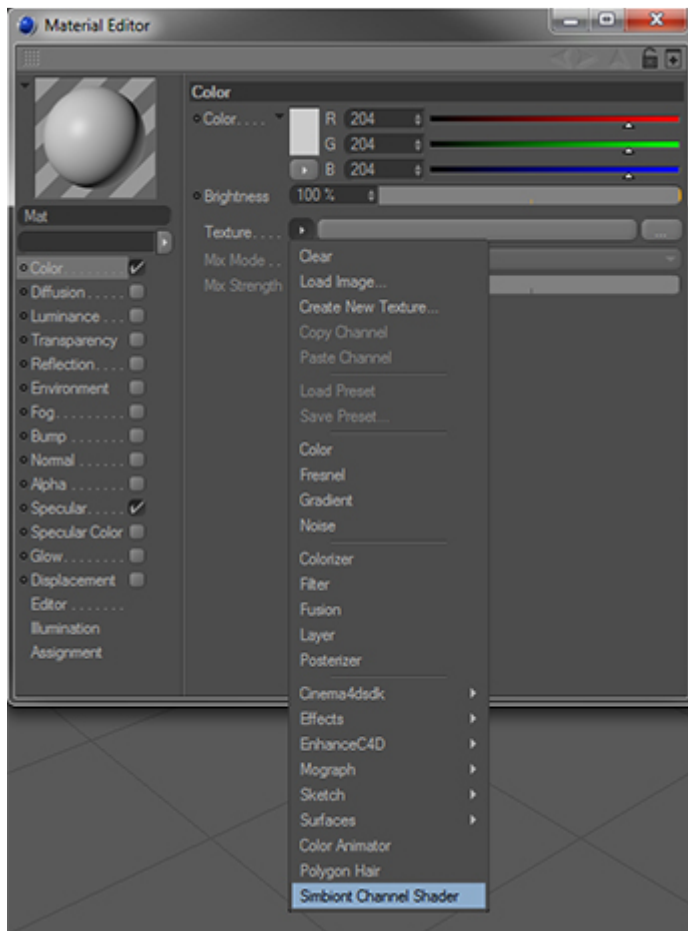
If this happens you will need to download and run the Visual C++ 2008 redistributable packages from Microsoft. (**ONLY** get these from Microsoft! You may find them on offer elsewhere, but you'd be unwise to trust them to be malware-free.) At the time of writing the package for 64-bit machines was on the Microsoft site at <http://www.microsoft.com/downloads/en/details.aspx?familyid=ba9257ca-337f-4b40-8c14-157cfdffee4e&displaylang=en> and for 32-bit machines at <http://www.microsoft.com/downloads/en/details.aspx?FamilyID=a5c84275-3b97-4ab7-a40d-3802b2af5fc2&displaylang=en>. You can find the most recent versions through Google if need be. Just download the correct one for your machine and run it.

Microsoft allows software developers to distribute these as part of a software installation, but since most people already have them, and as they add over 8Mb in total to the download, plus writing an installer program to run them automatically, I decided not to do that. Apologies in advance for any inconvenience if you find that you need to do this.

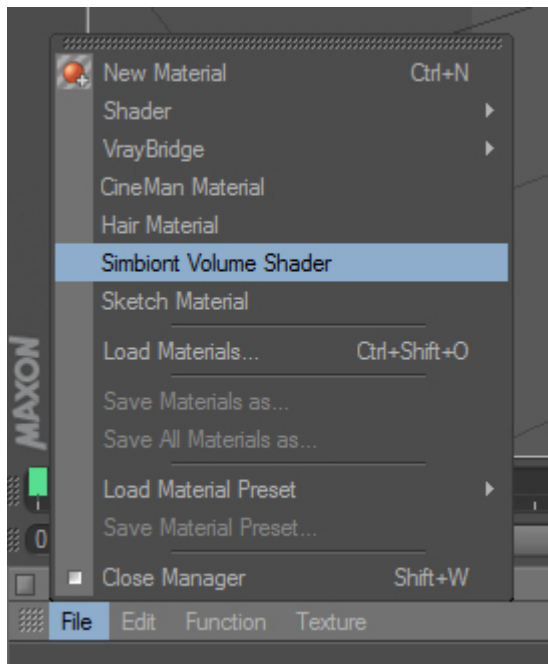
## New shaders

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The plugin installs two new shaders. The first is a channel shader which shows up in the list of shaders in a standard C4D material, like this:



The second is a volume shader, similar to those provided with Cinema, such as Cheen, Nukei, etc. You find this shader in the same menu as these, like so:



Having installed the plugin, you need to download some dark tree shaders to experiment with, and the best place to get them is the Darksim web site; you can download the entire archive in one file here. From now on this manual assumes you have downloaded the archive and unzipped it into a location of your choice. It is recommended that you unzip the archive into the simbiont plugin folder, because that is where the plugin will look first for dark trees to load.

To download the dark tree archive from Darkling Simulations, go to the Darksim web site at <http://www.darksim.com>, then on the home page on the left hand side click 'Download Shaders'.





## The Dark Tree files

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These files (referred to from here on as 'dark trees') are in fact simple text files. They contain three pieces of information:

- a set of common properties such as the name, any description added by the author, and so on
- a list of the DarkTree library components used by the dark tree, and their relationships to one another
- a list of the 'tweaks' which may be altered by the user within the plugin

If you look at the dark tree archive you downloaded, you see that there are four different file extensions. These are:

Extension	Type	Icon
.dstc	color dark trees	
.dstb	bump dark trees	
.dstp	percentage dark trees	
.dsts	shaded dark trees	

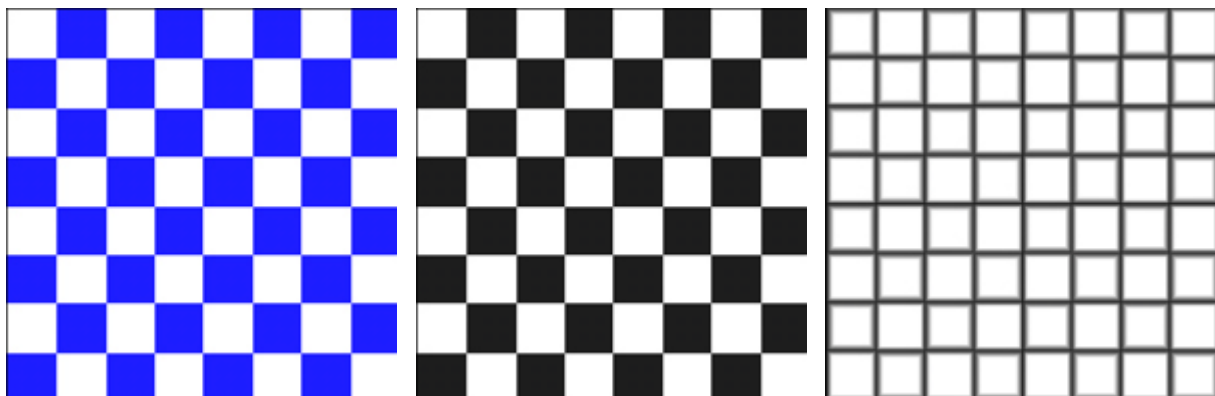
These require some explanation. The first three are used only in a simbiont channel shader in a standard C4D or Vray material, while the last one is only for use in the material (volume) shader.

Color dark trees (\*.dstc) are the easiest to understand. They provide color information and therefore would normally be used in the color or luminance channel of a material. Just as with C4D's inbuilt shaders, such as Noise, they can also be used in most other channels, such as transparency, bump, alpha, displacement, etc., because these channels are expected to return a greyscale value which C4D then interprets according to the purpose of the channel. Internally, for these channels Cinema converts color values into the corresponding greyscale value, which is why a color can be interpreted as a transparency value, or bump map, or whatever it is the channel is intended for. The vast majority of the channel shader dark trees in the archive are color trees.

Bump dark trees (\*.dstb) are intended to provide bump information only. They therefore return a greyscale value, and if you put one of these in the color channel of a material you will see a greyscale image as a result. Since the bump channel in C4D will accept color shaders, this kind of dark tree isn't really needed in Cinema compared to some other applications. Again, you can use this kind of dark tree in any relevant channel.

Percentage dark trees (\*.dstp) return a value from 0 to 1. They are most useful when building the shader within DarkTree itself. In Cinema, they aren't very useful as standalone dark trees; but what they return is interpreted as a greyscale value, and these dark trees can therefore be used in any channel which can make use of a greyscale value in some way.

An example may make this clearer. The images below show the same dark tree (just a simple checkerboard, identical to C4D's own checkerboard shader) exported from the Dark Tree application as a color, percent, and bump dark tree (you can find these three trees in the installation folder 'examples' if you want to test it out):



In this set of images, each tree has been placed in the color channel. As you would expect, the color tree on the left produces a colored (blue and white, in this case) checkerboard. The percentage-type tree produces a greyscale checkerboard because the percent trees produce a greyscale output. But the bump tree produces a greyscale representation of what the bump would look like, if the tree was placed in the bump channel.

In C4D, placing any of these trees (color, bump, or percent) in the bump channel produces exactly the same bump result; unlike some applications, C4D doesn't need a different kind of bump map to produce a bump effect.

Most of the time, you don't have to worry about this, anyway. Most available trees are color trees; you won't see many bump or percentage trees.

The shaded dark trees (\*.dsts) are used only in the volume shader; they cannot be used in the channel shader. The volume shader has both advantages and disadvantages over the channel shader. An advantage is that more complex shaders are possible, with some really outstanding results, such as the Pearl, or Potato Skin

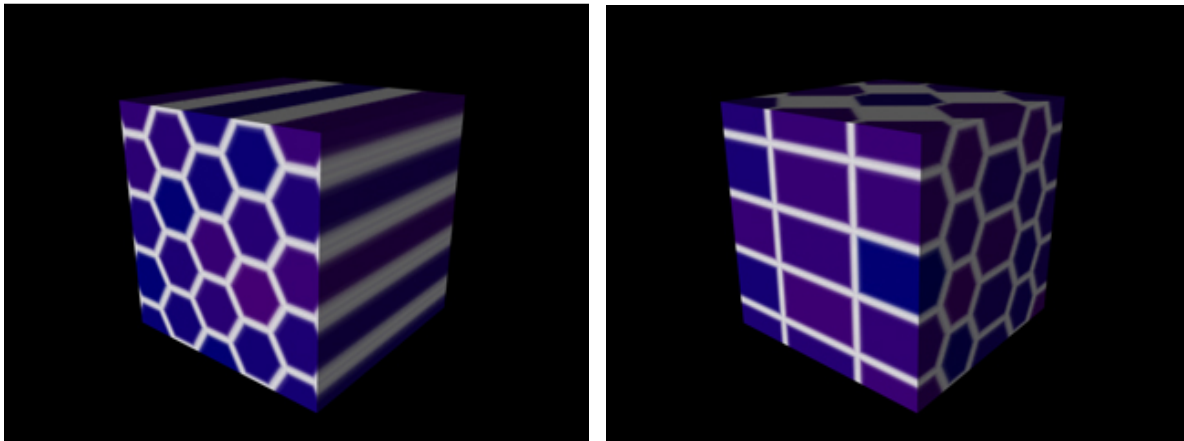


dark trees in the archive. However, since there are no channels in a volume shader you only get what the dark tree creator supplied – you cannot add bump, for example, if no bump function was included in the dark tree.

## 2D vs. 3D patterns

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Many, but not all, dark trees generate fully 3D patterns. Some, such as the ‘Scales’ dark tree in the archive, are only 2D. Some can be both (and the 2D pattern is sometimes advantageous). If the dark tree can be 2D or 3D, there will be a button in the Tweaks (see the next section) to switch between them. For example, here is ‘Polyhedra’ from the dark tree archive set to 2D and then 3D:



For 2D dark trees, the texture would normally appear correctly on the Z-axis of the object, as is shown in the left hand image above. The face with the correctly rendered texture is perpendicular to the Z-axis.

## Tweaks

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‘Tweaks’ are parameters in the dark tree which are changeable by the user. You don’t need the DarkTree application to do this – the plugin supplies the interface to alter the tweaks. You are, however, only able to alter the parameters written into the dark tree by its creator; you can’t add more of your own.

Tweaks can include a lot of different parameters – colors, random seeds for fractals, roughness, contrast, specularity, etc. They are limited by what the dark tree creator built into the tree, but they mean that you are not limited to the default settings of a dark tree. For example, if you load up the channel dark tree ‘Agate’ (in the ‘maps’ folder of the dark tree archive) then by default it is blue and white, with three other tweaks – roughness, contrast, and random seed. Playing around with these will get you very different results from the original.

## Animation

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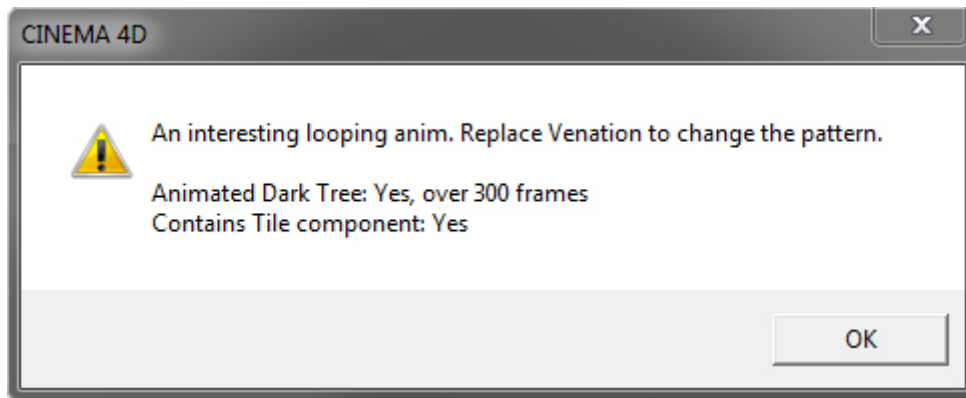
All the tweaks in a dark tree can be animated using C4D’s standard keyframe animation, as you would with any other shader.

However, in addition some dark trees are animated using an entirely separate system. DarkTree has the ability to animate its textures using an external timer component. This allows you to use animated textures without any keyframing, which can be very powerful. The downside, however, is that that animation length in frames is set in the dark tree itself, so if the creator of the tree set the animation to run for 30 frames, that’s all you



get – which rather limits the utility of this function. Unfortunately there is no way to alter this without editing the dark tree file itself. Try the dark tree ‘Warp Loop’ (in the archive folder ‘vfx\_animated’) and render out a preview animation to see how this works. A sample movie using this tree can be found on my web site, along with several others.

How do you know if the dark tree is an animated one? It may say so in the description, but if not the plugin can tell you this. Click the button ‘About this Dark Tree’ in the shader interface and a message box will appear which will tell if the dark tree is animated and over how many frames:



## Using the simbiants

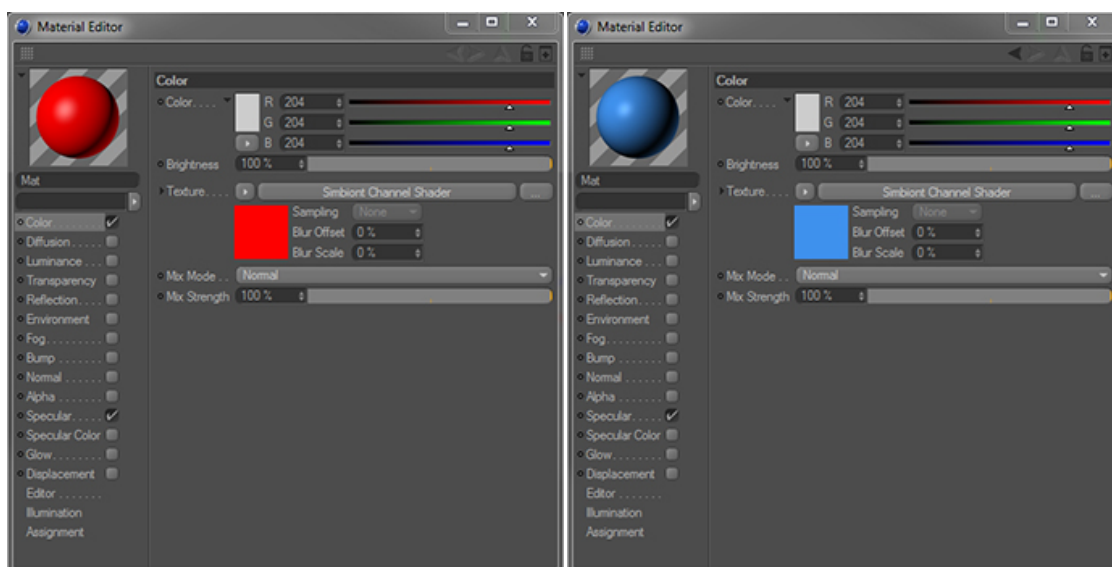
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### The Channel Shader

This shader can be included in any relevant channel in a C4D standard material. Essentially, that’s every channel except Fog and Glow, though it probably won’t be of much use in the Normal channel.

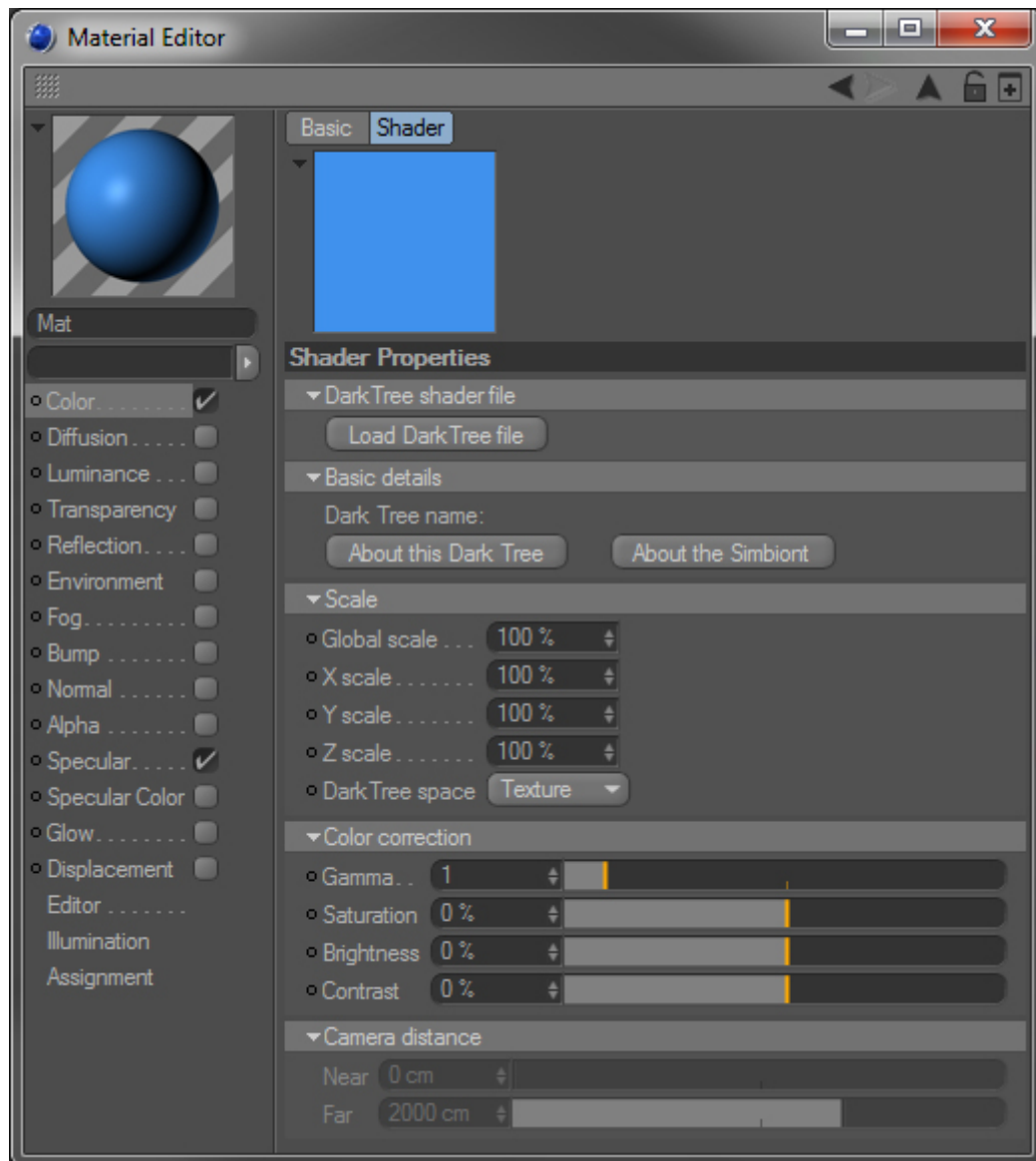
You can also load it into any other shader which has sub-channels – such as Colorizer, Filter, Fusion, Layer, and Posterizer.

Once you load the shader, there are two possible results:



If the preview is red, then this means that the Dark Tree engine could not be initialised for some reason. In this case you will not be able to load a dark tree file, and the output of the shader will be plain red.

A blue preview indicates that the Dark Tree engine has been initialised. As with other channel shaders, clicking the bar reading 'Simbiont Channel Shader' or the blue square below it will show the shader interface. Initially, before a dark tree file is loaded, only the Shader tab will be available, giving some properties that are common to all dark trees. The common properties for every dark tree are shown below, with their default values:



To load a dark tree, click the 'Load Dark Tree file' button. A file selector will appear, and you can navigate to and load a dark tree file. Remember that the channel shader only lets you load color-, bump-, and percent-type dark trees; trying to load a shaded dark tree (extension .dsts) will cause an error message to be displayed.

When the shader is first loaded, it will look for dark tree files in the folder 'DarkTrees' contained within the plugin folder.

Once the dark tree has loaded, in most cases a new tab will appear in the shader interface, labelled 'Tweaks'. These are where you adjust the user-changeable parameters for the dark tree, such as colors. Not all dark trees have tweaks (if the Tweaks tab does not appear, it doesn't have any tweaks).

## The Shader tab

This tab is shown in the screen shot above. There are five sections in this tab:

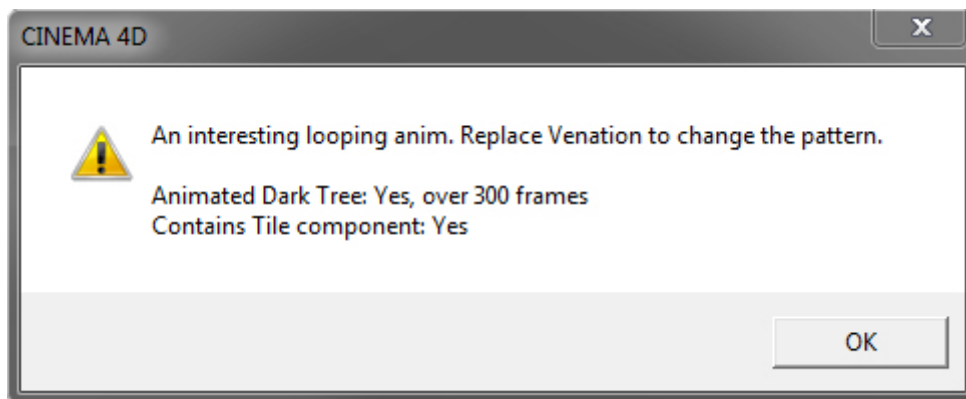
### 1. Dark Tree shader file

This section contains the button you click to load a dark tree file.

### 2. Basic details

The name of the dark tree will be shown here (if one is loaded) and you can get more information about the dark tree by clicking the 'About this Dark Tree' button. If no dark tree has been loaded, a message will be displayed accordingly.

If one has been loaded, then you are shown several pieces of information. The following message box is a typical example:

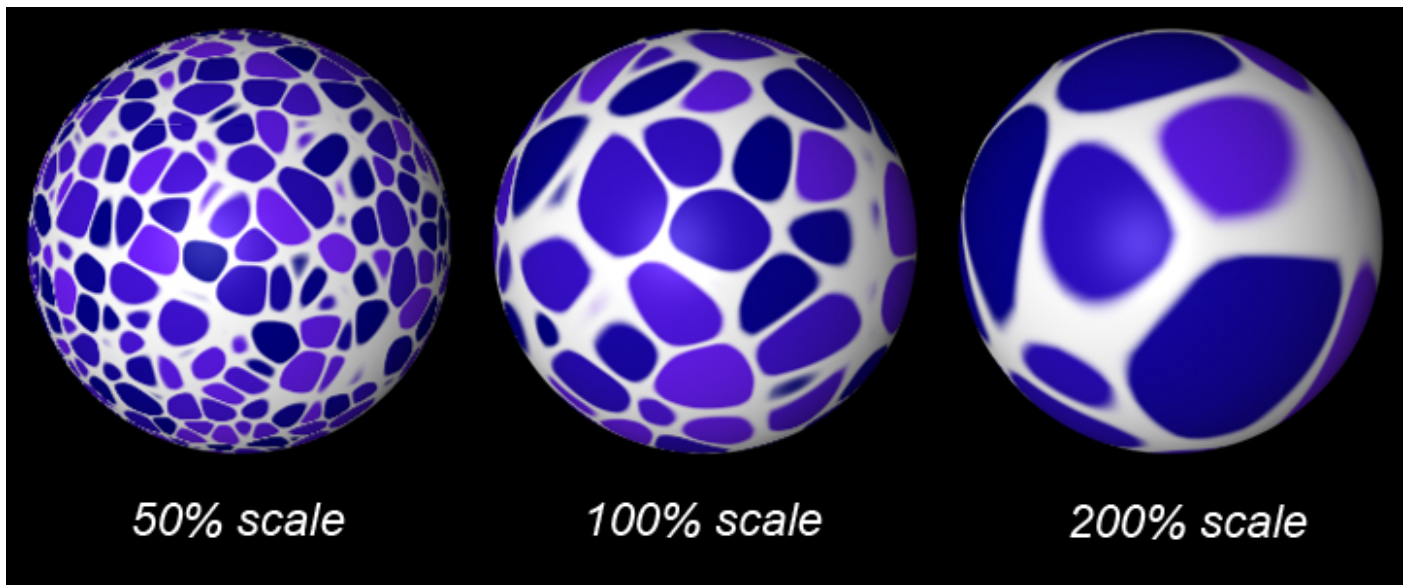


First you have the description of the dark tree given by its creator, if the creator gave it a description. Then there are two points to note:

- is the dark tree animated with the Dark Tree components, and if so, the length of the animation in frames (see the 'Animation' section above)
- and does the dark tree contain a Tile component or not (see the 'Known issues' section below)

### 3. Scale

These allow you to scale the dark tree on all axes at once (global scale value) and/or by the individual X, Y, and Z axes. The following images show the difference this can make:



You can also switch the dark tree space between Texture and World space. If you select Texture space (the default) then the texture will stay the same no matter where you move the textured object on screen. If you select World space, then the texture will change depending on the position of the textured object in the 3D world. See 'Known issues' for an important caveat about World space. Most of the time you will probably want to stick to Texture space.

#### 4. Color correction

For an explanation of why this is necessary, see the section 'The problem with gamma' below.

With these sliders you can adjust the gamma, saturation, brightness, and contrast of the rendered output.

IMPORTANT: please remember that if you adjust these settings and then load another dark tree the settings are returned to the default values (Gamma to 1.0, Saturation, Brightness, and Contrast to zero).

#### 5. Camera distance

These controls are only relevant if the dark tree which is loaded contains a Distance component. They are disabled if no such dark tree is loaded.

The Dark Tree distance component blends between two colors depending on the distance of the point being rendered to the camera. This can produce some very interesting results, especially for terrains where the color in the foreground might gradually fade into another color in the distance. You can try this out with the supplied example file 'Distance\_component.c4d'. Experiment with this by altering the Near and Far values and see what effect it has on the rendered result.

#### The Tweaks tab

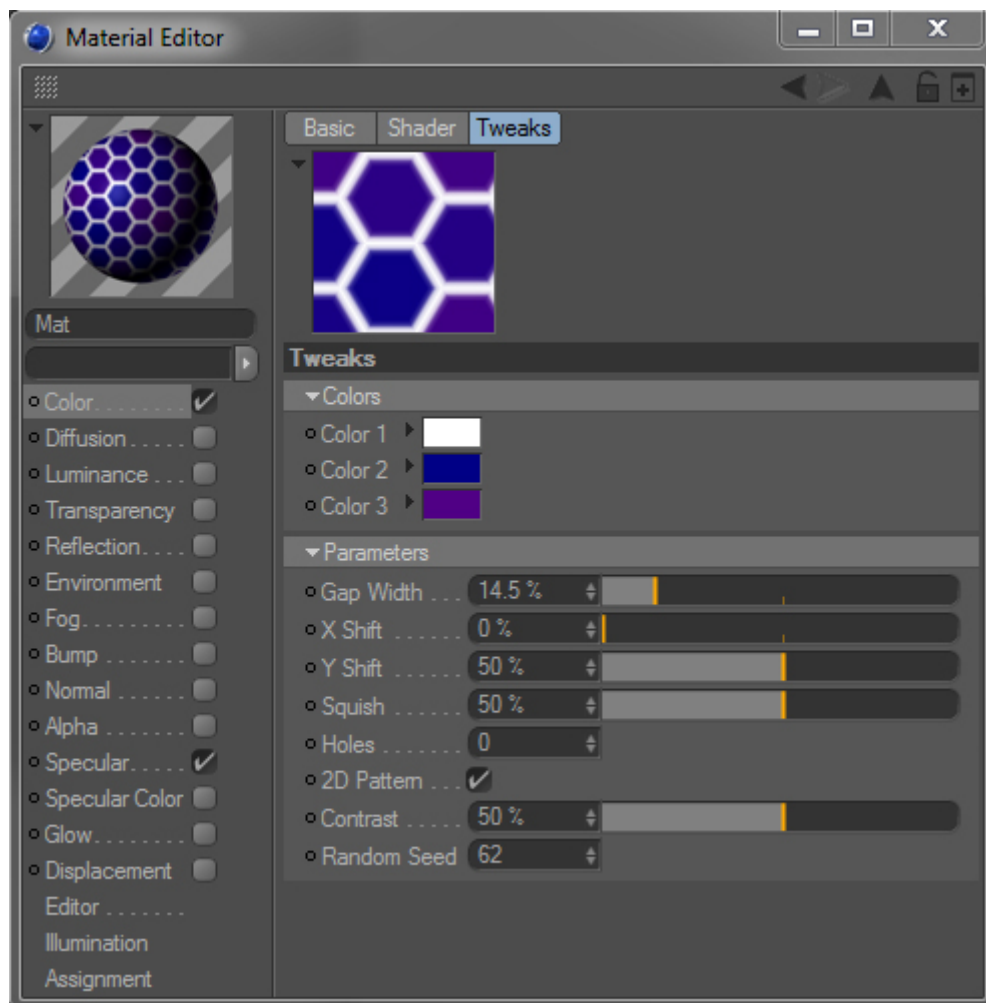
There won't be a Tweaks tab until you load a dark tree file, and there may not be one even then if the dark tree does not contain any tweaks.

Tweaks are set by the creator of the dark tree file using the Dark Tree application. They represent parameters which you, the user, can change within the plugin. What sort of tweaks you get varies considerably from one dark tree to another, but generally they fall into the following categories:

1. Colors. These can be changed with the usual color picker.
2. Percentage values. These are the commonest tweaks after colors and are used to change a wide variety of parameters such as Roughness, Contrast, Blend, etc. They range from 0 to 100%.
3. Integer (whole-number) values. Usually seen when setting parameters for the initial seed value for fractals.
4. Floating-point values. As integer values but these allow fractions of numbers as well.
5. On-off switches. In some dark trees these are used to switch between a 2D and fully 3D pattern, for example.
6. Bitmap files which are manipulated in some way by the dark tree (see 'Known issues' for a problem to be aware of here).

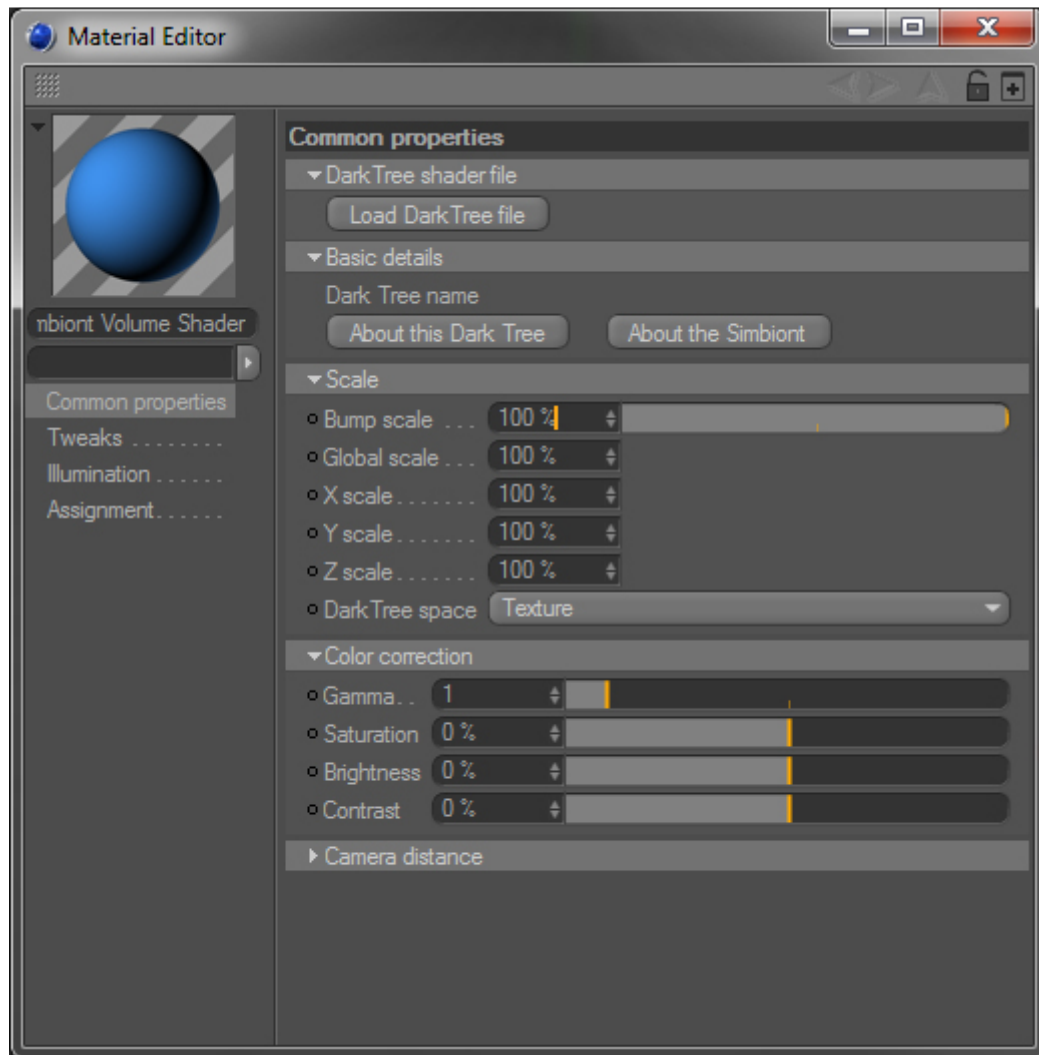
Changing the tweaks can give very different results from the original default values in the dark tree. Don't assume that the initial values are either the best or is the only appearance of the dark tree – experiment widely!

Here's a screenshot of a well-featured Tweaks tab:



## The Volume Shader

To use the volume shader, create a new Simbiont Volume Shader from the File menu in the Material Manager. Other than that, the use of the volume shader is almost identical to the channel shader. It has a similar interface, which appears like this in the material editor:



With the volume shader you can only load shaded dark trees (extension .dsts); attempting to load any other kind will result in an error message.

As you can see from the screenshot above, instead of the two tabs in the channel shader, you have two pages – Common properties and Tweaks. The Tweaks entry is identical to that in the channel shader. If you haven't loaded a dark tree yet, this page will be empty.

You can alter the parameters and tweaks in the volume shader interface in the same way as you do in the channel shader. The only addition you see in the volume shader is in the 'Scale' section, where in addition to the usual scale parameters there is also a 'Bump scale' parameter. This increases or decreases the bump strength of the material, exactly as the bump channel 'Strength' parameter in a standard material does. The default value is 100%, which should be the optimal setting for the dark tree, but you can go higher (or lower than 100%) if you need to. This setting has no effect if there is no bump function in the loaded dark tree.

Note that very occasionally dark trees have a 'Bump scale' as one of their Tweaks as well as the standard bump scale slider. You can use either or both of these parameters, as they have identical effects.

There are of course no specular, transparency, alpha, etc. channels in the volume shader. If a material has one of these attributes, it will be controlled via one of the tweaks.

## Other points

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### Antialiasing

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The simbiونت will often produce good results with C4D's antialiasing set to 'Geometry' (the default). Some have such complex bump systems that for best results you should use 'Best' antialiasing. Unfortunately this will slow the render down, sometimes significantly, especially with the volume shader.

### Using the simbiونتs with Vray

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The channel shader can be used in any appropriate channel of a Vray material, as with standard C4D materials. They are particularly good in the bump channel, and also do well in the Vray displacement material.

There is one strange issue with Vray: for some reason the shaders are rendered upside down! In most cases this doesn't matter, but in some cases the shader output has an obvious 'up' – see the dark tree Env\_SkyGrass.dstc in the archive, for example. If this is a real problem, try switching to World space rather than Texture space, which at least solves the direction problem.

Unfortunately the volume shader, as with Cinema's own volume shaders such as Cheen, Danel, and so on, will not work in Vray.

## Known issues

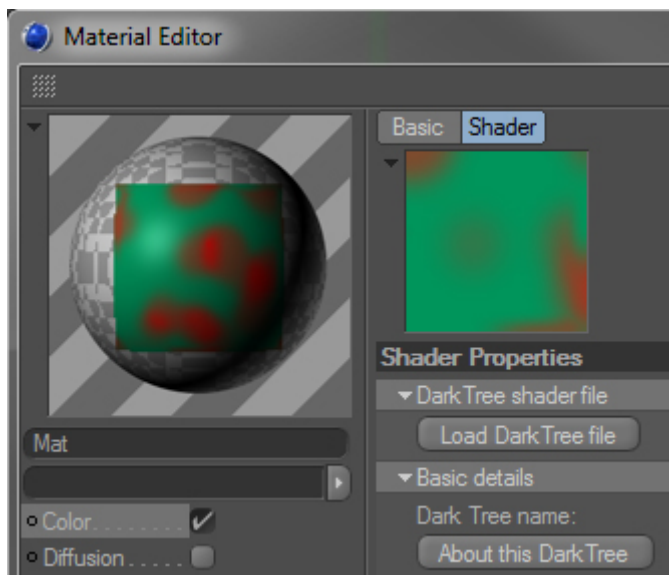
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### 1. Dark trees with a Tile component

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Dark Tree contains six 'Tile' components, which as the name suggests, will tile a texture over the surface of an object. For some reason, in the preview render in the material editor (in the top left corner), a dark tree with a Tile component appears as a small square on a grey background, as shown here:



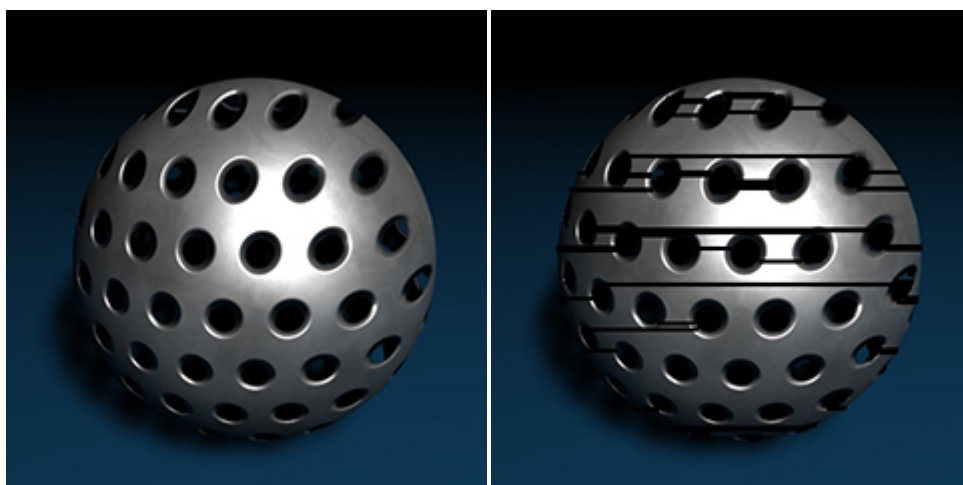


It's not clear why this artefact occurs. It may also be seen in the textured object. The solution to this is simple – right click on the texture tag and select 'Fit to Object', which will ensure the object is fully textured by the material. (This won't alter the preview, unfortunately.) Hopefully this small problem will be fixed in a later version of the plugin. If you need to know whether a dark tree uses a Tile component, click the 'About this Dark Tree' button in the material editor and the dialog box which appears will tell you if the tree uses a Tile.

## 2. Dark trees with a Dots component used as an alpha texture in the 64-bit volume shader

There *may* (and I stress *may*) be a bug in the 64-bit version of a DarkTree component known as 'Dots'. As its name suggests, this component produces a pattern of dots, which can be used for surface color, bump, and alpha, among other things. When used as an alpha it is quite nice, because it can cut holes to make textures such as perforated metal plate.

Unfortunately, when used in the volume shader in 64 bit Cinema, there is a bug which produces black spots or lines on the rendered object. The effect can be seen quite clearly in the examples below, which use the 'Metal Holes' dark tree from the archive (64-bit version is on the right):



It doesn't always occur, and you may see white spots instead of black ones. This is unfortunate but pending a possible fix, the only workaround if you need to use this dark tree is to render in 32-bit Cinema. You can work with it in 64-bit as it won't cause any other problems until you come to render. Also, the component doesn't

appear to cause any problems in the channel shader or when used in the volume shader for purposes other than alpha maps.

### **3. Texture vs. World space**

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If you choose World space for a dark tree, then move the textured object to another position, you may find that the object renders with no texture. Having tested this in Cinema R8.5, it appears that this problem also occurs with the plugin which was available for R8.5. This would seem to indicate that the problem is in the Dark Tree engine, or in the way it plays with Cinema (remember this engine was designed to be used in a variety of 3D apps). The issue doesn't always arise, and I will continue to work on a solution for it, but in the meantime if you stick to Texture space (the default setting) you won't encounter this issue.

### **4. Bitmaps in the dark tree**

---

Some dark trees load a bitmap, and the bitmap to load may be one of the tweak settings, so that you can choose a different bitmap if you want to. You should be aware of one small problem. The name of the bitmap to load is contained in the dark tree file, but unfortunately its full path may be hard-coded there, too. This can cause obvious problems. If the dark tree specifies 'c:\program files\darktree2\images\shuttle\_2.jpg' (this is an actual example from the 'Posterizer' dark tree in the archive) and the bitmap isn't in that location, or the location doesn't even exist on your machine, then clearly it can't be loaded. This will become apparent as soon as you load such a dark tree, because you will receive an error message telling you that the bitmap can't be found. To fix this, go to the Tweaks tab and locate the bitmap manually.

This small problem is inherent in Dark Tree itself and cannot be corrected in the plugin. It is possible, if you really need to, to edit the dark tree file in a text editor and correct the path there.

### **5. The problem with gamma**

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The DarkTree engine was written several years ago, when CG artists didn't think about image gamma values and linear workflow in the way they do now. Therefore, the engine contains no built-in gamma correction method. In addition, since the shaders have not been available for C4D since R8.5, the latest versions of C4D, and any plugins or renderers which affect the gamma value, know nothing about DarkTree and cannot take the simblent into account.

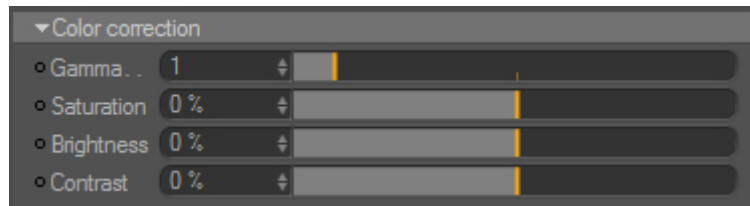
What this means is that if you:

- are using C4D R12 with automatic LWF turned on
- or have a Color Correction post effect with a modified gamma value
- or use the DeGamma plugin

then the dark tree shaders, when rendered, may look rather faded or washed out.

One way round this would be to place the channel shader in a C4D Filter shader and modify the gamma value there. That's inconvenient, and in any case isn't possible with the volume shader. Therefore, both the channel and volume shaders have controls to modify the gamma value of the shader output and also to alter the saturation, brightness, and contrast of the output.

The controls look like this:



If you are using R12 with linear workflow on, all you have to do is change the gamma value in the plugin to your monitor gamma (usually 2.2) and this will give the correct color output. Likewise, in any version of C4D, if you add a color correction post effect in the render settings and change the gamma there, just set the shader's gamma to the same value.

The biggest problem is with DeGamma, if you have bought that excellent plugin. For one thing, DeGamma allows the user to select different color spaces to be used, and this will affect the gamma value. However, the simbiont doesn't know anything about color spaces, so you may not get ideal results. In such a case you can:

- turn DeGamma off and accept the disadvantages of doing that
- or leave DeGamma on and adjust the gamma, brightness, saturation, and contrast of the shader's output by eye. (Yes, that's a kludge. But it doesn't always matter. When abstract patterns are being used, which is most of the time with the simbiont, the correct output is the output you think looks best, not necessarily what is mathematically correct.)

Future versions of the plugin may contain more sophisticated methods of resolving this problem, but for now the above workarounds can be used.

## Future developments

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I do not consider the development of this simbiont to be complete yet. There are a number of enhancements which I would like to introduce in later versions. Some of these include fixing the problems mentioned in 'Known issues' above.

In other cases there is additional functionality to introduce. The most important of these is referred to in the DarkTree system as 'dynamic tweaks'. This is a facility to control the tweaks by shaders in a sub-channel. For example, a colour tweak could be driven by a C4D gradient shader, or a noise shader, or even by another simbiont. This really increases the power of the simbiont, and was a feature of the simbiont for C4D R8.5.

I would be interested to hear of other improvements and suggestions for development. Please use the contact details below if you have any suggestions about the simbiont.

## Other places to find DarkTree files

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Jan Sandstrom's site has nine dark trees including some very good rock and dirt shaders - [http://www.pixero.com/downloads\\_darktree.html](http://www.pixero.com/downloads_darktree.html)

You can also find a collection of 120 dark trees at Matt Andersen's site at <http://www.deadeyez.com/>, click the 'DarkTrees' link in the sidebar and there is a link to download them all in a single zip file. Unfortunately

some of these are broken (they won't even load into the actual DarkTree application), but they are still worth a look.

3D Digital Graphics has four nice shaders at [http://www.3ddigitalgraphics.com/darktree/darktree\\_main.html](http://www.3ddigitalgraphics.com/darktree/darktree_main.html)

The site at shaders.org has a set of components for DarkTree. These are for use in the DarkTree application itself, but if you buy the components you also get several hundred shader (mostly .dts) files which use them. The components are available in both 32- and 64-bit. One slight downside is that, unlike the DarkTree components, which have to be distributed for the simbiont to work, there does not appear to be any license permitting the Enhance:DT components to be distributed, so you can only use them on the machine on which they are installed. See [http://www.shaders.org/enhance\\_dt/](http://www.shaders.org/enhance_dt/) for details.

You can probably find more dark trees scattered around the net if you search.

## Contact details

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I hope you find the simbiont for Cinema 4D useful. If you have any comments, feature requests, or (especially) bug reports, please let me know. You can email me at [steve@microbion.co.uk](mailto:steve@microbion.co.uk).

The latest version of the simbiont is available on my site at <http://www.microbion.co.uk/graphics/c4d/dtshader.htm>.

Thank you!

Steve Pedler

## Acknowledgements

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This simbiont could not have been created and released if it was not for the very generous help provided by August Swanson from Darkling Simulations. He answered all my often silly questions and kindly provided source code and libraries where necessary. I am extremely grateful to August for all his help. Any errors or bugs in the simbiont are entirely down to me.

If you like the simbiont, and would like to develop your own dark trees, then the original Dark Tree application v2.5 is still available at the Darksim web site, [http://www.darksim.com/html/dt25\\_description.html](http://www.darksim.com/html/dt25_description.html). It's not particularly cheap (though no more expensive than Genetica Pro, which only produces bitmaps, not procedural shaders) but is a whole lot of fun to use. I encourage you to try the demo, and have a play.

## Copyright

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The DarkTree Simbiont for Cinema 4D version 10 and higher is copyright (c) Steve Pedler, December 2010. Portions of the code within it are copyright (c) Darkling Simulations.

## Legal disclaimer

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I really hate these things. I make free software, you use it, what's the problem? Unfortunately we live in a world where everybody seems to reach for their lawyer at the drop of a hat. The only purpose of what follows is to emphasise that if you use the Simbiont, you do so at your own risk, as I don't guarantee that it will or won't do anything. Please don't sue me if it doesn't work for you.

THIS PROGRAM IS PROVIDED "AS IS" AND WITHOUT WARRANTIES AS TO PERFORMANCE OF MERCHANTABILITY OR ANY OTHER WARRANTIES WHETHER EXPRESSED OR IMPLIED.

Because of the various hardware and software environments into which the Simbiont may be put, NO WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE IS OFFERED.

Good practice indicates that any program be thoroughly tested with non-critical data before relying on it. The user assumes the entire risk of using the program and the author cannot be held liable for any damage to or loss of critical data, program or operating system files, hardware, or any other content or aspect of the user's computer system or ongoing work or projects.

In particular I need to emphasise that Darkling Simulations, the creator of Dark Tree, cannot be held in any way responsible for this Simbiont and anything it might do.

In plain English, this means that use of the Simbiont is your own responsibility. If the program trashes your system, or crashes when manipulating critical data, you must take the responsibility. Microbion Software and the program's author accept no responsibility for any untoward results.

Hopefully nothing like this will happen, but in today's litigious climate such disclaimers are a necessary evil.

## Donations

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This plugin is, and will remain, free for personal and commercial use. Having said that, it was a complex piece of coding which took several weeks of my spare time to produce. If you use the simbiont, and would like to support its future development, please feel free to make a donation, which you can do at my web site - <http://www.microbion.co.uk/graphics/c4d/dtshader.htm>.

All donations will be gratefully received!