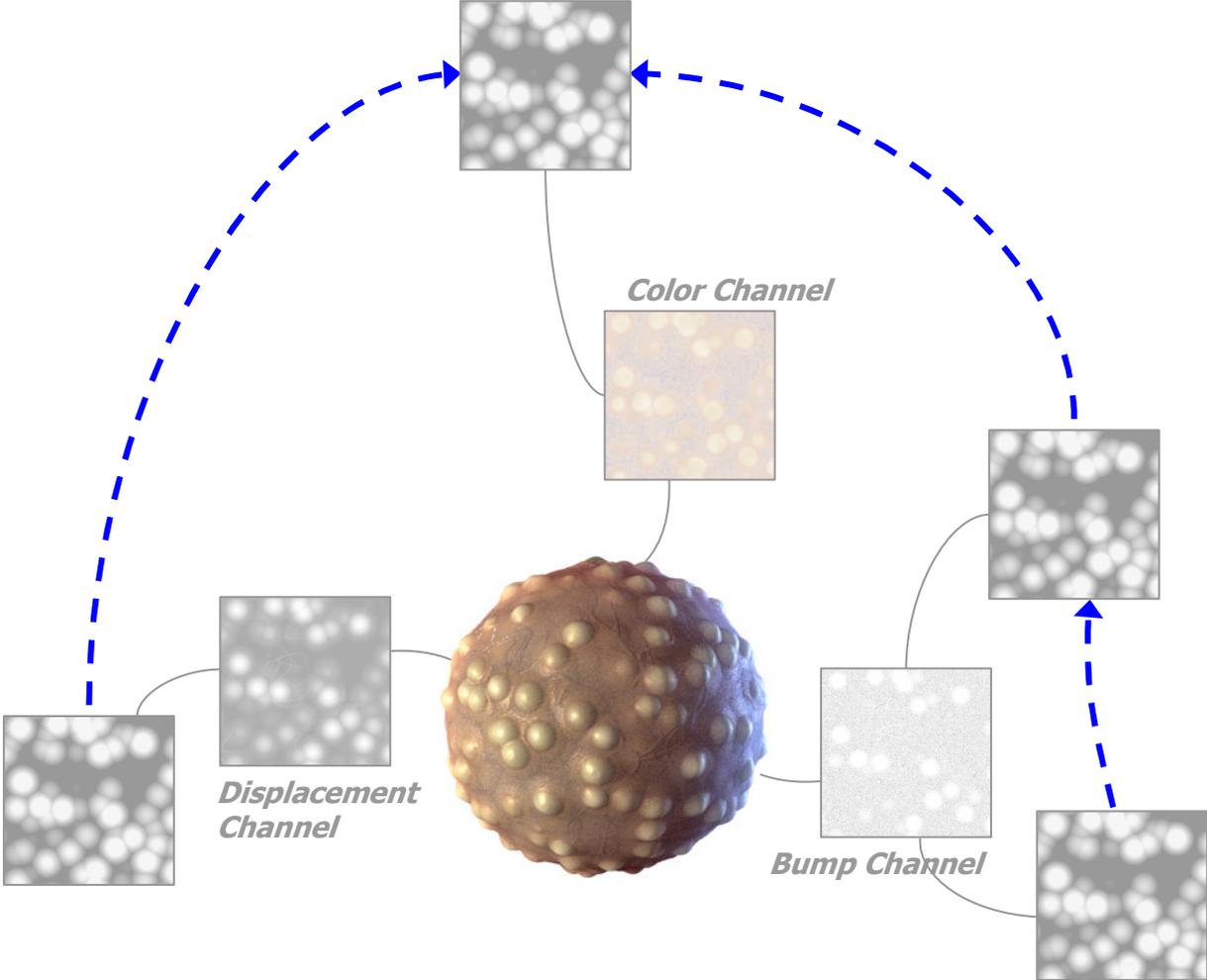


BLACKSTAR REFERENCE SHADER

– Advanced shader instancing for Cinema 4D



General Information

Copyright and Disclaimer

BlackStar Solutions does not offer any warranties arising by the behaviour of the Reference Shader Plugin beyond the legal minimal warranty. This applies to any part of the product independently even if one part contravenes this disclaimer. In no case the authors are responsible for any damage or misbehaviour occurring by this product.

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Licence

A single licence for this product is limited to a unique Cinema 4D licence and a single computer. The Plugin must not be transferred beyond these restrictions.

Installation

Installing the BlackStar Reference Shader Plugin is similar to embedding any other Cinema 4D Plugin:

- Extract the Zip-File you received to your Cinema 4D "plugins"-folder
- On the first start-up of Cinema 4D you will be asked to enter your licence key for the Reference Shader Plugin

To purchase the BlackStar Reference Shader Plugin visit <http://www.blackstar-solutions.de>

Supported Platforms and Cinema 4D Versions

The BlackStar Reference Shader Plugin is currently available for the operating systems Microsoft Windows® and Mac OS X. Supported Cinema 4D Versions are 8.5 and above.

For detailed information about the availability of the Reference Shader Plugin on your platform or 64-bit operating systems please contact us (further contact information see below).

Support and Contact

For support and information beyond this manual please contact us via email:
blackstar@blackstar-solutions.de

Important:

Concerning support requests please be sure always to add information about your operating system, your Cinema 4D version and your Reference Shader version if available. You can find your Reference Shader version in the supplied text file "version_info.txt" and also directly in the Cinema 4D Shader Property dialog when selecting a Reference Shader.

Introduction and overview

The BlackStar Reference Shader Plugin provides the possibility to reuse shaders in different channels and materials. With this plugin you no longer need to perform time-consuming multiple copy and paste operations after each adjustment of shaders. Any changes of the source shader are automatically applied to every linked Reference Shader.

I.e. put a shader in the Color Channel and you want the same pattern to be referred to the Bump and Alpha Channel. By using the Reference Shader you can easily achieve automatic adaptation of the Bump and Alpha Channel when changing only the appearance of the shader in the Color Channel.

Instance Nesting

Save even more time and effort by nesting shader references. Using multiple Reference Shaders with the same source – i.e. a Noise Shader – causes the problem to re-assign each Reference Shader if the source is changed to a Tiles Shader. By creating a single Reference Shader "R" pointing to the Noise Shader and other Reference Shaders referencing R itself, you can change the shader type with need of adapting only the single Reference Shader R. This method called instance nesting can be used to build arbitrarily complex hierarchies. Such a powerful technique is provided for advanced usage in very complex material structures.

 **Note:**

Avoid cyclic reference structures as there must be at least one real shader to be pointed at. See "Troubleshooting", page 6 for further information.

Use shader references beyond materials

Selecting a source shader of a Reference Shader offers you a tree-like view of all materials and their corresponding channels and shaders within the same document. You can choose any displayed shader – even those from materials different from the one the current Reference Shader is a part of.

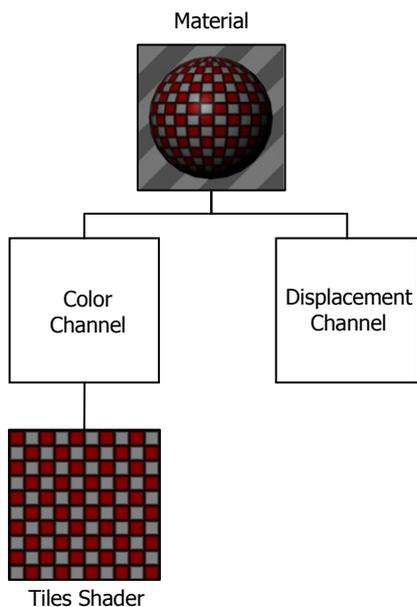
Usage Instructions

Creating a Shader Instance

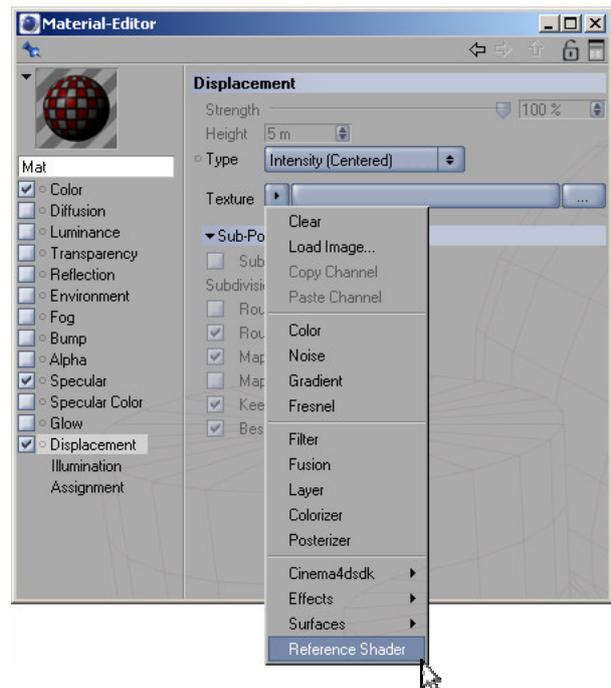
The whole user interface for creating and handling Reference Shaders is integrated in the Cinema 4D Material Editor. By selecting a material you can create a new Reference Shader just like a common texture within an arbitrary channel. To specify the source shader press the "Select"-Button in the Shader Properties of the corresponding Reference Shader. The opened dialog displays all materials of the current document and below them every shader in their particular channel. By selecting a shader and pressing the "Ok"-Button it will be assigned to the Reference Shader as its source. These two steps can be seen in figures 1 to 4 below. And that's it!

Note:

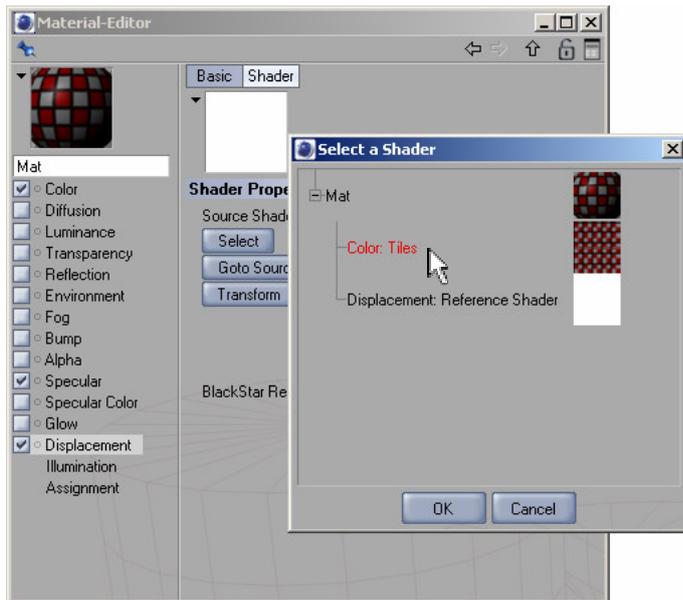
Be sure not to select a material itself and also to avoid cyclic references. See "Troubleshooting", page 6 for further information.



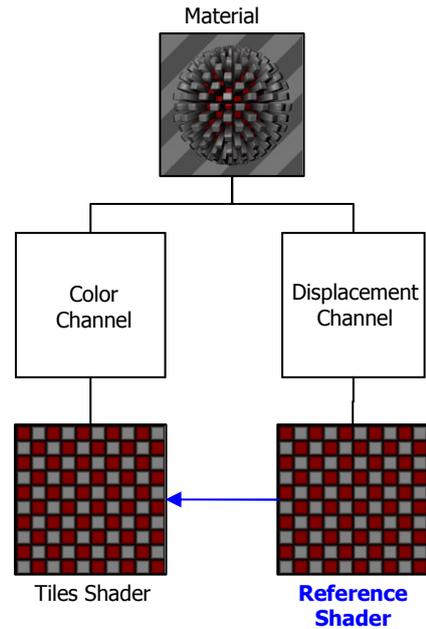
[Fig. 1: The hierarchical structure without Reference Shader]



[Fig. 2: Inserting a Reference Shader in the Displacement Channel]



[Fig. 3: Assigning the Tiles Shader from the Color Channel as source of this Reference Shader]



[Fig. 4: Hierarchical structure with shader instance - every change of the Tiles Shader will be automatically applied to the Displacement Channel]

"Select" - Redefining the source

You can change the source shader of a Reference Shader at any time by pressing the "Select"-Button and choosing a different shader.

"Goto source" - Hyperlink to source shader

With the "Goto source"-Button you can quickly access the original shader which the Reference Shader points at. Performing any changes here will update all Reference Shaders which are linked to this shader.

"Transform" – Resolving shader instances

Similar to the function "Make editable" of Cinema 4D, shader instances can be resolved and converted to stand-alone shaders. By pressing the "Transform"-Button, the Reference Shader will be replaced by an independent and editable shader of the same type, configuration and appearance as the source shader. It is situated at the same hierarchical position as the former Reference Shader. Even the underlying structure will be created. So if you have a reference to a layer with a Noise and Gradient Shader as children and you transform the reference, the same hierarchy will be generated. Just how you are used to by the "c"-Button in Cinema 4D.

Note:

By transforming a Reference Shader to a stand-alone shader the reference will be resolved and there are no longer automatic updates as the transformed shaders are completely independent.

Troubleshooting

Q: Why does the Reference Shader display only a white preview image?

A: If there is the message "Source Shader not found!" in the Shader Properties you inserted a Reference Shader without selecting a source. Press the "Select"-Button to assign an existing shader to the reference. This applies also to the case of deleting or removing the source, saving and reloading the document. Otherwise the source is a white shader ;-)

Q: What does "Source Shader not found!" mean?

A: Either you didn't select a source shader or deleted or removed the source. In this case the Reference Shader Plugin shows the latest appearance of the former source instead of a white image.

Q: What does the error message "Cyclic references are not allowed!" mean?

A: A Reference Shader must always point to a real Cinema 4D shader. To provide instance nesting it is possible to select a Reference Shader as a source of another Reference Shader anyway. This is not a problem if at least the topmost Reference Shader has a real shader as its source. If consecutive Reference Shaders build a cyclic structure you will get this message as the cycle cannot be resolved. The simplest case of such a cycle arises by trying to select the Reference Shader itself as its source.