VRayScatter For Maya
User Manual

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Introduction

VRayScatter is a plug-in for Maya which works with V-Ray rendering system. It is possible to create complicated scenes with a huge amount of objects easy and quickly with the aid of this plug-in.

Usually scenes in Maya with a great amount of even identical objects take a lot of space on HDD, consumes a lot of time for loading, and it is very hard to work with. VRayScatter is created to solve these problems. The scene containing 500 000 identical objects created with Maya 2008 occupies 1400Mb of HDD space. Now, if it is created with VRayScatter and still containing the same 500 000 objects the scene can take just 250Kb.

The most exciting feature of VRayScatter is a quick generation of an array of objects right before rendering. Those very 500 000 objects are created in only 2 seconds before rendering. Another outstanding VRayScatter ability is uploading and downloading from VRayProxy memory if needed (as and when necessary). This allows the application of polygon models without missing productivity and capacity of RAM.

Animated objects support and animated VRayProxy support allows creating huge amounts of animated objects. Now with VRayScatter it is possible to create the whole forest of wind-shaken woods.

The support of 64-bit systems and multi-core processing allows VRayScatter to create and render, for example, forest or even a city in a blink of an eye.

Requirements

Operating system:
- Workstation (artist machine): Windows
- Render node: Windows, Linux

Maya versions: 2009, 2010, 2011, 2012

V-Ray versions: 1.5, 2.0

Architecture: 32, 64 bit

Please note:
User must have local administrator rights with Windows XP to use VRayScatter.
On Windows 7 administrator rights are only needed during the installation.

Installation

Please make sure you downloaded the latest version of the plug-in from our forum.

To install the program you need to run the **vrayscatter_for_maya_<version>.exe** with the administrator rights (on Windows 7 right-click "Install as administrator").
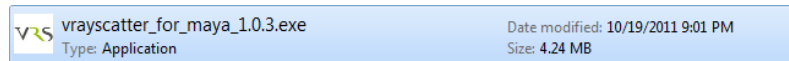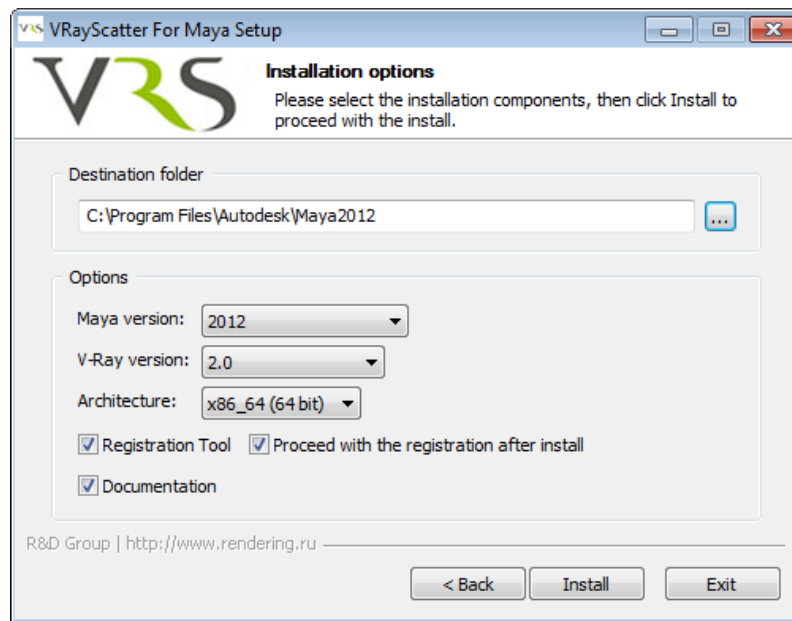

Don't forget to quit Maya before you start the installation (please check Task Manager too for any running instances of Maya).

Read the license agreement carefully. If you accept the license the click "I Agree" otherwise press "Cancel":
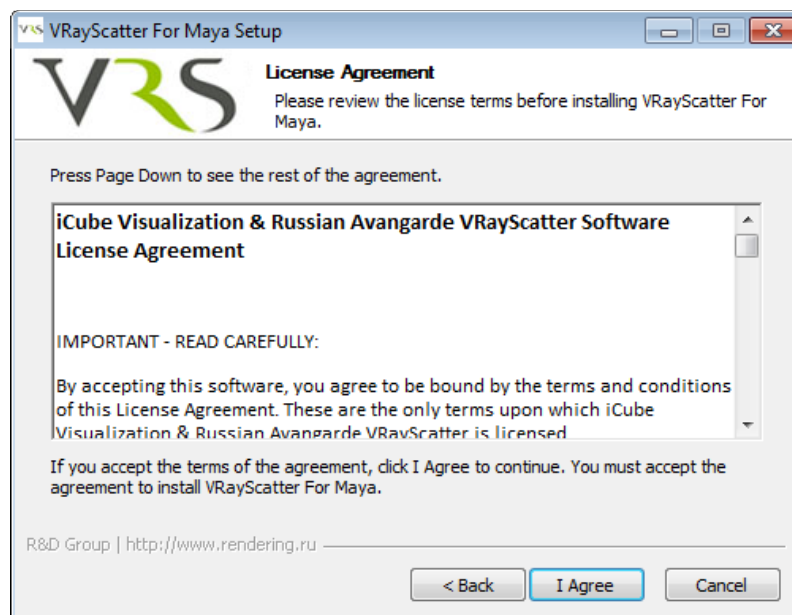
Choose Maya installation path and version, V-Ray version and the proper architecture:

Start Maya and enable *Load* and/or *Auto load* in *Window -> Settings/Preferences -> Plug-in Manager* for the **VRayScatter** plug-in**.**

Installation on render nodes

Copy **vray_GeomRamProxy.dll** and **vray_VRayScatter.dll** from *MAYA_ROOT/vray/vrayplugins* to *VRAY_STANDALONE/vrayplugins* on render nodes.

For example, from:
```
C:\Program Files\Autodesk\Maya2012\vray\vrayplugins
```
to:
```
C:\Program Files\Chaos Group\V-Ray\Standalone for x64\vray\vrayplugins
```
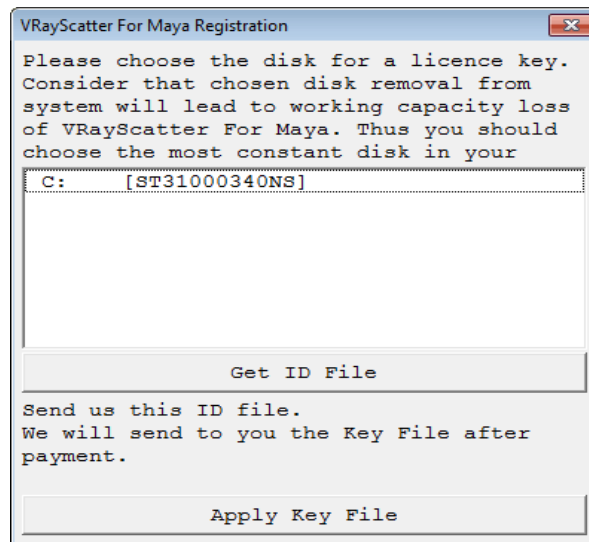
Uninstall

To uninstall VRayScatter use the uninstaller: *Start menu → R&D Group → VRayScatter For Maya → Uninstall*

Registration

Start the registration utility: *Start menu → R&D Group → VRayScatter For Maya → Registration*

Please make sure you always use the registration utility which is supplied with the particular version of VRayScatter For Maya.

Choose the hard disk to be linked with the VRayScatter license (linking with external USB storage, Flash drives and network drives is not supported).

Press the *«Get Your ID File»* button and save ***.id** file on your hard disk under any name you like.
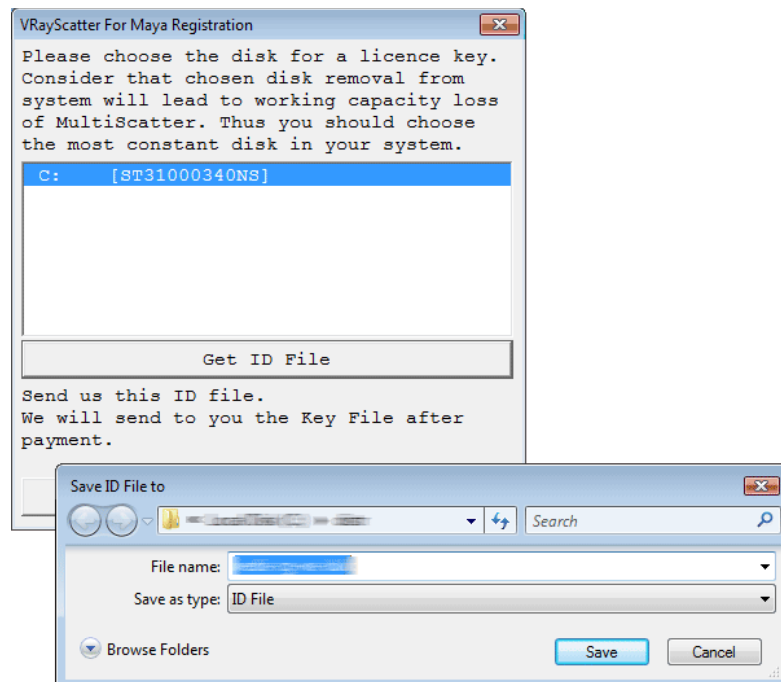
Send this file to mail@rendering.ru (or your reseller). **Please attach copy of you receipt or order**

number to avoid any delays in communication.

In the nearest time (usually within 24 hours) you will get an email from us (or your reseller) with ***.key*** license file attached. Save this file on your hard disk.
Start again the registration utility and press the *«Apply Key File»* button.

In the dialogue box select the *.key file you received from us. With this registration procedure is over.

In case of license malfunction and errors (which can be caused by disk formatting, reinstallation of the operating system or components replacement) you are free to address the developer at any time. Please make sure you download latest version from our forum and generate new ***.id*** file. Send it to mail@rendering.ru to get your updated ***.key*** file.

However, we reserve the right not to issue a new license in case of total replacement of a PC if the registration request is submitted more often than once in half a year.

ATTENTION! Please always try to email from the same email address you used when you purchased the plug-in. If we can't find your e-mail address from which you sent the ID file in our database and there is no explanation and receipt or order number in you email, your request may not be processed!
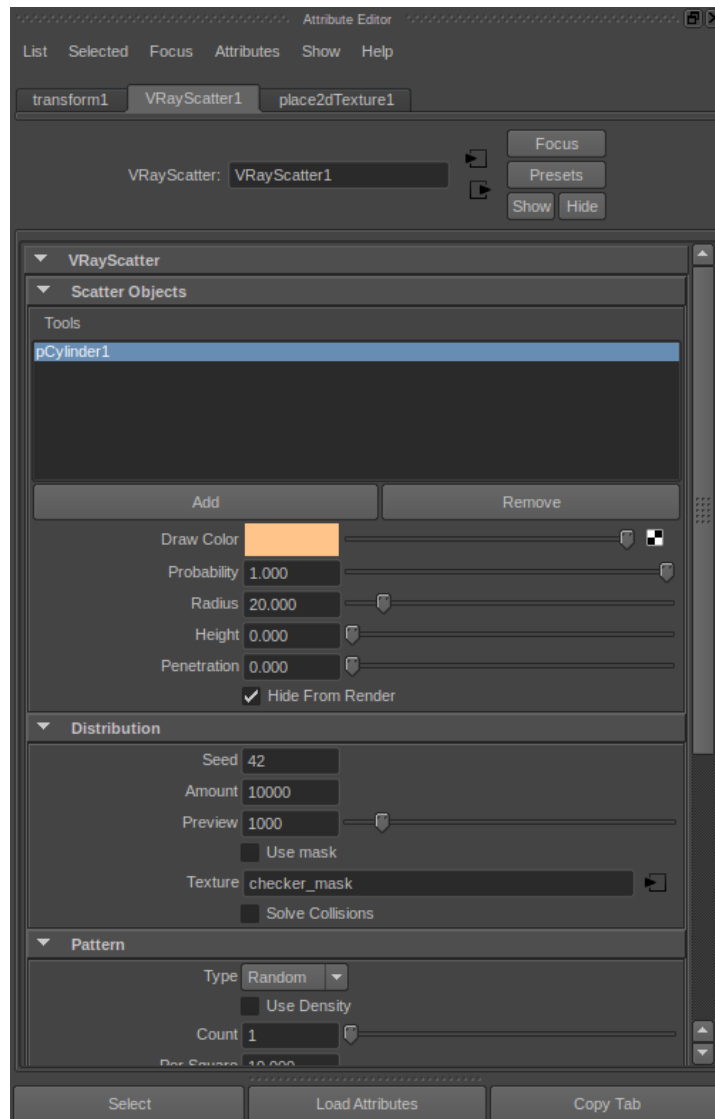
Please always attach you receipt or order number to avoid any delays in communication.

Usage

VRayScatter Creation

1. Select a mesh object you want to distribute objects on.

2. In menu press: *Create -> VRayScatter*

3. VRayScatter bounding box will appear. Use it to select VRayScatter.

User Interface

1. Select objects to distribute (*Mesh* or *VRayProxy*) then select VRayScatter and press *Add* in «Scatter Objects» rollout. This will connect objects to the "*scatterObject*" attribute.

2. If you have added multiple objects tweak the *Probability* parameterto make all objects visible or use menu *Tools -> "Auto Probability"*.

Parameters Description

Scatter Objects rollout

- *Scatter Objects* – list of scattered objects.

- *Draw Color* – object's drawing color in viewport.

- *Probability* – probability of the object's appearance.

- *Radius* – radius of the collision sphere for the collision solving. Default value is 100% - that corresponds to the object size.

- *Height* – addition offset of the collision sphere.

- *Penetration* – sets the blur of the collisions border areas.

- *Hide From Render* – hide original object from render.

Distribution

- *Seed* – initial random seed.

- *Amount* – render objects amount.

- *Preview* – preview objects amount.

- *Use Mask* – use distribution mask texture.

- *Texture* – distribution mask texture. This could be any Maya texture.

- *Solve Collisions* – solve scatter objects collisions.

Pattern

- *Type* – pattern type: Random or Pattern (constant)

Random
- *Use Density* – *r*andom position settings include only this one additional option. With it you can set the number of objects (*Count*) to be located at a single area unit (*Per Square*). The resulting number will also be fixed with 'Max Count' option. The area is defined by system units. It means that in the case when centimetres being used in system units one single object will fall within 1 square meter.

Pattern distribution uses UV-mapping to work, thus object must have proper UV-coordinates.
- *Lock Offsets* – when this option is enabled you will to control both U and V offsets simultaneously.
- *U Offset* – U offset.
- *V Offset* – V offset.

Rotation
- *Use* – quick control to enable/disable rotation features.
- *Align To Normal* – align object to surface normal.
- *Constant* – constant rotation (for each axis).
- *Random* – random rotation (for each axis).
- *Use Texture* – Use rotation texture.
- *Texture* – rotation texture. Red color represents rotation around X, Blue – Y, Green – Z. Color value 0.0 equals to rotation of 180 degrees to one direction, color value of 0.5 leaves the rotation state unchanged, color value of 1.0 makes the rotation of 180 degrees to another direction.
- *Use X, Y, Z* – quick control to enable/disable rotation about each axis when using texture.
- *Texture contrast* – quick control of texture contrast.

Scale
- *Use* – quick control to enable/disable scale features.
- *Global From/To* – global minimum/maximum scale. The actual scale will be a random value between *From* and *To* values.
- *Local From/To* – per-axis minimum/maximum scale. The actual scale will be a random value between *From* and *To* values.
- *Use Texture* – Use scale texture.
- *Texture* – scale texture. Red color represents X scale, Blue – Y, Green – Z.
- *Max Scale* – maximum scale that corresponds to the 1.0 color value.

Offset
- *Use* – quick control to enable/disable offset features.
- *Along Normal* – offset objects along surface normal.
- *From/To* – minimum/maximum offsets. The actual offset will be a random value between *From* and *To* values.
- *Normal* – additional normal offset.
- *Use Texture* – Use offset texture.
- *Texture* – offset texture. Red color represents X offset, Blue – Y, Green – Z.
- *Max Offset* – maximum offset that corresponds to the 1.0 color value.

Distance to surface borders
- *Use* – quick control to enable/disable surface border features.
- *Distance* – maximum distance from object to surface border in which object parameters will be affected. Actual control parameter behavior could be defined using Density and Scale ramps.

Distance to curve borders
- *Use* – quick control to enable/disable curve border features.
- *Distance* – maximum distance from object to curve in which object parameters will be affected. Actual control parameter behavior could be defined using Density and Scale ramps.
- *Attach Curve* – attaches selected curve.

Mask curve
- *Use* – quick control to enable/disable mask curve features.
- *Inverse* – inverse mask curve behavior.
- *Attach Curve* – attaches selected curve.

Camera
- *Use* – quick control to enable/disable camera features.
- *Use FOV* – limits rendered objects to only that are seen from camera field of view. Could save some RAM.
- *Distance* – distance from camera.
- *Affect density* – limits objects visibility to distance.
- *Attach Camera* – attaches selected camera.

Viewport
- Draw style – objects draw style in the viewport.
- Icon size – VRayScatter dummy object size.

Animation
Currently parameters animation is not supported.
This animation feature only works with VRayProxy and allows to assign different frame offset to scattered objects.
- *Use* – quick control to enable/disable VRayProxy animation features.
- *Offset From/To* – From/To frame offset. Actual frame offset is a random value between *From* and *To*.

Troubleshooting

License error

VRayScatter: Warning! Incorrect license!

In case of license malfunction and errors (which can be caused by disk reformatting, re-installation of the operating system or components replacement) you are free to address the developer at any time by sending your request for a new ***.key** file to the e-mail mail@rendering.ru.

However, in the case of total replacement of a computer by a new one new license is not provided more often than once in half a year.

Installation error
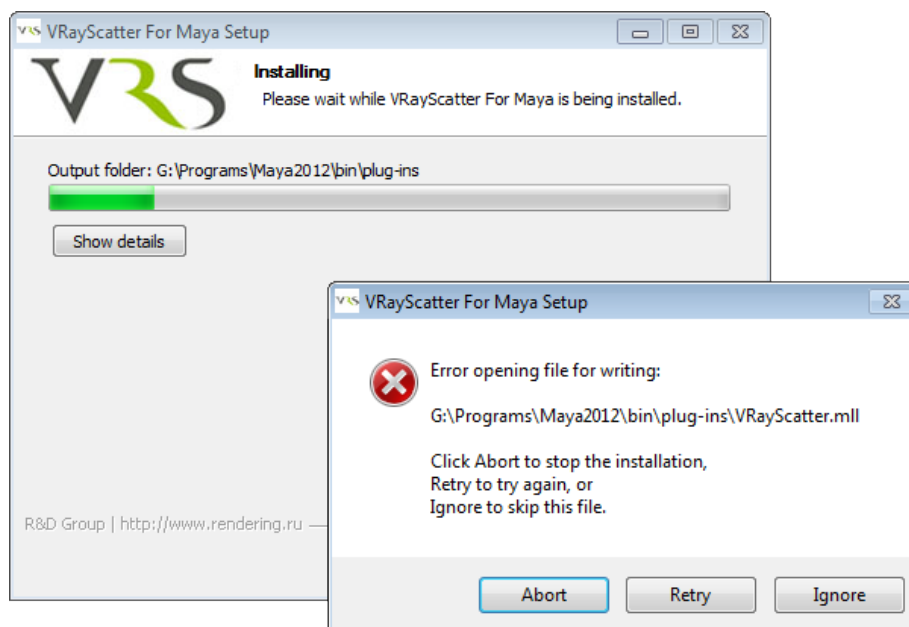
Make sure Maya is not running, please double check in task manager too.

Make sure you are installing with the administrator rights (on Windows 7 right click "Run as administrator") .

Make sure you choose right installation path.