
Plug-in of the Month, February 2013

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Explode Geometry for 3ds Max

Description

This plug-in can be used to choose one or more nodes in the scene and create "exploded" geometry. The exploded geometry is actually 3 or 4 sided faces and you have the options to add modifiers to enhance the finished geometry to your needs.

System Requirements

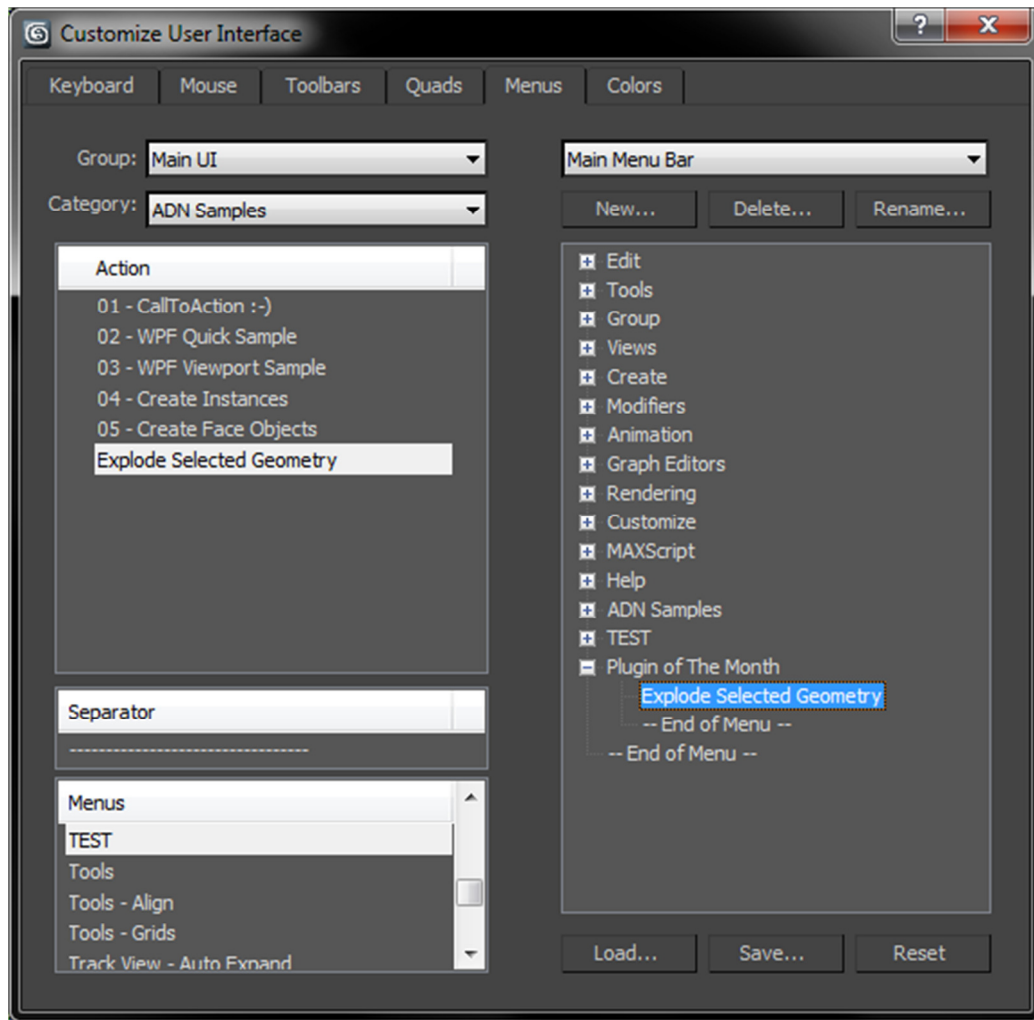
This plug-in has been tested with Autodesk 3ds Max 2013. This plugin is a .NET API using the new 3ds Max enhanced .NET API. It has been tested with 3ds Max 2013 x64, but we are providing source code. It may be possible a few minor changes to also use it with the 3ds Max 2012 Subscription Advantage Pack.

Installation

To install the plugin:

1. Copy the "ADNExplodeGeometry.dll" file into your <3ds Max install>\bin\assemblies folder. If your Windows installation is using UAR, you may need administrator's rights for this.
2. Start-up 3ds Max
3. Select the "Customize" menu, and then choose "Customize User Interface" (CUI) menu. This should bring up the CUI dialog.
4. This plugin will be located under the "ADN Samples" category, and the Action name is "Explode Selected Geometry". You can add this to any portion of the UI from here. See the online 3ds Max documentation for details.
5. For example, to add it to a new menu entry, follow these steps:
 - Switch to the "Menus" tab
 - Select "Main Menu Bar" in the drop down box (this may be already selected as the default)
 - Press the "New..." button and enter "Plugin of The Month" into the edit box
 - Find the new "Plugin of The Month" menu in the "Menus" list
 - Drag it into the Main Menu Bar TreeView
 - Select "ADN Samples" in the category drop down
 - Select "Explode Selected Geometry" in the Action column

- Drag it over to the new menu. For example:

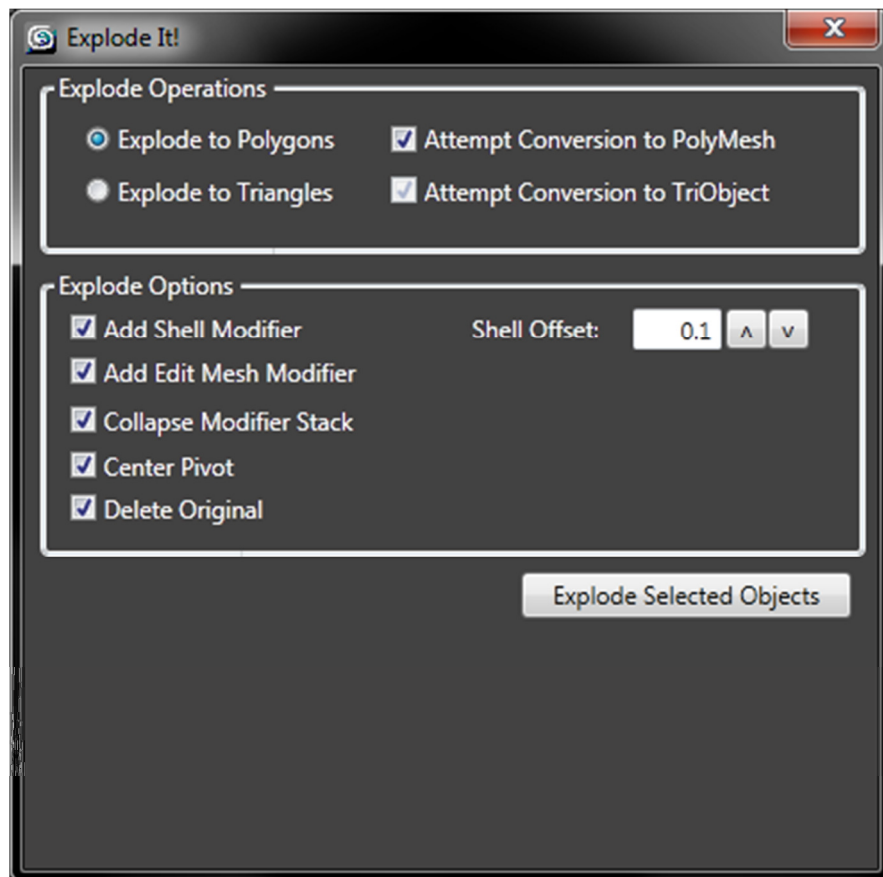


- You can now run the action from this new menu.

How to use the Explode Geometry Plugin

First select the nodes that you want to explode (you have an option to maintain the original geometry if desired). From the UI element that you assigned the plug-in action to, select it and a dialog will come up.

Select the options, and then select "Explode Selected Geometry". A progress bar will be displayed for long actions and you have the option to cancel. The plugin has several options you can choose from. Here is a screen capture of the UI:



You can choose to create three or four sided objects as a result of the explode operation. Select the radio button of the desired operation. Additionally you can toggle whether to try and convert the object's mesh before the conversion. By default it will try to convert, and if it cannot it will end. If it can be converted (or is already of the correct type) then each node will be exploded into the resulting individual faces.

You can also control several other options.

- Add Shell Modifier – will add the modifier to the resulting face object, and apply the given shell offset.
- Add Edit Mesh Modifier – will add the modifier to the stack resulting in edit mesh operation being immediately available.

- Collapse Modifier Stack – will collapse the stack down to become an editable mesh as the end result.
- Center Pivot – will center the pivot on each resulting face.
- Delete Original – will remove each original node that was used to create the new faces.

Uninstallation

Simply removing the "ADNExplodeGeometry.dll" file from your <3ds Max install>\bin\assemblies folder will uninstall it.

You will also need to use the Customize User Interface to remove it from the user interface element that you assign it to in above install steps.

Limitations

There are no known limitations; however it is a very process intensive program. If you select many nodes with many faces it could take a long time to complete, or even cause an error your system if it runs out of memory.

Author

This plug-in was written by kevin.vandecar@autodesk.com from the Autodesk Developer Technical Services team.

The idea was provided by Louis Marcoux.

Further Reading

For more information on developing with 3ds Max, please visit the 3ds Max Developer Center at <http://www.autodesk.com/develop3dsmax>

Feedback

Email us at labs.plugin-ins@autodesk.com with feedback or requests for enhancements.

Release History

1.0 Original release (February 1, 2013)

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