Alias to P3DBridge 2023 X6

USER MANUAL

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Version: 20230317.1045

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This documentation is provided with the software Alias to P3DBridge. It does not, however, constitute a contractual agreement with regard to the features and functionality of the software.

PREREQUISITE

Autodesk Alias

The plugin has been developed and tested with Alias Concept 2022. Other versions of Alias may work but there is no guarantee.

Lumiscaphe Patchwork 3D

The plugin is compatible with any Patchwork 3D Enterprise version starting from 2022 X5 release 1.

INSTALLATION

1. Install a compatible Patchwork 3D Enterprise version.

2. Then, install the plugin using the .msi file (AliasToP3DBridge 2022 release 1 x64 setup.msi). Please note that the plugin is installed on a per-user basis. Each Windows user will need to install it to use it.

3. In Alias, open the Plug-in Manager in **_Utilities_** > **_Plug-in Manager…_**
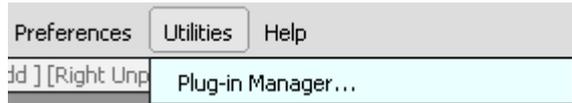
In the **_Plug-in Manager_**, check **_Load_** next to **_AliasToP3DBridge_** to load the plugin for the current session. Check **_Auto Load_** to load it for each session.

5
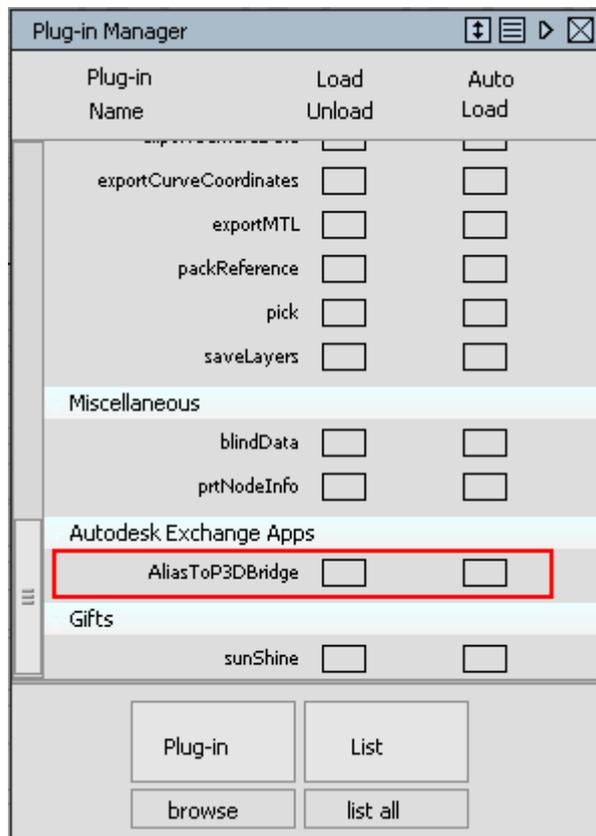
ALIASTOP3DBRIDGE USE

> ✎ **NOTE**
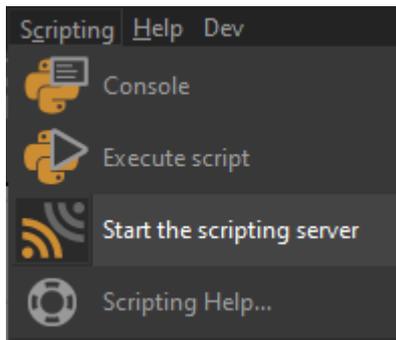> You need to have Alias and Patchwork 3D running at the same time.

Preparing Patchwork 3D to receive Alias data

Patchwork 3D needs to be in "Scripting server mode" for the plugin to connect to it.

1. In the Patchwork 3D menus bar, select *Scripting* > *Start the scripting server* to activate it.

2. Click *Start* to start the server.
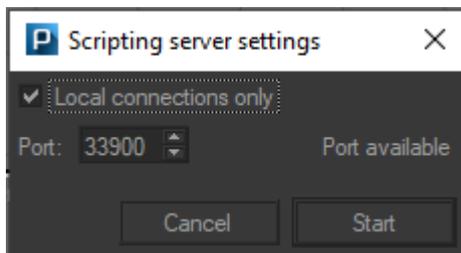
3. Click *Stop* when you have finished importing your data.

Exporting from Alias

The plugin can be invoked from the following path: **File** > **Export** > **Export to Patchwork 3D**.

This icon ⬜ displays the export options dialog box.

Export options dialog box

Host: The host to connect to. The default (127.0.0.1) means the local computer.

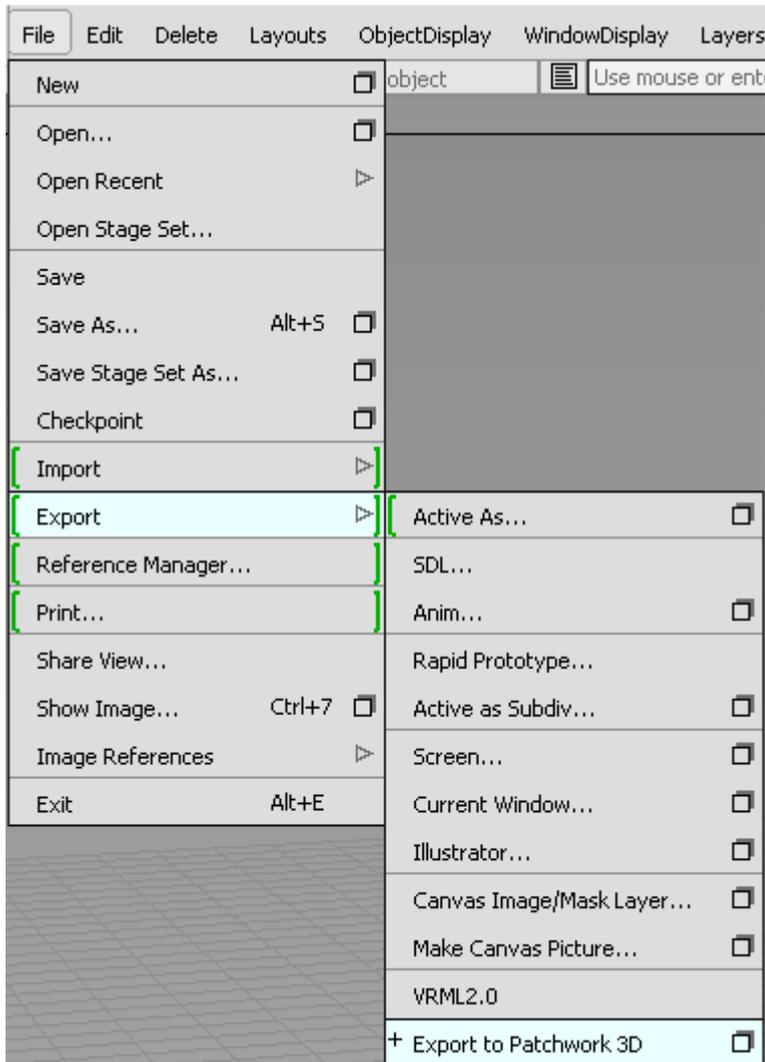**Port**: The scripting server port to connect to (defaults to 33900).

Export layers as Shaper layers: Exports Alias layers as Shaper layers.

Export groups as Shaper layers: Export Alias groups hierarchy as Shaper layers.

Don't Stitch Surfaces: Don't group surfaces. Each surface, mesh or shell will be exported individually as they appear in Alias.

Merge Surfaces in Patchwork 3D: Each surface, mesh or shell are exported individually but are merged together in Patchwork 3D. Surfaces in different layers or with different materials will not be merged together but disjoint surfaces can be merged together.

Stitch Surfaces to Shells (experimental): Whether to stitch adjacent surfaces to shells using Alias. Surfaces in different layers or with different materials will not be stitched together. Only surfaces with gaps less than the specified Stitching tolerance are stitched together. Using this setting can make Alias crash in some cases or the resulting geometry can be invalid (See the Known issue [9] section).

Stitching tolerance: The maximum gap allowed between surfaces to stitch them together. This setting only appears when **Stitch Surfaces to Shells** is selected.

Keep groups: Whether to stitch only surfaces that are in the same group. This setting only appears when **Stitch Surfaces to Shells** or **Merge Surfaces in Patchwork 3D** are selected.

Tessellation tolerance: Controls how accurately surfaces are tessellated.

Export hidden geometry: Indicates whether hidden geometry is also exported.

Export selected objects only

Export surfaces

Export shells

Export meshes

Export materials: Exports materials and assign them to surfaces. Procedural textures are not supported (only File textures).

Port: The scripting server port to connect to (defaults to 33900).

Host: The host to connect to. The default (127.0.0.1) means the local computer.

Known issue

Due to problems in Alias, stitching surfaces while exporting may crash Alias or cause the exported geometry to be exploded in Patchwork 3D. The bug has been reported to Autodesk, and is pending fix at this time.

> 💡 **TIP**
> As a workaround, you can use the **Merge Surfaces in Patchwork 3D** parameter, albeit the tessellation is less qualitative.

Troubleshooting

- **No *Export to Patchwork 3D* menu**
  Make sure the plugin is correctly loaded in Plug-in Manager.

- **Some surfaces are not exported**
  When the surface is suspected to be invalid it is ignored and a message is displayed in **Alias Prompt-line History**. Invalid surfaces are mainly due to **Alias tessellation of Shells** or when using the **Stitch**

Surfaces to Shells setting (see the Known issue [9] section). Not using this setting and unstitching shells could make the surface to export correctly.

- **Some surfaces are reversed when imported in Patchwork 3D**
  You can reverse the surface in Patchwork 3D or, better, reverse it in Alias using ***Surface Edit** > **visnrm*** in ***Palette***. Blue surfaces are correctly oriented, yellow surfaces are reversed (red in Patchwork 3D). Use left click to turn a surface blue and right click to turn it yellow (reversed).
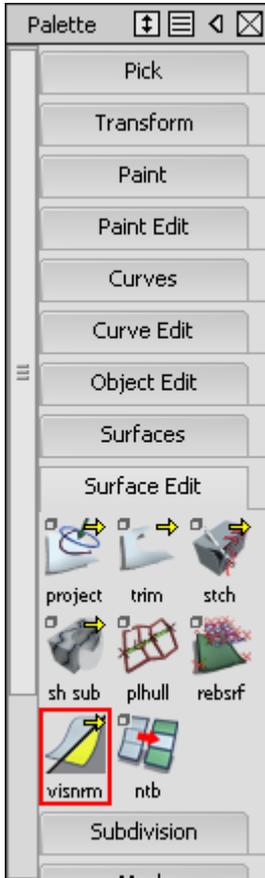
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Alias to P3DBridge 2023 X6
Version: 20230317.1045

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