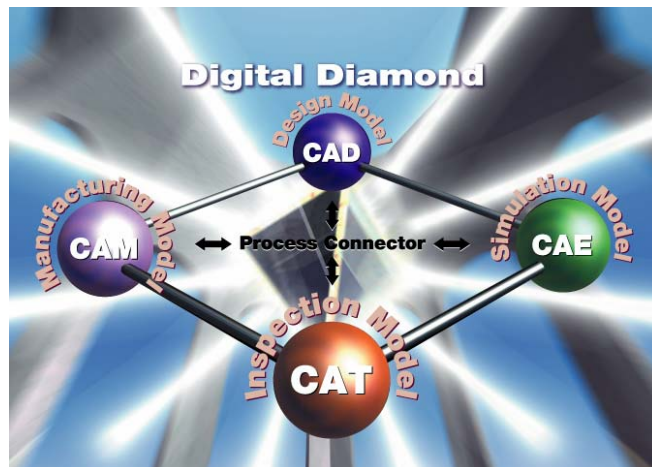


Process Connector
spGate Ver6.8
Release Information



V6.8 Version Details

« Import/Export »

01. Newly Support Formats

ThinkDesign 2008.1	Native File Import/Export
Rhinoceros 4.0	Native File Import/Export
spGauge VISTA Support	Native File Export

« PolyMend »

02. Smoothing	New
03. Environment Settings	New

« Error Checking/Healing »

04. Import Check	New
05. Error Check	New
06. Full Assembly Check	Enhancement

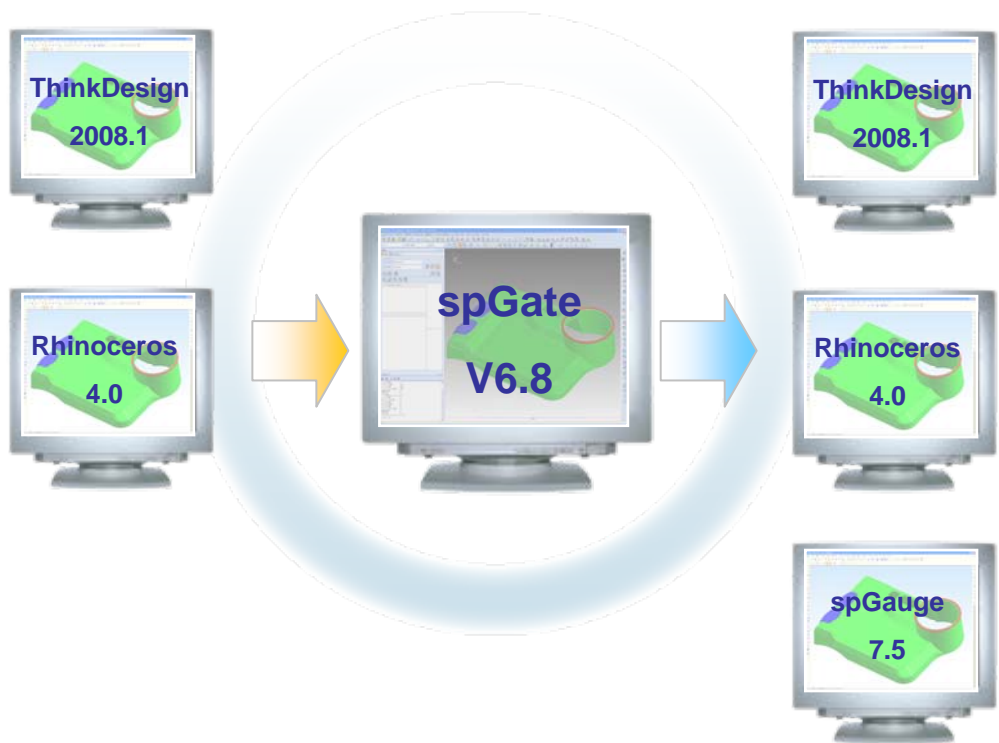
«Other»

07. Polygon Size Control (STL/OBJ Export Option)	New
08. Normal Information (OBJ Export Option)	New
09. CoCreate Flavor (STEP Target Option)	New
10. Subfigure Control (IGES Import Option)	New
11. Color Palette (IGES Export Option)	Enhancement
12. Layer Pane	New
13. Part Selection	New
14. Space Ball	New
15. Rotation Focus Definition	Enhancement
16. System Settings Dialog	Enhancement

【 Export 】

1. New File Version Support

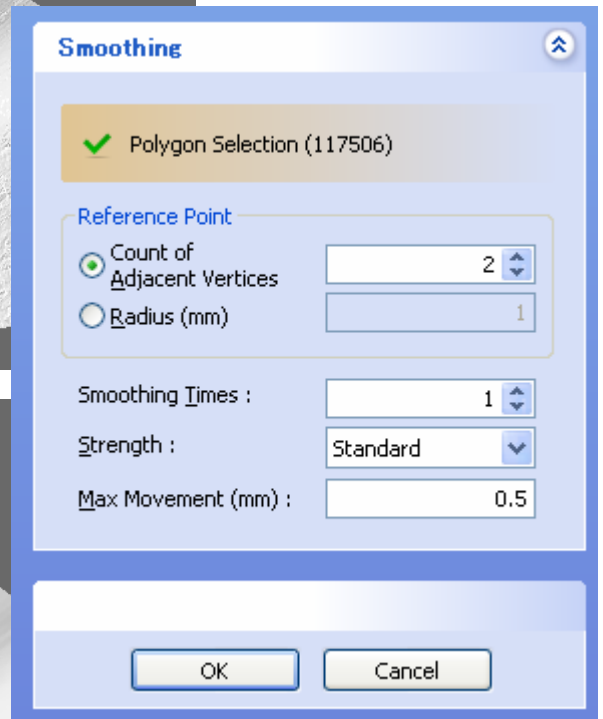
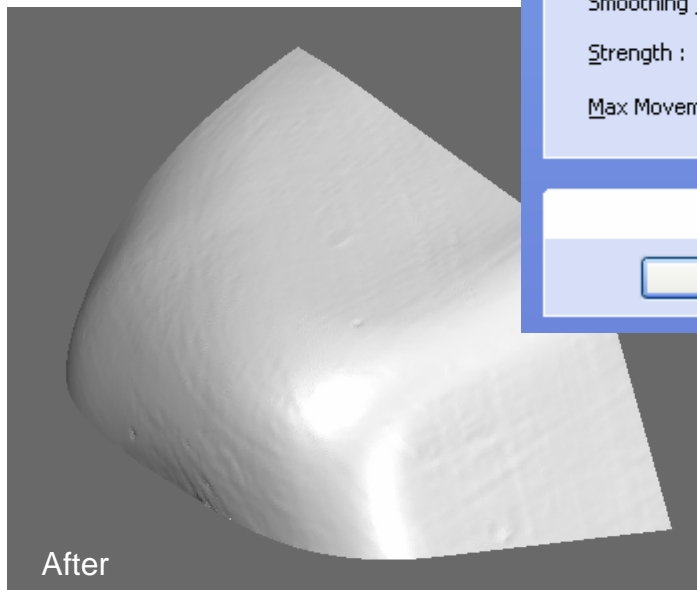
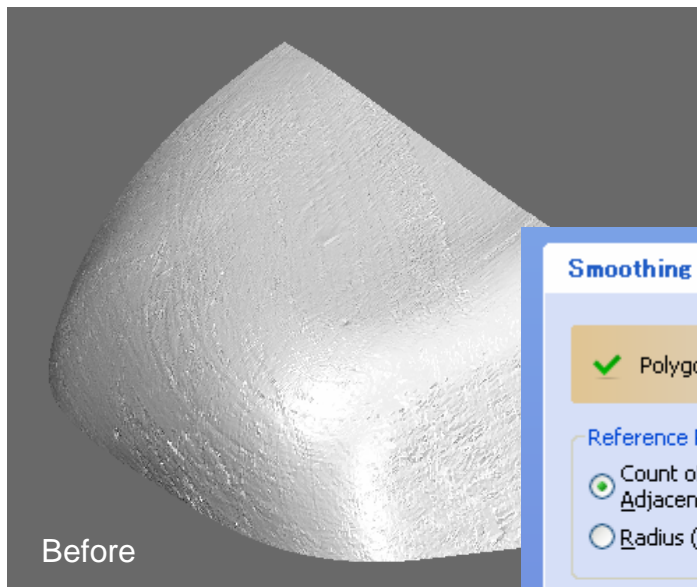
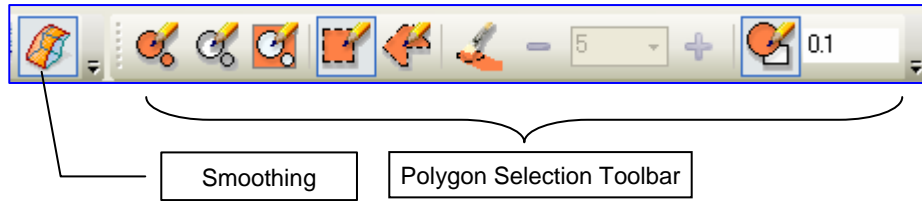
- ThinkDesign 2008.1 Native File Import/Export
- Rhinoceros 4.0 Native File Import/Export
- spGauge 7.5 Native File Export in VISTA



【 PolyMend】

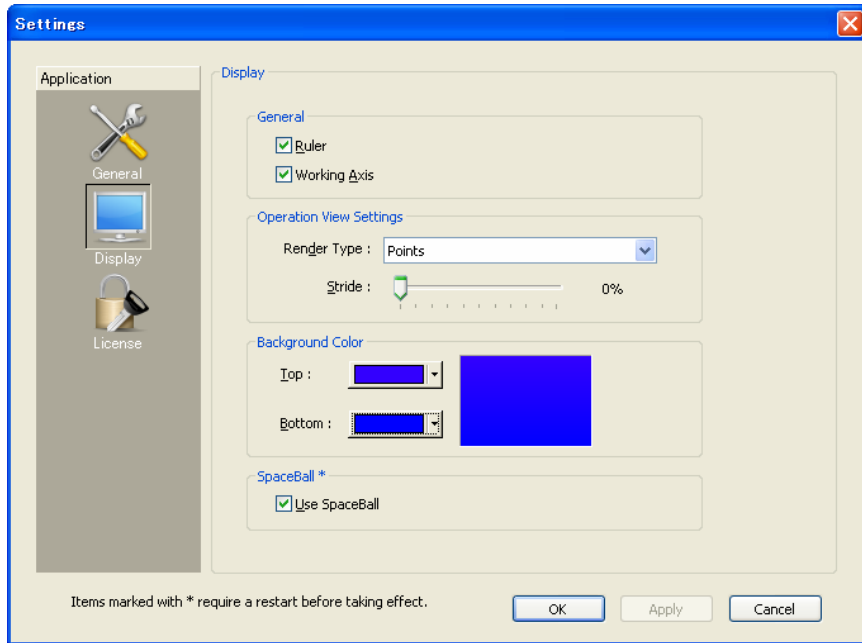
02. Smoothing

PolyMend now includes a new smoothing tool, which analyzes polygon vertices and attempts to smooth the selected portions of the mesh. Because nothing is removed during the process, the polygon count is guaranteed not to change when using this tool.



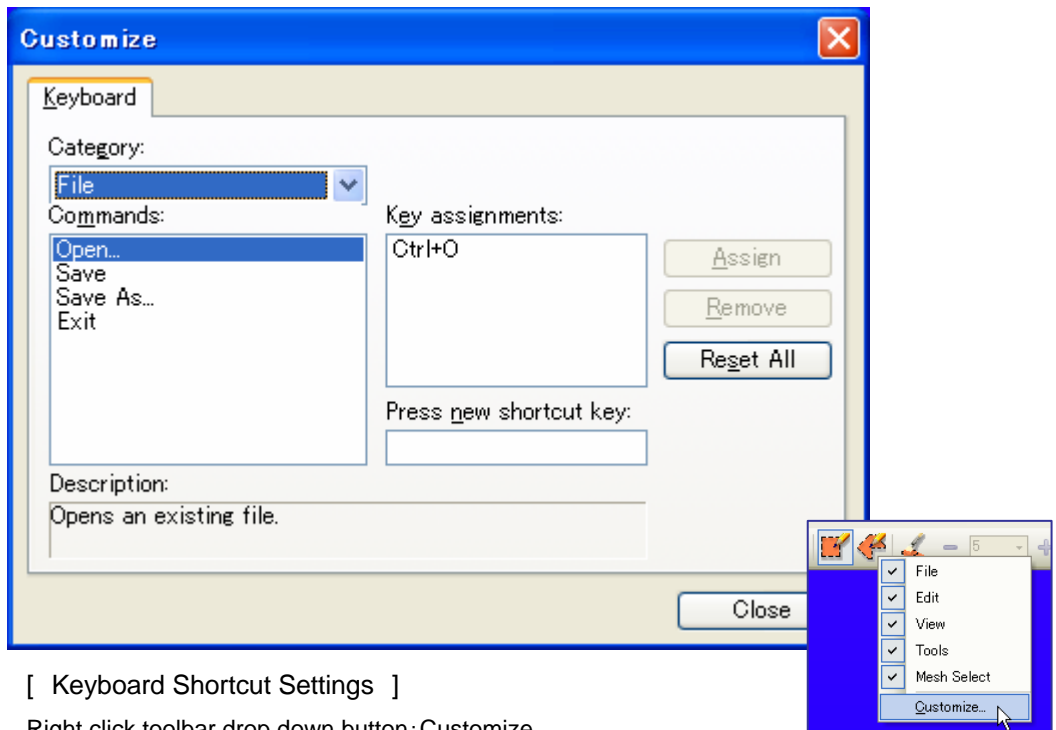
03. Environment Settings

Polymend display, license, shortcut, and various other settings are available.



[Display Settings Screenshot]

Menu: Application / Preference



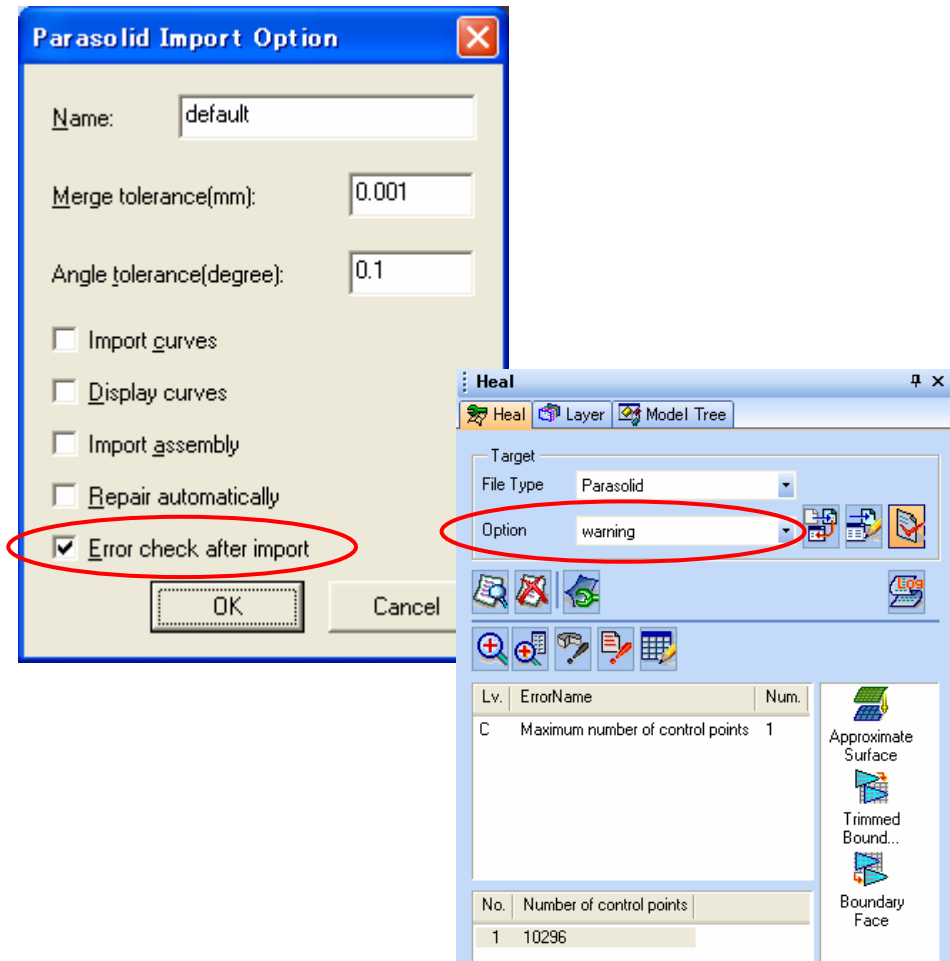
[Keyboard Shortcut Settings]

Right click toolbar drop down button: Customize

【 Error Check/Healing 】

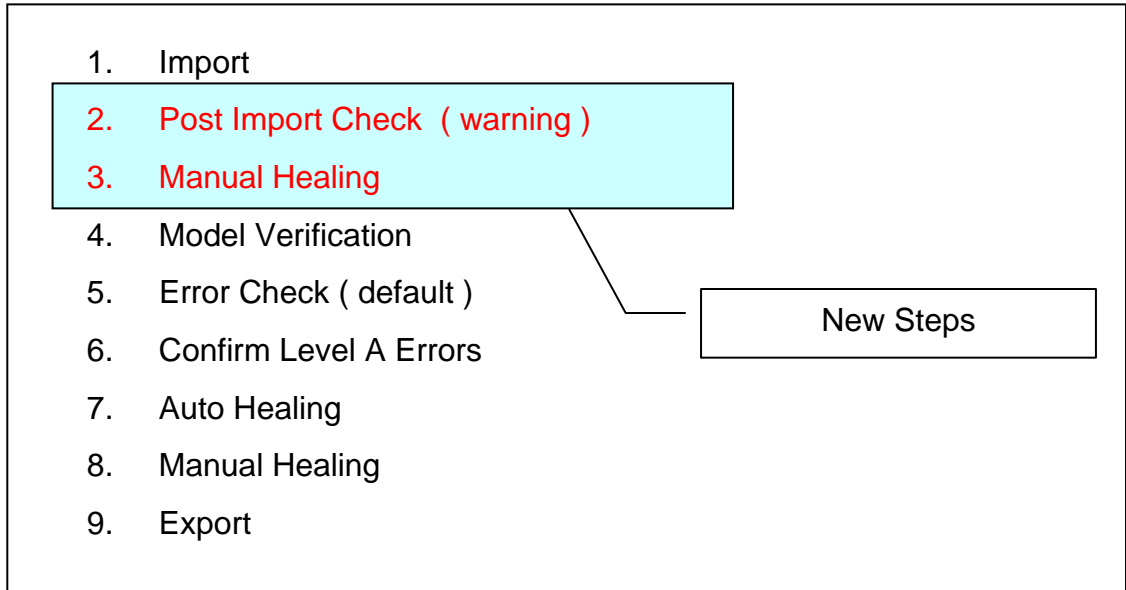
04. Post-Import Error Checking

Starting with V6.8 files can be checked immediately following import into spGate. By enabling “Error check after import” in a CAD’s import options dialog (default Enabled), checking for surfaces with a “Maximum number of control points” and “Non-tangent segment of curves” will automatically be executed.



This feature checks “Maximum number of control points” and “Non-tangent segment of curves” before allowing standard spGate operations. Enabling this options helps to improve view responsiveness and automatic check/healing performance. When an errors of these types are found the target options will be set to “warning”, informing the user that these issues need to be resolved before continuing to use spGate. After resolving the errors (using Surface Approximation, Edge Division, etc.) the target options should be changed back to “default” and normal operation can continue.

Example Flow in V6.8



When “Maximum number of control points” and “Non-tangent segment of curves” are discovered when importing a file, the above dialog will be displayed and the Target Options will be changed to “warning”. Press the OK button to repair the errors using the heal icons.

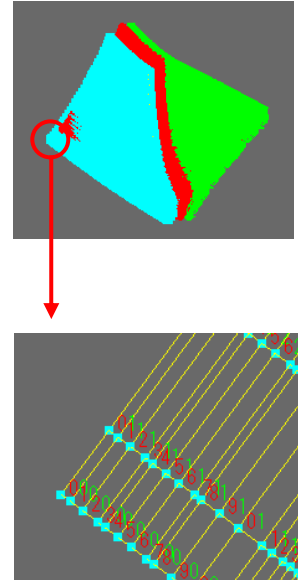
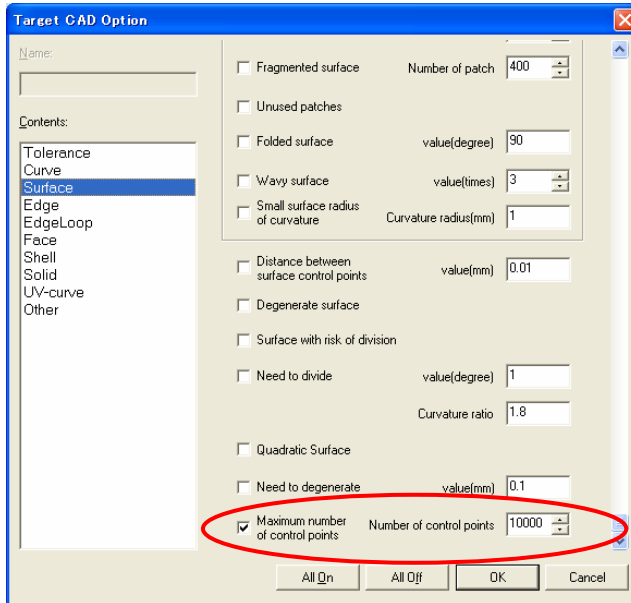
Once the repairs are complete, manually change the Target Options back to “default” and perform healing as always.

05. Error Check

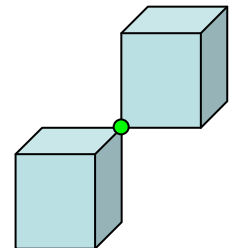
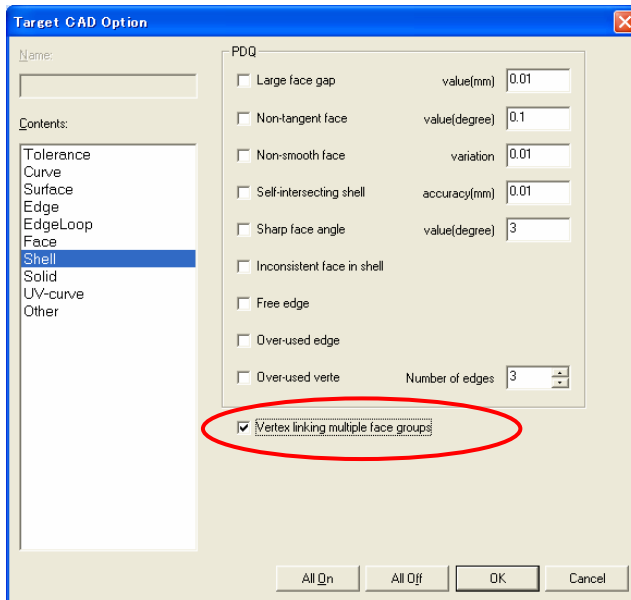
New Check Features

“Maximum number of control points”

“Vertex linking multiple face groups”



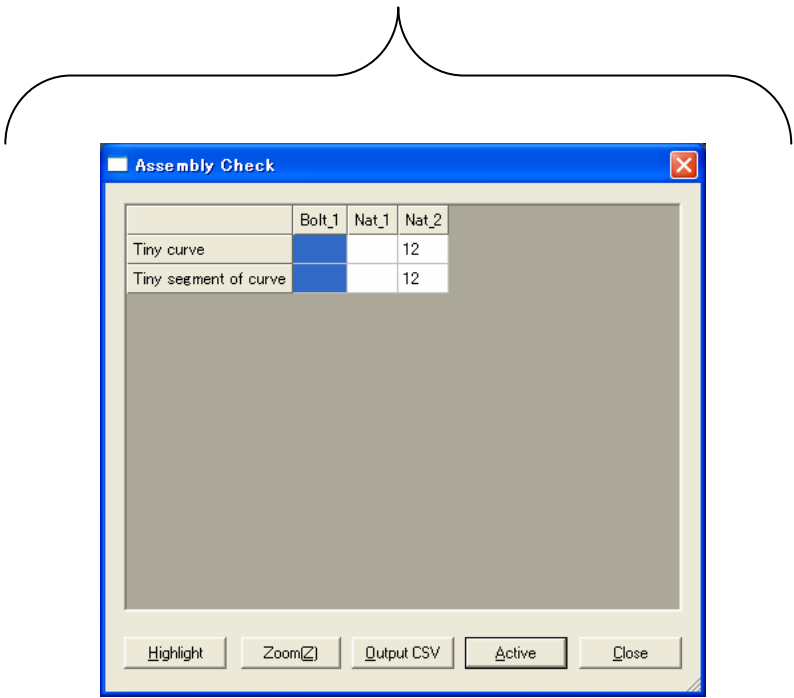
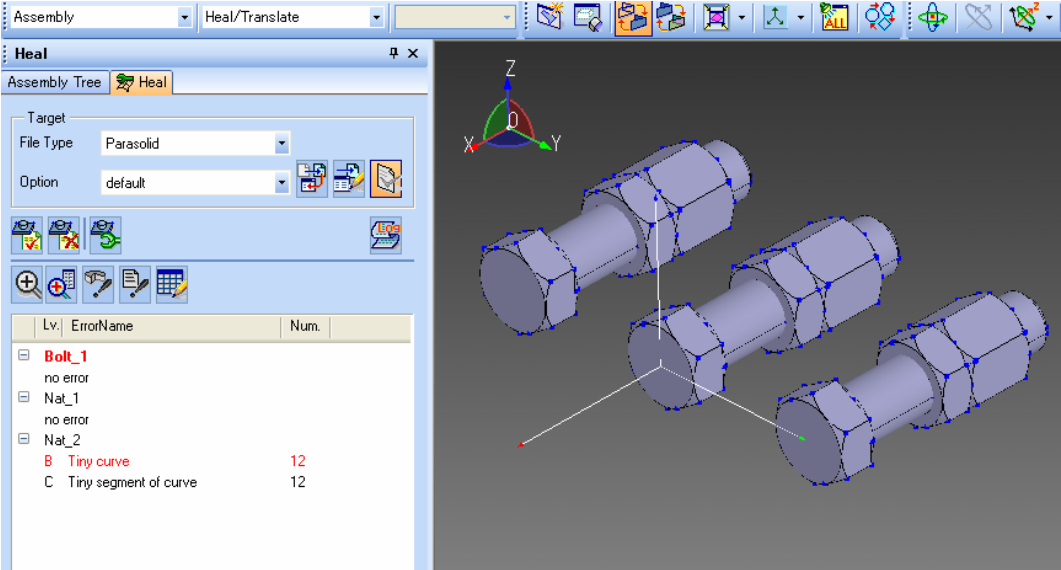
“Maximum number of control points” is used to find abnormally complex surfaces during Post Import Check



“Vertex linking multiple face groups” is used to eliminate topology that is not valid in some CAD systems.

06. Full Assembly Check

The traditional stand alone Assembly Check dialog has been eliminated and moved into the Heal Pane.

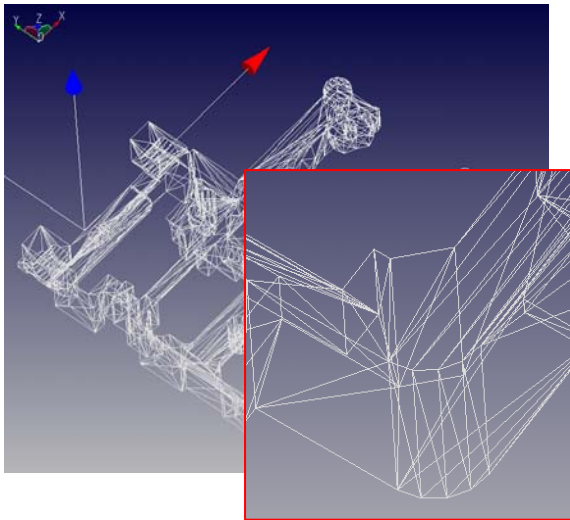


Obsolete Assembly Check Dialog

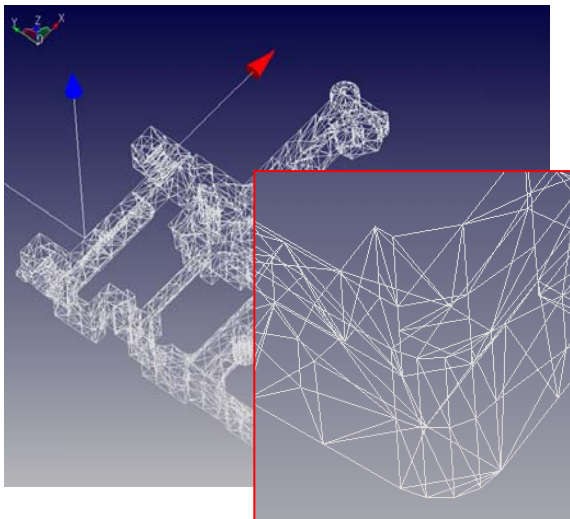
【 Other 】

07. Polygon Size Control

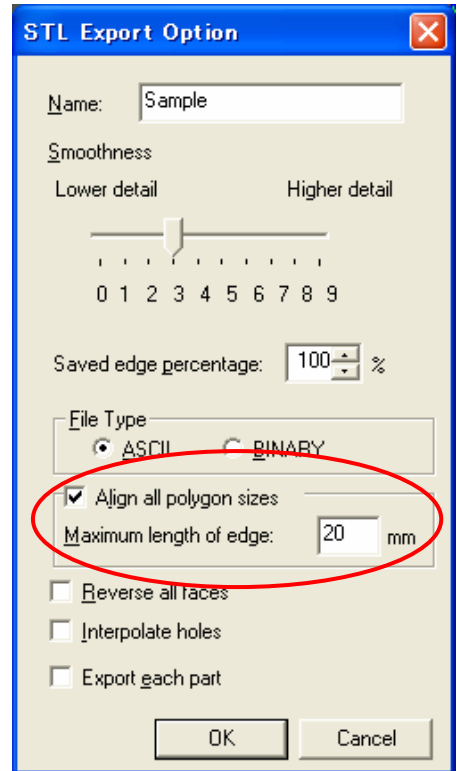
“Align all polygon sizes” has been added to STL/OBJ export options. This allows the user to define a maximum edge length, resulting in a more uniform polygon mesh export.



Previous Result

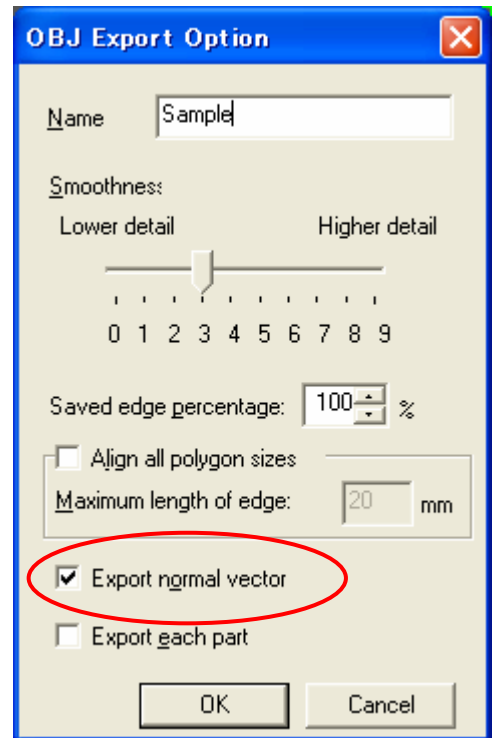


With Polygon Size Set



08. Normal Export

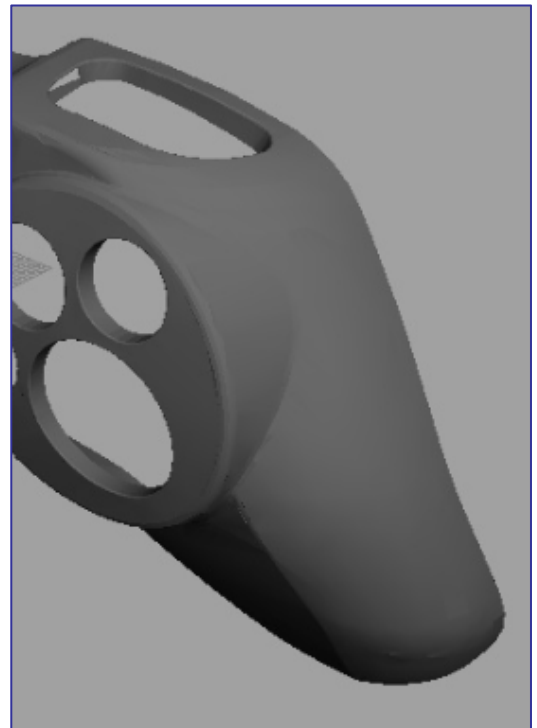
A new option “Export normal vector” allowing the writing of normal vectors when exporting OBJ files.
This enables various CG applications to smoothly display the exported polygon mesh.



* Shading in Maya



Without Normals

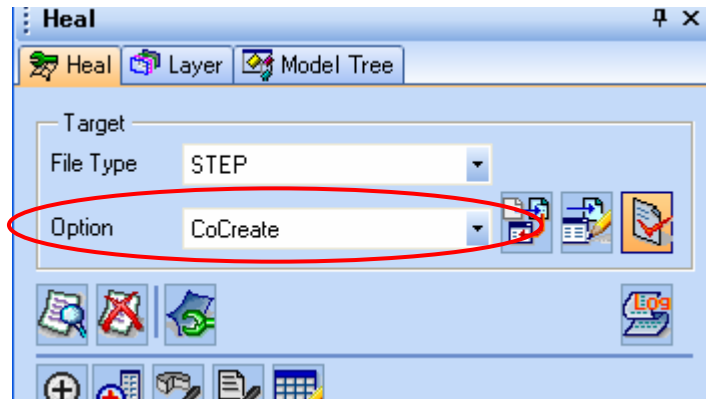


With Normals

09. CoCreate Flavor

Added CoCreate STEP Options

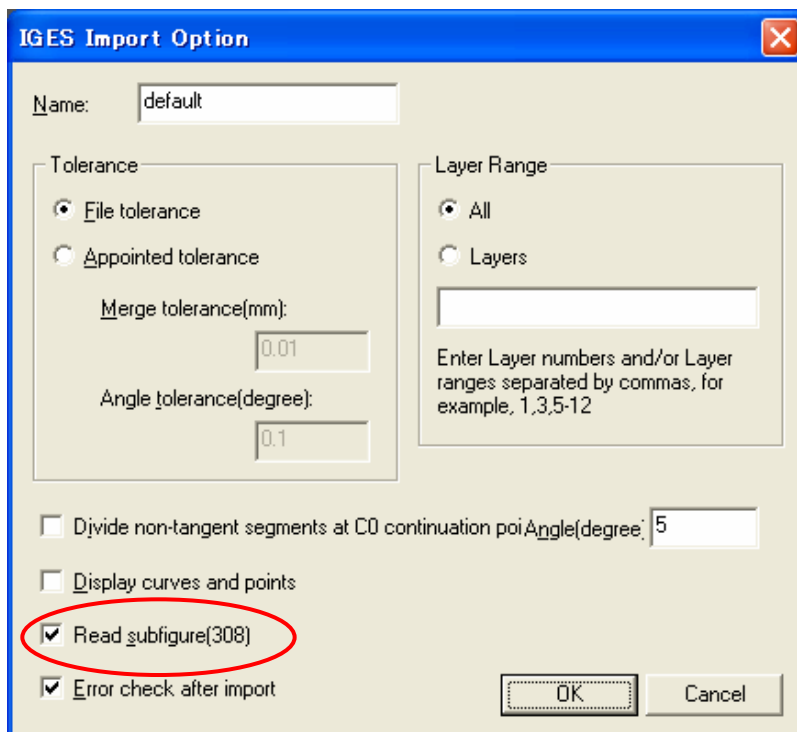
This options should be used when the data is intended for CoCreate (OSD) systems.



10. Subfigure Control

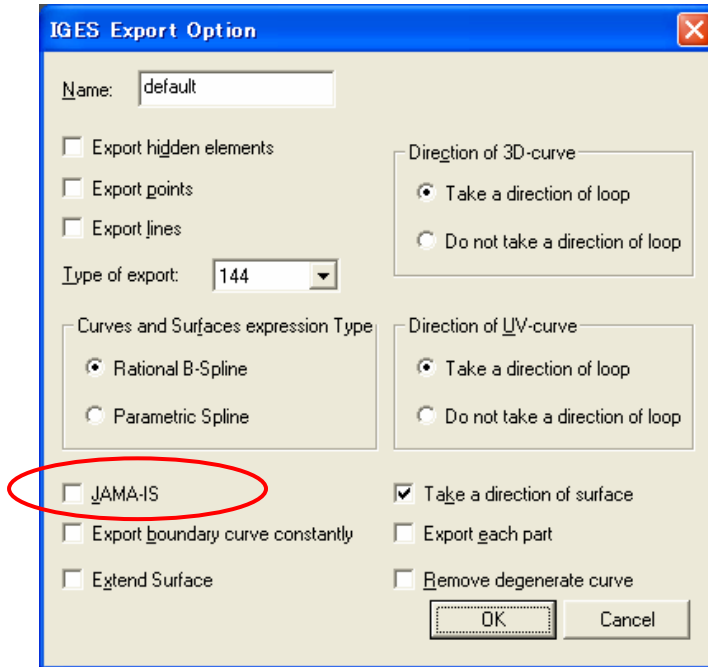
The new "Read subfigure(308)" available in IGES imports allows users to control the import of 「SUBFIGURE DEFINITION ENTITY (TYPE 308)」 (default ON).

Some CAD systems incorrectly allow the definition of multiple Subfigures. In those cases, use this option to have spGate ignore the incorrect data.



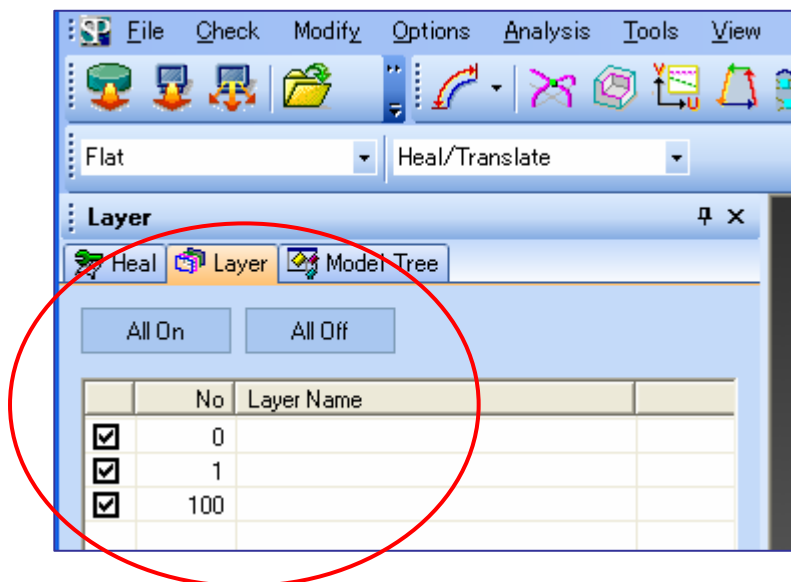
11. Color Palette

spGate now supports IGES Color Palette Export “COLOR DEFINITION ENTITY (TYPE 314)”. Color Palette is exported by default. When exporting JAMA-IS the color palette is converted to use the base colors black, red, green, blue, yellow, magenta, cyan, and white.



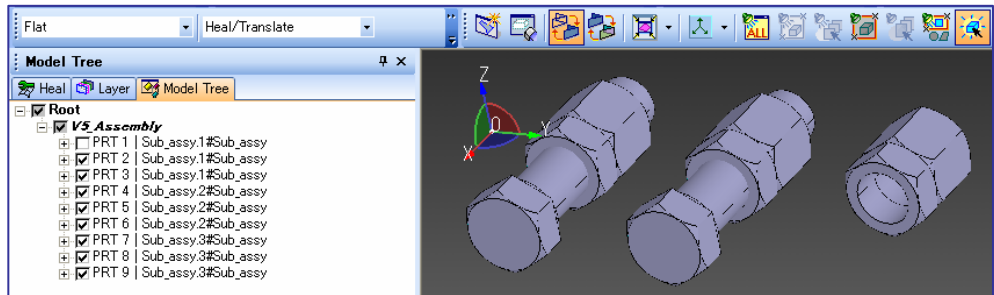
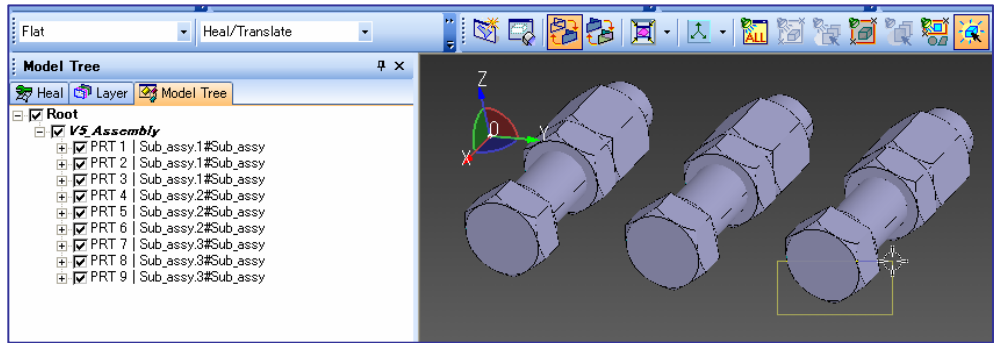
12. Layer Pane

The Layer Control dialog has been replaced with the new Layer Pane.



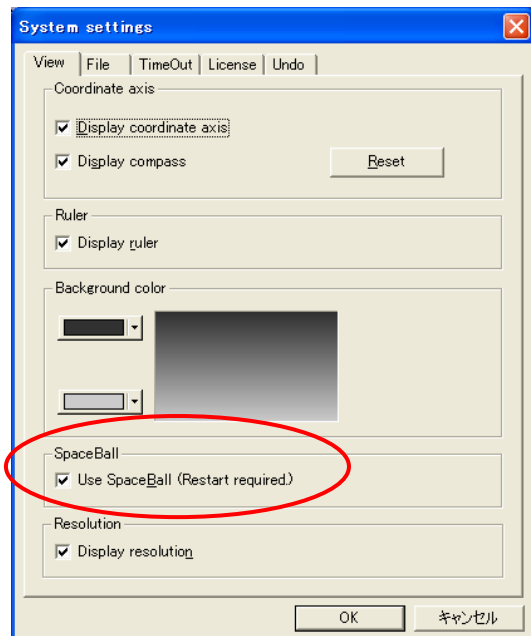
13. Part Selection

Hide/Show commands can now be executed on parts in much the same way as previously available for faces. By enabled the Part Selection toolbar icon, selection faces on a part will hide the entire part and not only the selected faces..



14. Space Ball

Support for 3D Connexion's "Space Navigator" has been added. As with many CAD applications Zoom, Pan, and Rotate can now all be controlled using the Space Navigator in spGate.

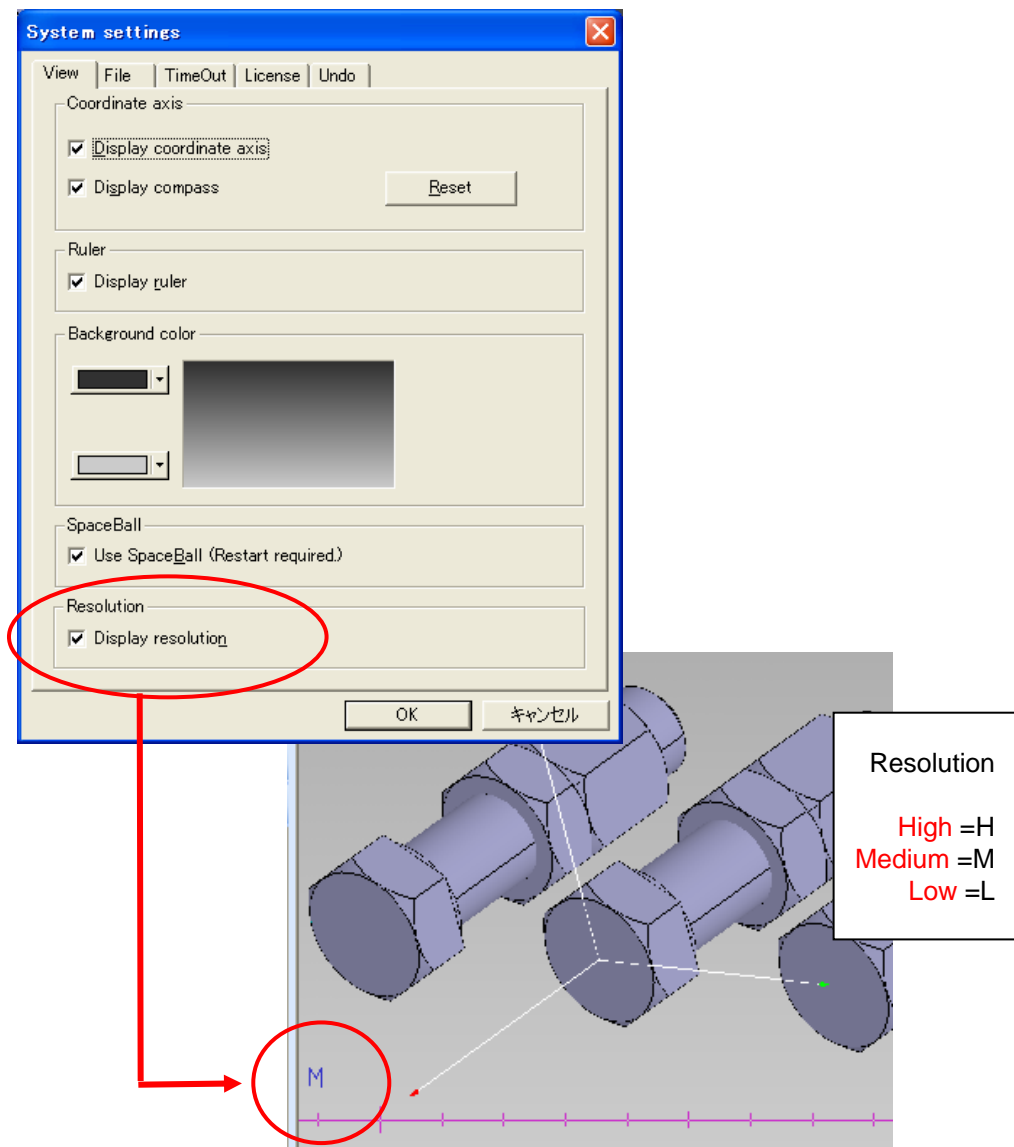


15. Rotation Point

“Specify Rotation Point” can now be defined by right clicking on an entity while holding down the Alt key.

16. System Settings Dialog

The System Settings Dialog has been reorganized with all View related options being put in the same page. An option to show resolution settings (view precision) in the view has been added.



- For a list of the latest support file formats <http://www.armonicos.co.jp/spgate/fc-io.html>

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