

Release Status

Supported CAD Systems, Kernels

Kernels: ACIS R14, Parasolid 16, CATIA V5 R14.0

Supported Platforms and Operating Systems

Linux Red Hat 9.0

Sun Solaris 2.6 and 2.7 not supported

Windows NT not supported

Import/Export

Inventor

Import of native .ipt files from versions 6 to 9

Attribute support but not assembly support

SolidWorks

Import of native .sldpart and .sldasm files from versions 98 to 2004

Unigraphics

Import of native .prt files from versions 11 to 18, NX1 and NX2

Attribute and assembly support

Centaur

Export of native .dat files

CATIA V4

Export option to select either *VOL or *SOL

Graphical User Interface

Display area and Quick-fix tools

Under the mouse right-click is Centre of rotation, Box zoom and Frame view options plus Repaint, Wipe last and Wipe all display options. Choosing either the Basic selection or Smart selection will change the right-click options:

- Basic selection offers: Centre of rotation, Box zoom and Frame view options. Box select and Polygon select. Picking targets of Bodies, Faces, Edges, Surfaces and points. Adding parent parts from child parts and the neighbours of parts selected. Select All, children, parents, unused or parts by connectivity. There are Advanced options for Set creation. Display options or the Smart selection mode. Finally a selection Clear, Cancel and Properties option.
- Smart selection offers: Centre of rotation, Box zoom and Frame view options. An Accept option (also middle mouse button), which allows groups of faces identified to be selected and new groups appended prior to processing. Advanced and Display options or the Basic selection mode. Finally a selection Clear, Cancel and Properties option.

When in Basic Select mode the user may point and pick items into the selection set with the mouse. Holding the CNTL key down and picking will remove items from the selection set.

Fifteen Quick-fix tools are listed in a column down the right hand side of the display. For convenience the Quick fix tool bar maybe moved to the left of the display with a setting under the Preferences menu. At the top of the tool bar are buttons to choose either the Basic select or the Smart select mode. Below these buttons is a Modify parameters button where any options relevant to the individual Quick-fix tools may be changed.

A new group selection algorithm has been developed for identifying ribbons of related or similar faces defining features such as fillets, chamfers or blends. When the Smart Selection option is chosen moving the mouse over the model reveals groups of three or four-sided faces. A three-sided face may cause the ribbon to branch. The edge underneath the pointer would be identified as the "seed" edge from which the ribbon has grown. After selection the group can be reduced by identifying "block" edges or increased with "gate" edges. Using this function features can be quickly collected for further processing.

Under the Tools >> Customize menu are additional, less common Quick-fix tools that maybe dragged onto the tool bar.

Integrated work area to left of Display

The new Model Tree tab allows you to view the model hierarchical structure. As branches of the model tree are highlighted the parts are shown in the display area. Groups of parts can be collected together by use of the SHIFT and CNTL keyboard keys.

CADfix 7.0 Data Exchange Change Notes



- Right click on the model tree selection and you can: Frame, Auto Frame, Display labels, Probe or make a set. Delete, Select all, Collapse all or clear the selection. The children or parents of the selection maybe added. Adjust the properties of the selection.
- In-line with the model tree branch you may set the attributes of the part. Across the top of the Model Tree tab window you may click on a heading to sort the entities on labels or attributes.
- At the bottom of the model tree tab window are a number of filters that may also be applied to the listings.

Within the model tree tab has also been integrated the Assembly Manager

Information area below the Display

When the user is in selection mode the model entity summary will be changed for a summary of the selection set contents. Other indications of the change will be SELE replacing ALL as the display part and one or other of the selection mode icons in the Quick-fix tool bar being depressed.

Helpful information on the state of the selection or picking will be displayed to the left of the bottom panel.

Menus and Icon bars above the Display area

Icons have been generally revamped to give a clearer smoother look. The Attribute Manager and Part Browser have been removed as the functionality has been replaced and enhanced under the Model Tree tab.

Measure Tool

X, Y and Z coordinates have been added to this tool

Wizard Process

Import

IGES import option line font filter added

Prepare

The topology tab in the prepare options dialog has been updated so that there is now only one tolerance at which 'Remove short edges in a chain' and 'Collapse small features' will be performed. This was due to a conflict between the 'Collapse small features' option and the diagnostic scan for 'Tiny faces'. Both options used the same tolerance value which is typically $1.0E-03$ * model diameter, but this is too large for collapsing small features where the tolerance should be typically $1.0E-04$ * model diameter. So the scan for tiny faces now uses a tolerance of $1.0E-03$ * model diameter and the fix for collapsing small features now uses the same tolerance as removing short edges in a chain ($1.0E-04$ * model diameter).

Export

Attributes definitions clarified

Diagnostics/Interactive Repair

Diagnostics & Repair

- Integrity - Degenerate edges (R-ED-DEG) has been added
- (LO-ISP)
- (FA-ISP)
- Spline edges and zero area faces
- (OS-FA) from OS-SU

Defeaturing/Simplification

Delete feature tool

Amongst the Quick-fix tools is a new feature deletion tool, which can be used to remove ribs, bosses and holes. The tool will also attempt to sensibly rebuild the geometry after a fillet or blend removal by extending the neighbouring surfaces and adjusting the topology to heal the "scar".

General

FlexLM licence system

The licence system has been upgraded to version 9.5 for better security.

Shaded Body display

The behaviour of the shaded body display has changed such that if the body does not have any assigned colour, then the colour assigned to each face will be used instead, if they have any. If no assigned colours are found then the default yellow will be used. This should make the shaded body display more compatible with colours imported from CAD systems where they tend to be carried by the individual faces rather than the whole body.