

# CADfix

## CADfix 11 SP2 Data Exchange Change Notes

### Release Status

#### Supported Platforms and Operating Systems

Windows Vista, 7, 8 and 10 64 bit

Linux RHEL 6 64 bit

### Import/Export

#### ACIS

Updated to version 2018 1.0

#### CATIA V5

Updated to version V5 – 6R2017

#### IGES

Improved p-curve handling when exporting to IGES format

#### Inventor

Updated to version 2017

#### JTOpen

Updated to version 8.5

Improved JT import (vertex normals) for smoother visualisation and export where supported

#### OpenCASCADE export

Export to .brep file

Connect commercial CAD to OpenCASCADE apps with full power of CADfix clean-up and healing

#### Parasolid

Updated to version 29.1

#### STL

Improved STL export quality (at cone tips)

### Assembly Manager

- Faster display for large assemblies
- Significant speed-up when exporting

### Wizard Process

- Improved healing of grossly sloppy vertices

### Applications

- **STL (facet) manager**
  - Added extra Laplacian smoothing for faceted models
  - Extensive additions to facet properties for scaling, min/max clipping, smoothing etc
  - Tabulation of facet distances to point clouds

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- Tabulation added for specific facet properties
- Collection of facets by property
- Facet selection now supports dynamic model rotation when paused
- **Zone manager**
  - Improved handling for display of interior lines
  - Collection of zones with different characteristics has been added
- **3D Scanning**
  - Point cloud noise reduction/smoothing
  - CAD to cloud comparison (no tessellation)
- **3D Differ tool**
  - Display of results improved by smarter grouping
  - More robust comparison logic to detect smaller diffs
  - Major enhancements coming in CADfix 12 release

## Defeature and Build tools

- Simplify cones to “chip cones” which have a corner at the apex
- New hole simplification tool reduces compound/stepped holes to simpler form
- Extend joining of lines to give an exact option and a non-G0 concatenation of resulting NURBS
- Split face with a plane more robust
- Split face along uv supports additional is0-picking types
- Boolean subtract now copes with multiple bodies as a valid result

## Morph

- Improved by adding Nastran BDF file reader
- Support for morphing an assembly model
- Improved mesh matching performance

## CAE Meshing

- New element quality test: CRAT and VRAT
- Improved flexibility of the mesh connectivity generation
- New Advancing Front with Local Reconnection (AFLR) meshing style for TR3 and QU4.
- Listing of elements by type
- Improvement to the handling of arc lines > 180
- Collection of nodes outside the bounding box of its parent geometry
- Addition for the computing of PY5 mass properties
- Collection of elements by 1,2 or 3 dimensions
- Improvements to turn based mesh refinement by application of a minimum radius
- Improvements to source based mesh control division distribution for better quality mesh
- Extend meshing instruction to include keep sets
- Removal of certain 2D surface meshing limits for side compatibility when using TR6 elements
- Allow Faceted Tartan mesh to be generated on combined lines

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### General

- Increased material property limit from 1023 to 4095.
- CADfix configuration files (.CADfix1100) now segregated based on product type
- New display type code for showing line/edge sense.
- Tabulation of line length either individually or by sets
- Extension of collections for properties assigned
- Improvement to the handling of arc lines > 180
- Coprocessor control has been extended to include a working directory argument
- Extend geometry building from mesh
- Collection of elements into sets by volume
- Polygon picking issues resolved
- Various user driven improvements