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 suppoted

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