



International TechneGroup

CADfix 11/SP2

Oct 2017

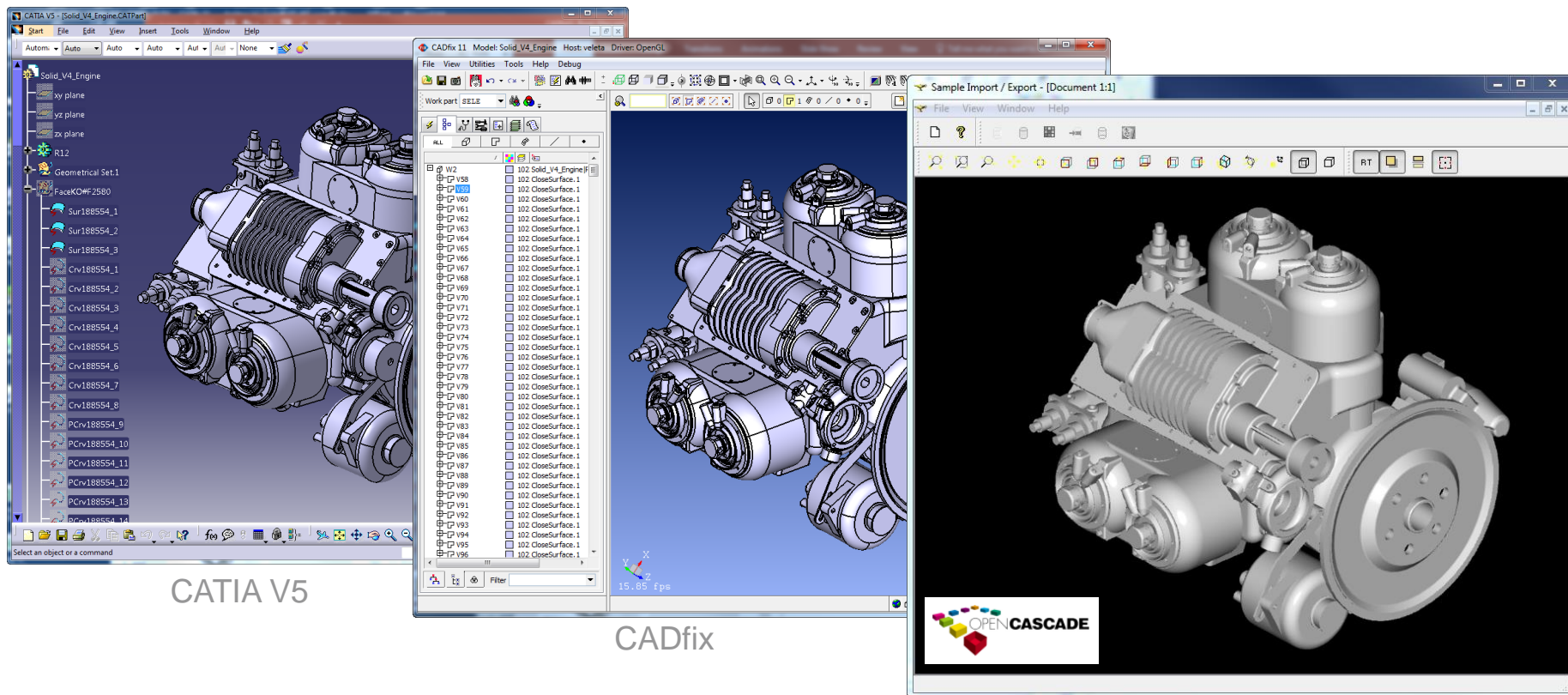


CADfix 11/SP2 Summary

- Import/Export
 - CAD version updates
 - CATIA V5 V5–6R2017
 - Inventor 2017
 - JT v8.5
 - Parasolid v29.1, ACIS 2018 1.0
 - New export to OpenCASCADE (.brep)
 - Improved STL export quality (at cone tips)
 - Improved JT import (vertex normals)
- Assemblies
 - Faster display and selection
 - Significant speed-up when exporting
- Wizard
 - Improved healing of grossly sloppy vertices
- Morph
 - New import of NASTRAN mesh
 - Support for morphing an assembly model
 - Improved mesh matching performance
- 3D Scans
 - Point cloud noise reduction/smoothing
 - CAD **to** cloud comparison (no tessellation)
- Diagnostics
 - Improved 3D differ tool
- Facets
 - Facet selection now supports dynamic model rotation when paused
- Defeature
 - New hole simplification tool
 - Split face with plane more robust
- Build
 - Split face along uv supports additional iso-line picking types
 - Boolean subtract now copes with multiple bodies as a valid result
- GUI
 - Polygon picking issues resolved
 - Various user driven improvements

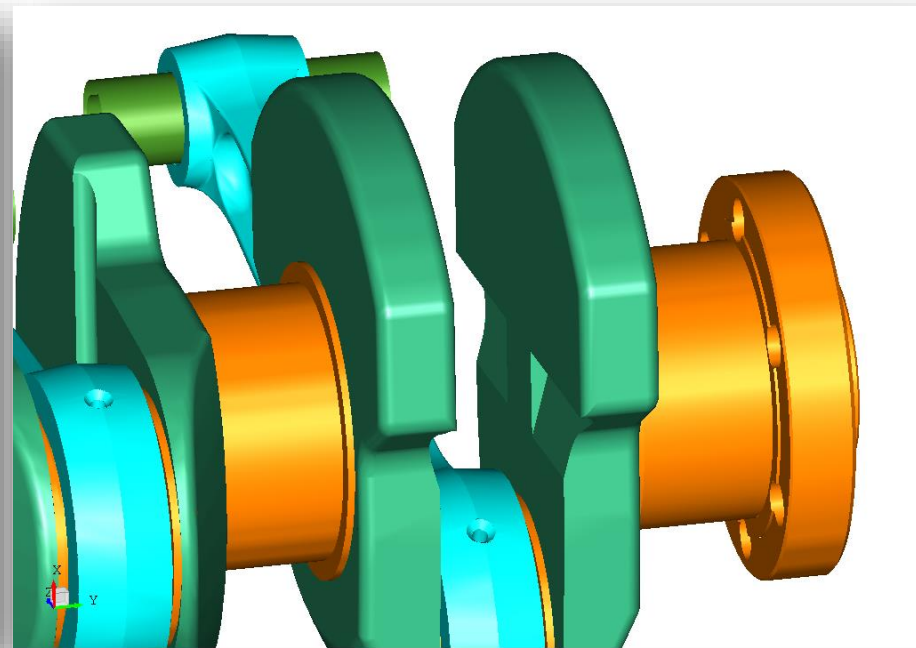
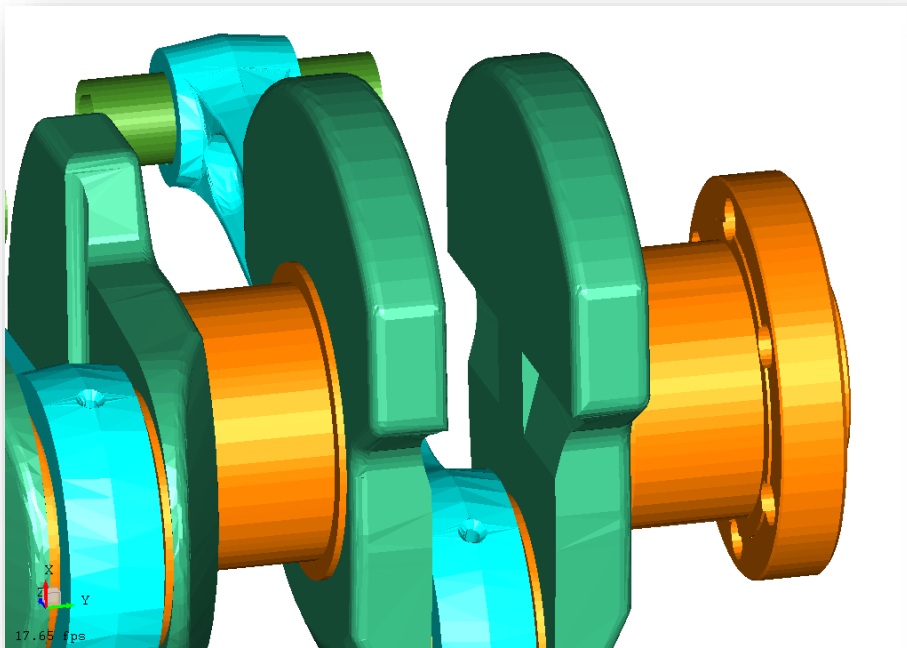
New OpenCASCADE Export

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



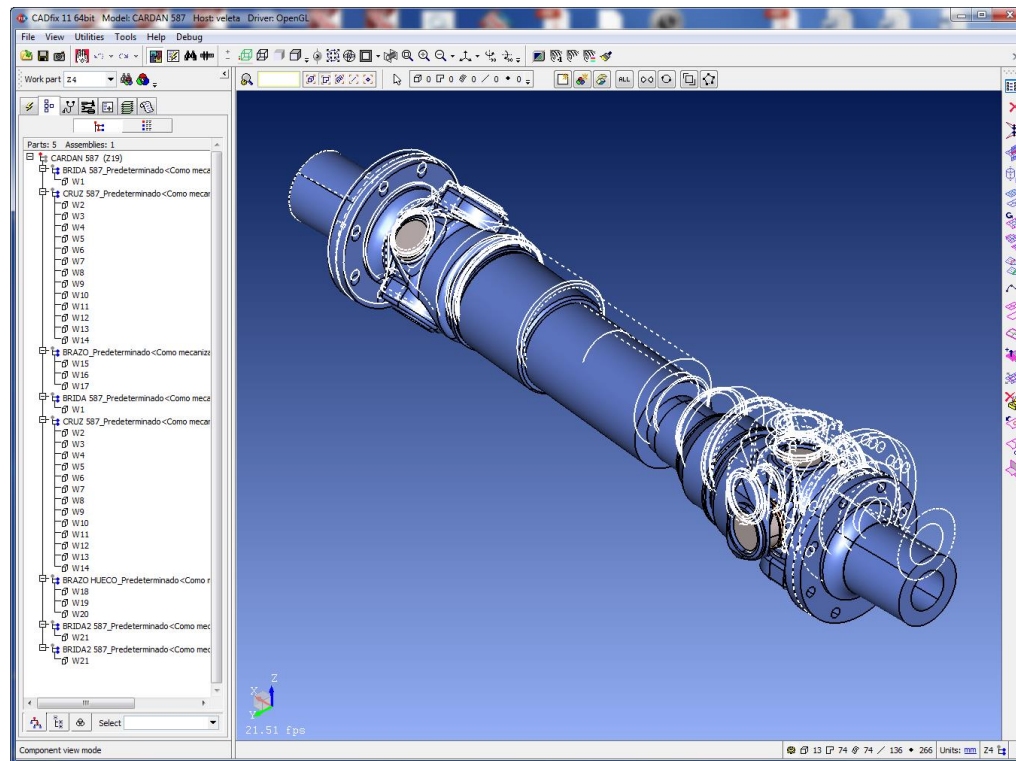
Improved JT Import

- Support for import of vertex normals
 - Smoother visualisation
 - Exported to downstream systems (where supported)



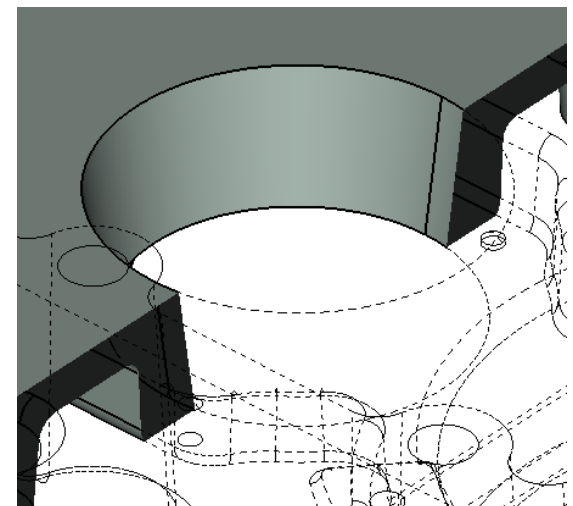
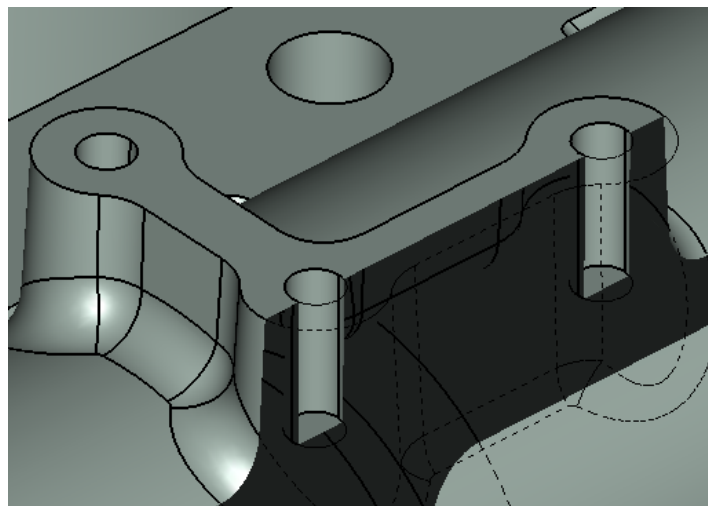
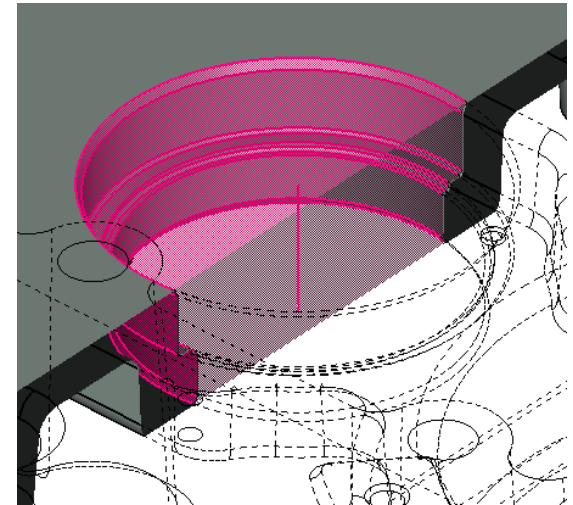
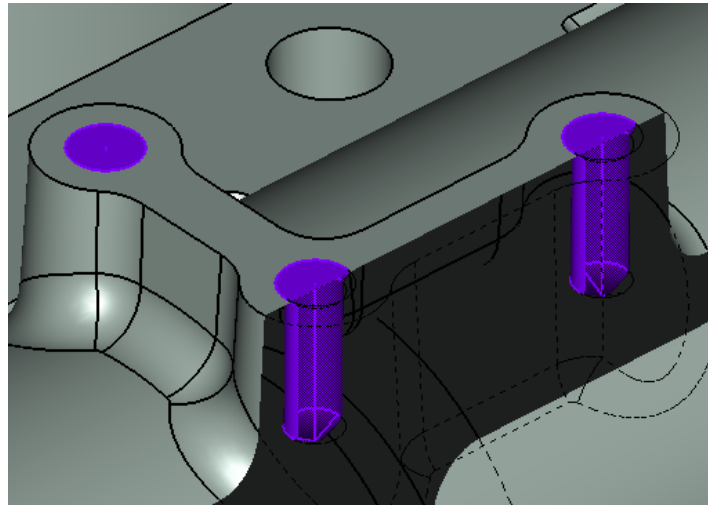
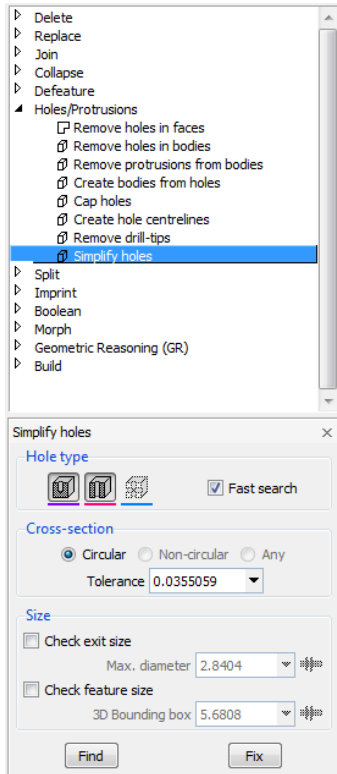
Morphing Improvements

- NASTRAN mesh import
- Assembly/multi-body morphing
- Faster mesh-to-CAD matching



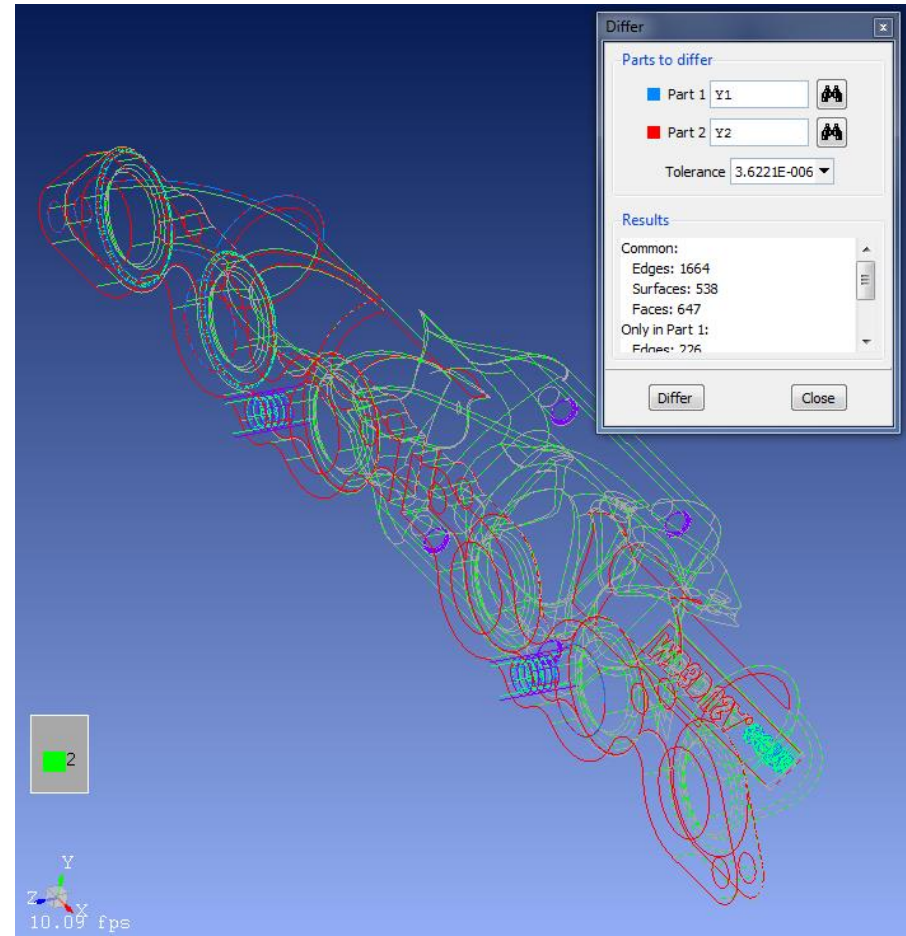
Hole Simplification

- New simplification tool for blind and through holes



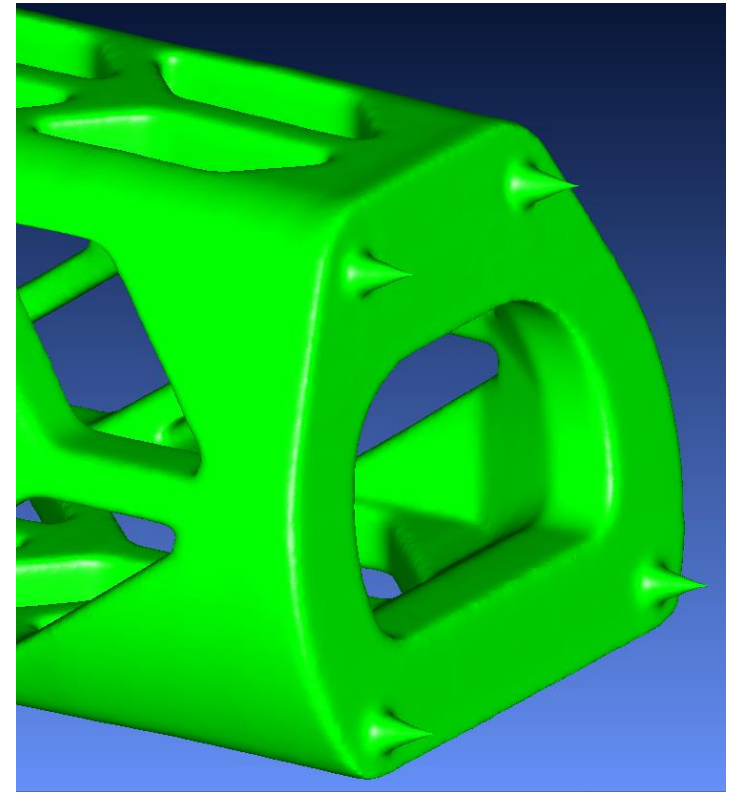
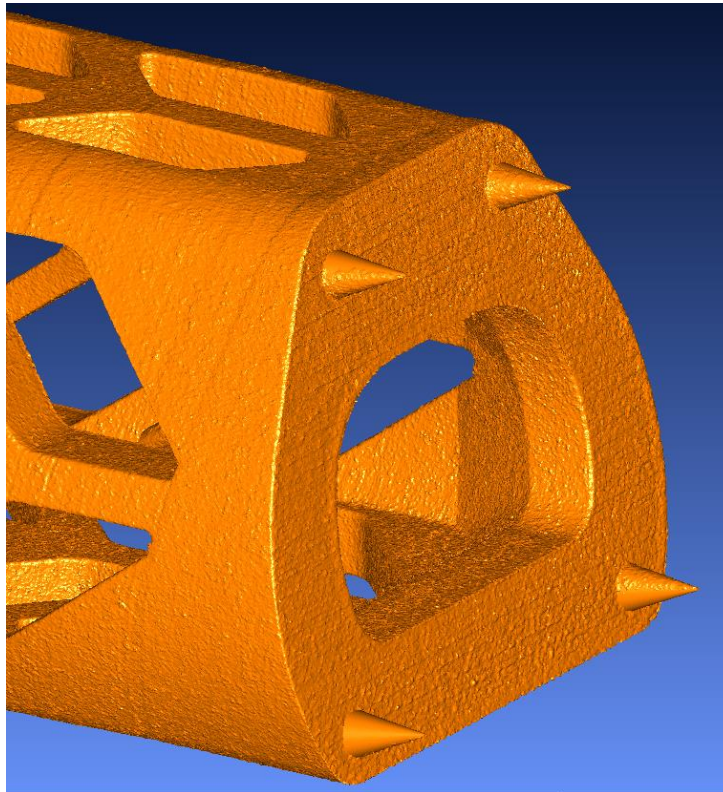
Improved 3D Differ Tool

- Display of results improved by smarter grouping
- More robust comparison logic to detect smaller diffs
- Major enhancements coming in CADfix 12 release



CADfix/AM: Point Cloud Smoothing

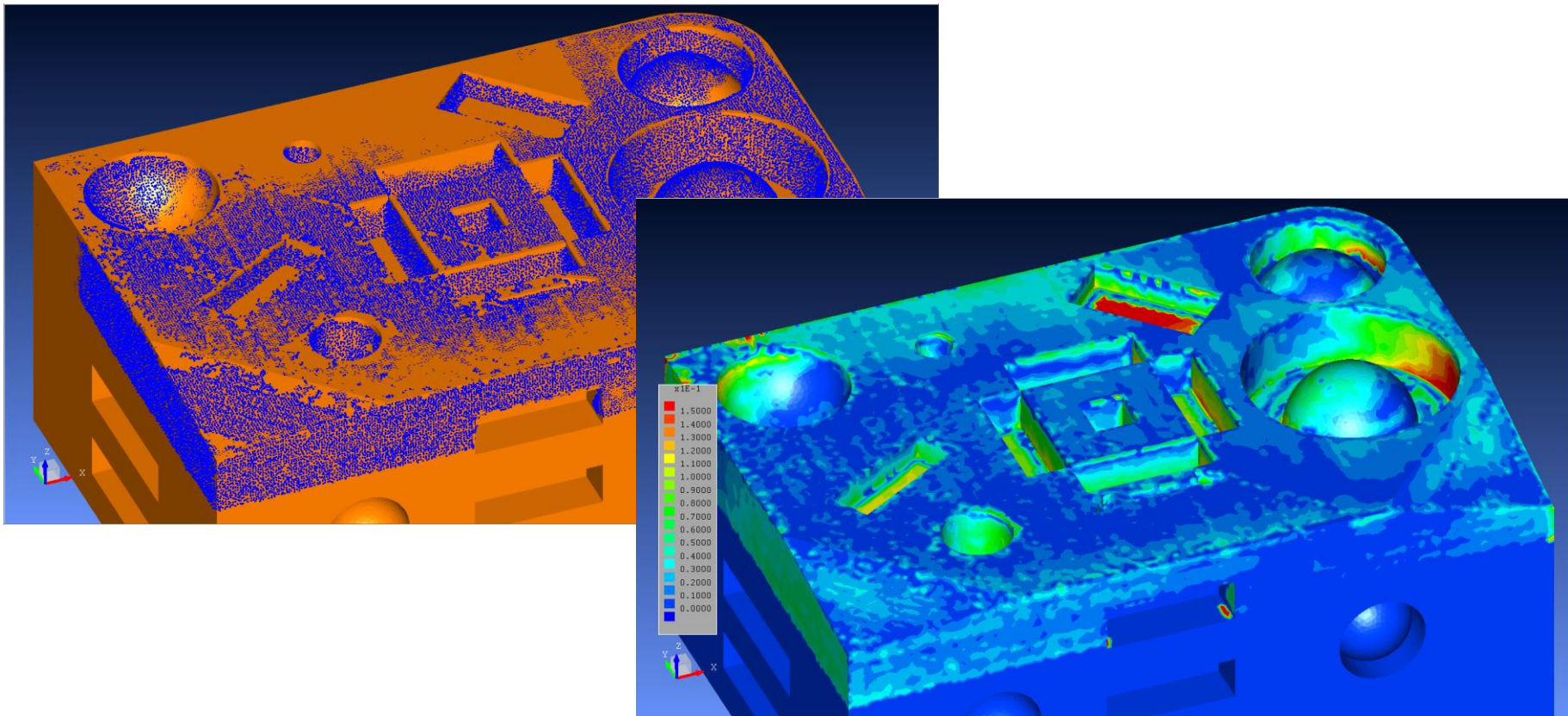
- New algorithm for processing noisy point clouds
 - Advanced smoothing with automatic adaptive convergence



(Prototype functionality, contact ITI for more details)

CADfix/AM: Point Cloud to CAD Compare

- No need for tessellated point cloud.
 - Distances measured from CAD entities directly to cloud



(Prototype functionality, contact ITI for more details)

Coming in CADfix 12

- Record GUI macros
 - Record interactive operations and playback on a different model.
 - Built-in model-to-model comparison updates macro automatically and checks for incompatibilities
- Expanded 3D differ tool
 - More comprehensive tool for highlighting 3D differences between models. Numerical, visual and distance contours.
- Mesh-to-CAD differ tool
 - Compare solid/shell meshes from NASTRAN, ABAQUS, LSDYNA, PATRAN to CAD model for quality assurance
- New quad subdivision tool
 - Cross-field based automatic face subdivision tool aimed at all quad/quad dominant mesh generation.