ANSYS®

SPACECLAIM
CORPORATION

3DPRINTING
COLORADO by Laser Concepts

Fact Sheet 2015

At ANSYS, we believe that technology shouldn't hinder the innovation of new ideas, nor should it get in the way of developing high-quality, efficient tools. In our new release, we made ANSYS® SpaceClaim better and faster — delivering a top-of-the-line product to help you throughout the entire product workflow. We've addressed customer concerns, emerging technologies, and rapidly growing trends while honing our core features that distinguish SpaceClaim from other 3-D modeling solutions.

SpaceClaim 2015

- Enhanced 3D Printing Preparation
- Upgrades to Simulation Prep
- Concept Design and General Modeling Improvements
- Manufacturing Preparation Enhancements
- Interoperability Advances
- Sheet-Metal Enrichments
- Detailing

ANSYS SpaceClaim 2015 delivers:
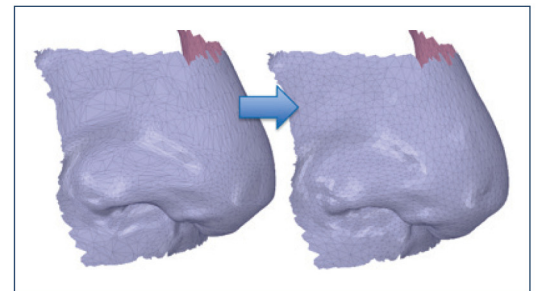
Enhanced 3-D Printing Preparation

- New cleanup and print prep tools, including: Repair Holes, Repair Sharps, Thicken, Smooth, Regularize, Separate and Join
- New print analysis tools: thickness analysis, overhang analysis
- Merge/subtract/edit open meshes, including direct editing of meshes with Pull/Move tools
- Ability to scale meshes non-uniformly
- Localized reduce capability for increased mesh accuracy
- Mesh to mesh deviation analysis
- Volume and area measurements, as well as Volume Extract, Enclosure, and Replace tools now supporting meshes

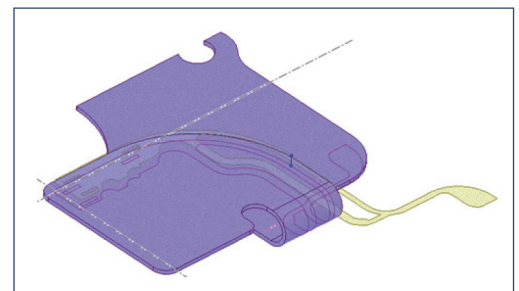### Upgrades to Simulation Prep

- New Imprint and Wrap tools for better control over connections between parts
- New simulation cleanup and detection tools: Short Edges, Overlap Faces, Corrupt Faces
- Power selection and update of mid-surfaces to geometry changes
- Driving dimensions from Pull tool edge pivot, as well as imports of layer contents into selection sets
- Improved integration with ANSYS Workbench™, including:
  - Import geometry from Workbench and Design Modeler into SpaceClaim
  - ANSYS Neutral File (ANF) format export
  - 10-20x transfer speed improvement for assemblies
  - New transfer option — "explode during transfer"
  - Shared topology performance improvements
  - Direct connection to ANSYS HFSS™ is now supported

Regularize triangles to evenly position them across a surface.

Wrap solid geometry or surfaces around curved parts.

Concept Design and General Modeling Improvements

- Custom shortcuts that personalize SpaceClaim tools to your needs
- Pivoting of surface edges and vertices
- Reverse engineering improvements, such as a dedicated mesh curve fitting tool and snap to point
- Blend improvements — blend to point capability
- Automatic Clip Volume for Repair tool options
- Tangent/natural extensions for curves and surfaces
- Variable radius rounds, re-ordering of overlapping round chains, and projected linked points
- Plugin for Makerbot Upload
- Mirror depression/protrusion, min/max curvature points shown, and ability to scale points/axes
- "Paste Independent" and replace component commands, support multiple components

Manufacturing Preparation Enhancements

- Relief tool for automated cutout creation at sharp corners
- Deburring and Lathe profile creation tools for generating deburring and lathe tool path
- Curve Table tool for generating associative table of curve data for export
- Edges tool for extracting the wireframe version of a part
- Support for Mastercam X8

Interoperability Advances

- New import information, including layers, materials, JT facets only, and PDF faceted curves for optimal model editing
- Multi-threaded import for more file formats (JT, CATIA CGR), creating faster imports
- IDF Sync to update changes made in SpaceClaim
- Ability to map CATIA Geometric sets to SpaceClaim groups on file import
- OBJ improved texture export
- Updated version support for: Inventor 2015, NX 9, Parasolid 26, Solid Edge ST6, SolidWorks 2014
- Improved automated Converter application

Sheet-Metal Enrichments

- Swept walls, rounded louvers, split of blend junctions, and configurable junctions gaps
- Power Select of features to use only what you need faster
- Support for editing of U-shaped bends
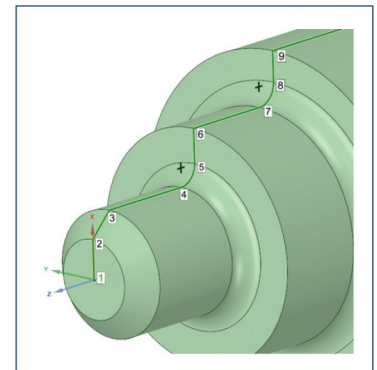- Fold up of individual walls and user-defined wall overlap %s

Detailing

- BOM display controls: include and collapse properties
- Highlight selected point dimension, leader underline control, and 45° chamfer note
- Overall usability improvements, including option to hide annotations behind bodies

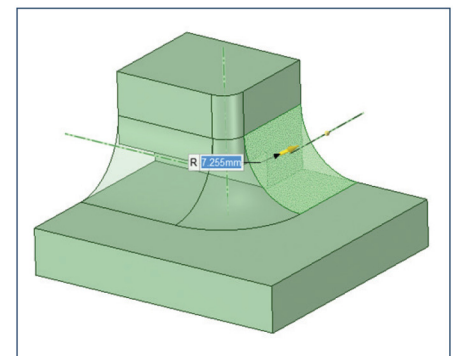# SpaceClaim 2015: The fastest tool to create, edit, and repair 3D data.

Please contact us for more information.

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Automatically generate basic tool paths from revolved geometry.

Create rounds directly as surfaces.

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