



# Ansys SpaceClaim Direct Modeler

Ansys simulation technology enables you to predict with confidence that your products will thrive in the real world. Customers trust our software to help ensure the integrity of their products and drive business success through innovation.



### Faster Time to Analysis

Open data from any CAD system, and edit designs and prepare them for simulation no matter where the model was created, without relying on the CAD expert, thus removing the geometry bottleneck.



### Shorten Simulation Time

Simplify geometry by removing features, like rounds and holes, that lead to low-quality mesh generations and longer simulation times. Clean up and repair dirty geometry to create watertight solids.



### Let CAE Drive Product Development

Increase innovation and quality while decreasing costs by bringing simulation up front into the design process.

## / CAE Prep for Faster Time to Analysis

### Fluids:

- Prepare tools such as Volume Extract and Enclosure automatically extracts necessary volumes.
- Volume previews help ensure all inlets are capped before extracting volumes.
- Split solids to partition models before meshing.
- Update fluid volumes automatically if changes are needed to optimize a design.

### Structures:

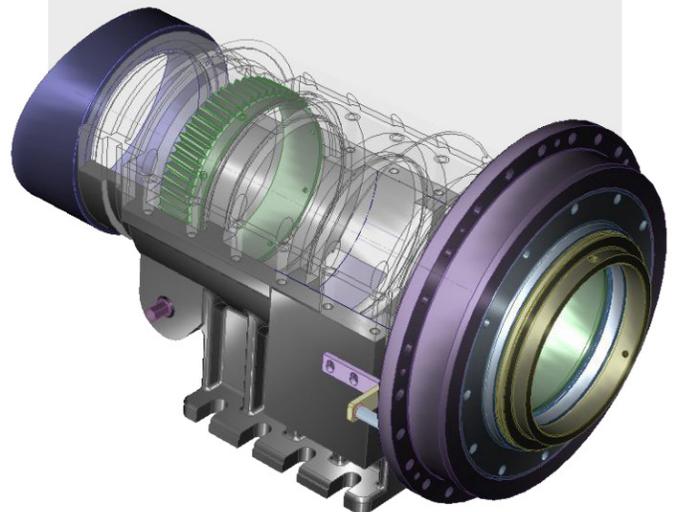
- Mid-surface extraction and creation.
- Beam (line element) and Shell (surface element) Modeling to reduce dimensionality of solids.
- Removal of rounds or small/irrelevant features.
- Edit and modify imported models.
- Merge faces to improve meshing.

### Electronics:

- Create proper contact between models.
- Accurate wrapping of traces.

### Ansys Multiphysics solutions

help cross-functional engineering organizations predict the performance of complex products influenced by multiple physics and improve their designs through simulations of the interactions between physics.



## / Repair Geometry

- Edit models for faster time to analysis.
- De-feature complex models by removing features, like rounds and holes, that lead to low-quality mesh generations.
- Open data from any CAD system.
- Edit designs and prepare them no matter where the model was created.
- Clean up and repair dirty geometry to create watertight solids.

## / Topology Optimization

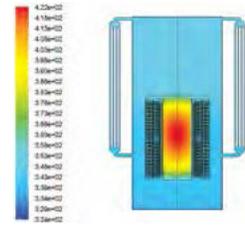
- With SpaceClaim's STL Prep for 3D Printing Module, users can also repair and edit files for further finite element analysis topological optimization and computational fluid dynamics analysis.

## / Simulation-Driven Product Development

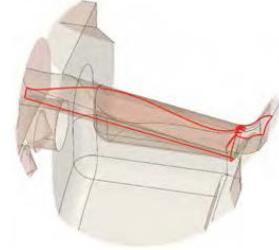
- Parameterize dumb geometry and quickly create numerous design variations for analysis.
- Quickly modify models to reflect results of simulations and test again for peak innovation and quality.
- Innovate effortlessly to create best product, exceeding customer expectations.

## / Early Concept Design

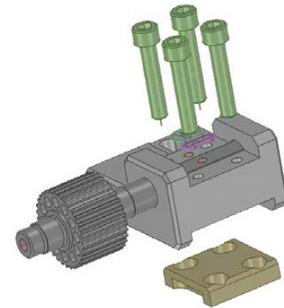
- Never again have a feature tree rebuild error.
- Intuitive Pull/Move/Fill/Combine interface makes it easy to get up and running in weeks instead of months.
- Brainstorm ideas freely without having to start over.
- Work with any CAD proprietary files, including 2D to 3D designs as well as any models using standard file types.
- Draft more ideas in less time.



Engrana: de-feature geometry for CFD analysis



Automatic clip volume for repair tool options



Emhart: increase efficiencies in workflow



Perplexus: innovative concept design