



Engineering, Product Development & PLM Experts

Creo 8.0 Highlights  
PRO/USERS of the Carolinas

Oscar Salas  
Implementation Consultant

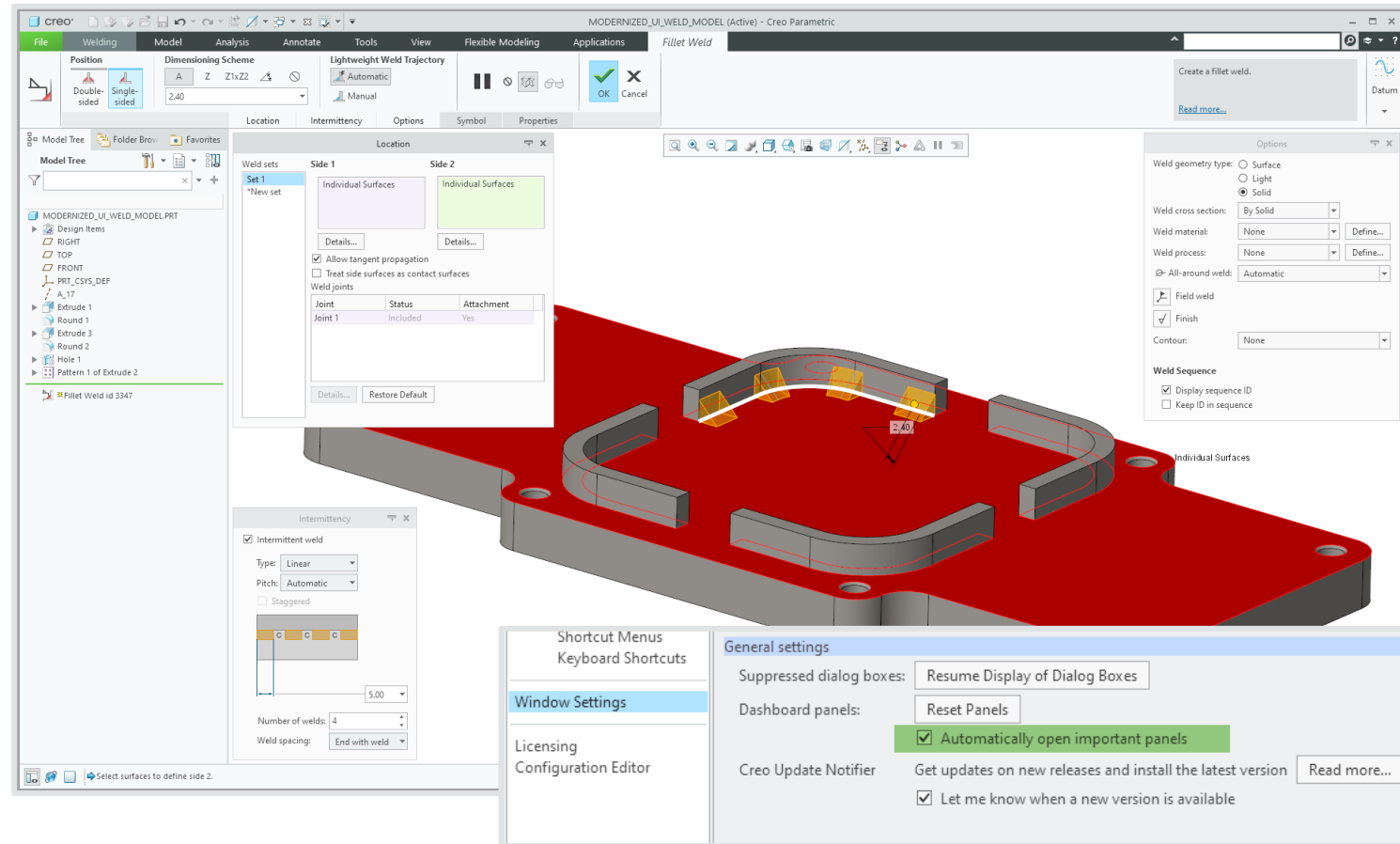
# |AGENDA

- Usability and Productivity Enhancements
  - Interface
  - Sketcher
  - Model Tree
  - Quilts
  - Surfacing Workflows
  - Sheetmetal
  - Assemblies
  - Multi-Body
- General Enhancements
  - Model Based Definition and Detailing
  - Optimization and Simulation
  - Additive Manufacturing

## MODERNIZED UI – DASHBOARDS & SKIN

## CAPABILITIES

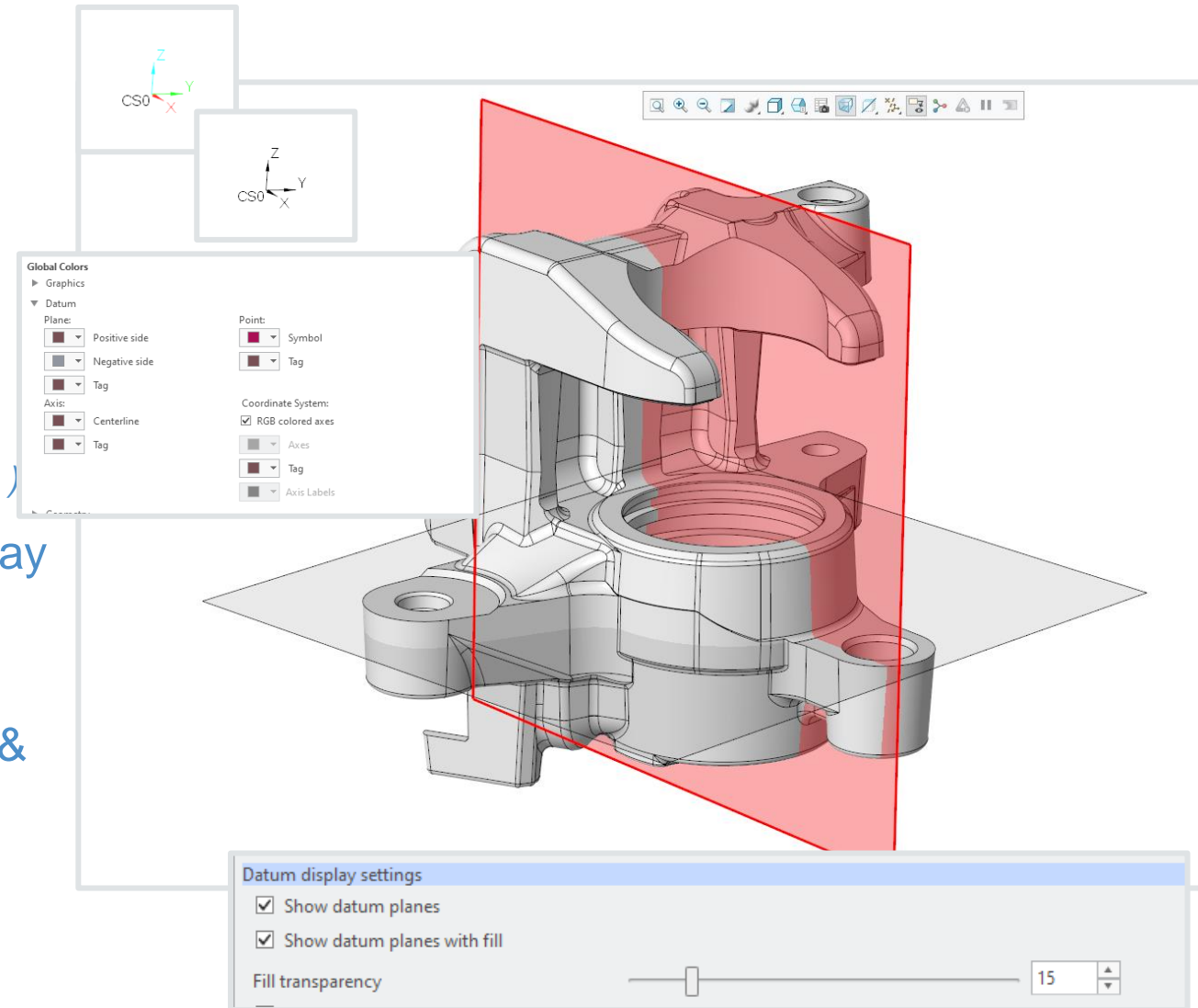
- Improved dashboard layout
- Optimized UI
  - Optionally open most important dashboard panel automatically
  - Detach multiple panels from the dashboard and display them simultaneously
  - Optimized option panel positions



# MODERNIZED DATUMS DISPLAY

## CAPABILITIES

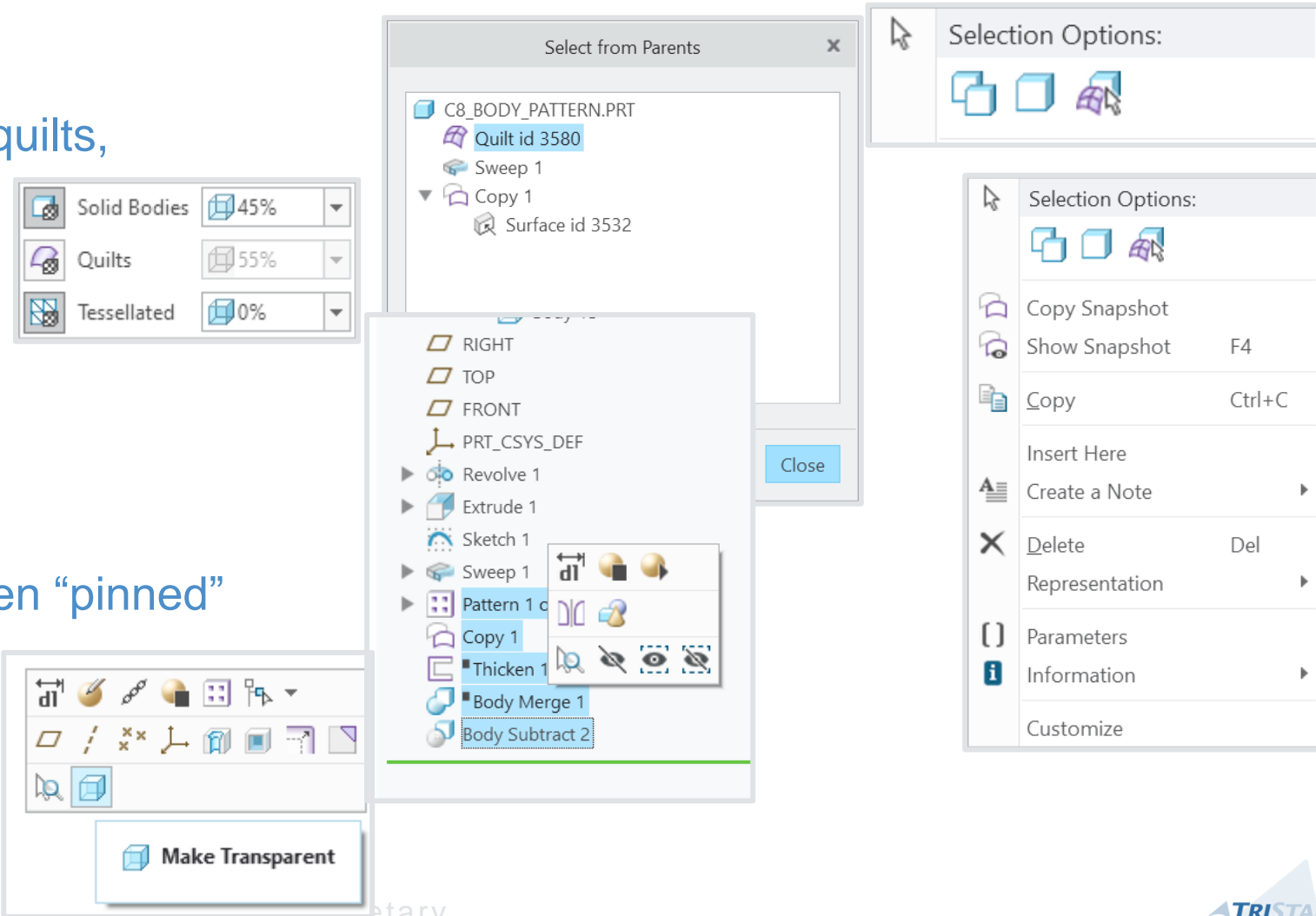
- Semi transparent display of Datum Planes
- Configuration options to
  - control filled display (*3D\_datum\_display\_fill*)
  - transparency level (*3D\_datum\_planes\_transparency*)
  - Switch to legacy display (*enable\_legacy\_datum\_planes*)
- Automatic fallback to non-filled datum display in specific situations (sketcher, hidden, no hidden and wireframe display mode)
- Modernized display of coordinate systems & datum points
  - Colored CSYS option *csys\_color\_rgb*



# VISIBILITY CONTROL AND SELECTION IMPROVEMENTS

## CAPABILITIES

- Transparency Control for bodies, quilts, tessellated geometry
- New command “Select Quilt or Body”.
- Enhancements to “Select from Parents”
  - Including parent quilts in listing
  - Improved window behavior when “pinned”
- Suppress & Resume for “mixed” selection

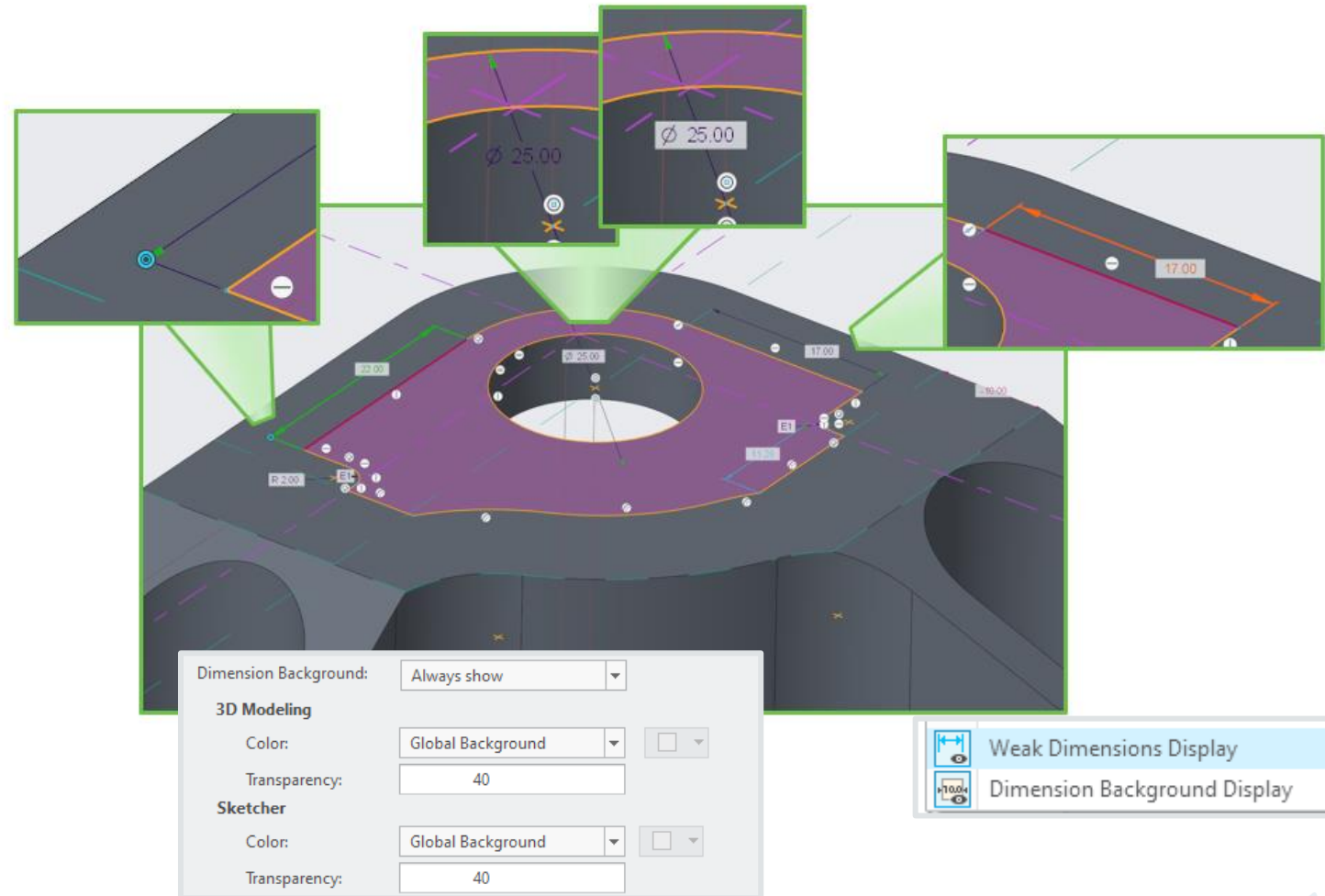


# IMPROVED VISIBILITY CONTROLS IN SKETCHER

## CAPABILITIES

### Enhanced control over dimension appearance in sketcher

- Dimension background appearance control (background suppressed during dragging)
- More pronounced dimension display during selection and pre-selection
- Modernized dimension dragger
- Easier access to control Weak Dimension & Dimension Background Display





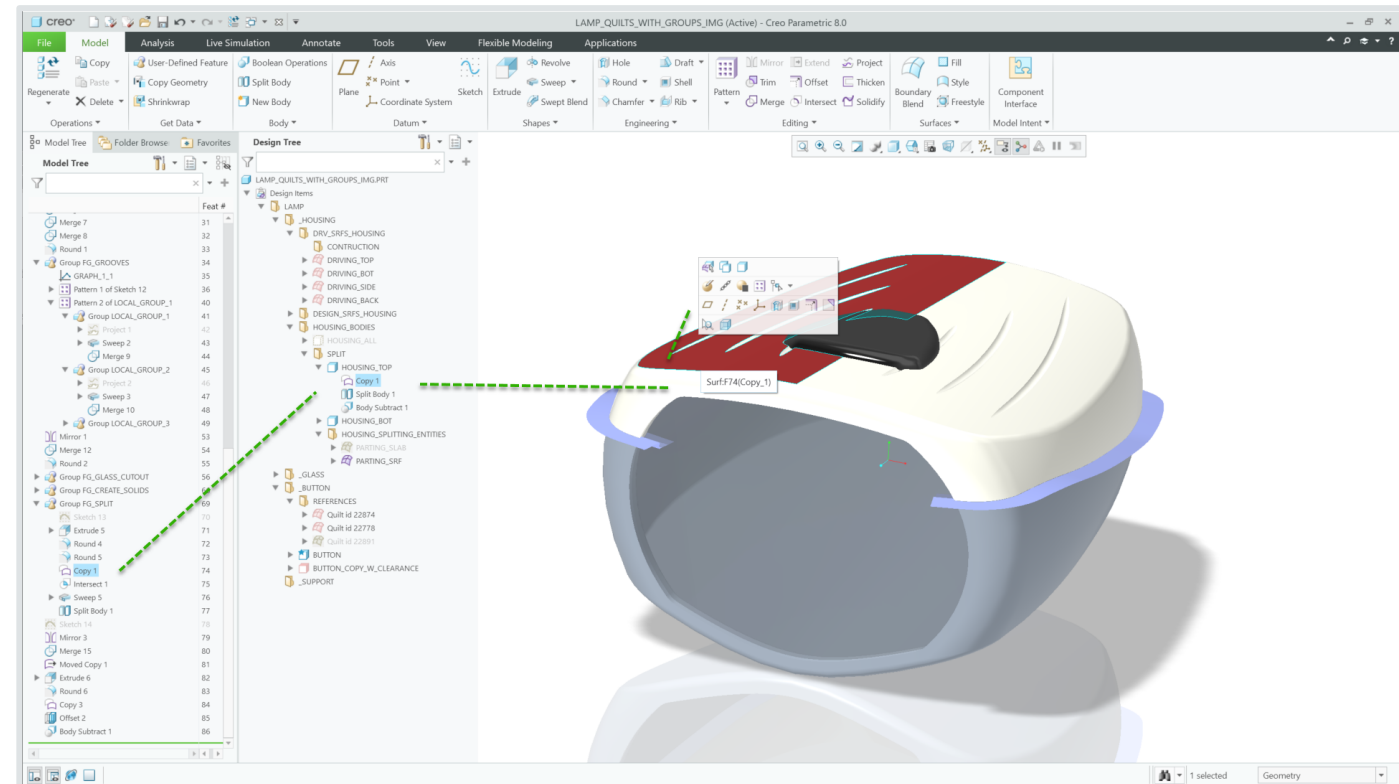
# CREO 8.0 – MODEL TREE ENHANCEMENTS

## USE CASE

- Documenting & Communicating design intent

## CAPABILITIES

- New Quilts node, listing individual quilts in the model tree like bodies
- Second level grouping for bodies/quilts (e.g., pattern, etc)
- Custom groups to organize bodies & quilts
- New “Design Items” folder
- Side-By-Side Trees



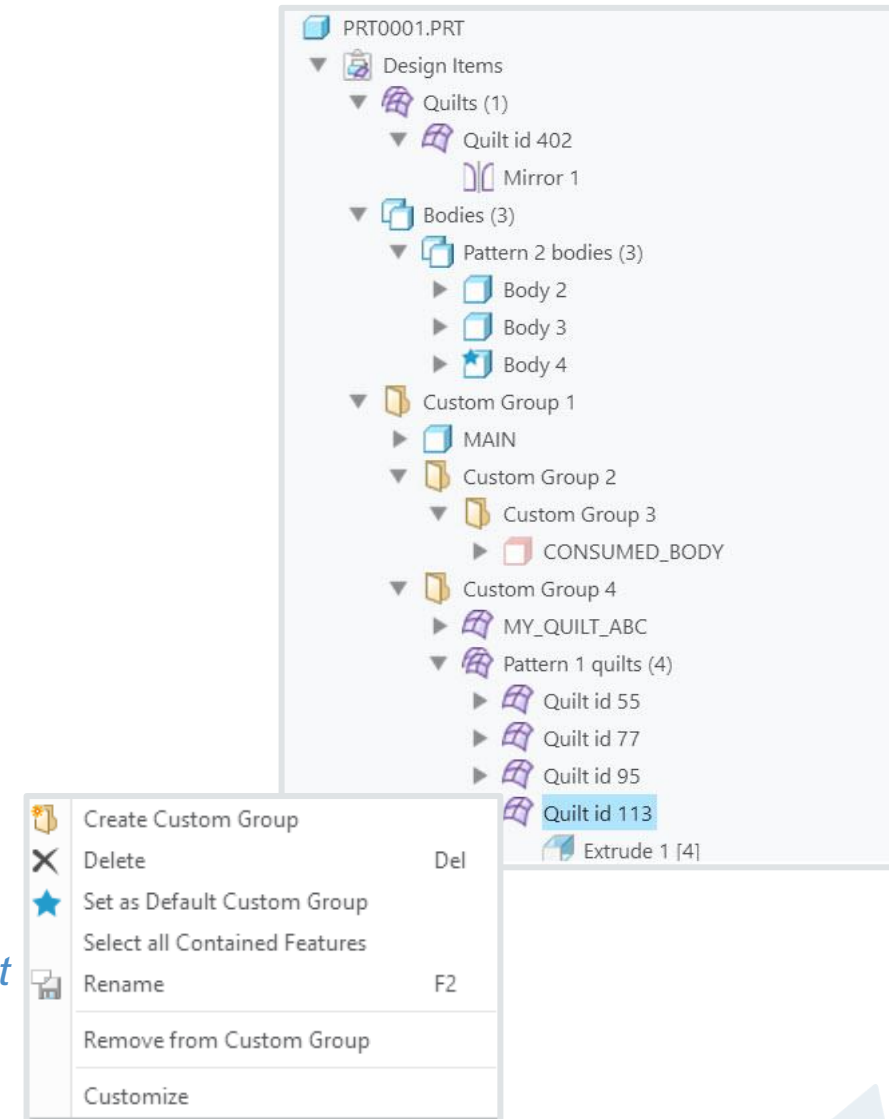
# CREO 8.0 – MODEL TREE CUSTOM GROUPS

## New *Custom group* concept

- Organize design items independent from regen. order

“Manage quilts and bodies according to their function in the design by assigning them to a custom group

- *Custom Group* operations
  - Create / Delete / Re-name custom groups
  - Supports nesting, re-order and restructure via DnD
- Managing bodies & quilts
  - “Insert into Default Custom Group” and “Remove from Custom Group”
  - Drag and Drop into / out of *Custom Group*
    - In a custom group, when you, right-click the item, and click **Remove from Custom Group**, the item is relocated to its original position. For example, when you remove a body from custom group, the body is relocated to the **Bodies** folder.
- **Default Custom Group**
  - If set, new quilts/bodies will automatically be created in the *Default Custom Group*





# MODEL TREE SIDE-BY-SIDE CONFIGURATION

Side-by-side trees allow to tailor tree display to personal needs and preferences. Secondary trees (e.g. Layer Tree, Design Tree, etc.) can be dragged out and docked to various places on the screen

- Within navigation bar
- Outside of navigation bar with separate visibility controls

## Separate Design Tree:

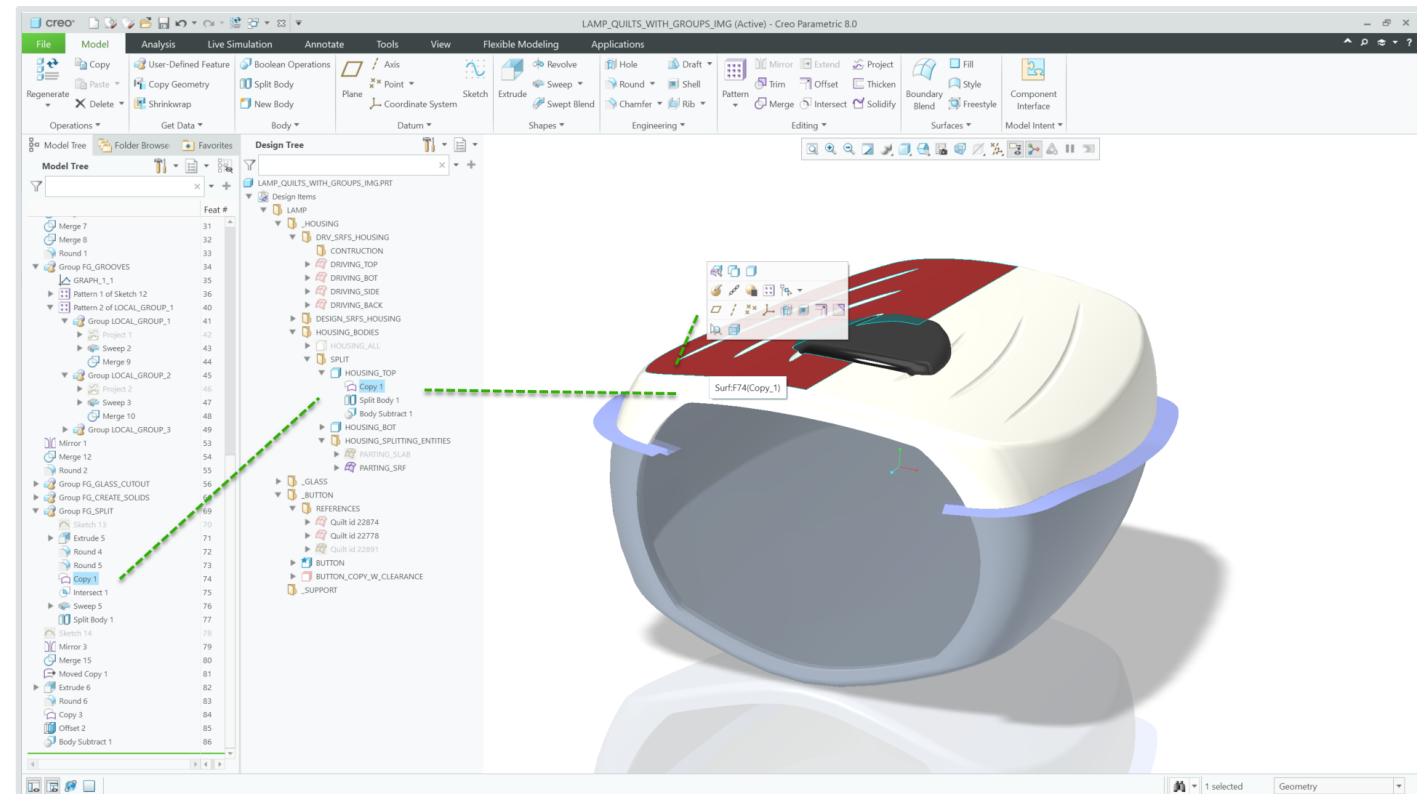
- Separate configuration
- Simple search

## “Auto-locate”

- Design items in Design Tree
- And
- Features in Model Tree

## Limitations:

- The Design Tree / Design Items folder is not available in assembly mode.
- The display of the new “Design Tree” in side-by-side tree configuration is only supported in selected situations in part mode (for example not within the Flexible Modeling tab or in assembly and related modes)



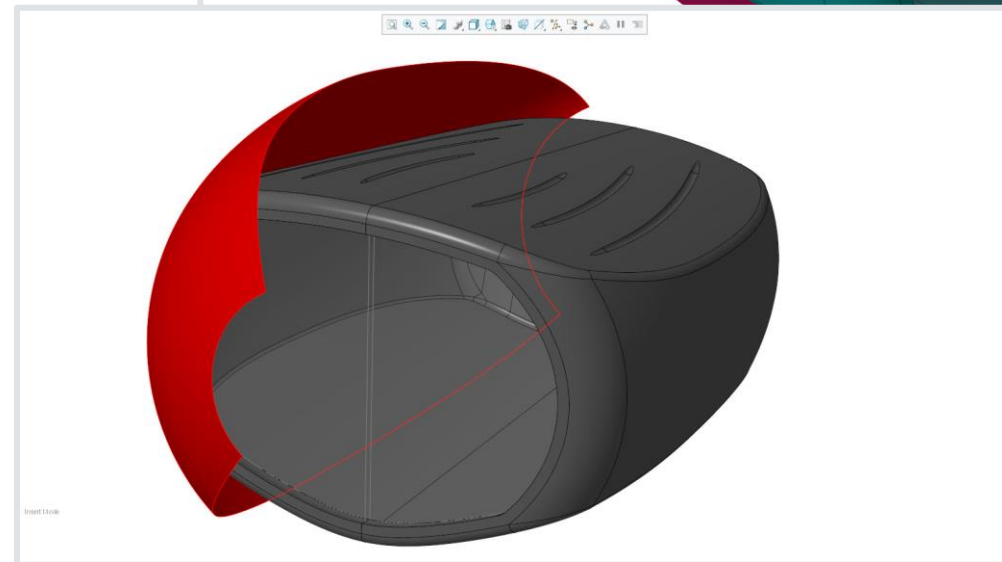
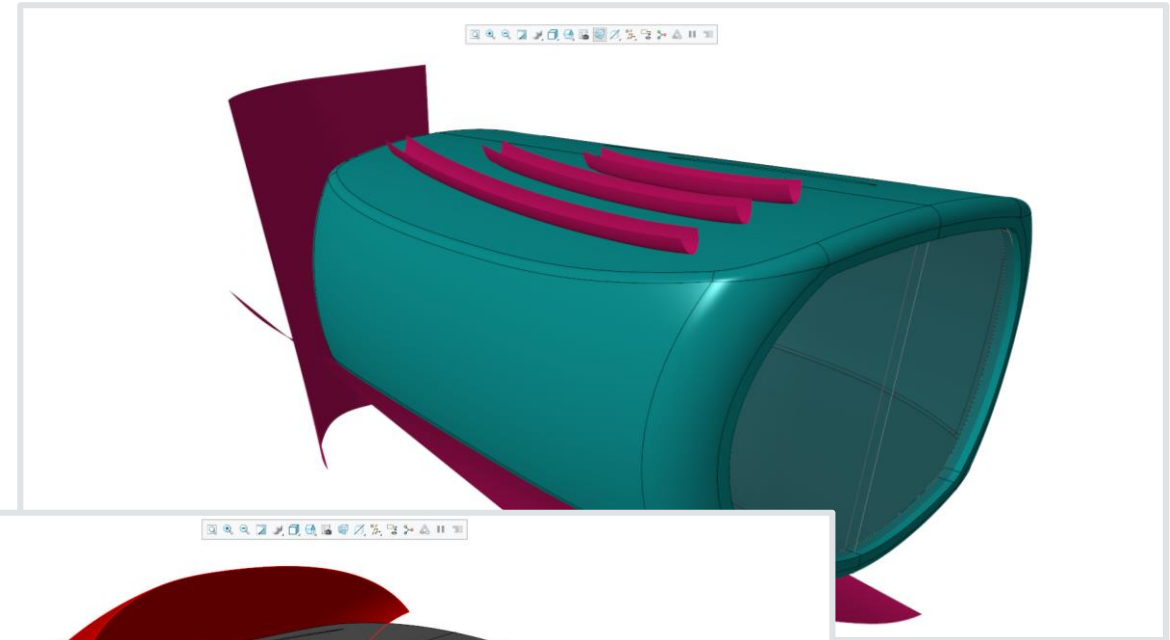
# CREO 8.0 – QUILT/BODY SNAPSHOTS

## USE CASE

- Design Investigation

## CAPABILITIES

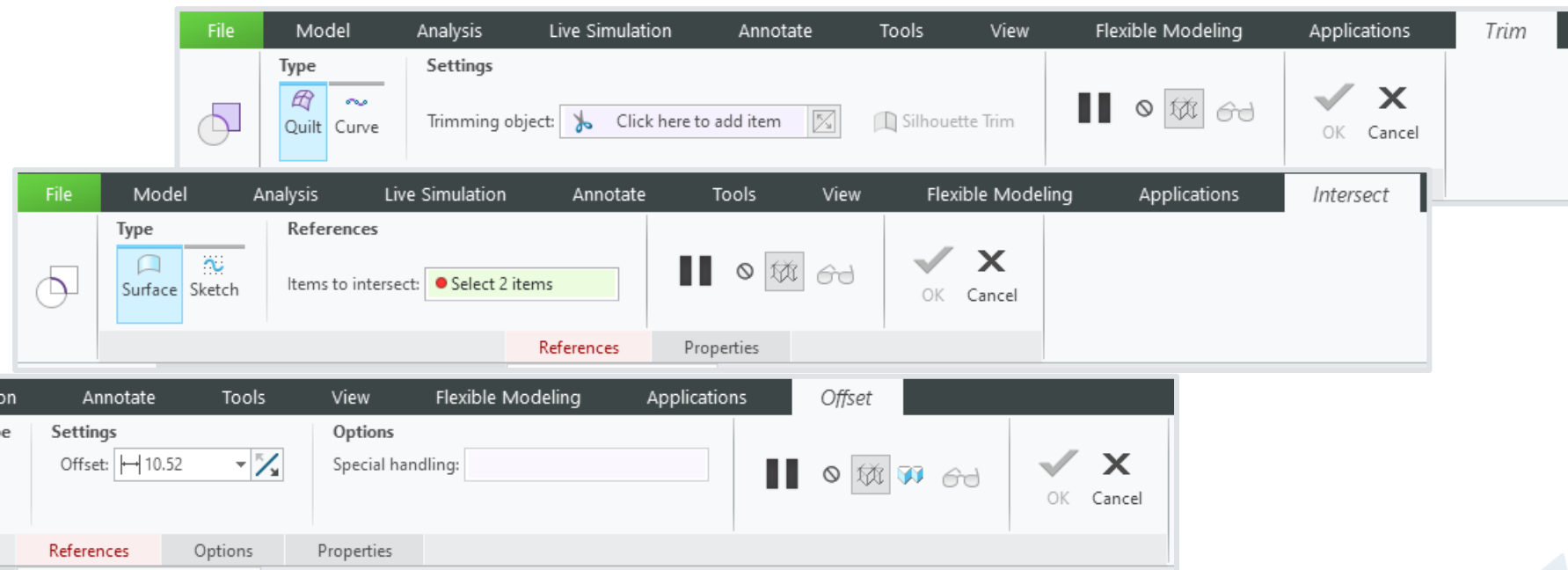
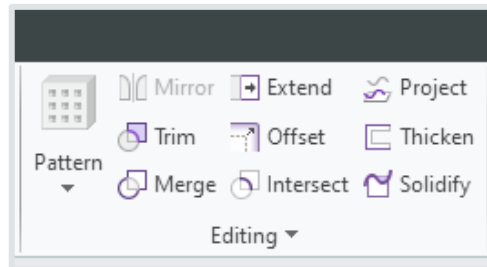
- New “Show Snapshot” for Quilt/Body snapshot preview based on selection of
  - Active Quilts/Bodies
  - Consumed Quilts/Bodies
  - Contributing features to Quilts/Bodies
- Visualize multiple previews together
- Invoke with keyboard shortcuts
- New “Copy Snapshot” for geometric copy of Quilt/Body snapshots



# CREO 8.0 – A/O EDITING WORKFLOWS

## CAPABILITIES

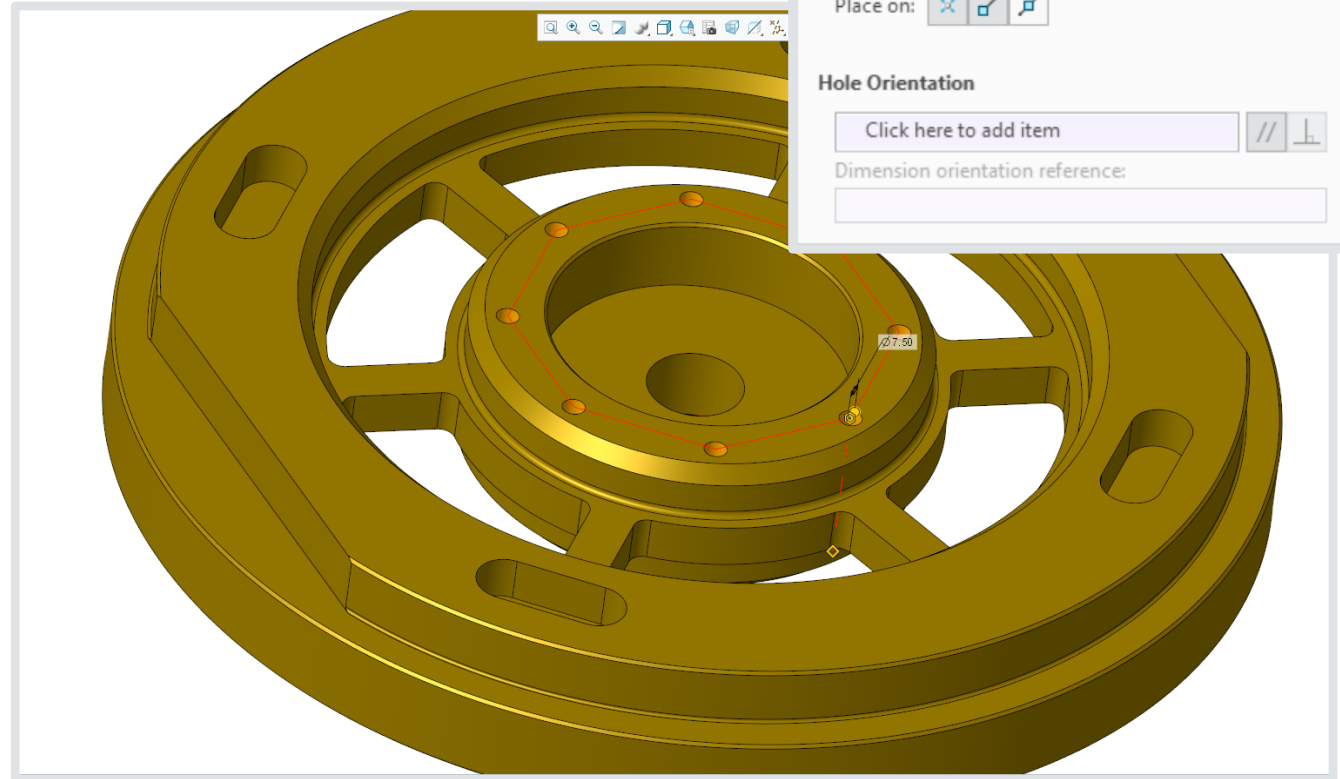
- A/O workflow support for features in “Editing Group” including Project, Trim, Offset, Thicken, Merge, Intersect, Solidify
- Switch between feature “Type” during initial feature creation



# MULTI-HOLE FEATURE

## CAPABILITIES

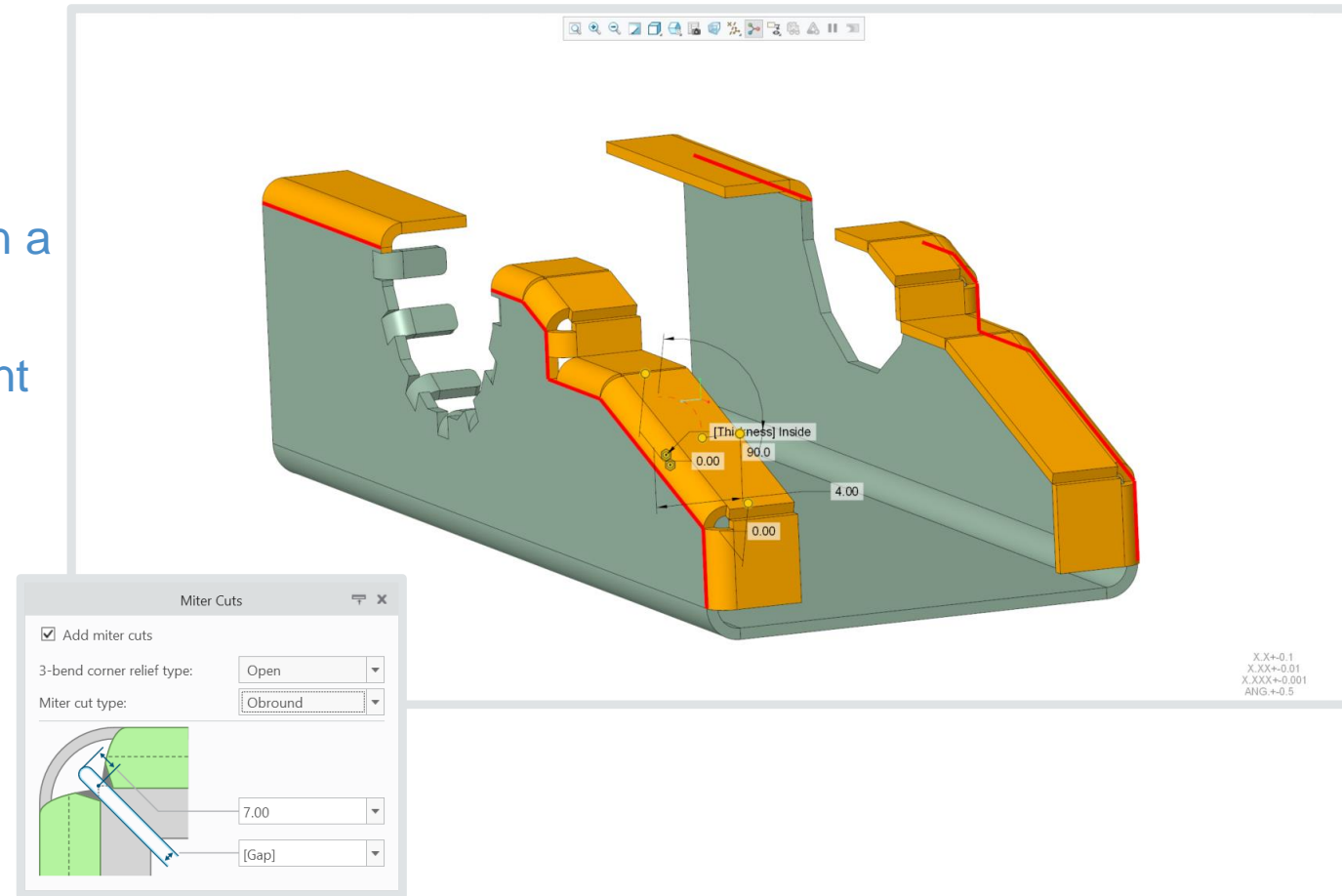
- Create multiple holes using the new sketch-based placement workflow option in hole feature
- Endpoints, Midpoints of sketched lines and sketched points
- Supporting sketched holes with drawing hole tables
- Reference pattern support
- Hole note pattern number summation



# | SHEETMETAL ENHANCEMENTS

## CAPABILITIES

- Multi Wall Support
  - Create multiple flat walls together based on a common definition
- Inner & outer corner detection & management
  - Intelligent default settings for corner/seam handling
- Contextual dragger placement
- Basic Miter support
- Improved default behavior
  - Remembering the previous wall height



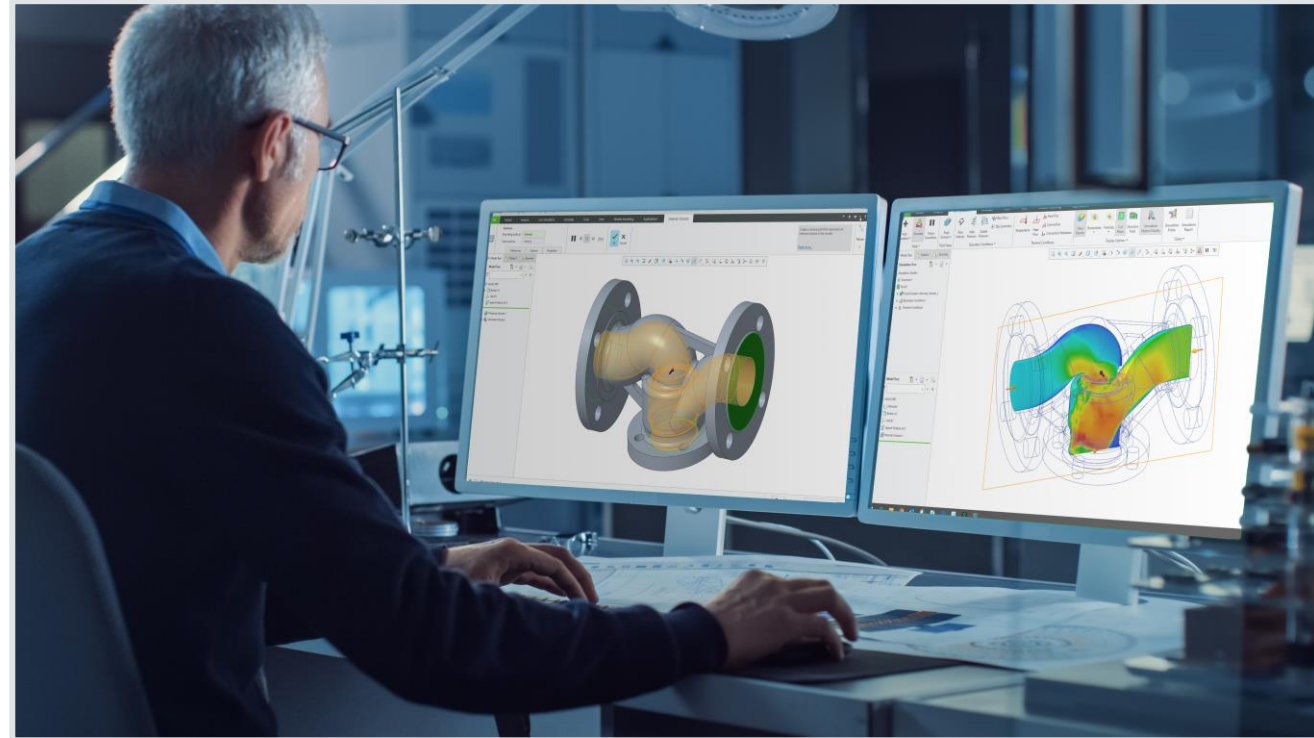
# CREO 8.0 – MULTI-MONITOR DISPLAY IMPROVEMENTS

## USE CASE

- Multi-Monitor working setup

## CAPABILITIES

- Define primary monitor for Creo
- Define dpi scaling for Creo independent from OS
- Use high dpi text display
- Control text height in graphics
- Configuration options:
  - *PRIMARY\_MONITOR*
  - *DPI\_SCALE*
  - *HIGH\_DPI\_TEXT\_ENABLED*
  - *TEXT\_HEIGHT\_FACTOR*

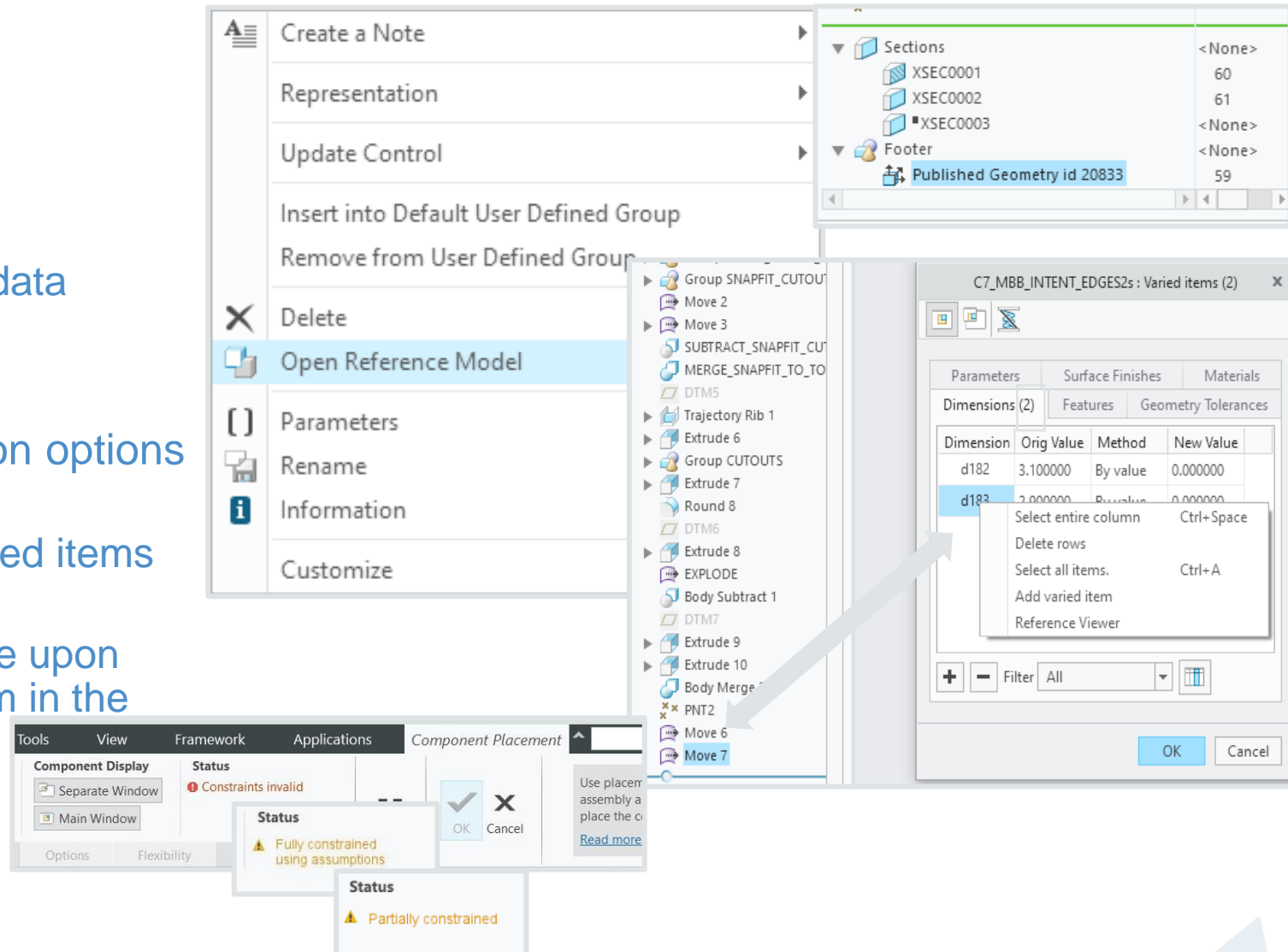




# CREO 8.0 – VARIOUS ASSEMBLY UX ENHANCEMENTS

## CAPABILITIES

- Publish Geometry
  - Created in Footer by default
- Open Reference Model menu from all data sharing features
- Varied Items UI
  - Right mouse menu investigation options on specific varied items.
  - Show number (summary) of varied items in the label of each type tab.
  - Interactive highlight in model tree upon selection of a specific varied item in the varied items table
- Constraint status in placement dashboard UI



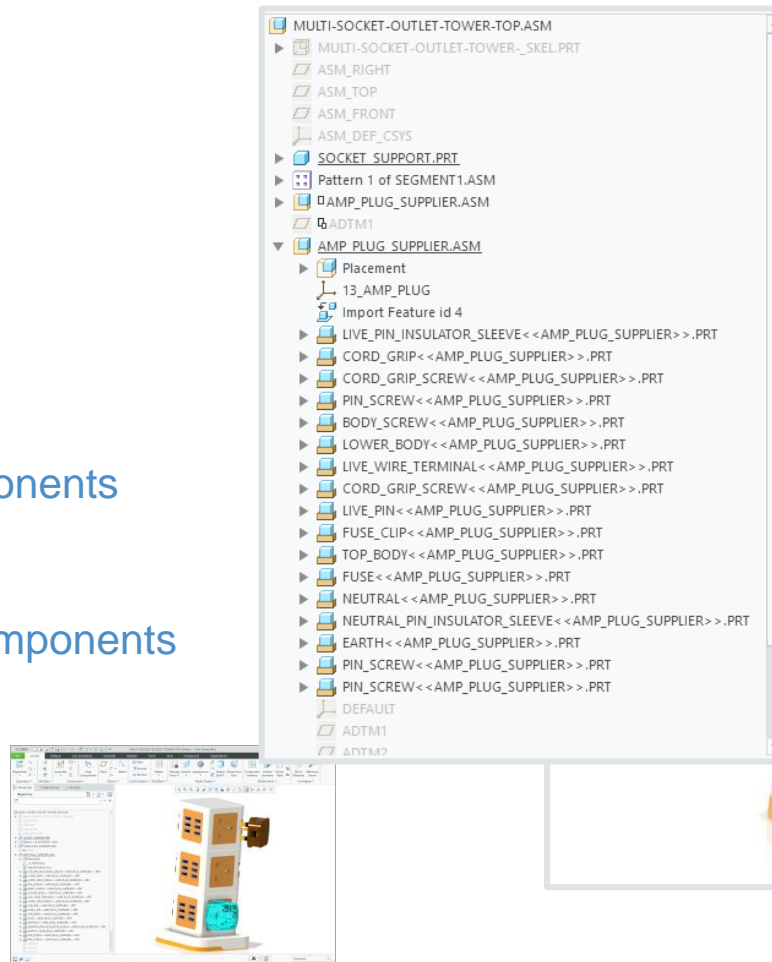
# INSEPARABLE ASSEMBLIES FOR PURCHASE PARTS

## USE CASE

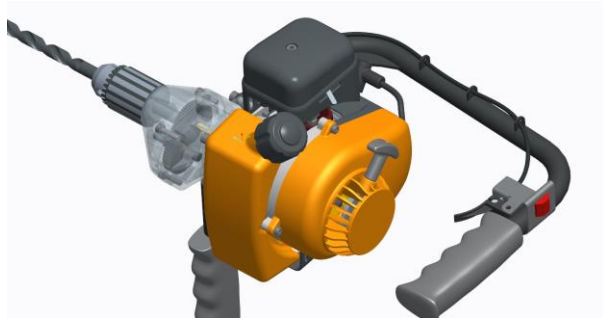
- Assemble Purchased Components

## CAPABILITIES

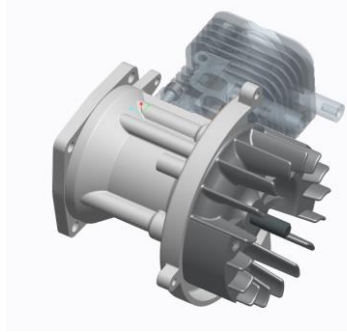
- Embed component or make inseparable
- Extract, make separable
- Open/Import non-native embedded components
- Create component as embedded
- Optionally include/ exclude embedded components in Creo BOM & Drawing repeat regions
- Configuration option:
  - *Enable\_insep\_asm\_operations*



# INSEPARABLE ASSEMBLIES FOR PURCHASED COMPONENTS

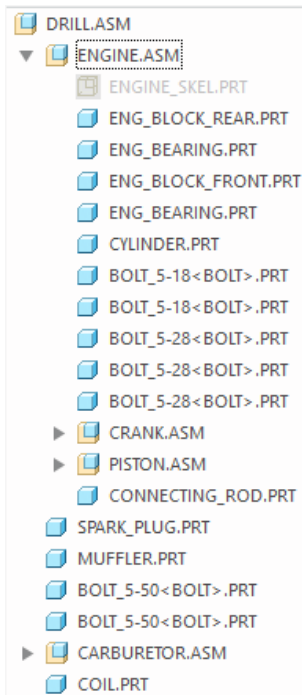


Purchased component



Convert to inseparable Assembly

Inseparable assembly



Files

.asm

.prt

.prt

.prt

.prt

.asm

.asm

...

Many unnecessary files

BOM

engine

block

bearing

front

cylinder

crank

piston

...

Many unnecessary BOM entries

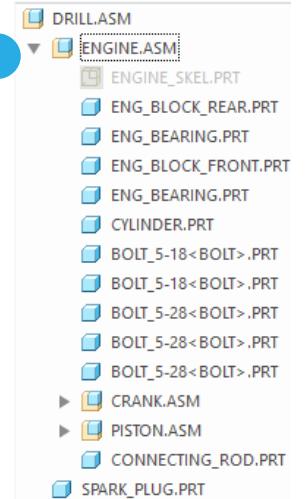
Single File  
w. embedded components

engine.asm

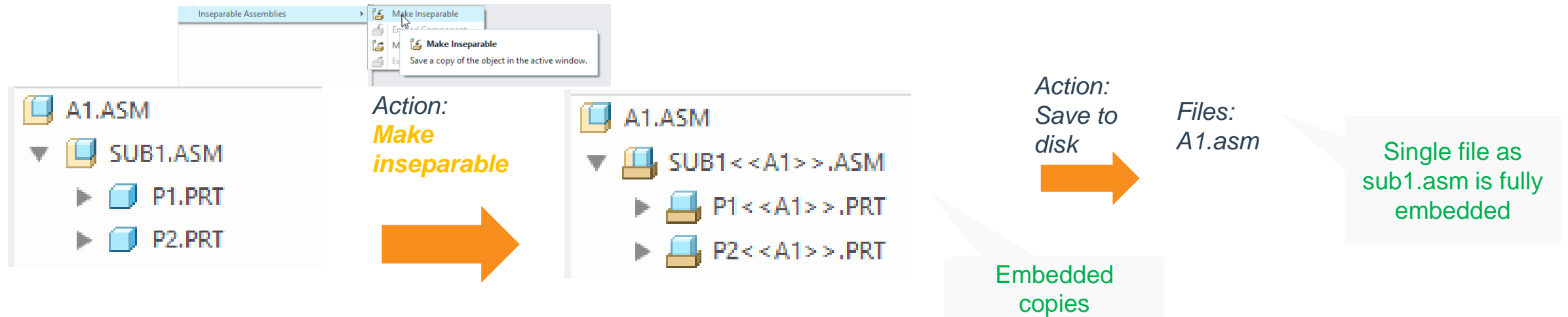
Single BOM entry

engine

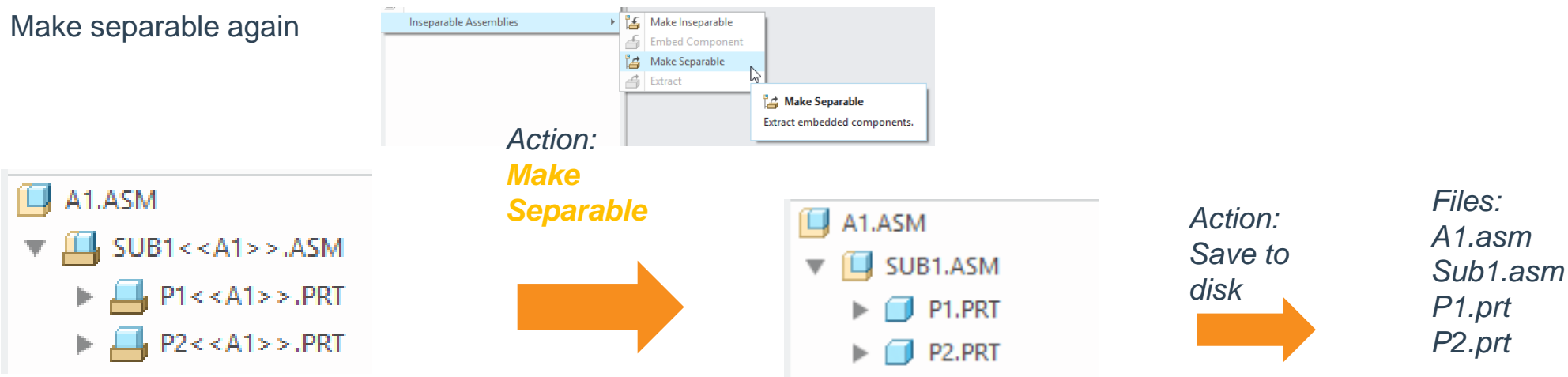
Full structure in Creo



# TURN EXISTING ASSEMBLY INTO INSEPARABLE AND BACK (partially or fully)



Make separable again

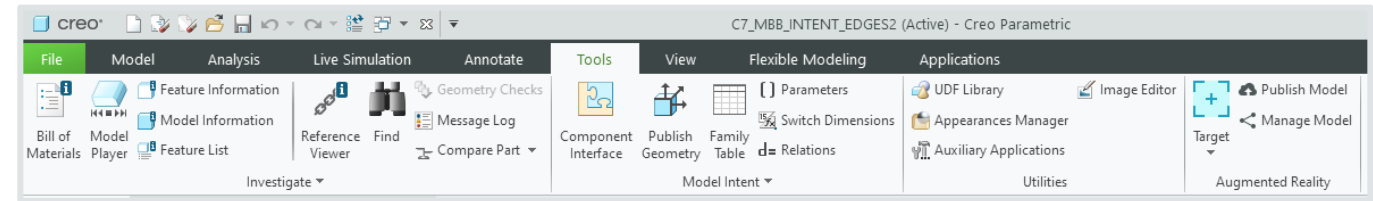


# CREO 8.0 – MORE MULTIBODY ENHANCEMENTS

## CAPABILITIES

### Part Level BOM

- For designated items (including bodies)
- Accessible in part environment from tools tab
- New “Part” selection option in Bill of Materials within assembly environment



Bom Report

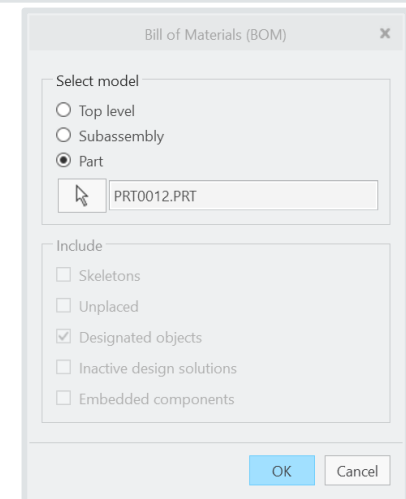
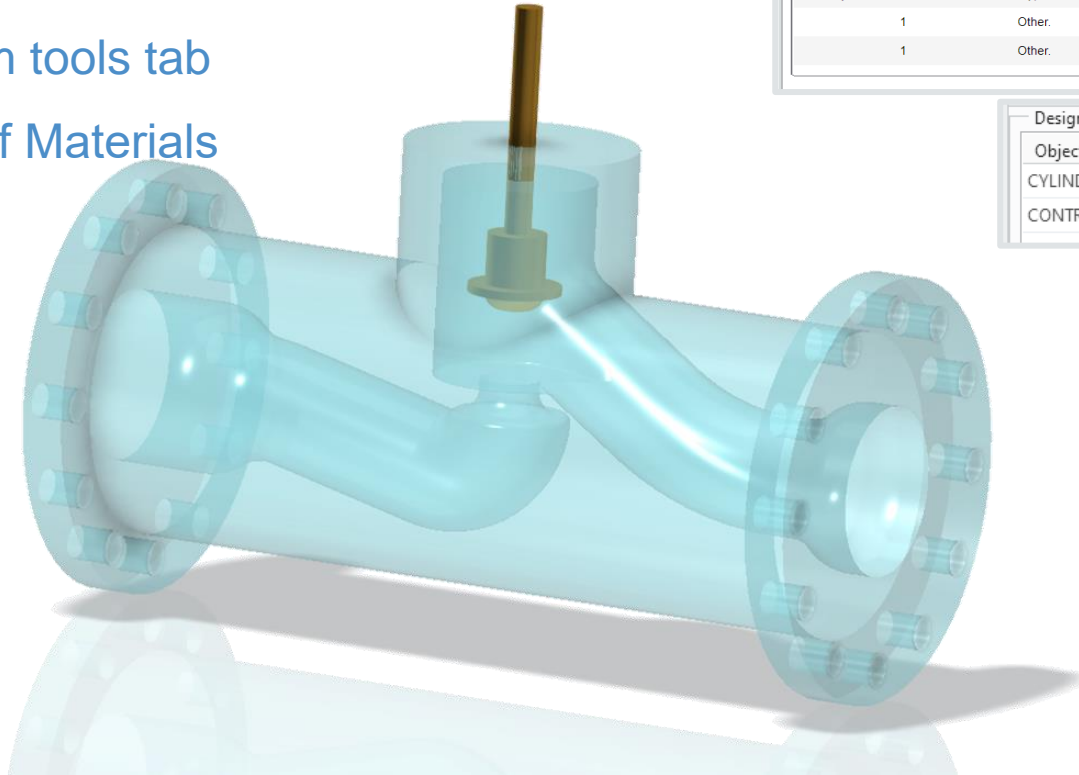
Bom Report : CONTROL\_VALVE\_MB\_CFD\_FINAL

Part CONTROL\_VALVE\_MB\_CFD\_FINAL contains:

Quantity	Type	Name	Actions
1	Other.	<a href="#">CYLINDER</a>	
1	Other.	<a href="#">CONTROL</a>	

Designated Items

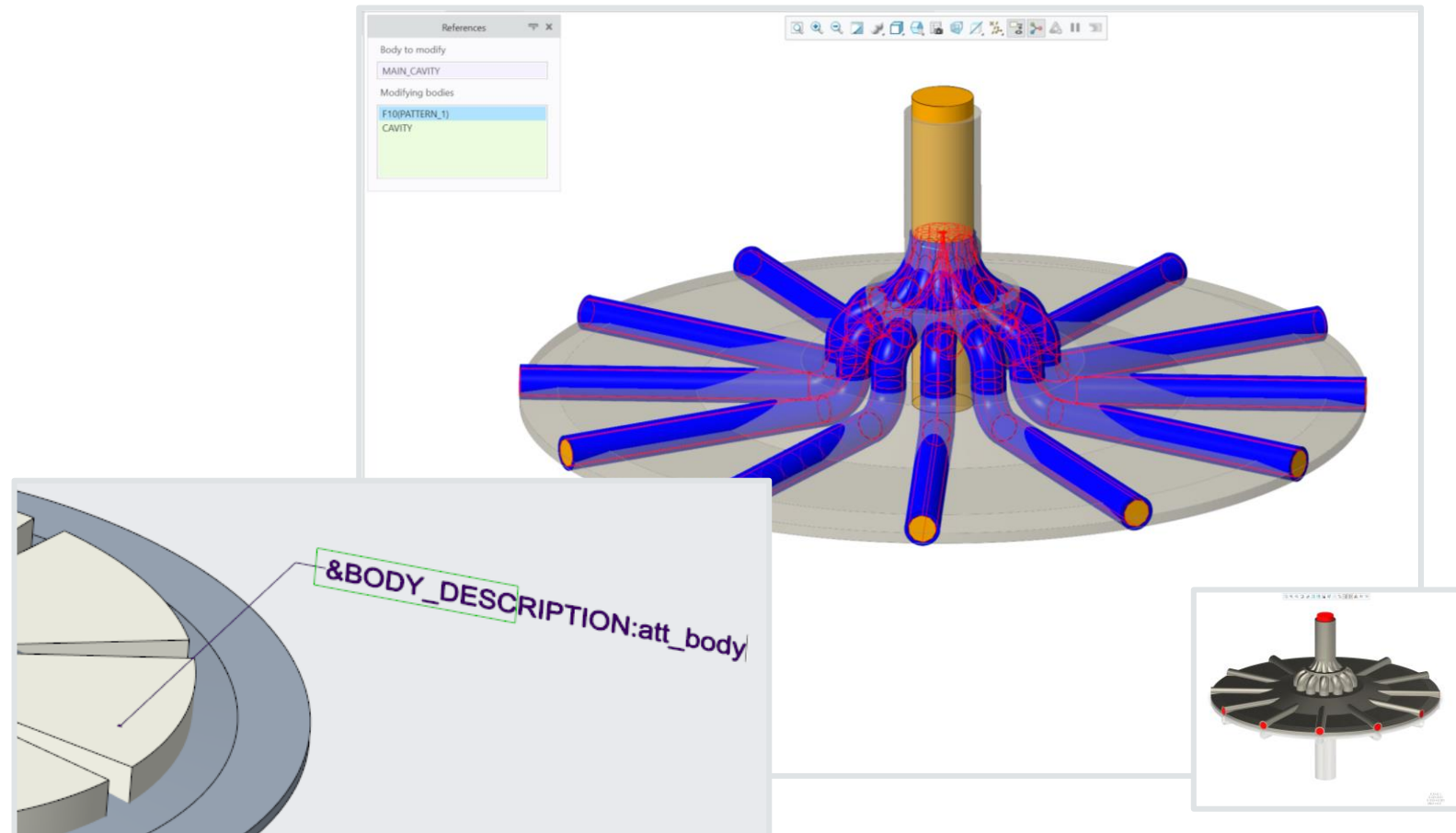
Object Name	Type	Designated Name	Extension
CYLINDER	Body	CYLINDER	.PRT
CONTROL	Body	CONTROL	.PRT



# CREO 8.0 – MORE MULTIBODY ENHANCEMENTS

## CAPABILITIES

- Body-Pattern as reference for Boolean operations feature
- Use ModelCheck to check for body interferences within a part (*BODY\_INTF*)
- Support callout  
&<param\_name>:att\_body  
for notes attached to bodies

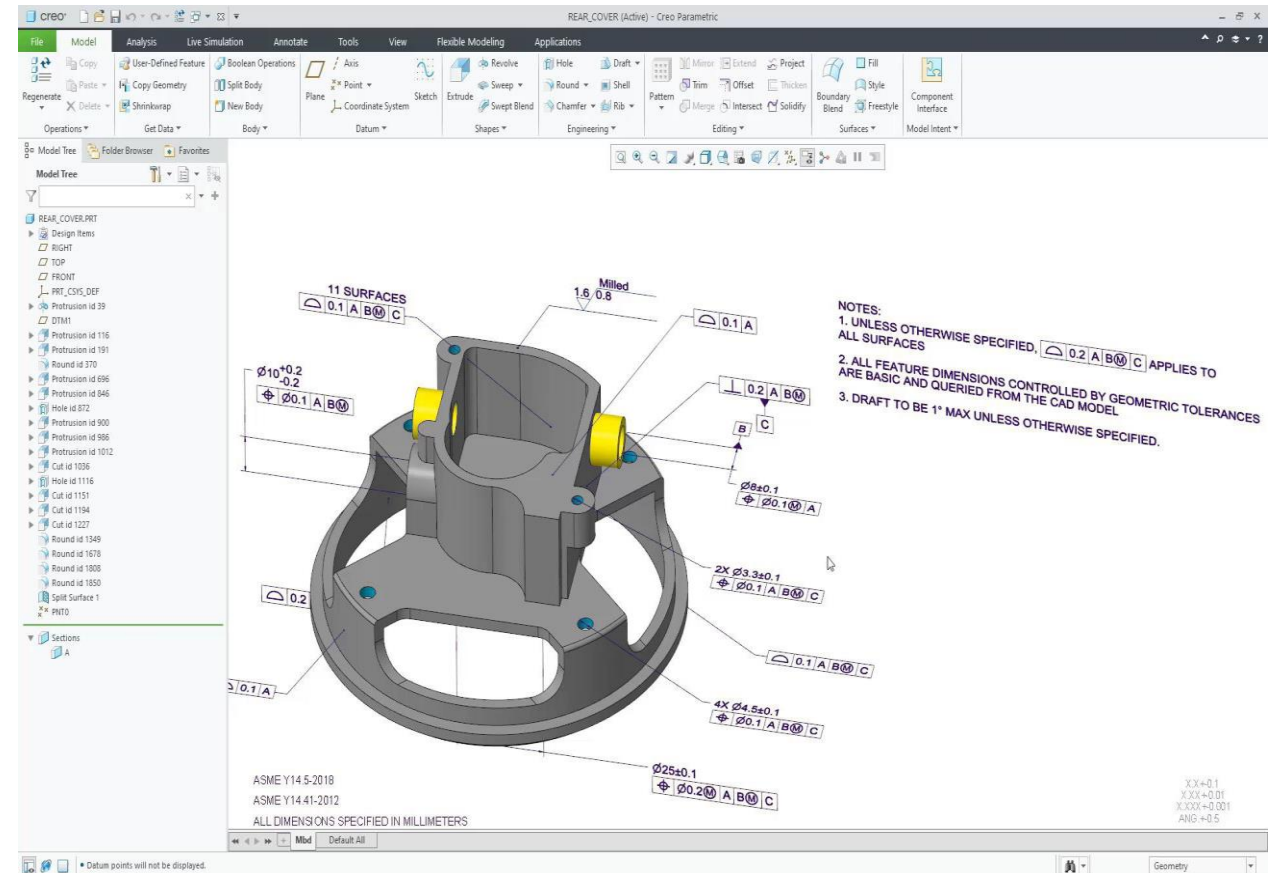




# MODEL BASED DEFINITION ENHANCEMENTS

## SYMBOL MODERNIZATION

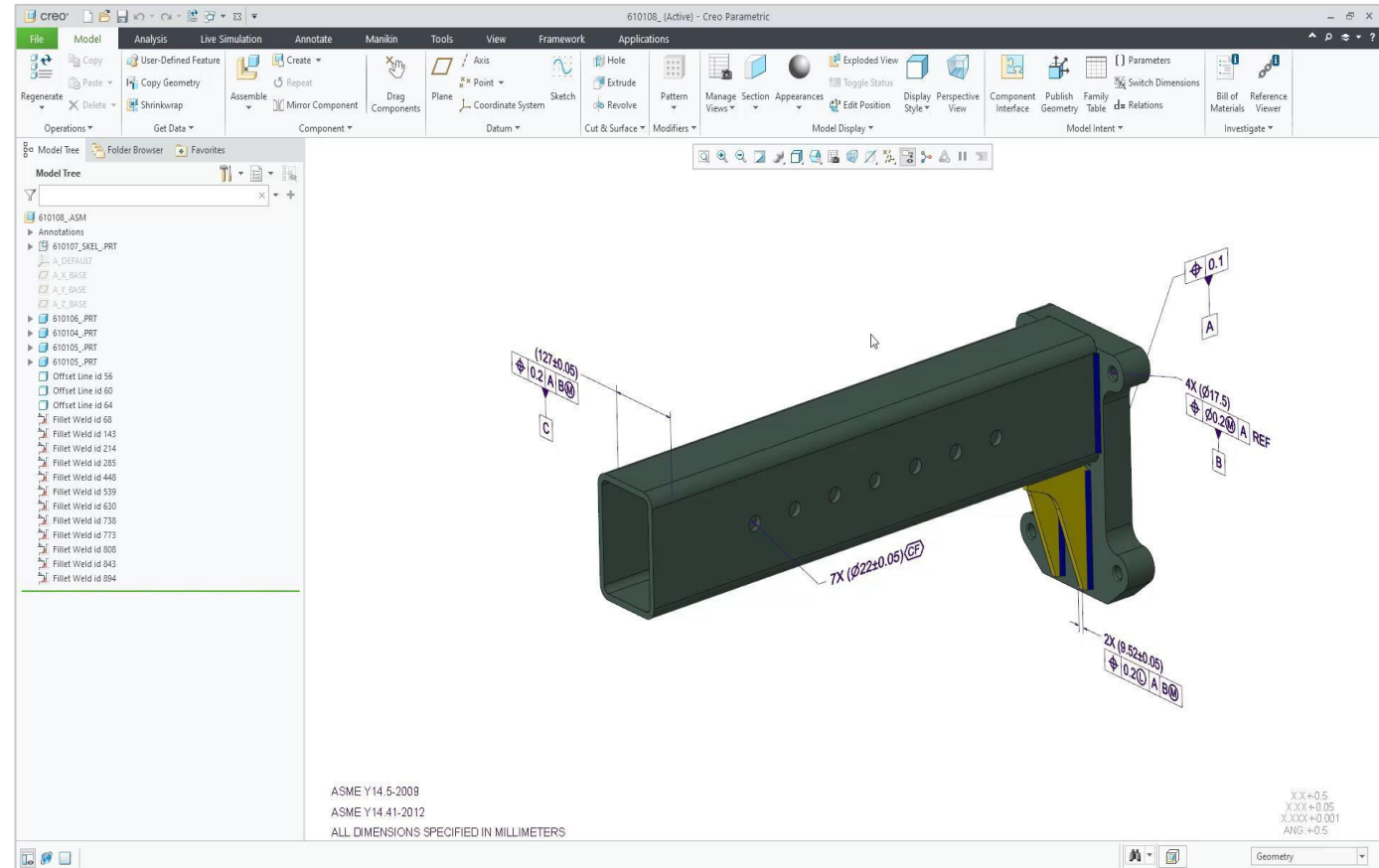
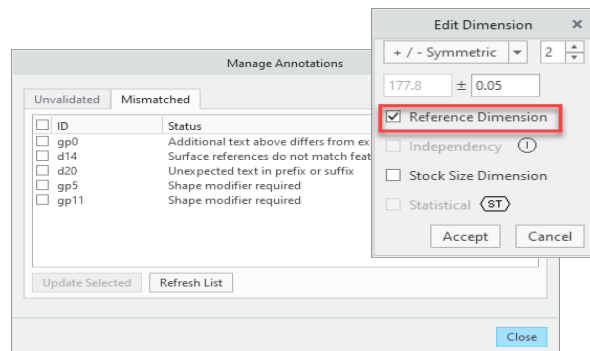
- Streamlined placement and editing workflows for symbols
- New gallery for symbols
- Semantic definition support for symbols
- Semantic references for weld symbols
- Enhanced symbol customization
- Transform command for symbols



# MODEL BASED DEFINITION ENHANCEMENTS

## GD&T ADVISOR

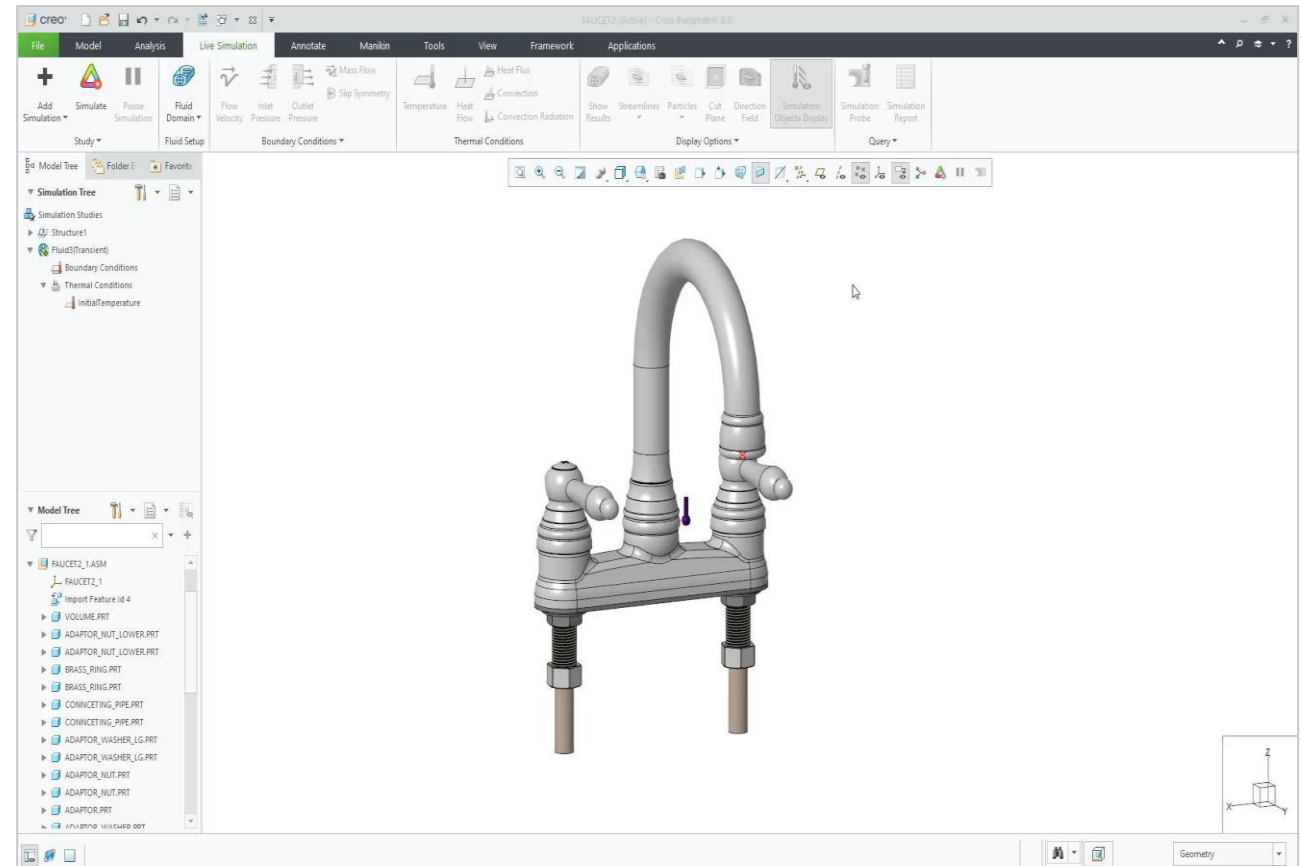
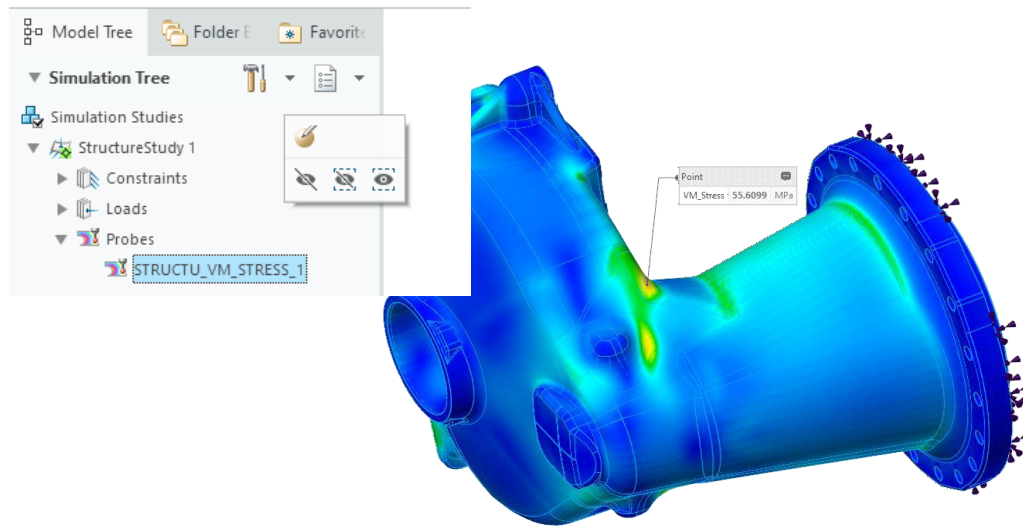
- GD&T Advisor support for assemblies
- Creation of Dimension while working with GD&T Advisor
- User control of reported annotation mismatches



# SIMULATION AND OPTIMIZATION ENHANCEMENTS

## CREO SIMULATION LIVE

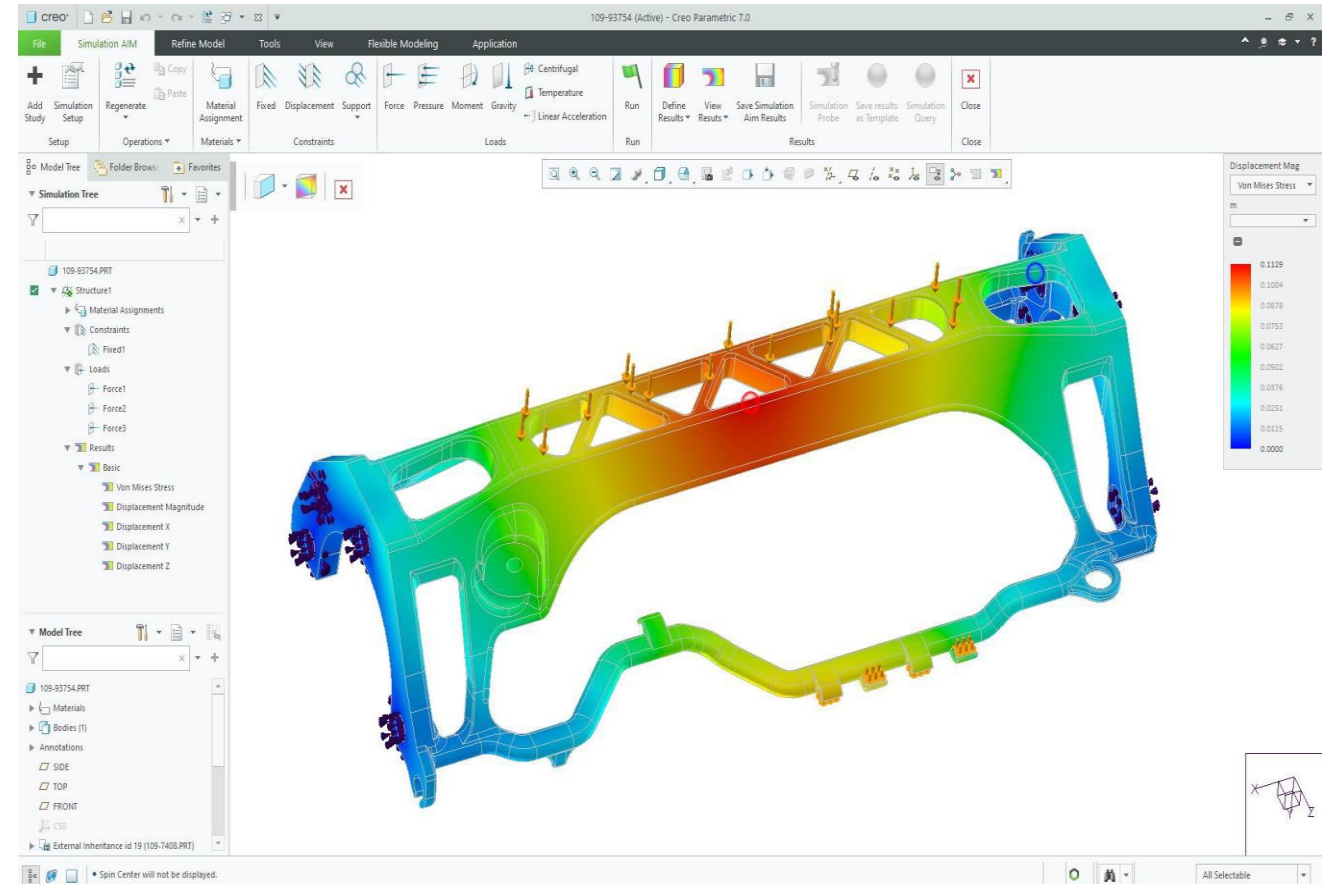
- Support for Steady State Fluids
- Ability to redefine Probes



# SIMULATION AND OPTIMIZATION ENHANCEMENTS

## CREO ANSYS SIMULATION

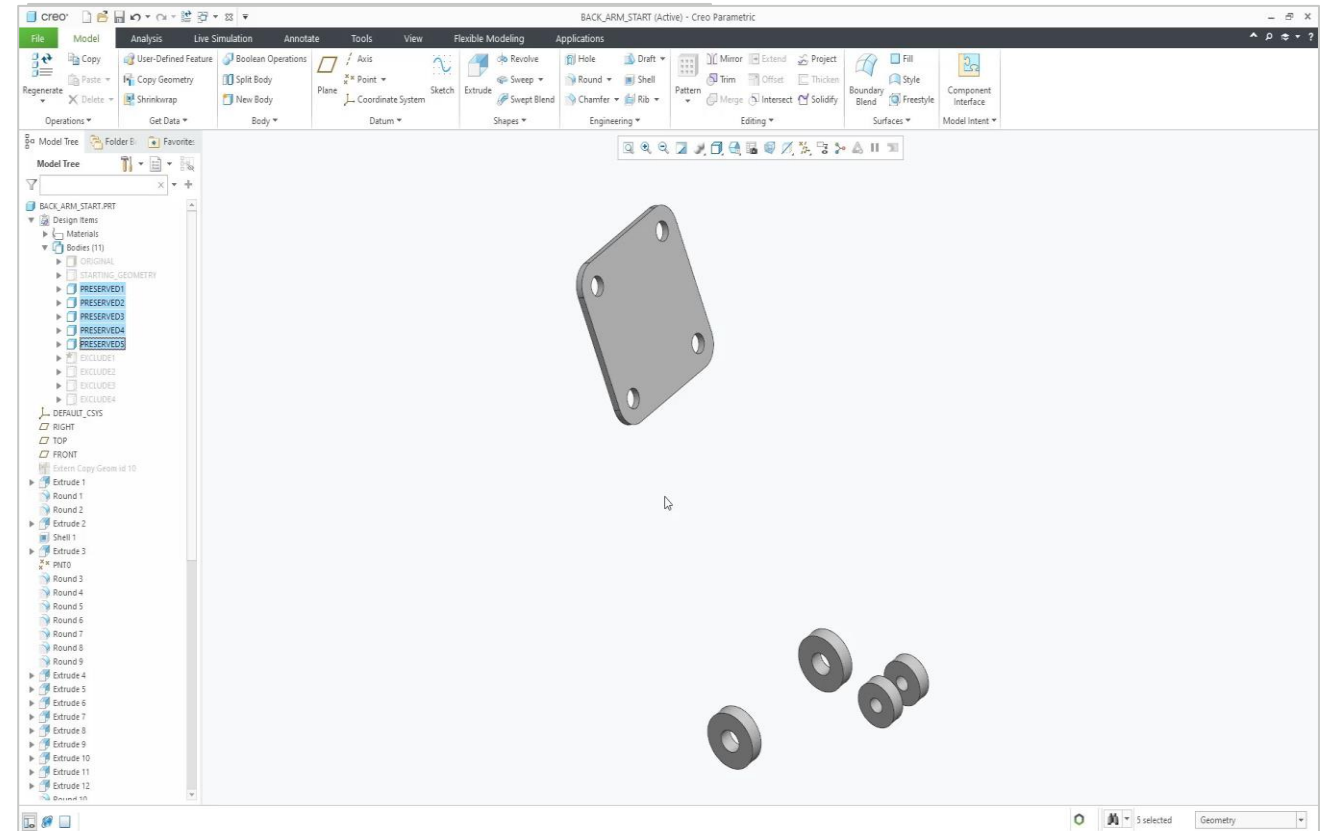
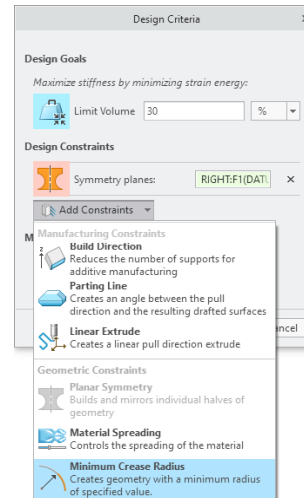
- Mesh control settings are now stored in the simulation tree
- Mesh diagnostics in Process Manager
- Manually control for large deflection (off or on)
- Automatically obtain license when entering Creo Ansys Simulation



# SIMULATION AND OPTIMIZATION ENHANCEMENTS

## GENERATIVE DESIGN

- Automatic Envelope
- Asynchronous operation
- Draft handling for reconstruction
- Minimum crease radius constraint

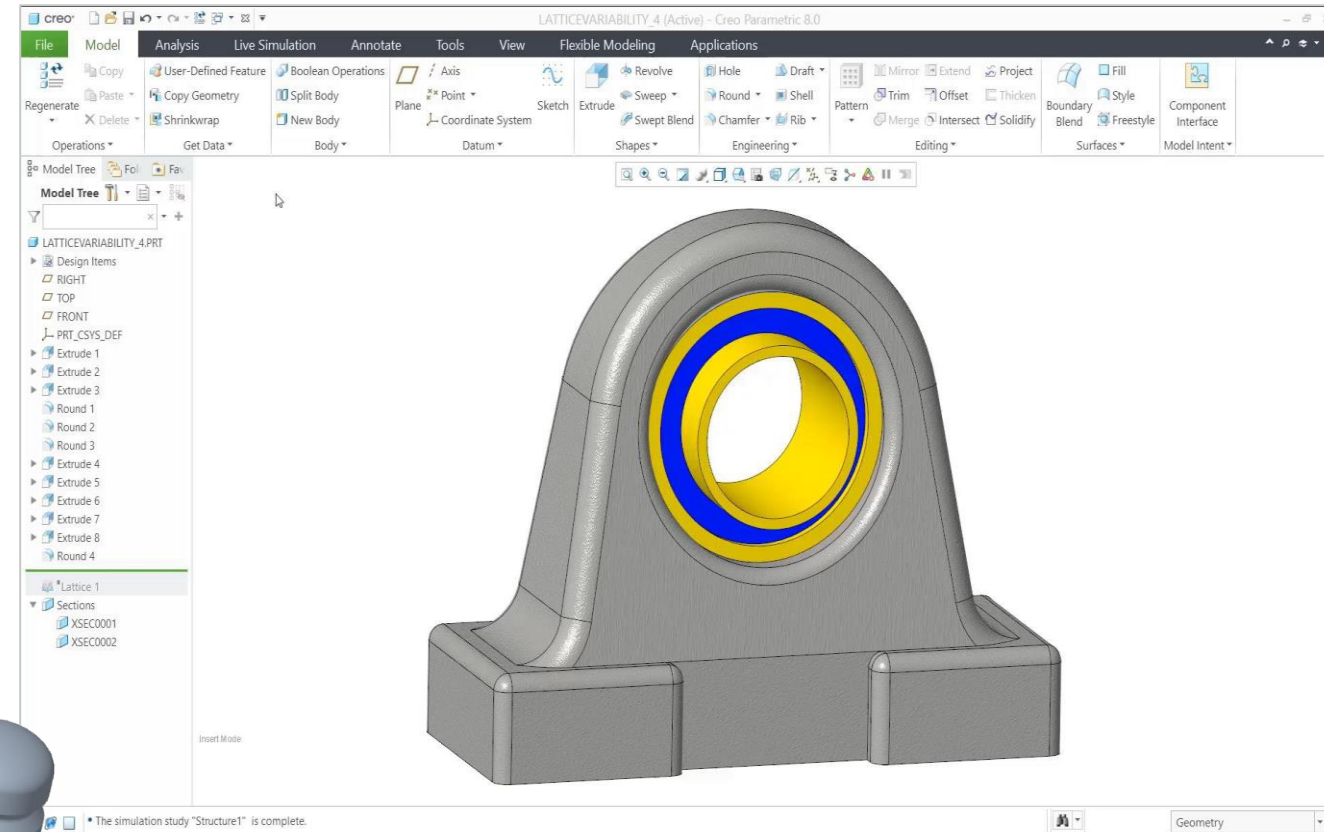
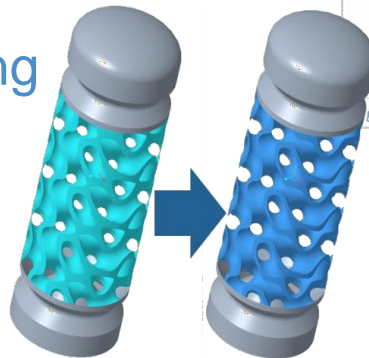




# MANUFACTURING ENHANCEMENTS

## ADDITIVE MANUFACTURING

- **Simulation driven lattices**
- Solid representation support for Stochastic Lattices
- Replacement of Formula- Based algorithm
  - An option to create complementary bodies
- Selective removal of dangling beams





# Thank You

Oscar Salas

Implementation Consultant

[www.TriStar.com](http://www.TriStar.com)



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