PTC Creo 3.0 Now Available

PTC®

Upgrade to bring your team to the next level!

- PTC Creo 3.0 Schools edition is now available to all FIRST teams

- To register go to: http://www.ptc.com/go/creoforstudents

- Standalone and Lab (floating) licenses are available

- We plan to start the webinar at 7 PM. In the meantime, we hope you enjoy our silent pre-webinar slideshow as people join!

![PTC® PRODUCT & SERVICE ADVANTAGE]

PTC Creo 3.0
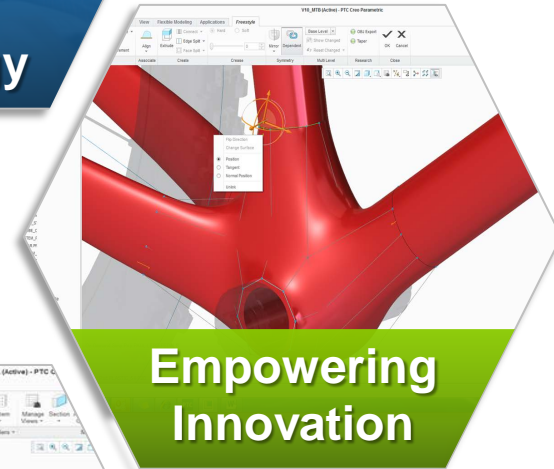*Design Better Products, Faster*

November 6, 2014

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What's new in PTC Creo 3.0?

Breakthrough Multi-CAD Technology

Concept Design Improvements

PTC Creo Efficiency Improvements

Unite Technology

Empowering Innovation

Core Productivity

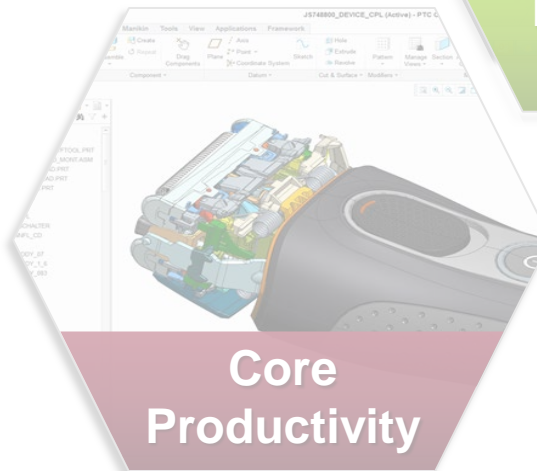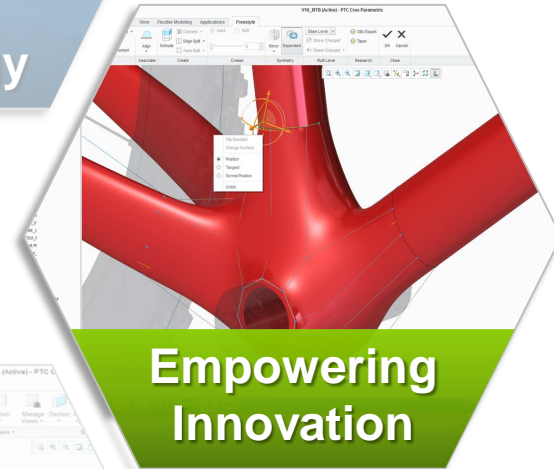**PTC**®

Breakthrough Multi-CAD Technology

Unite Technology

Concept Design Improvements

Empowering Innovation

PTC Creo Efficiency Improvements

Core Productivity

Enabling Optimal Multi-CAD Collaboration and Consolidation

- **_Import_** all common 3D CAD formats
  - SolidWorks, CATIA, NX, Inventor, SolidEdge

- **_Open_** key competitive 3D CAD formats
  - SolidWorks, NX, and CATIA

- **_Automatically update_** new versions of non-PTC Creo data within your designs

- **_Save As_** key competitive 3D CAD formats
  - SolidWorks, NX, and CATIA formats
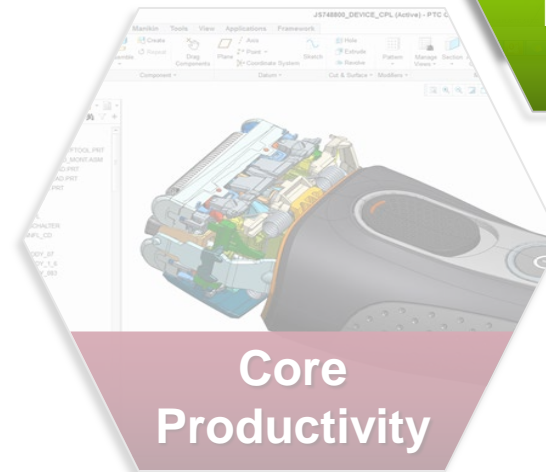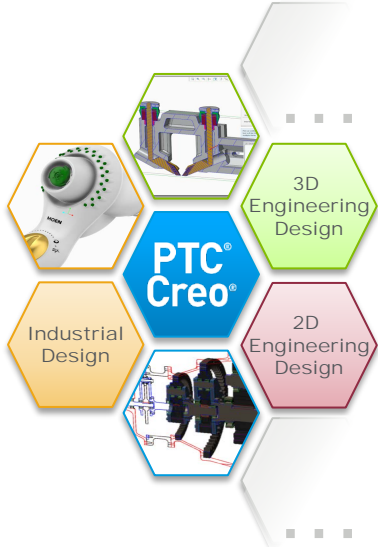
Breakthrough Multi-CAD Technology

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Dedicated tools for concept development that support the seamless flow of design intent into the detail design process.

EMPOWERING INNOVATION

92% OF PEOPLE SAY THEY WOULD BENEFIT IMMENSELY BY EXPLORING MORE CONCEPT DESIGN ALTERNATIVES[1]

PTC® Creo®

3D Engineering Design

2D Engineering Design

Industrial Design

# Empowering Innovation with PTC Creo 3.0

Industrial Design with Freestyle

- **Capabilities**
  - Rapid freeform surface creation
  - Direct manipulation with 3D dragger
  - **NEW!** Parametric control over freeform geometry
  - Trim, merge, round, thicken, solidify to make the model solid
  - **NEW!** Join faces and edges
 - High quality, curvature continuous, manufacturable surfaces

- **Benefits**
  - Quickly create the highest quality and most innovative products
  - Accelerate concept design
  - Generate more proposed concepts
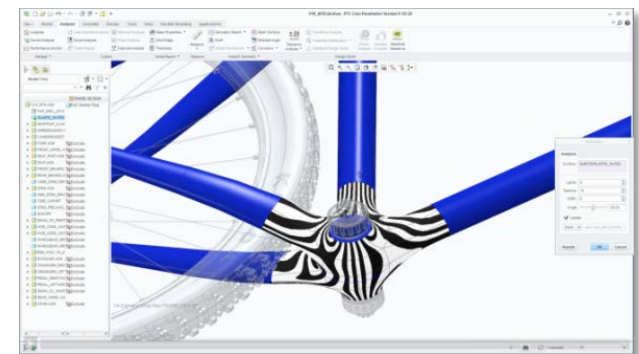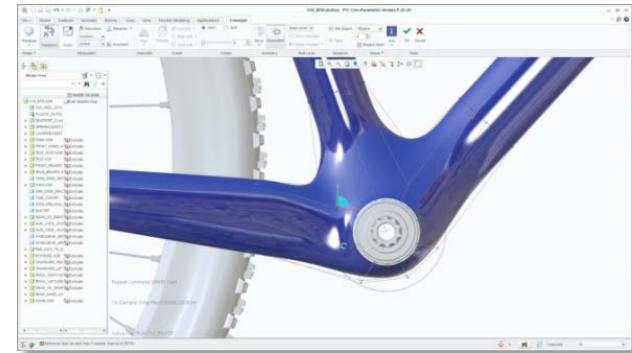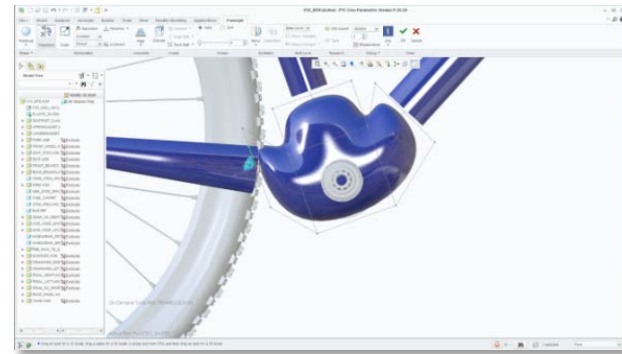
Quickly iterate parametric designs with PTC Creo Design Exploration Extension (DEX)

What is DEX?

– A dedicated environment for enabling the quick and easy investigation of alternative concept designs within the parametric environment

– A significant enhancement to the process of developing design alternatives, investigating modeling approaches and safely understanding the consequences of design changes


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PTC ®
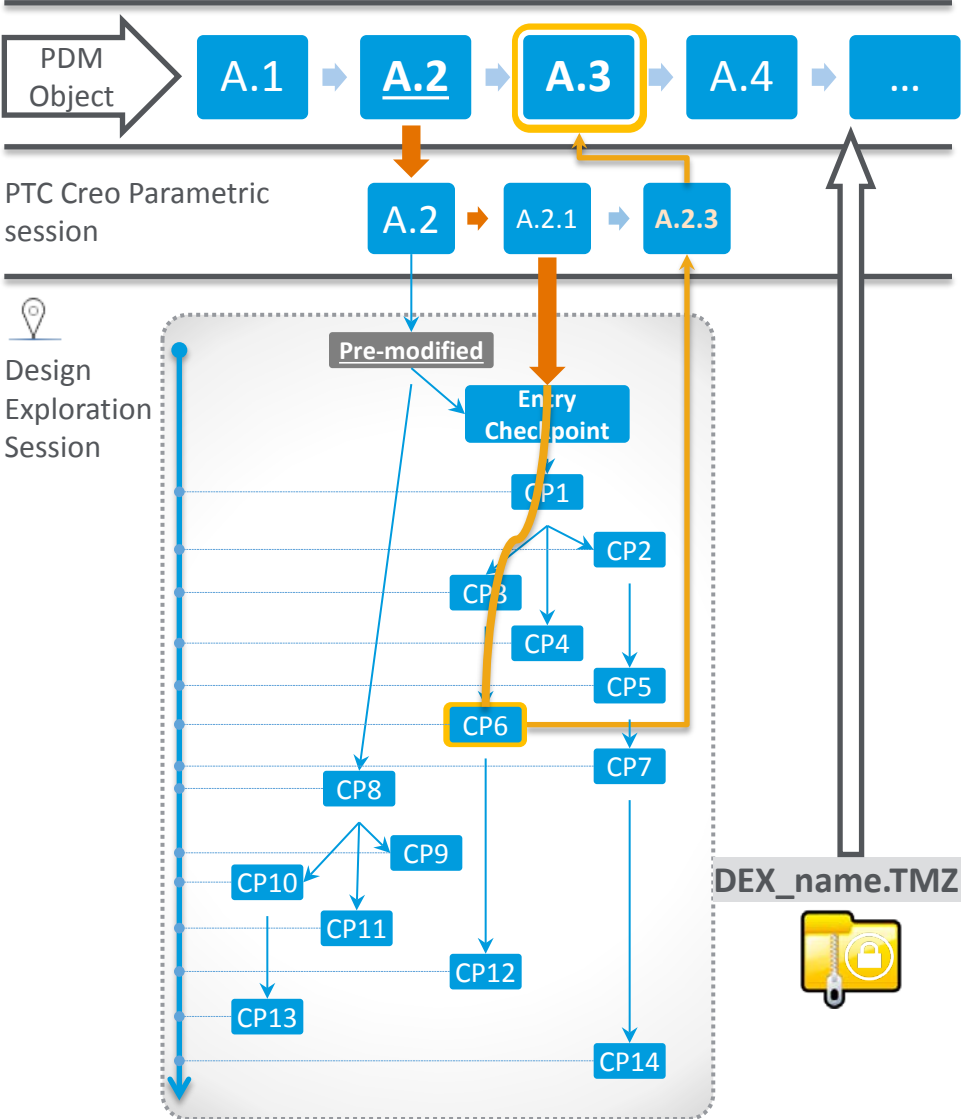
PTC Creo Design Exploration Extension

- **Capabilities**
  - Create unlimited checkpoints and branches of design alternatives
  - Instantly toggle between checkpoints
  - Save all checkpoints in a lightweight format for later reference
 - Store and access DEX data at any time

- **Benefits**
  - Explore design changes safely without risking original designs or committing to any change
  - Simultaneously develop different ideas and evaluate all options before making decisions
  - Eliminate manual data duplication and tedious session clean-up for loading and reloading different versions
  - Browse exploration checkpoints in a "decision tree" for interactive design review
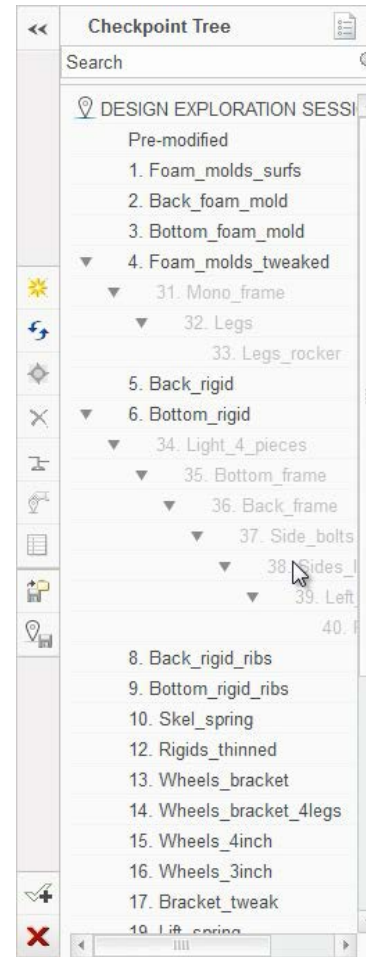
Benefits

- ## Seamless Interoperability
  - Use data across 2D & 3D, direct and parametric environments

- ## Flexibility and Control
  - Combine freeform and parametric modeling

- ## Support RFQ efforts
  - Quickly develop 3D concepts using direct modeling that can be used in a parametric environment

- ## Quickly Evaluate Design Alternatives
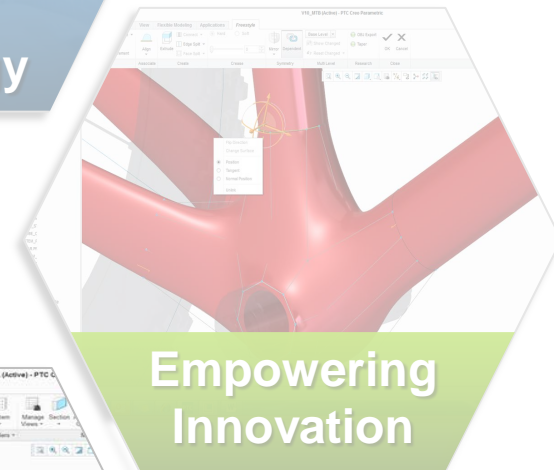 - Dedicated 'Sandbox' environment supporting the development of design alternatives or design approaches
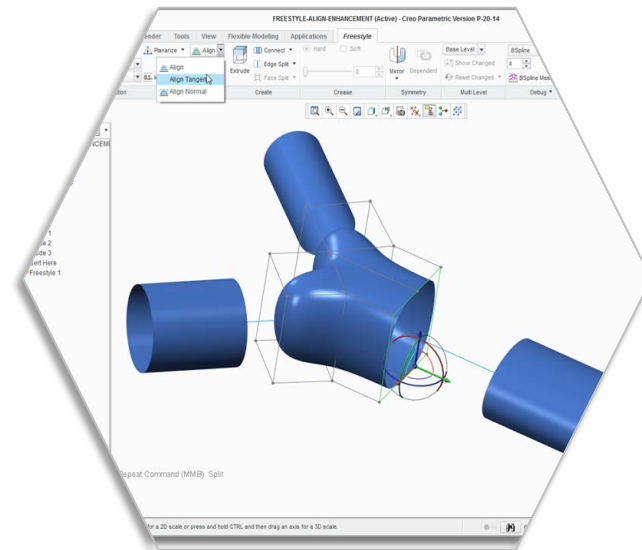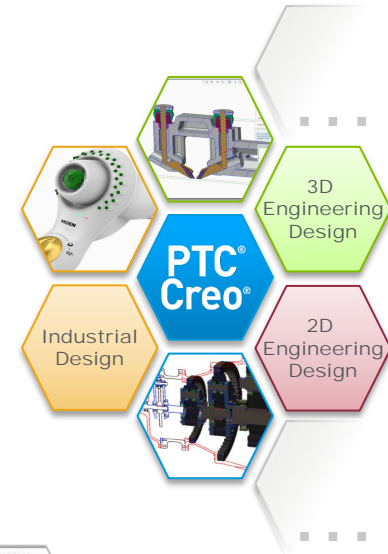
Breakthrough Multi-CAD Technology

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Enhancements in PTC Creo Parametric

- **New Getting Started Experience**

- **Integrated Hardware Libraries**

- **Chordal Round**

- **New PTC Mathcad Integration***

- **Redesigned Reroute**

- **New 3D Thickness Check**

- **Graphical Realism**

- **New Note Creation Tools and Workflows**

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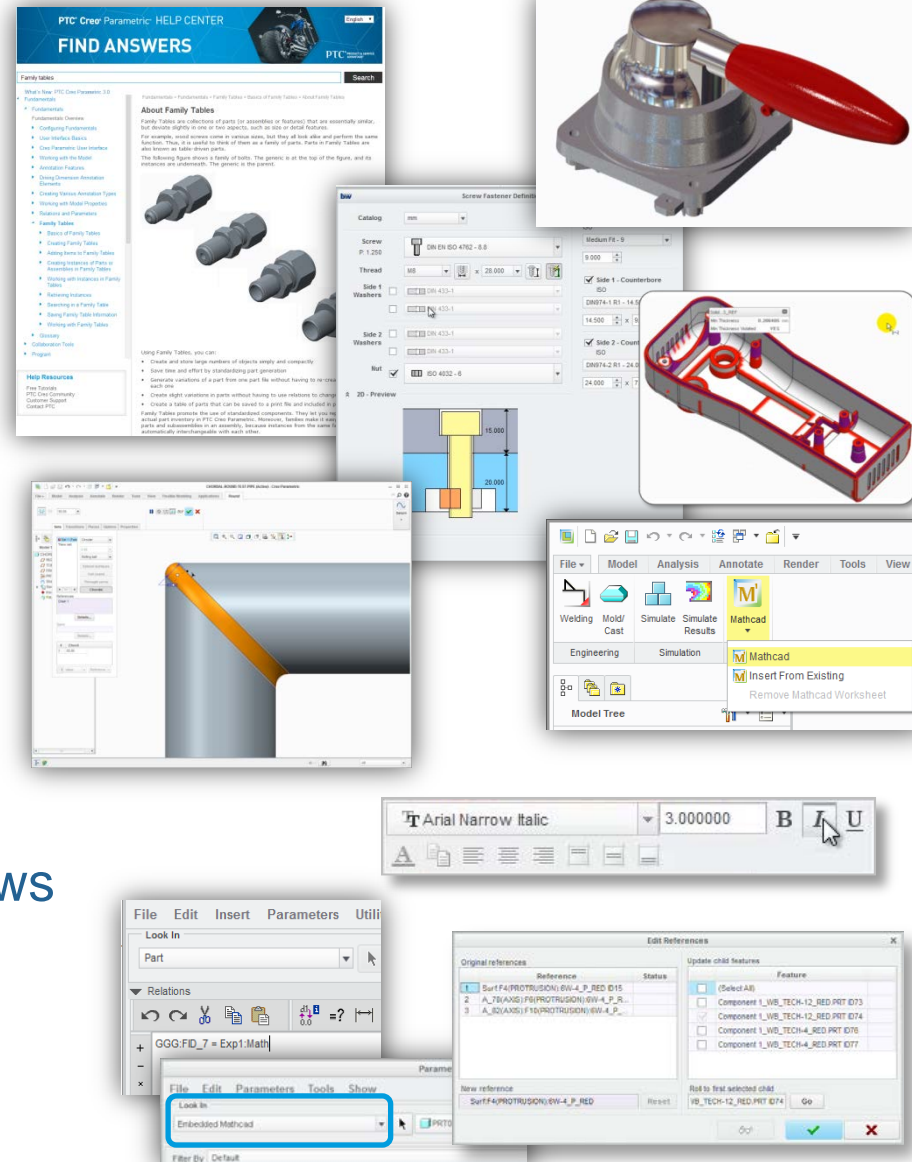
- **New Getting Started Experience**
  - Revamped Help, Google indexed and searchable on the web
  - Startup Tutorials shipped with the product
  - Additional tutorials downloaded through Learning Exchange
  - 100+ What's New Videos available on Learning Exchange

- **Integrated Hardware Libraries**
  - Nuts, Bolts, Washers, Screws
  - Auto hardware selection
  - Auto counterbore
  - Pattern placement
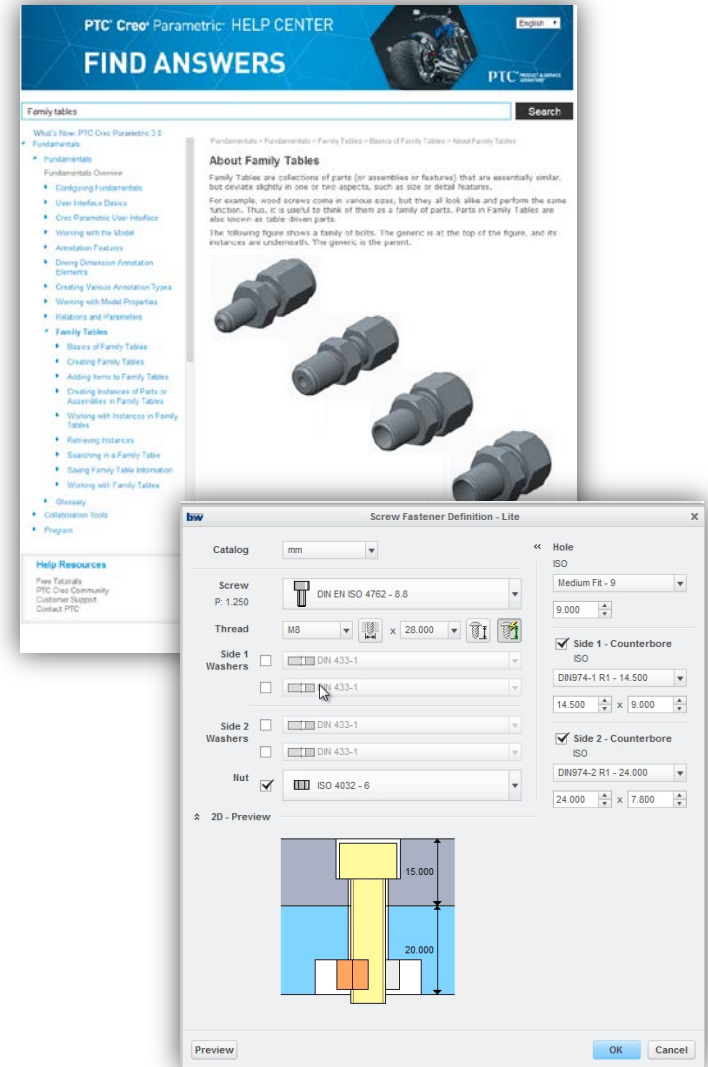
- ## Chordal Round
  - Constant width useful for many cases

- ## New PTC Mathcad Integration
  - Mathcad Express is shipped with every seat of PTC Creo Parametric.
  - Embed Mathcad worksheet in any PTC Creo part or assembly
  - Connect input/outputs from Mathcad to parameters in PTC Creo Parametric

- ## Redesigned Reroute
  - Reroute simplified
  - Broader power – easily transition to multi-feature reroute
 - Retained image of lost references available to guide selection of new references

PTC Creo Parametric Core Productivity Improvements
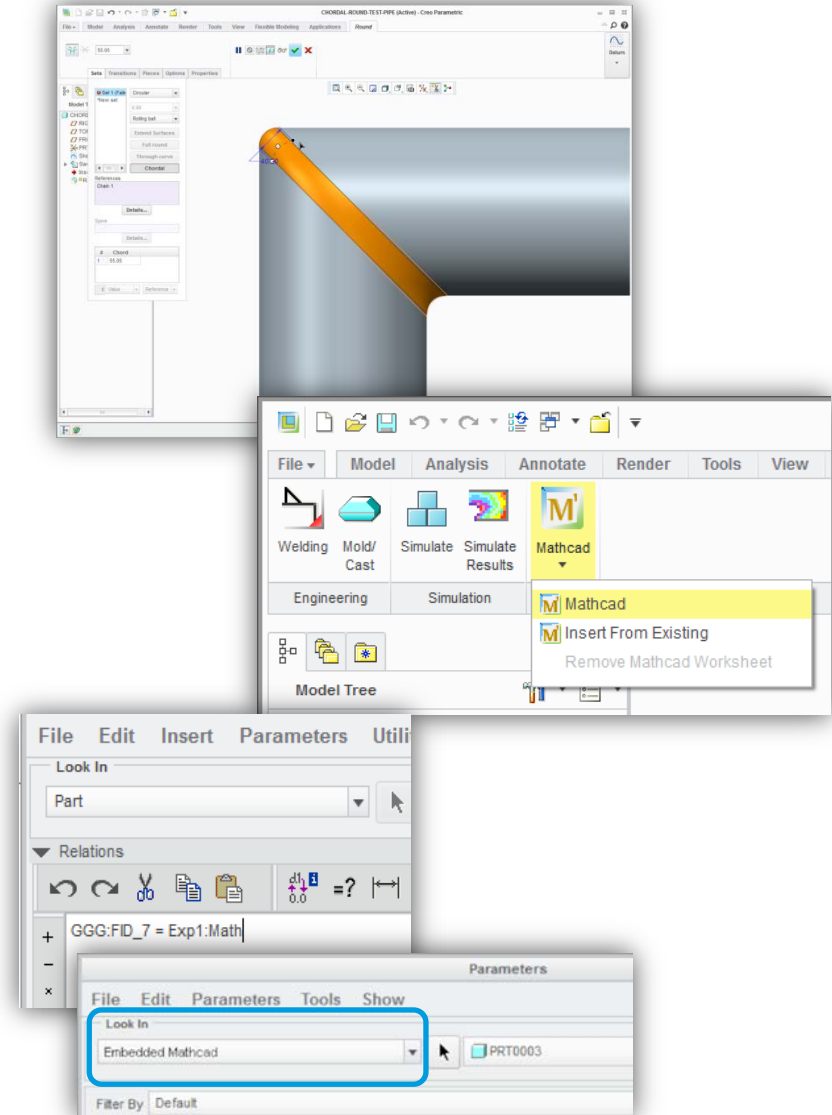
- **New 3D Thickness Check**

- **Graphical Realism**

- **New Note Creation Tools and Workflows**
  - Properties floating dashboard
  - Simple note import
  - Easy parameter mapping – no special syntax needed
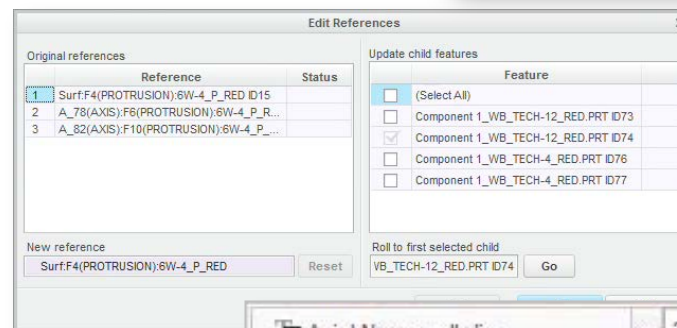
Outside of Core PTC Creo Parametric, PTC Creo Layout and PTC Creo Direct

- **PTC Creo Simulate**
  - Sliding Contact with Friction
    - Finite friction for individual contact interfaces
    - Different coefficients for Static and Dynamic friction
    - Automatic calculation of maximum tangential traction, normal force, contact area, slippage coefficients
  - Contact between intent surfaces
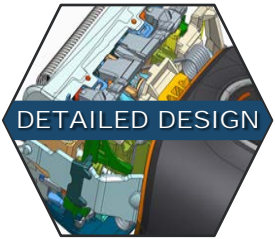 - All new results creation workflows and user experience
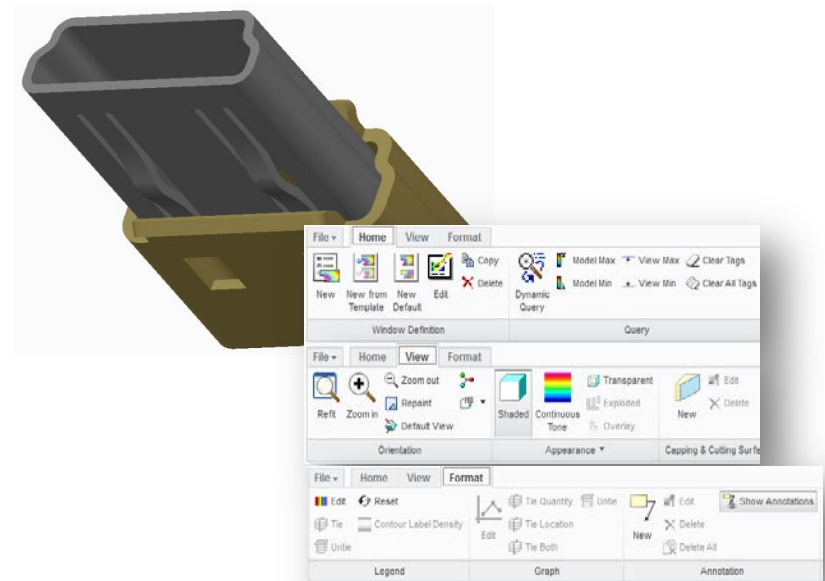
- **PTC Creo Flexible Modeling Extension**
  - Tangency propagation control
    - Includes Round/Chamfer handling
 - New Flex Pattern

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Exploring New PTC Creo Capabilities

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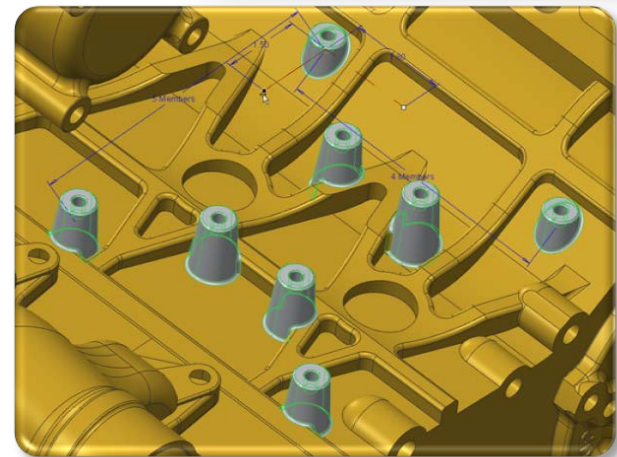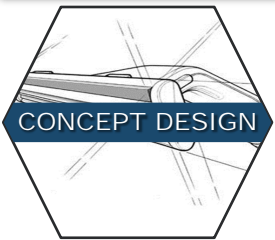
CONCEPT DESIGN

- Creating stylized concepts
- Creating new concepts from existing models
- Creating new concepts in 2D

DETAILED DESIGN

- Dealing with late design changes
- Working in a multi-CAD environment
- Working with large assemblies
- Electro-mechanical co-design
- Creating modular products

SIMULATION
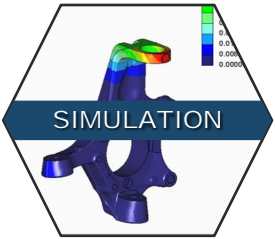
- Validating designs against functional requirements
- Associate design and analysis
- Preparing models for CAE analysis
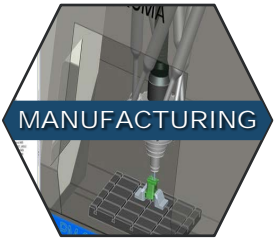
MANUFACTURING

- Using 3D data in manufacturing

COMMUNICATION
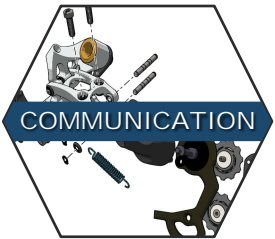
- Creating 3D technical illustrations