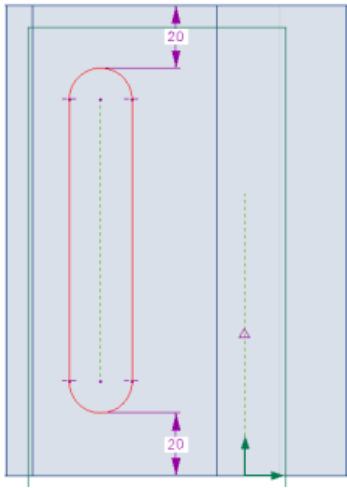


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Top Ten Reasons to upgrade

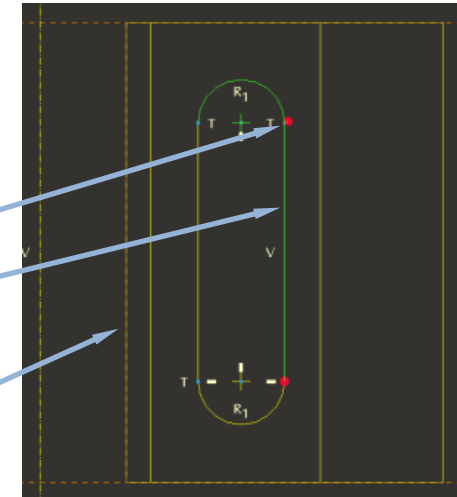
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One – Sketcher improved

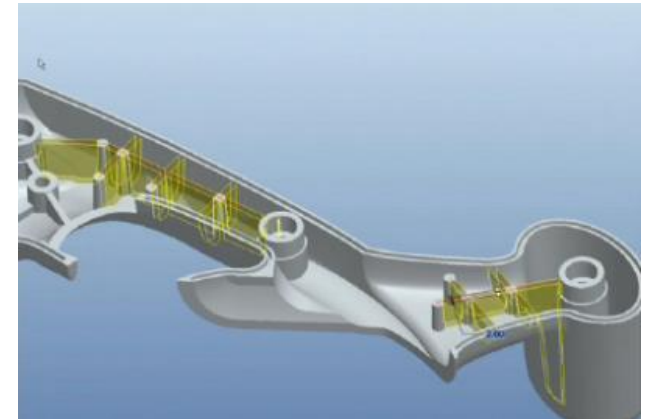
Sketchers diagnostics including;

- Sketch on planar geometry without a new datum plane (workplane).
- Shaded profiles (not shown)
- Highlights open ends with red dots.
- Highlights overlapping geometry and line either side in green.
- Displays feature requirements. (not shown).
- References existing datum and geometry.
- Infinite undo (Ctrl+Z) in a sketcher session



Two - Dynamic feature edit

- Drag handles allow features to be edited with real time regeneration of the model



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Three - cut and paste features

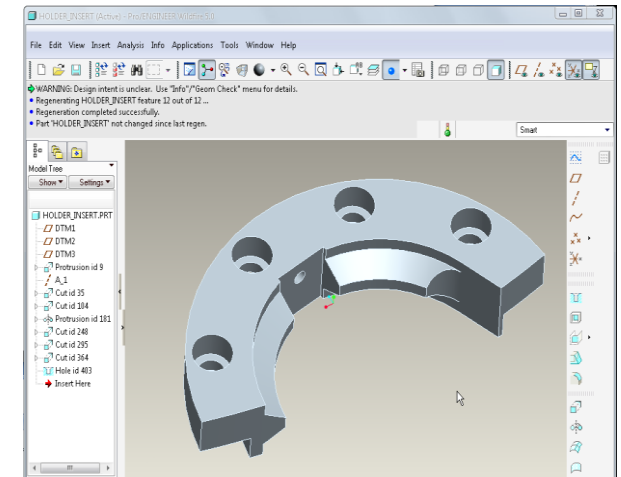
- Features can be quickly cut and paste into new locations for rapid generation for repeated geometry

Four – failure resolution

- Deal with failures now or later
- Models can be saved with failed features
- Failed feature not regenerated as well as child of failed and topology children
- “Failed” Geometry is shown when possible

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Image here



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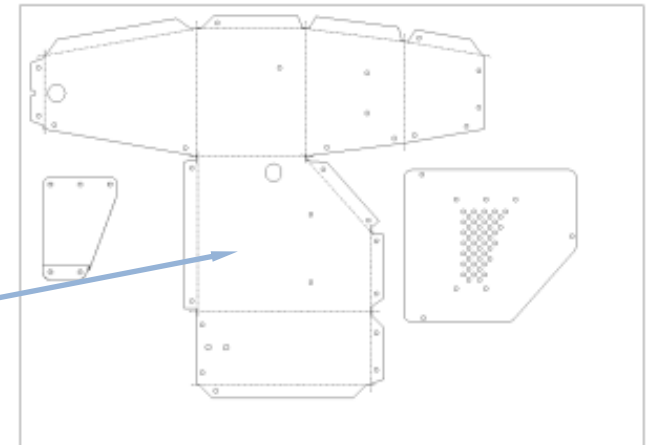
Five – Warp

- Stretch, bend, twist, sculpt, etc
- Easy creation of organic shapes for product design.

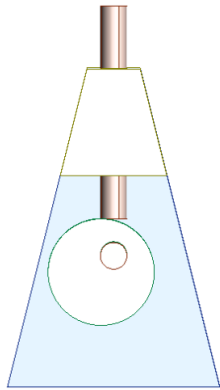


Six - Sheet metal

- Tools for creating metal, card, acrylic and structures for graphics, point of sale etc.

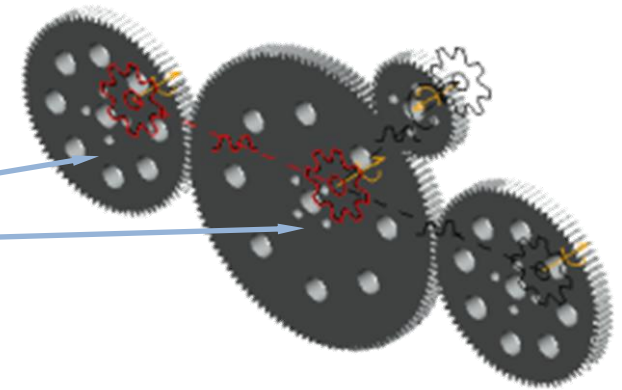


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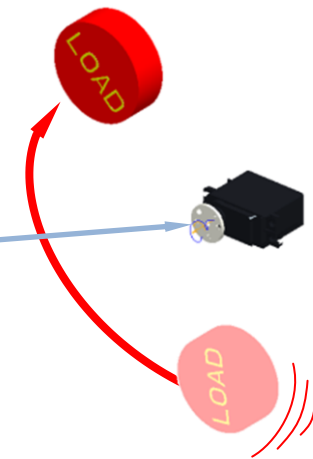
Seven - Mechanism assembly

- Pin joints
- Slider joints (not shown)
- Ball joints (not shown)
- Cams (not shown)
- Gears
- Belts (not shown)
- All points of contact

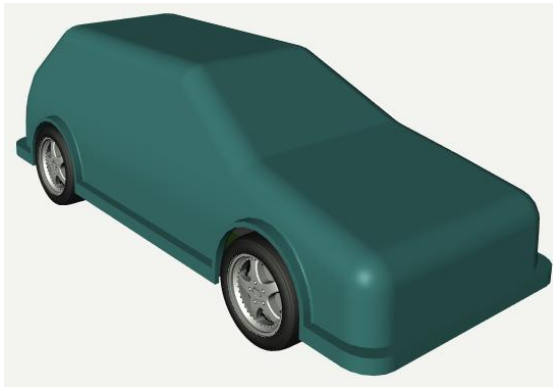


Eight - Mechanism dynamics

- Servo motors (not shown)
- Force motors
- Gravity
- Friction (not shown)
- Coefficient of restitution (not shown)



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Nine - Mechanica Lite

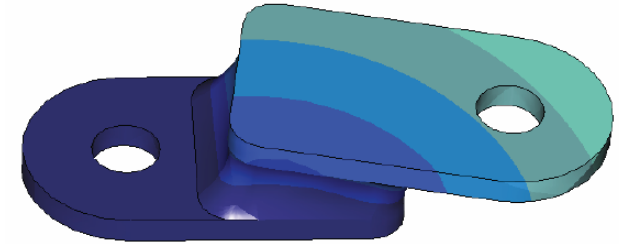
Finite Element Analysis (FEA) available for the first time in Schools Edition.

- Structural
- Thermal
- Resonance
- Non linear elasticity
- Plastic part design
- Elastomers

Ten – Photo realistic render

- Real time render
- Render integrated into modelling window
- Truly photo-realistic render
- Shadows, reflections
- Apply your own textures
- Create and apply decals
- HDRI backgrounds

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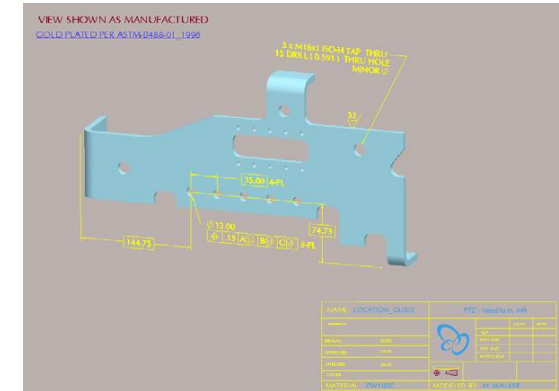
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Eleven – 3D Drawings

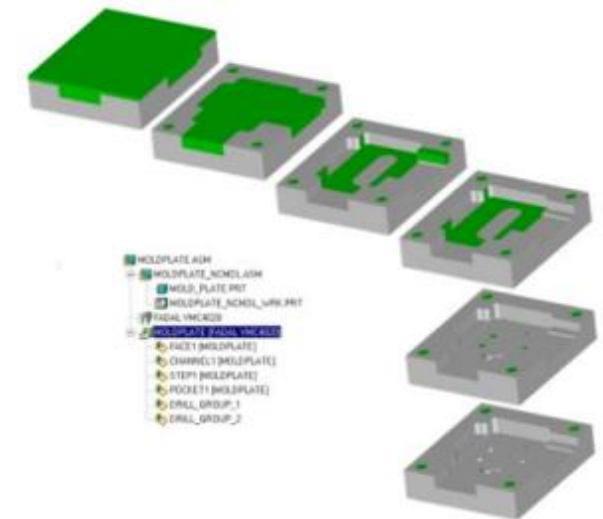
- Driving dimension annotations
- Annotations in design features
- Hole notes, weld symbols
- More flexible annotation planes



Eleven - 2.5D NC machining

- Setup machine, material, tooling, retract, fixture
- Machining features: Pocket, step, face, slot, channel, through pocket, holes, etc.
- Tool paths
- Simulate checks for collisions
- Output to Fanuc file format

Note: STL output is also available in **Pro|ENGINEER**



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Twelve – Robust and reliable

Engineers in the largest manufacturing companies in the world rely on Pro | ENGINEER to create robust models at the heart of product development. Seamless integration with PTC's Product Lifecycle Management (PLM) software ensures designers always access the most up to date geometry.

Thirteen – Network install

License server option has 150 floating seats

- Pro | ENGINEER installation can be cloned around the network.
- Streamlines licensing, installation and maintenance for busy IT support staff.
- Standalone option for teacher and pupil educational use at home.

Thirteen - FREE PTC curriculum

- 200+ hours of middle and high school projects with pupil tutorials, outline planning, schemes of work and detailed lesson plans.
- Product design
- Engineering
- Science
- Maths
- Mechanical simulation

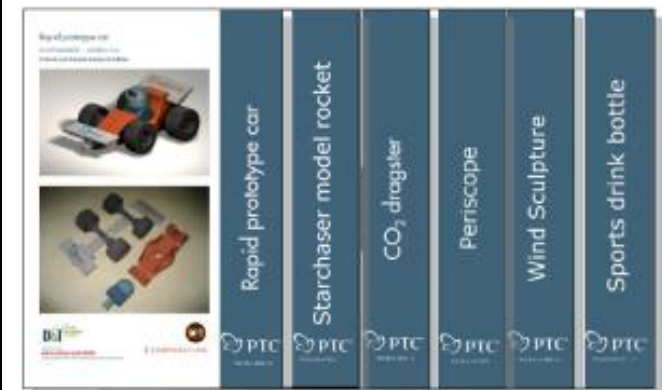
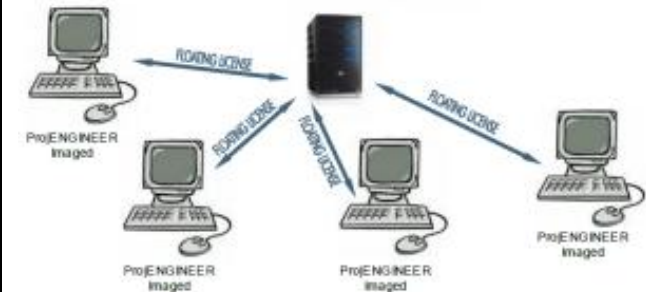


THALES

BAE SYSTEMS

AIRBUS

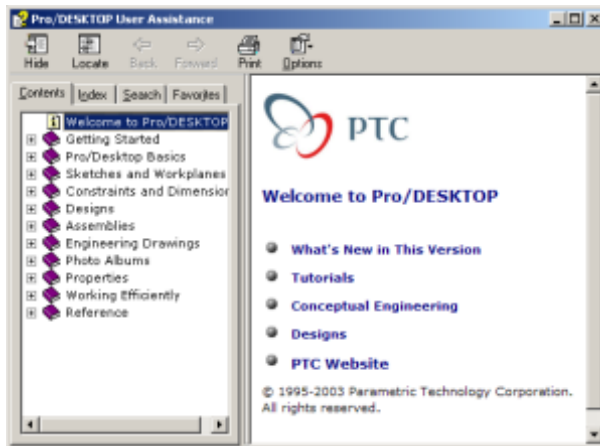
NOKIA
Connecting People



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Fourteen – FREE software tutorials

- Over 400 hours of **FREE** online multimedia software tutorials for **Pro | ENGINEER** on:
 - Modelling and Advanced modelling
 - Assemblies
 - Engineering drawing
 - Behavioural modelling
 - Mechanisms
 - Milling
 - Turning
 - Mold design
 - Mechanica
 - Sheet metal
 - Surfacing



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Scotland www.cadindet.org
Wales www.tawwales.co.uk
Rest of the World www.ptc.com/go/schools

Or email: schools@ptc.com stating you would like to use **Pro | ENGINEER** in your school with your school name and full address.

Tim Brotherhood – March 2010 - D:\PTCData\00 AA Global curriculum\00 resources\Bits & bobs\ProD to ProE top 10.docx