PTC User Montreal

Presented in Nashville at PTC Live Global 2015 by Ron Rich & Dan King

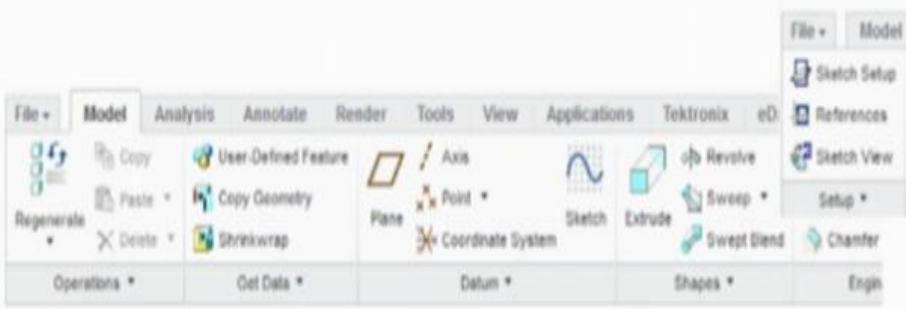
Tip 1 – Putting a square peg in a round hole

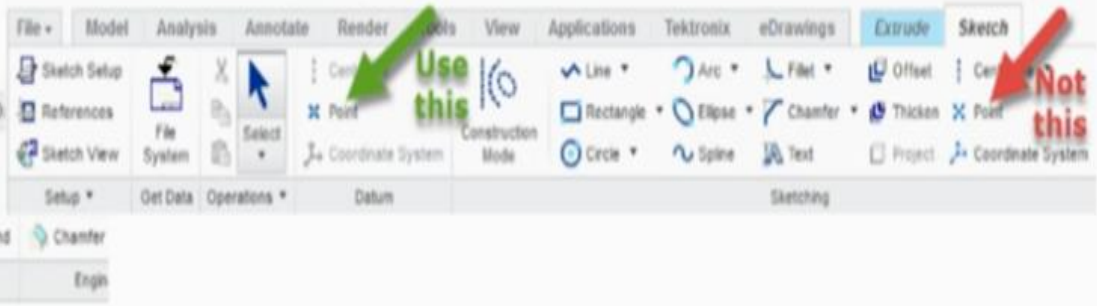
PTC Live Global

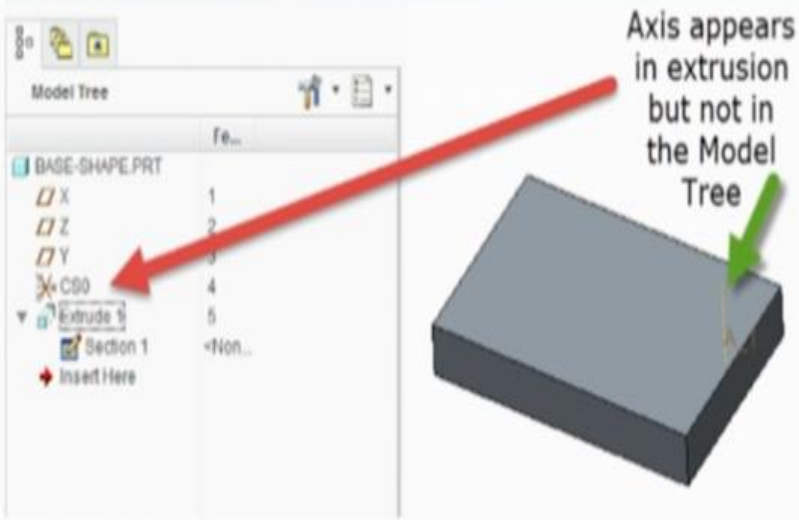
How to use an extruded axis for placement

- While making an extruded cut or protrusion that is not a circle, add axis point or points dimensioned and placed as desired to create an axis that can be used as a reference for assembling.

- Use the datum point icon from the Datum menu while in Sketcher.







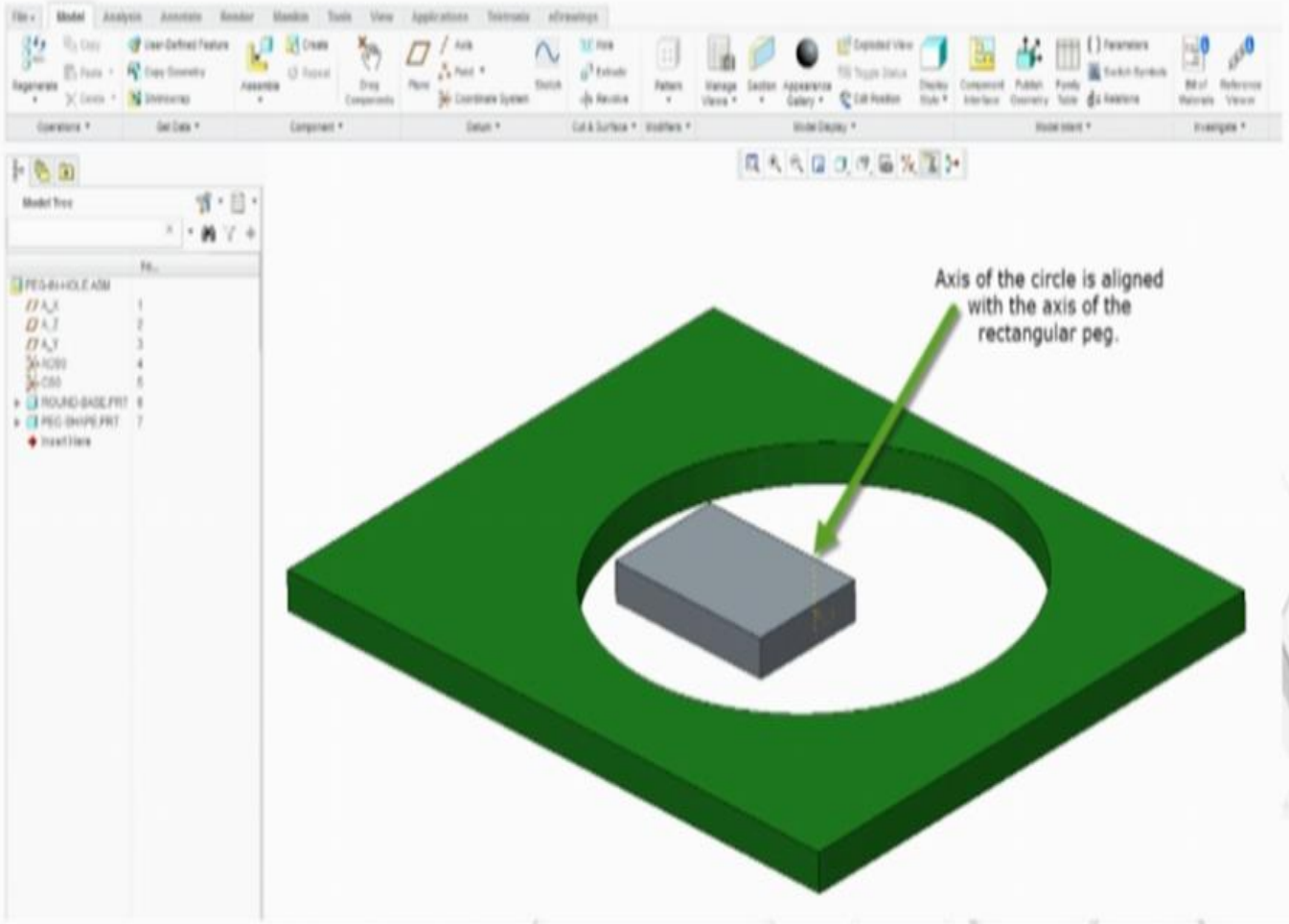
- Even though the axis does not show up in the Model Tree, the axis can be selected when placing in an assembly.

Tip 1 – Putting a square peg in a round hole

PTC Live Global

How to use an extruded axis for placement

- Using the axis from the extrude you can now assemble with another part aligned by these constraints.
- Show demo



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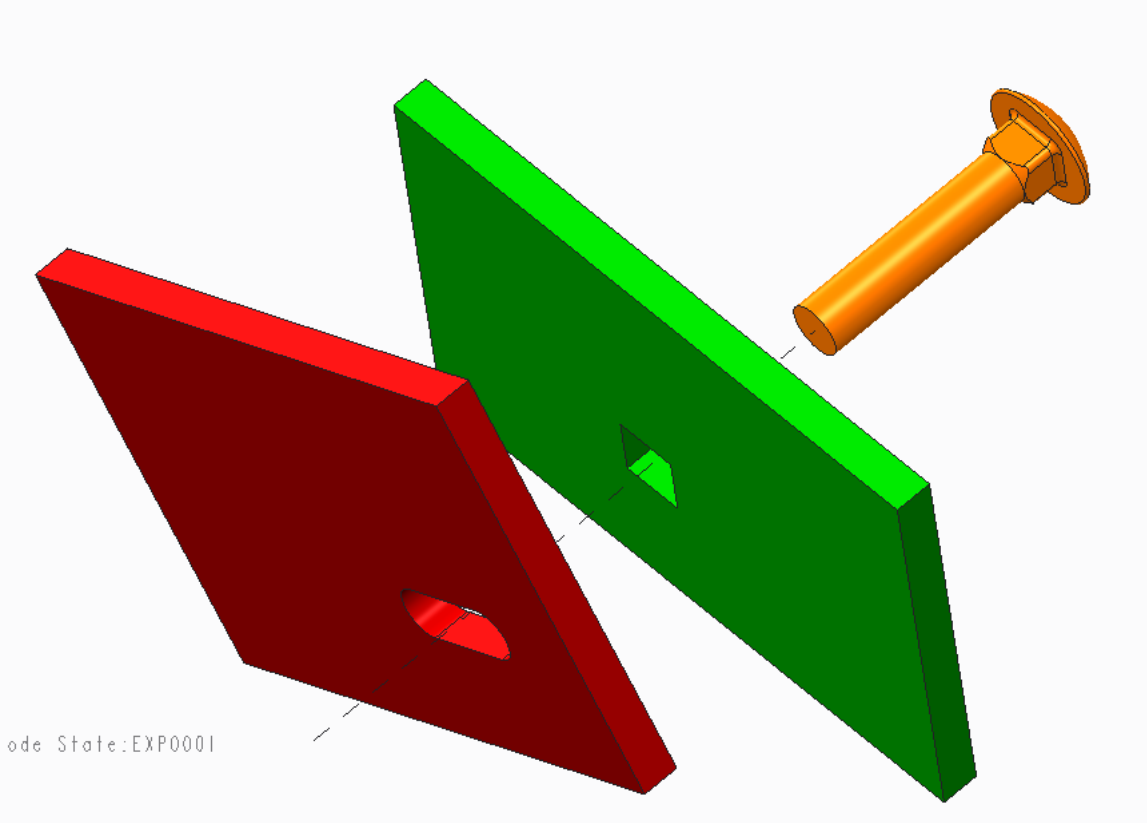

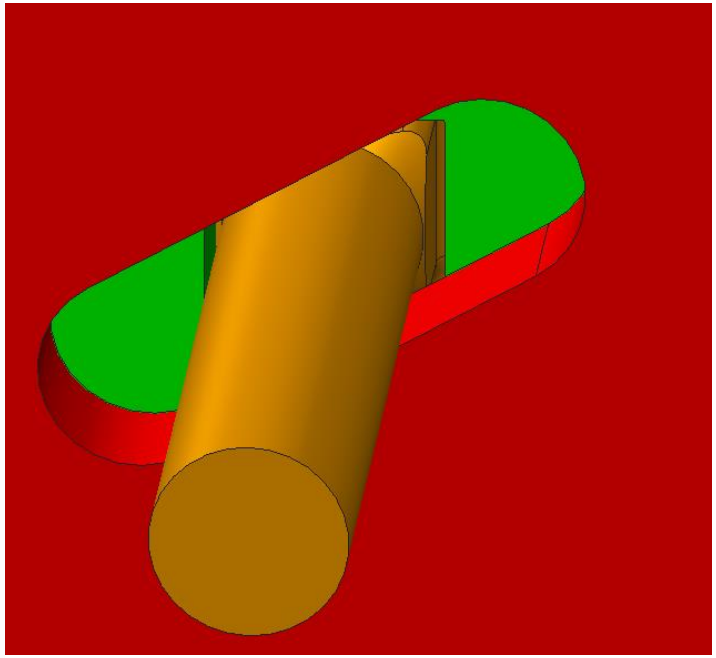

Tip 2 – Using your desktop publisher

PTC Live Global

Using True Type Fonts and other techniques in Creo notes.

- Examples

Same Creo note jazzed up a bit

PTC's technology solutions help customers transform the way they create, operate and service products for a smart, connected, world.

Founded in 1985, PTC employs approximately 6,000 professionals serving more than 28,000 businesses in rapidly-evolving, globally distributed manufacturing industries worldwide.

GLOBAL PRESENCE

6,000+
Employees in 30 countries around the world

1,300+
Dedicated service professionals

750+
Partners, including value-added-resellers, enterprise software and performance team partners, hardware and system integration partners, and service and training partners

Default note Creo look

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- **Sample Syntax for Text specials**

  - Superscript and Subscript : 13.0" @++1.0@#@--1.0@#
  - Box : @[MAIN CABLE@]
  - Underline : Use checkbox in Text Style Dialog Box

  - Special Characters using Ascii codes hold Alt button and press xxx number on the number pad
    - The Ohm symbol Ω = Alt + 234
    - Infinity ∞ = Alt + 236

  - Search for other Ascii table characters online or experiment for yourself

List of System Parameters used in drawing
List of Model Parameters used in drawing
List of Parameters
SEE CS133915

Tip 3 – Working with images – Decals or Labels

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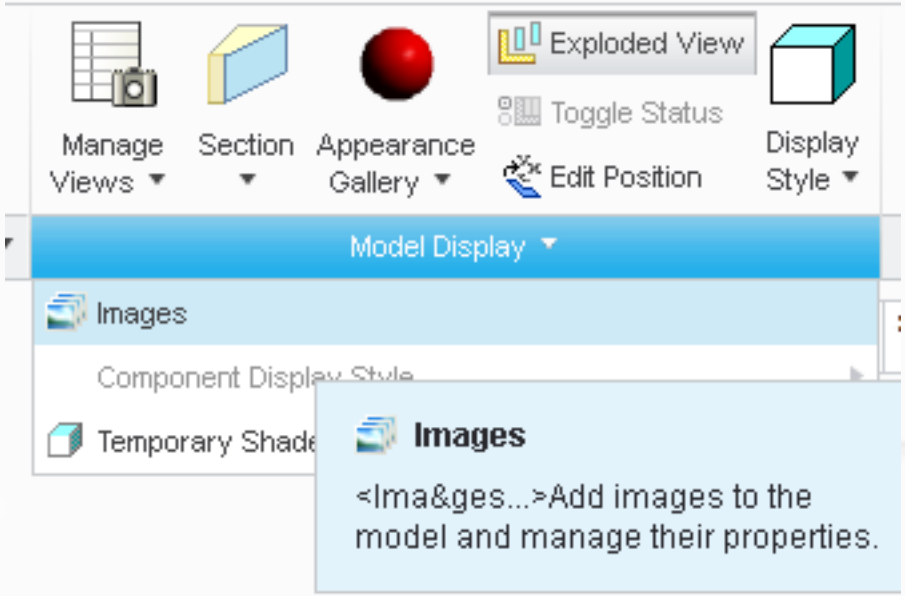
Ways to use Bitmap images and achieve positive results

- Importing a Bitmap to a part file – find under Display in the View Tab
- Things you can do with this.
  - Embed pictures into part files
  - Add labels onto flat surfaces
  - Better aspect control of images for drawings
  - Tracing surface for logo making or other bitmap copies



Tip 4 – Creating a Symbol

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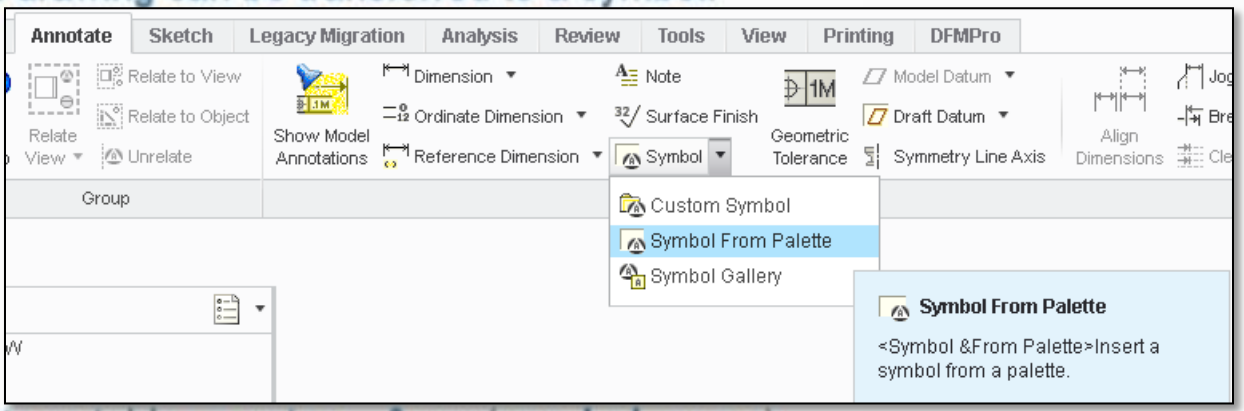
Create a symbol for easy use across your drawings

- Using Vectors to create symbols
- Anything you can do in a drawing can be transferred to a symbol.
  - Sketched entities
  - Imported Vector Formats
  - Text – Notes
  - Variable Parameters



- Adding a Symbol to a note or table – syntax &sym(*symbol_name*)

Tip 5 – How would you make a tape measure

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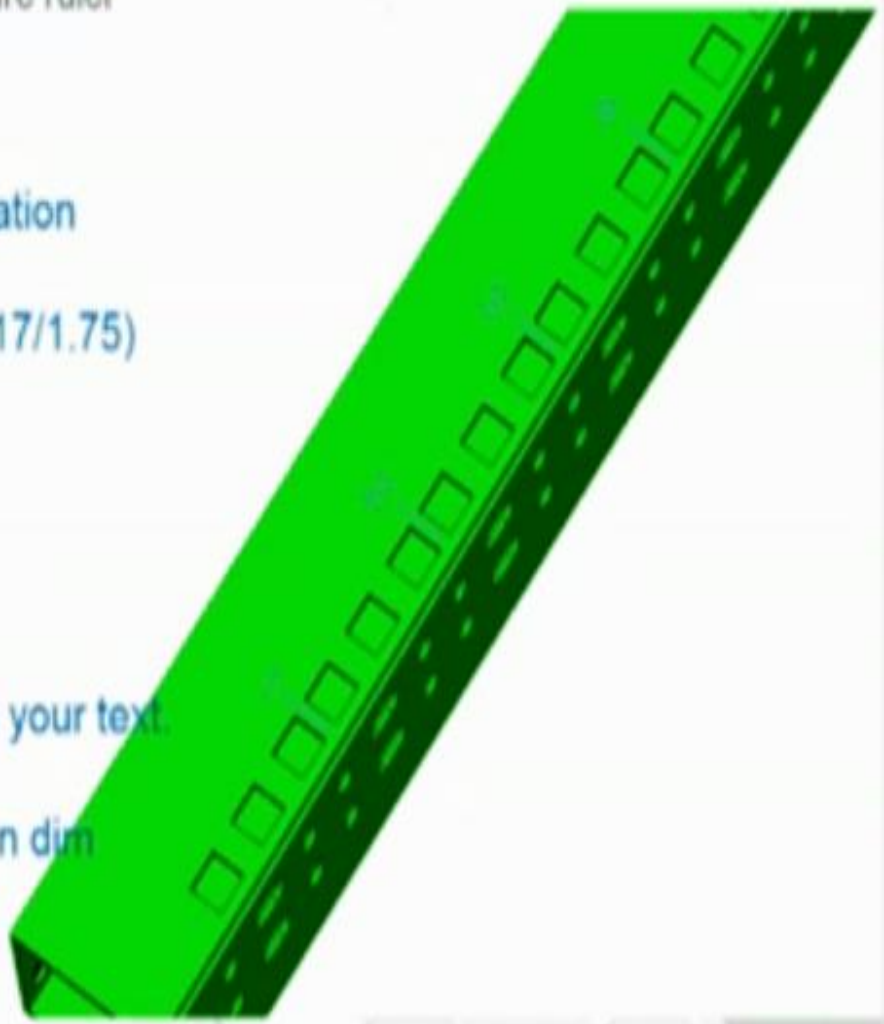
Using relations parameters and patterns to make a tape measure ruler

- Create part representing your ruler.
- Add sketch or extrude feature for your digit representation
- Create a relation during your sketch - LABEL=itos(sd17/1.75)
  - LABEL is the parameter name
  - itos stands for integer to string
  - sd17 is the driving dimension for your number
  - The 1.75 just happens to be the increment for this ruler
- Add text to your sketch and add parameter LABEL as your text
- Create a dimensional pattern use sd17 as your pattern dim



Tip 6 – Training your Solidworks users

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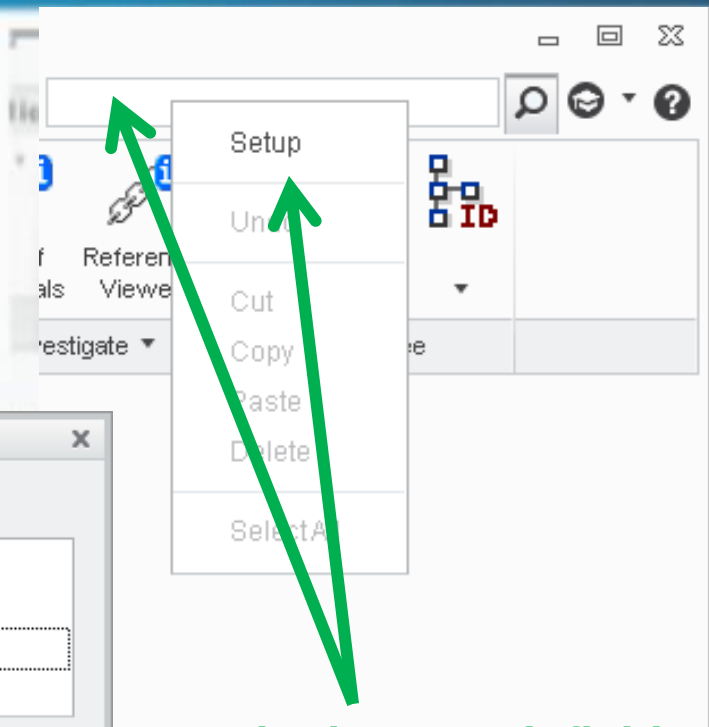
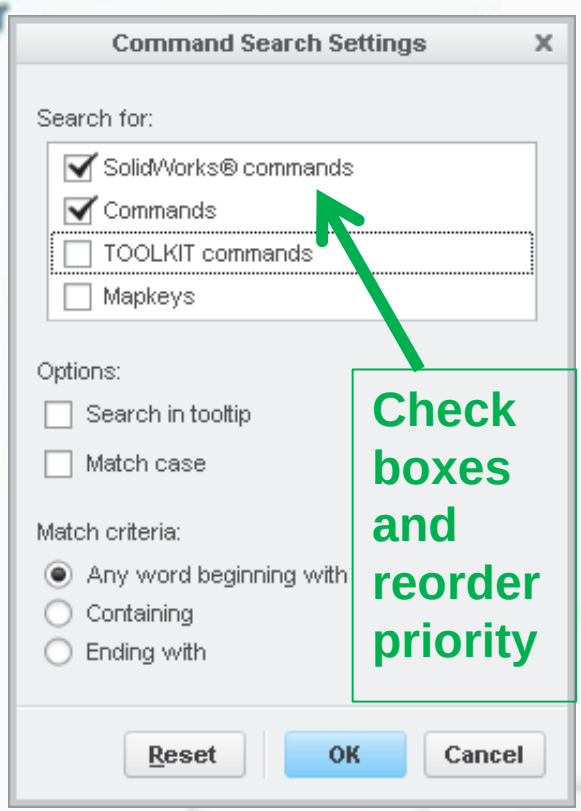
Using a config option that allows Solidworks users to find commands.

- Loft - will take you to blend
- Fillet – will take you to round
- Useable in Creo 2.0 M090 and newer



RMB in the search field then click SETUP.



Check boxes and reorder priority

Tip 7 – Adding color to a part you have no change ability on

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Using an assembly to change the color of a part.

- Your problem: Your working in a WindChill environment and you wish to change the color of a component that is used in many places in your assembly and you want all of them to be the same color, but the part is locked by WindChill and you are not permitted to change it.

- Your possible solutions
  - In your main assembly assign each part the new color – repeat for every instance in your assembly – this allows you individual colors for each of your identical components.
  - Or you could also create another sub assembly with just your part of concern in it and change the color in that assembly. Now where ever you assemble this new sub assembly your part will have the color you desire. – this allows you identical colors on all of the same components able to update from one assembly.

Tip 8 – Removing Creepy Ghosts From Your Data

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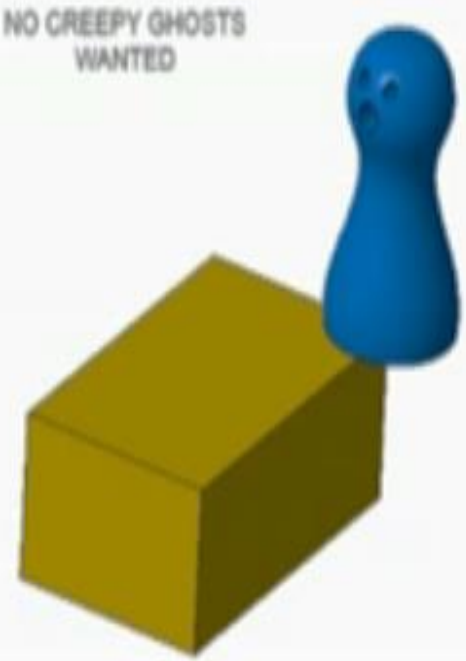
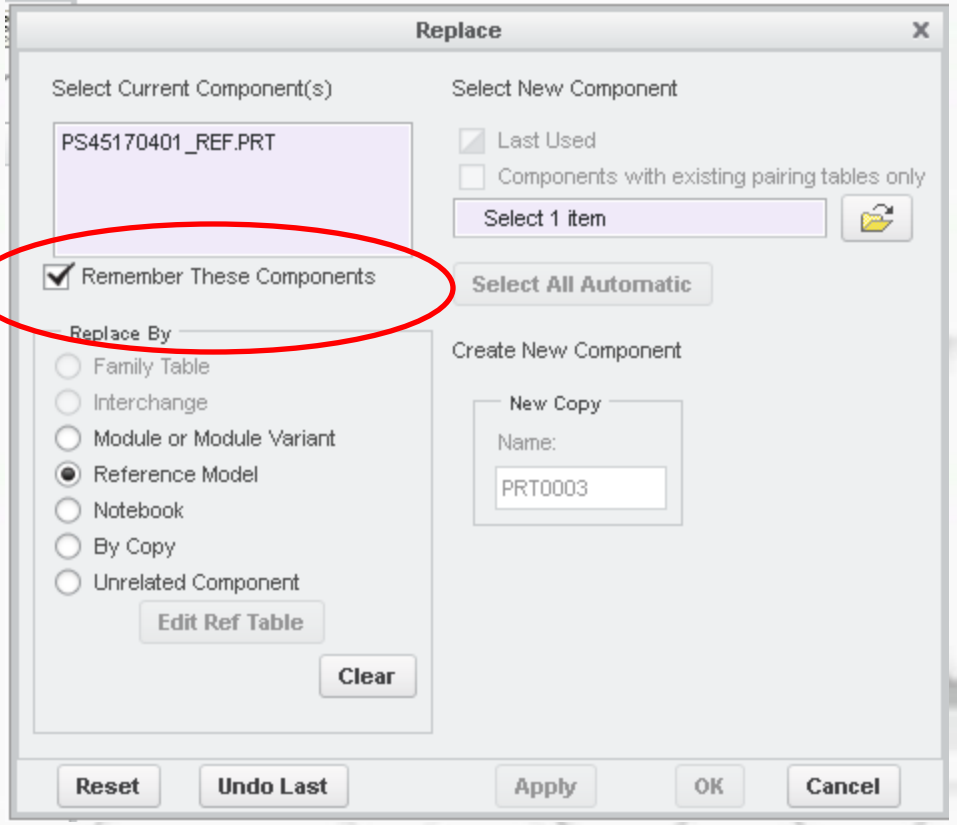
Setting your replaced components in your config.pro

- Getting ghost objects in your workspaces? Who are you going to call?
- Call up your config.pro and add the following item to it.
  - Rembember_replaced_components NO - by default it is set to YES and the box is checked.





Tip 9 – Crazy Curves

Creating curves by equation

- Interesting possibilities – Use these for trajectories – Use as surface boundaries – or just have fun
- A Fish

```
a = cos (t * 360)
b = sin (t * 360)
/* As "c" increases the fish gets fatter until it transforms into a figure 8.
c = 10
x = (C*a-20*((b)^2)/1.5)
y = c * a * b
```

- Try adding a Z component
- More can be found online at http://www.cadbackoffice.com/CAD_Model-394-1-1.html

Tip 10 – Sketcher tips

Things you need to know to make you a better and faster sketcher while modeling

- Use your RMB see what is there – just a good rule of thumb, as many commands are on the RMB
- Use your RMB to Lock or Ignore constraints
- Use ALT to make Sketching Reference on the fly while you are in the middle of sketching an entity.
- Select and highlight entities then RMB to Rotate and Resize your sketch entities