

CUST 218 - 10 Tips and Tricks Every Old Dog Should Know

Ron Rich and Dan King
Mechanical Engineers at
Keithley Instruments a Tektronix Company

June 8, 2015



Tip 1 – Putting a square peg in a round hole

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.

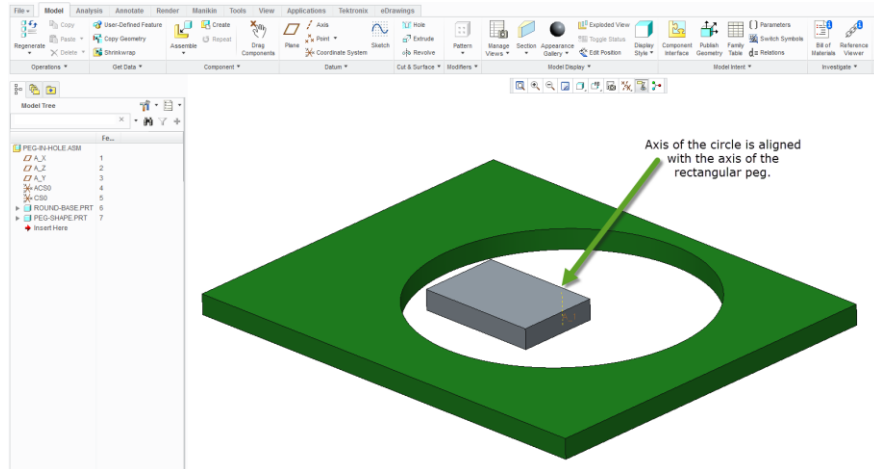
Axis appears in extrusion but not in the Model Tree

- 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

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

Tip 1

Tip 2 – Using your desktop publisher

Using True Type Fonts and other techniques in PTC Creo notes.

- Using different looks of text inside the same note of a drawing.

Sample copied from PTC.com as a snag-it capture

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

- Things you can do inside a note

- Use underline
- Use superscript or subscript
- Placing text in a box
- Change color
- Change fonts

Tip 2

Tip 2 – Using your desktop publisher

Using True Type Fonts and other techniques in PTC Creo notes.

- Examples

Same PTC Creo note jazzed up a bit

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Default note PTC Creo look

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Tip 2 – Using your desktop publisher

Using True Type Fonts and other techniques in PTC Creo notes.

- 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

- Show demo

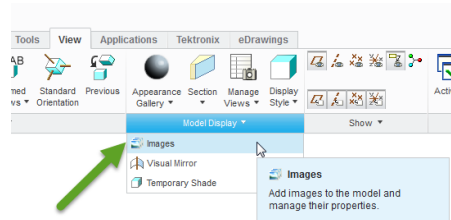


Tip 3 – Working with images – Decals or Labels

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



- Show demo



Tip 4 – Creating a Symbol

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)`

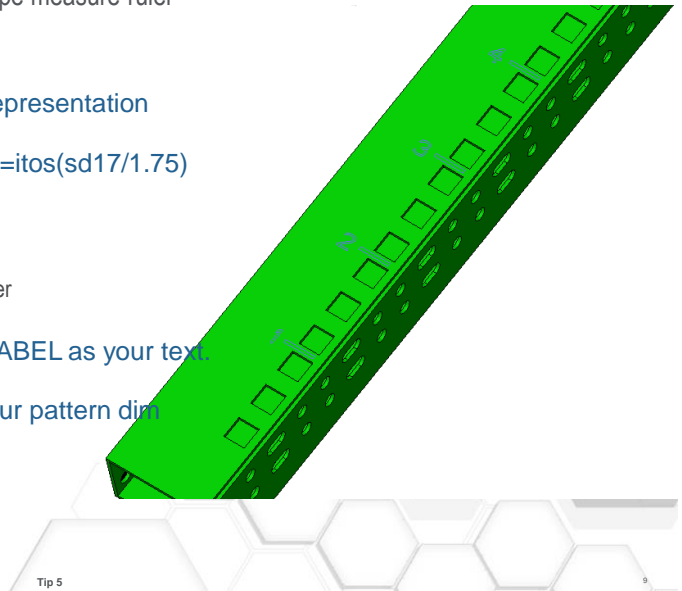
- Show demo



Tip 5 – How would you make a tape measure

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
- Show demo

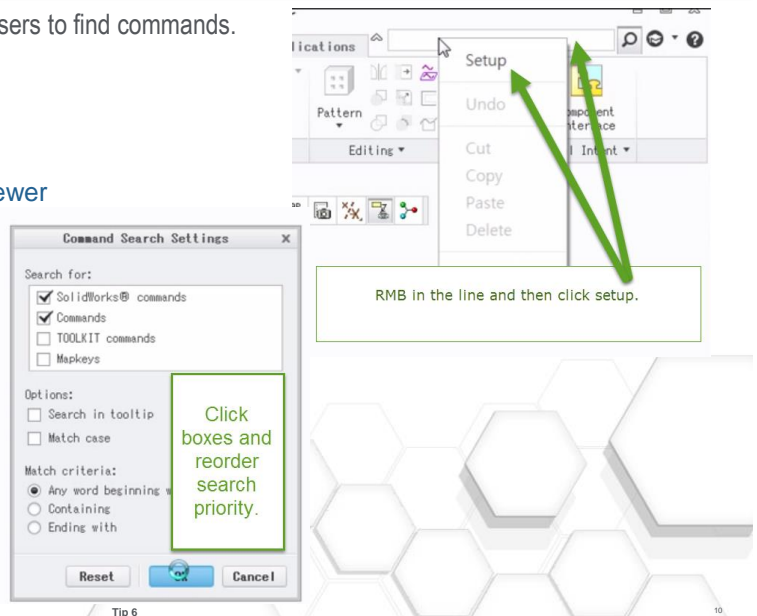


Tip 5

Tip 6 – Training your Solidworks users

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 PTC Creo 2.0 M090 and newer
- Show demo



Tip 6

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:** You're working in a PTC 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 PTC 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 wherever 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.

- [Show Demo](#)



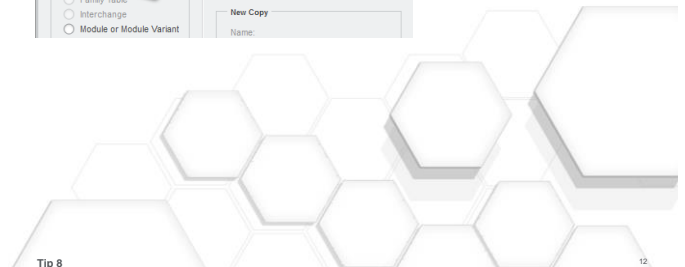
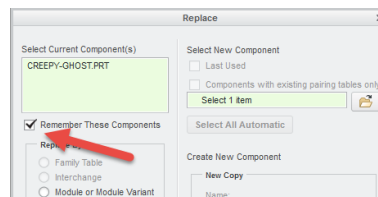
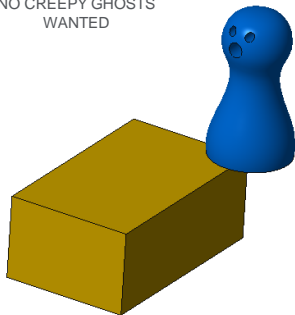
Tip 8 – Removing Creepy Ghosts From Your Data

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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.**
 - Remember_replaced_components NO - by default it is set to YES and the box is checked.

NO CREEPY GHOSTS
WANTED



Tip 9 – Crazy Curves

Creating curves by equation

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

- A Fish

$$a = \cos(t * 360)$$

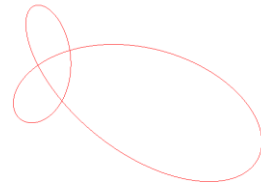
$$b = \sin(t * 360)$$

/* As "c" increases the fish gets fatter until it transforms into a figure 8.

$$c = 10$$

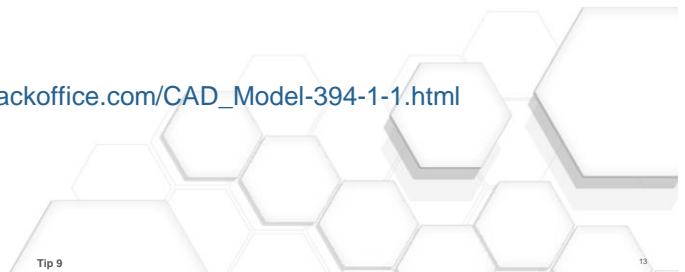
$$x = (C*a-20*((b)^2)/1.5)$$

$$y = c * a * b$$



- 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

- Demo



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