

Dimension Rounding Behavior – Creo Parametric

The problem & the solution

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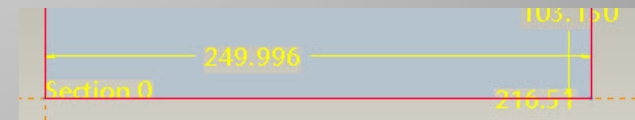
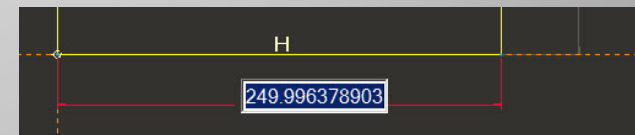
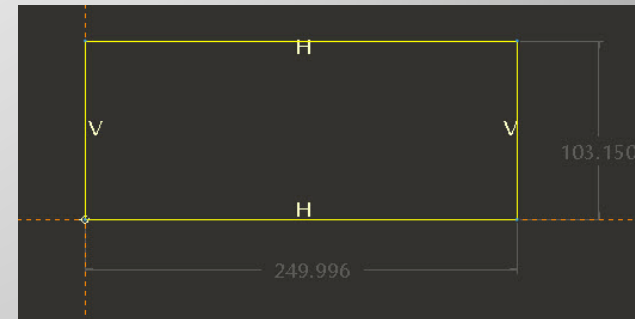
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Wildfire 4.0 and earlier behavior

- Parts created with weak dimension, do not show the actual size of the model when viewing the dimensions or measuring the model.
 - Test:
 - Set the following config.pro options
 - default_dec_places 2
 - measure_dec_places 10
 - sketcher_dec_places 3
 - Create a sketch with weak dimensions
 - Double click on one of the dimensions
 - Notice the it goes out to 9 places
 - Finish the part use the default depth
 - Edit the dimension in the part
 - It only shows 3 places
 - Measure the length of the edge in the part
 - It shows 10 places
 - Save the part as weak_dims_problem.prt

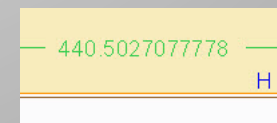
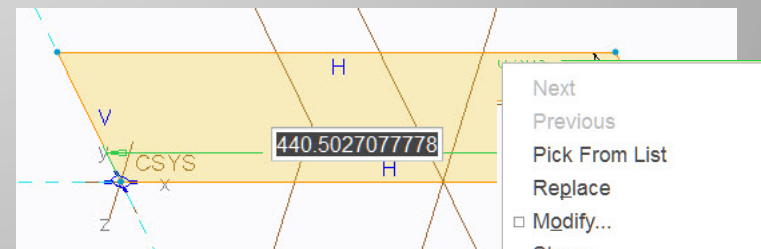
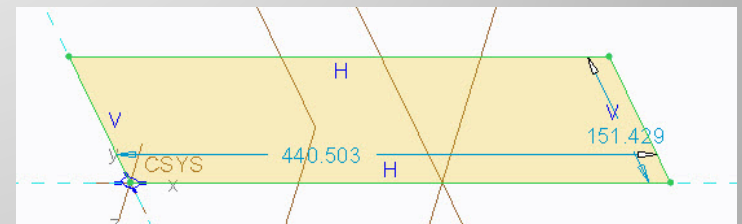


Wildfire 5 and Creo behavior

- If you know to look for it, rounding of dimension can be shown and controlled.
- The problem is, any dimension, strong or weak, can be rounded. Meaning the displayed dimension may not match the model size.

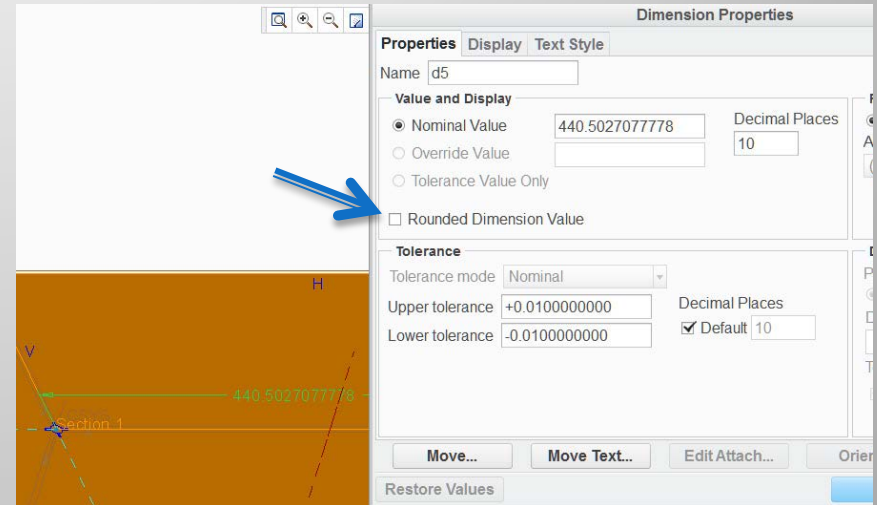
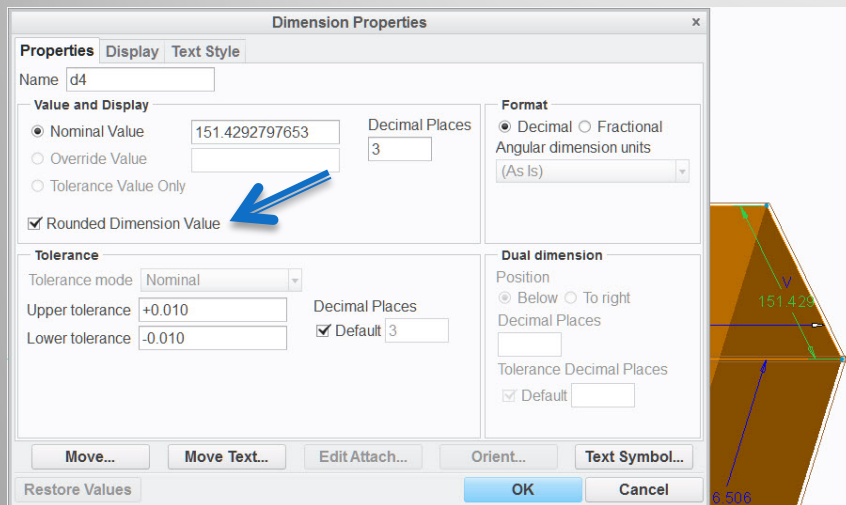
- Test:

- Set the following config.pro options
 - default_dec_places 3
 - measure_dec_places 3
- Create a sketch with weak dimensions
- Double click on one of the dimensions
 - Notice the it goes out to 10 places
- Select the dimension and from the RMB menu
 - Select Round Display Value
- The dimension now displays its full value
- Finish the part use the default depth



Wildfire 5 and Creo behavior

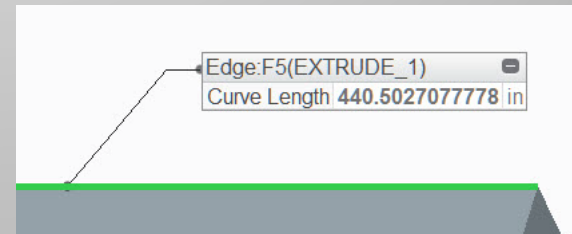
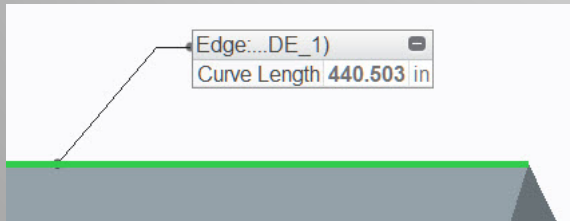
- Test Continued:
 - Double click on the part to show the dimensions. Show the properties of the horizontal and vertical dimensions of the part.



- Notice there is a check mark next to **Rounded Dimension Value** on the vertical dimension and missing from the horizontal dimension

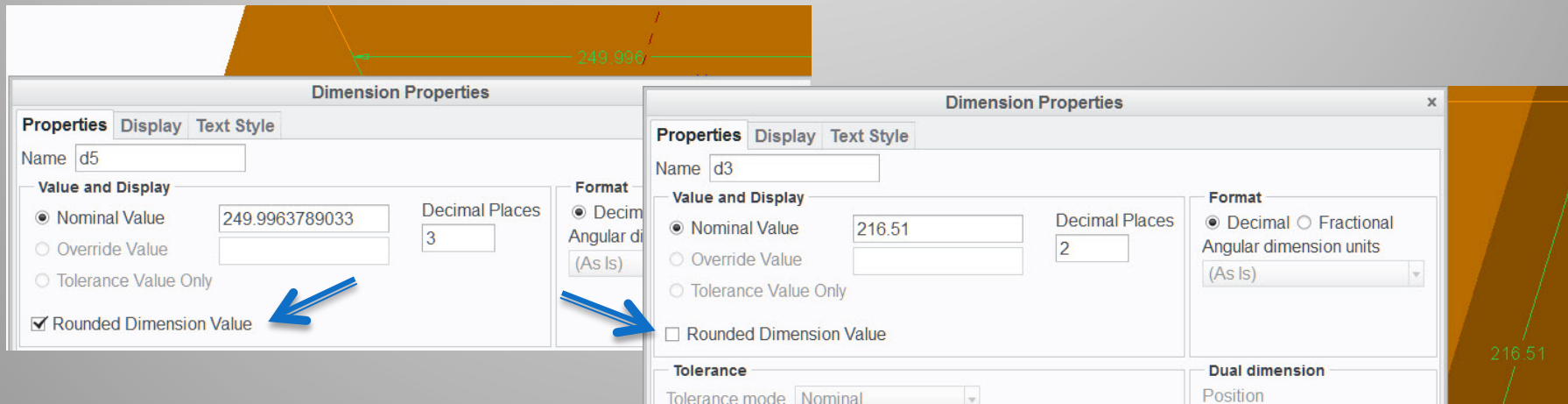
Wildfire 5 and Creo behavior

- Test Continued:
 - Pick the **Analysis** Tab and select **Measure, Length**
 - Notice it only reports the length to 3 decimal places
 - Edit the config.pro and change the option
 - Measure_dec_places 13
 - Now measure the edge again
 - Notice it now reports the length to 10 decimal places



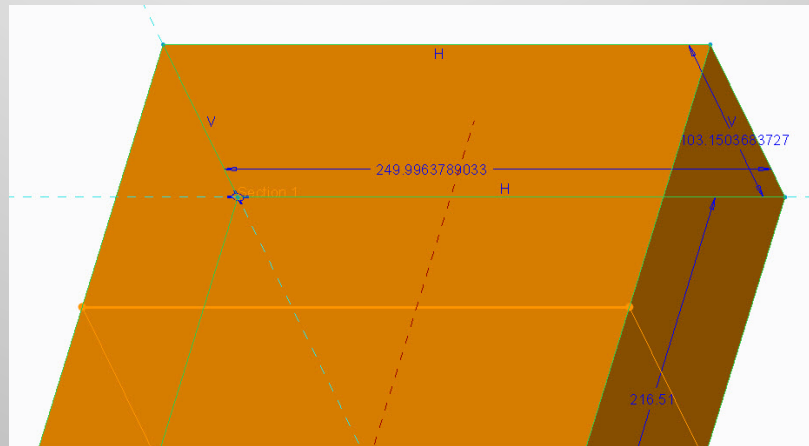
Importing Old Models into Creo

- Open the Wildfire 4 model weak_dims_problem.prt
- Go to dim Properties for the horizontal and depth dimensions
 - Horizontal = Rounded Dimension Value **on**
 - Depth = Rounded Dimension Value **off**
- This is the default Creo behavior, config option:
 - round_prewf5_displayed_dim_val = **calculated**



Importing Old Models into Creo

- Exit Creo
 - Change the config option to **round none**
 - Yes, it has a space in it
 - Again open the weak_dims_problem.prt



- The actual model size is now displayed
- Any old drawing showing these dimension would be affected
- The other option is **round all** which would look like **calculated**, but all the dimensions would be set to display rounded values

Tolerance Number of Digits

- There is another related config option
 - Tol_num_digits_default_driven
 - Yes look like this:

Value and Display

Nominal Value **Decimal Places**

Override Value

Tolerance Value Only

Rounded Dimension Value

Tolerance

Tolerance mode

Upper tolerance **Decimal Places**

Lower tolerance Default

linked

- No looks like this:

Value and Display

Nominal Value **Decimal Places**

Override Value

Tolerance Value Only

Rounded Dimension Value

Tolerance

Tolerance mode

Upper tolerance **Decimal Places**

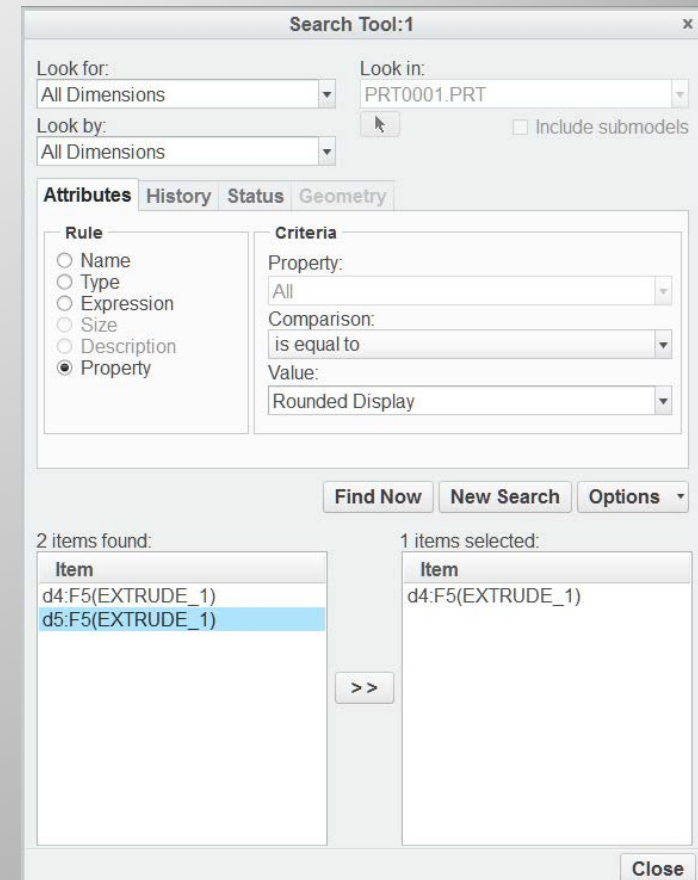
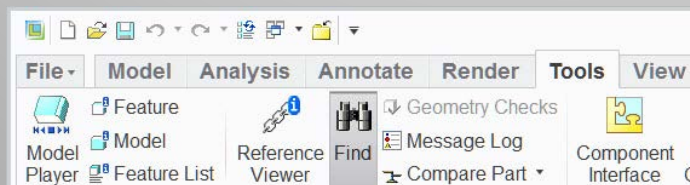
Lower tolerance Default

Suggested Config Settings

- Use these config settings
 - These will ensure that the actual model size is always displayed
 - Round_displayed_dim_values **no**
 - Round_prewf5_displayed_dim_val **round none**
 - Tol_num_digits_default_driven **yes**
 - sketcher_strngthn_to_def_dec_pl **yes**
 - measure_dec_places **10**
 - If old models used weak dimensions, both the models and drawings would be affected.

Finding Rounded Dimensions

- There is no way to prevent users from rounding dimensions, however you can find them.
- Pick:
 - Tools tab
 - Find
 - Look for All Dimensions
 - Look by All Dimensions
 - Attributes Rule = Property
 - Is Equal to = Rounded Display





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