

WHO WANTS TO BE A PTC CREO ENGINEER

Steven LaPha Jr.

CAD/PLM Administrator NASA Kennedy Space Center – Engineering Services Contract June 6-9, 2016

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Board









\$100

The function that uses this icon



• Freestyle

Appearance

Turn on Auto-DJ

Edit Definition

D - Edit Definition

Board



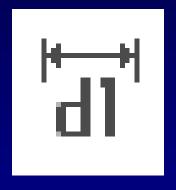






\$200

The function that uses this icon



A • Show Dimensions

B • Edit

C • Dimension

• Measure Text

B - Edit



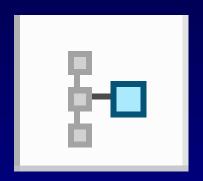






\$300

The function that uses this icon



A • Isolate

B • Select Parent

C • Locate In Model Tree

• Route Pipe

C - Locate in Model Tree



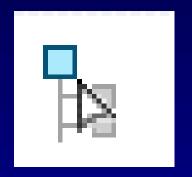






\$400

The function that uses this icon



A • Home

B • Insert Here

C • What is this?

• Select Parent

D - Select Parent









\$500

The function that uses this icon



• Save

• Save As

• Rename

Search For Floppy Disk

C - Rename

AFX

A - Auto Framing Expansion
 B - Advanced Framework Extension
 C - Advanced Field Xylophone

Advanced Effect Extension

B - Advanced Framework Extension

UDF

A • User Defined Feature

• User Developed Feature

• You Do Feature

• User Designated Functionality

A - User Defined Feature

IFX

IT Flexibility Extension

• Instinctual Fastener Experience

• Intelligent Fastener Extension

Ipsum Fastenum Extensium

C - Intelligent Fastener Extension

FMX

A • Frequent Makeshift Expression

B • Full Model Extension

C • Flexible Moldmaking Extension

• Flexible Modelling Extension

D - Flexible Modelling Extension

PDX

A • Please Don't Crash
 B • Platinum Development Extension
 C • Progressive Die Extension
 • Parenthesis Division Multiplication

C - Progressive Die Extension

Board



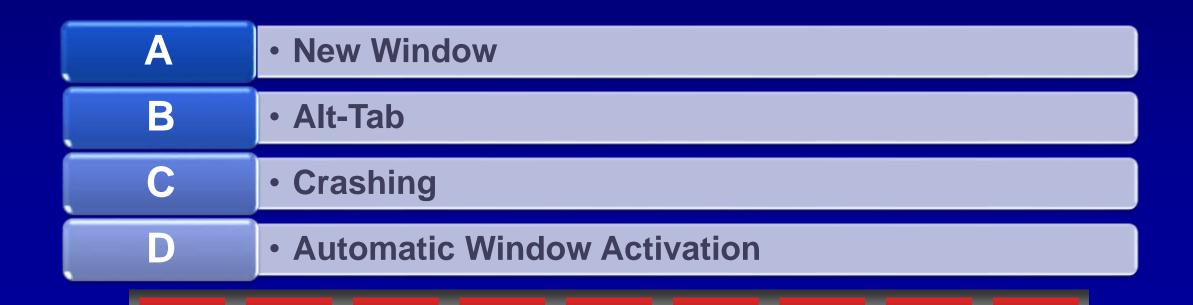






\$100

This new functionality allows you to move seemlessly between different files within an active Creo session.



D - Automatic Window Activiation

 Automatic Window Activation will make whichever window you select become the active window. Through window selection or Windows Explorer.



This command exposes a dialog window with a new series of icons, and can now be customized.

A • Left Mouse Button Click (LMB)

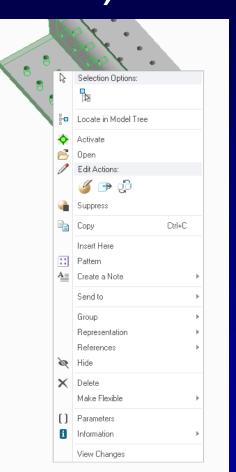
• Right Mouse Button Click (RMB)

• Center Mouse Button Click (CMB)

• CTRL-ALT-SHIFT-DEL-\$-\$-42

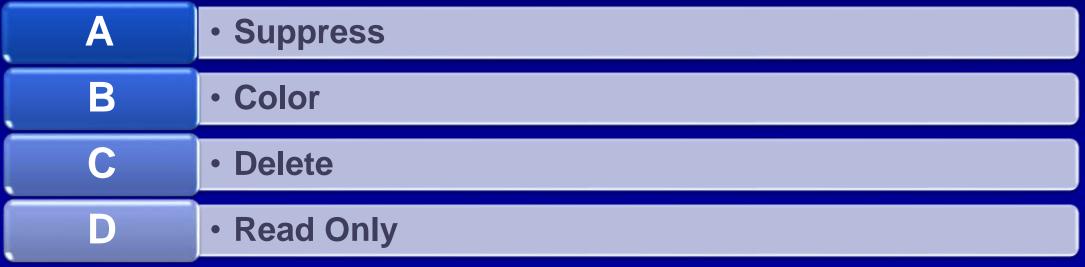
B - Right Mouse Button Click (RMB)

 Though not new, the right mouse button menu, also called the Shortcut Menu, has many new icons and functions. It can also be customized in Creo 3.0 via File> Options> Shortcut Menu.





Enabling this function on a series of features now creates a grouping in the model tree, with a small icon



D - Read Only

 The Read Only feature now groups items and shows a lock icon reducing confusion as to what features are read only.



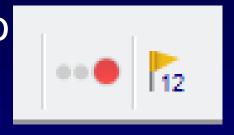
This icon can cause engineers to see red, but is now split into two different notification icons



Board \$0 \$0 \$0 \$0 \$0 \$0 \$400

C - Regeneration Manager Status

 Regeneration Manager status is now split into 2 icons. One for Regeneration status, and another for Model Notifications.



AL COVER DEC COVER 10

Notifications also display in the model tree as yellow triangle icons.
 ▶ ☐ ▲FRAME_SQUARE_HSS_11.PRT
 ▶ ☐ ▲Group PLANE_THRU_CURVE_3

Board









\$500

Model Notifications display which of the following

A • Outdated Components/Features

• Regeneration Failures

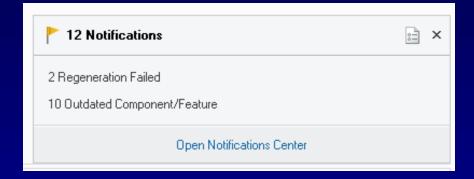
• Missing Models/References

• All of the Above

D - All of the Above

Model Notifications show for all of the following reasons

- Outdated Components/Features
- Regeneration Failures
- Missing Models/References





This feature was once "What you see is different than what you get" now shows letters and numbers as WYSIWYG.

A • Google

B • Regenerate

C • Notes

D • Colors

Board \$0 \$0 \$0 \$0 \$0 \$100

C - Notes

 Notes no longer need have a separate dialog box and instead show as you type using the appropriate formatting options available from the ribbon or upon selection.



Board









\$200

Changes to this feature have been updated to more closely meet ASME Y14.5

A • Holes

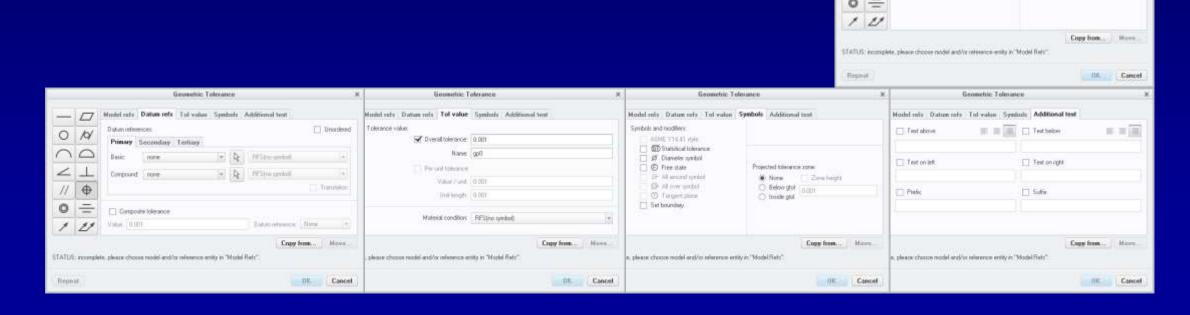
B • Rounds

C • Flag Notes

• GTOL

D - GTOL

- All Over modifier for surface profile tolerances
- Translation modifier for datums
- Allow additional text



Placement: To be placed.

Select entity.

Place glob.











\$300

This feature now allows symbols to be placed within them.

A • 3D Notes

B • Chamfers

C • Sketches

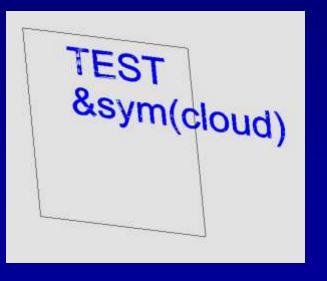
• Datum Planes

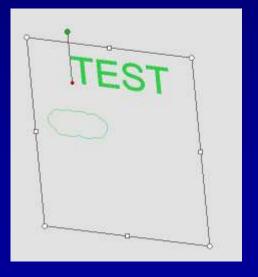
Board \$0 \$0 \$0 \$0 \$0 \$0 \$300

A - 3D Notes

• By adding &sym(<symbol name>) to your 3D note it will now recognize it as a symbol and place the symbol in the note. Tip: If it doesn't show up, try adding the symbol to the model by itself first, and then delete after the note is

created.













\$400

Hyperlinks can now be created in 3D notes to map to which feature.

A • Datums

B • Features

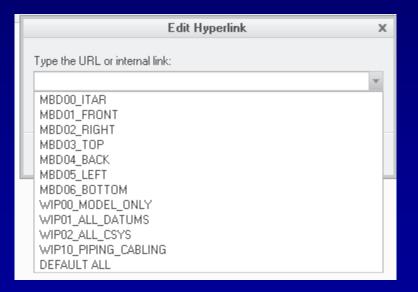
C • Combined States

D • Last Save Configuration

Board \$0 \$0 \$0 \$0 \$0 \$400

C - Combined States

• From Style>Hyperlink you can type the given URL, or pick from a list of Combined States.





This function used to work without visual confirmation, now it allows you to preview the results before running.

A • Modelcheck

B • Exit

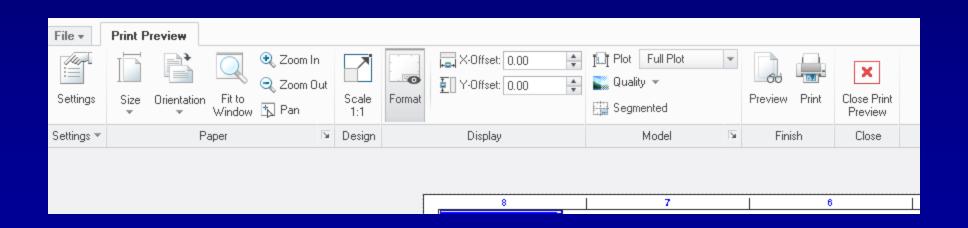
C • Print

D • Save

Board \$0 \$0 \$0 \$0 \$0 \$0 \$500

C - Print

 The Print command now takes you directly to the Print Preview window to verify the drawing will print exactly as intended.











\$100

When patterning a part feature using a reference pattern, the feature...

Must reference the original feature of the reference pattern

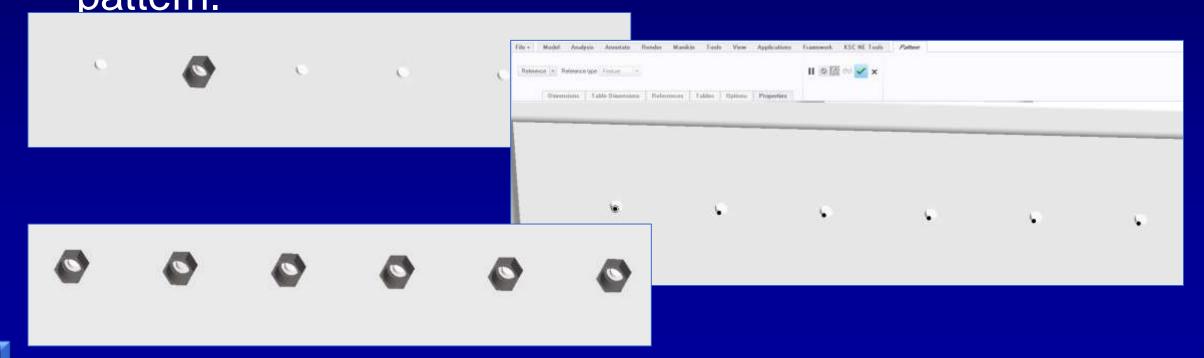
• Can reference any feature in the reference pattern

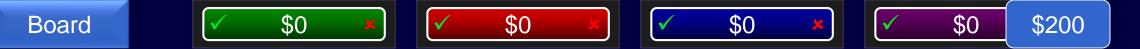
Must be grouped with the original feature then patterned

Cannot be created

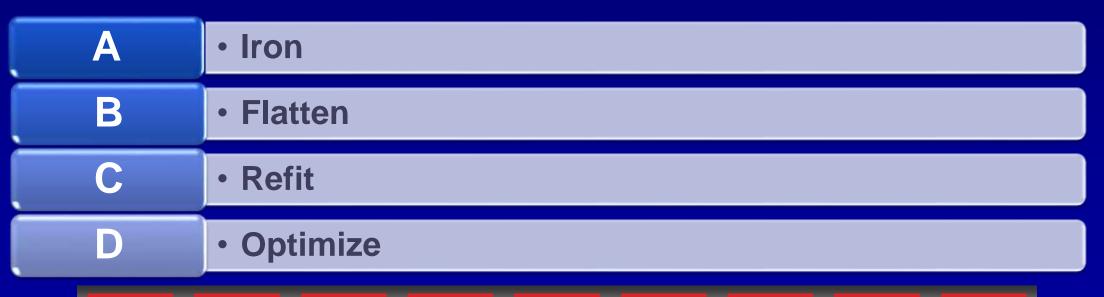
B - Can reference any feature In the reference pattern

Previously you had to pick the first element of the pattern.
 Now you can pick any instance to start a reference pattern.





A zebra can change his stripes. This new functionality in Boundary Blend allows you to smooth out the wrinkles.



D - Optimize

• The Optimize surface shape allows you to change some of the contours to smooth the blend shape.

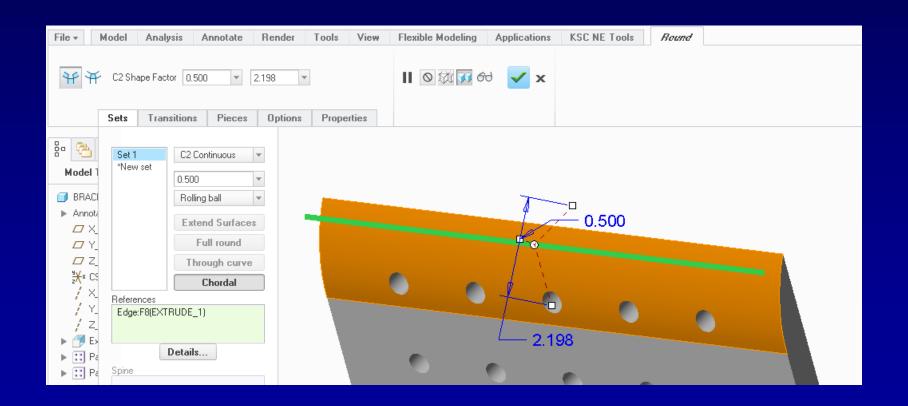




This type of round is new to Creo 3.0, allowing creation of rounds with a constant width for the length of the selected curve

A	• D1 X D2
В	• Chordal
C	• Conic
D	• Sweep

B - Chordal











\$400

The Draft feature now supports what range of angles

A • +/- 30°

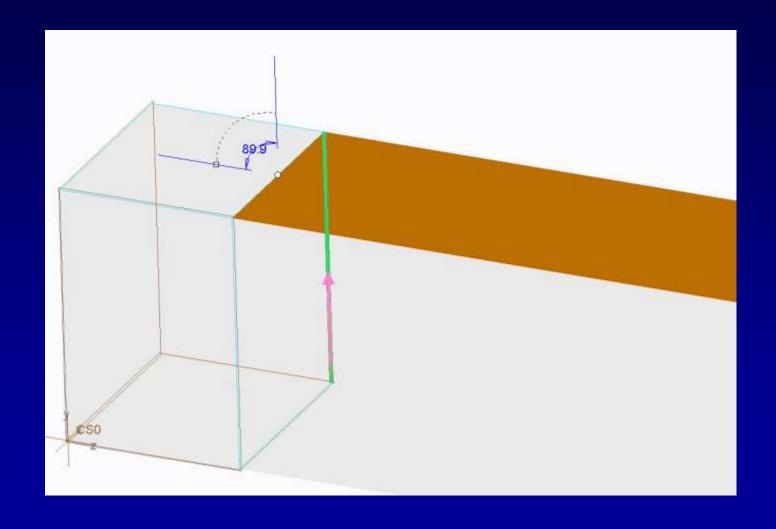
B • +/- 180°

C • +/- 45°

• +/- 89.9°

Board \$0 \$0 \$0 \$0 \$0 \$400

D - +/- 89.9°











\$500

The new Edit References menu allows you to do which of the following

Change references

Identify missing references in red

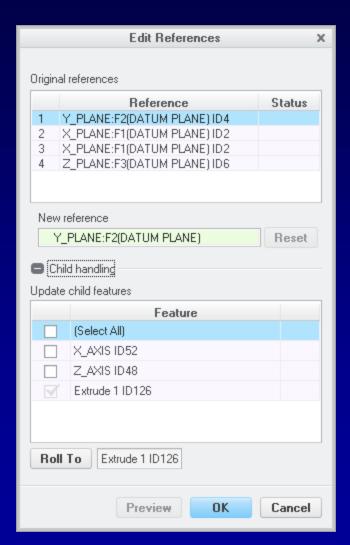
Replace reference for all children

All of the above

B

D - All of the Above

- Edit References allows you to do
- all of the following
 - Change references
 - Identify missing references in red
 - Replace reference for all children





\$100

A • Iteration extension

B • Working Directory

C • Hard drive space

• Pants

Board \$0 \$0 \$0 \$0 \$0 \$100

A - Iteration extension

 Config Option "Save_File_iterations" allows you to save to a single file rather than creating files with each save iteration.

Name	Description	
save_file_iterations	Yes - Iterations of a file will be saved. No - Iterations of a file will not be saved.	









\$200

These software models can be opened directly in Creo Parametric 3.0

A • Catia

B • Solidworks

C • NX

D • All of the above

D - All of the Above

 Thanks to the new Unite technology enabling use of Multi-CAD data Catia, Solidworks, and NX can all be opened directly in Creo Parametric 3.0 and remain in their original format.



Without this new Simulation functionality, contact analysis would be resting on a slippery slope.

A • Midplane

B • Meshing

C • Finite Friction

• Clamps

C – Finite Friction

 Creo Simulate 3.0 now allows you to determine if sliding has occurred between components and the tangential force load transferred across each interface.









\$400

These software models can be imported in Creo Parametric 3.0?



D - All of the Above

• Thanks to the new Unite technology enabling use of Multi-CAD data NX, Inventor, Solid Edge, Catia, and Solidworks files can be imported.

This module's integration with Creo View increases and shows more detailed information

\$500



A - Cabling

 With Creo 3.0 cables, cable contents, wire information can be displayed in Creo View. The ability to select a single wire is also possible. Board \$0 \$0 \$0 \$0 \$0



Enter your wager:

Adj Scores Instructions \$0 Board \$0 \$0 \$0 Single Final If you Additive Administrati Name That Design havent' IFX Manufacturi **Exploration** Tool seen it, it's on ng new to you \$200 \$200 \$200 \$200 \$200 \$200 \$400 \$400 \$400 \$400 \$400 \$400 \$600 \$600 \$600 \$600 \$600 \$600 \$800 \$800 \$800 \$800 \$800 \$800 \$1000 \$1000 \$1000 \$1000 \$1000









\$200

The icons in IFX identify these 2 types of objects for inserting fasteners

A • Screws & Bolts

B • Hardware & Adhesives

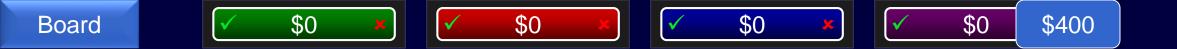
C • Screws & Dowel Pins

D • Duct Tape & Bailing Wire

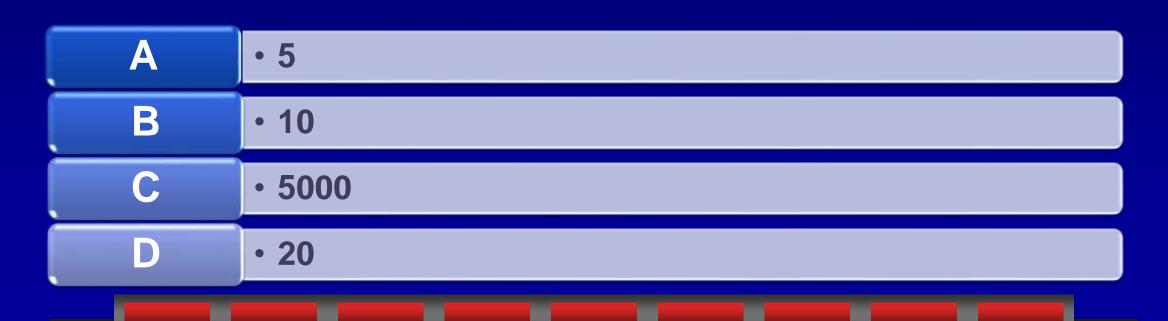
C - Screws & Dowel Pins

 Under the Tools ribbon Screws & Dowel Pins are the two primary types of objects to use with IFX.





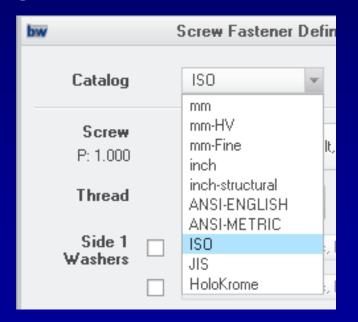
IFX includes a library of this many different "catalogs" of screws



Board \$0 \$0 \$0 \$0 \$0 \$0 \$400

B - 10

- While IFX includes many screws and many different standards, out of the box they are listed in 10 catalogs.
- This list of catalogs can also be customized.











\$600

This functionality in IFX will prevent your fasteners from coming up short

A • Hollow

B • Bolt stretcher

C • Set Length Automatically

• Trim Plate

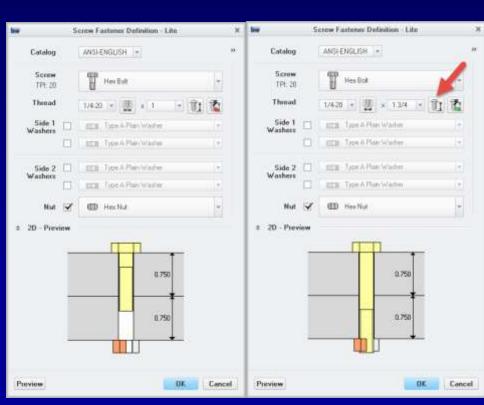
Board \$0 \$0 \$0 \$0 \$0 \$0 \$0

C - Set Length Automatically

 The Set Length Automatically button in the IFX dialog will adjust the length of the fastener so that the

matching nut is fully engaged.

 Tip: Use the icon to the right to verify length and set to permanently set auto-length automatically



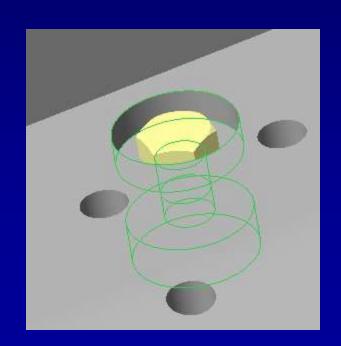
In addition to the automatic assembly of fasteners with washers and nuts, this functionality saves time when designing and changing placements

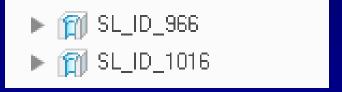


Board \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0

A - Automatic Hole Creation

- As part of adding the fastener, you can allow it to create a hole feature in the lower piece parts automatically.
- You can also select to add counterbores and offsets.





Board









\$1000

Advanced licensing for IFX allows you this

• Customize the screw library

Change the orientation

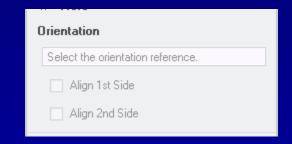
Assemble fastener on all instances

All of the above

D - All of the Above

 The advanced licensing for IFX allows you to customize the screw library, change the orientation, assemble fastener on all instances

	Intelligent Fastener	Х
i	The requested function is not available in the sta Please contact your account manager to upgrad	
		OK



Board \$0 \$0







\$200

This new Creo function saves your 3D prints from falling apart

A • Superglue all

B • Printability Validation

C • Chamfer

• Weld

B - Printability Validation

 Printability Validation checks features that could cause your print to become too fragile.







\$400

The number of 3D printers Additive Manufacturing allows you to define settings for

A • None

B • Only 1

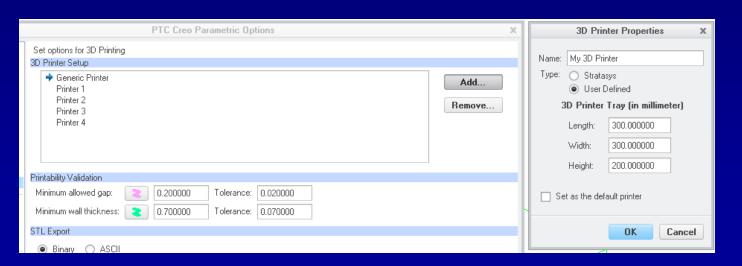
C • Only 2, if you customize Creo

• Multiple

Board \$0 \$0 \$0 \$0 \$0 \$400

D - Multiple

- Creo Parametric 3.0 allows for multiple 3D printers to be added.
- In File, Options, under 3D printing you can add multiple printers with different size build trays









\$600

Printability Validation highlights these two primary ways your model can fail.

Incorrect support & weak material

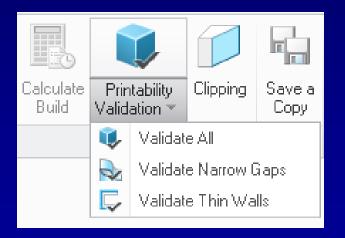
• Thin walls & narrow gaps

• Thermal properties & solubility

Resolution & scale

B - Thin Walls & Narrow Gaps

• Thin walls lead to fragile prints and narrow gaps lead to prints that do not move as expected. These validations can help make sure your design is printed as expected.



With Creo 3.0 and a Stratasys Connex Printer you can now do this.

\$800

A Print parts and assemblies directly

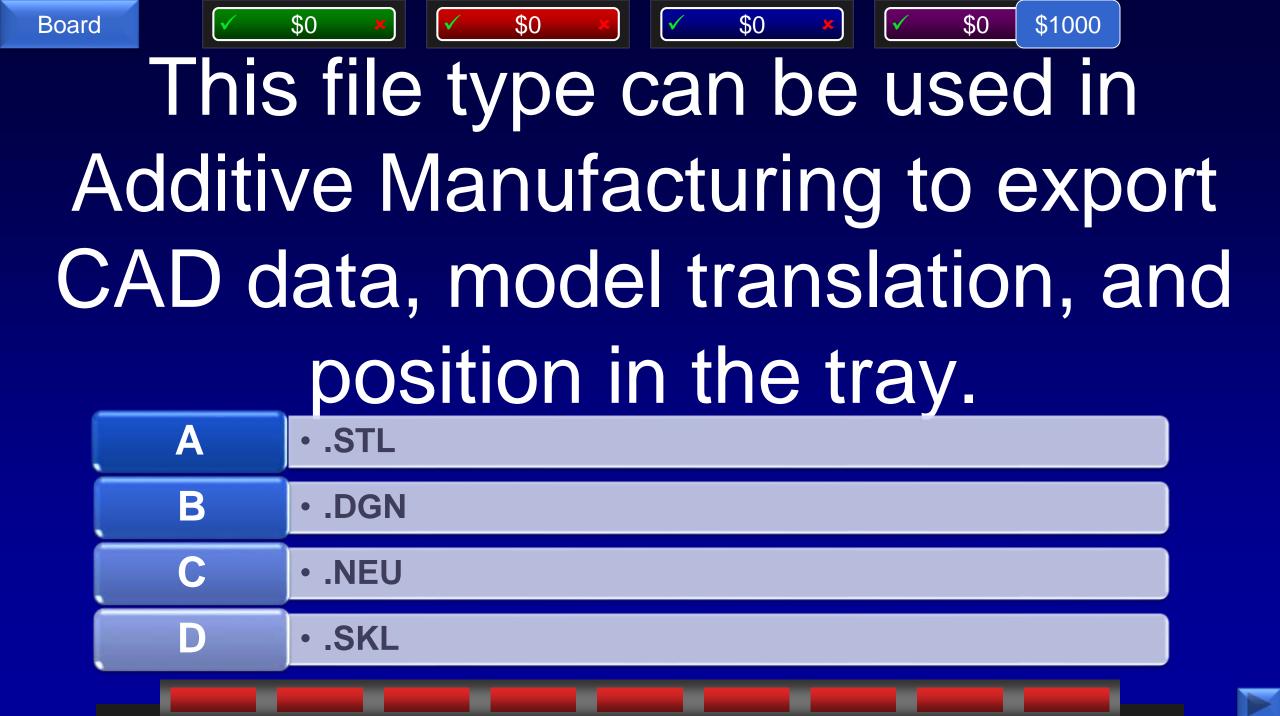
B • Assign print materials, colors, and finish

C • Calculate the require amount of build and support materials

• All of the above

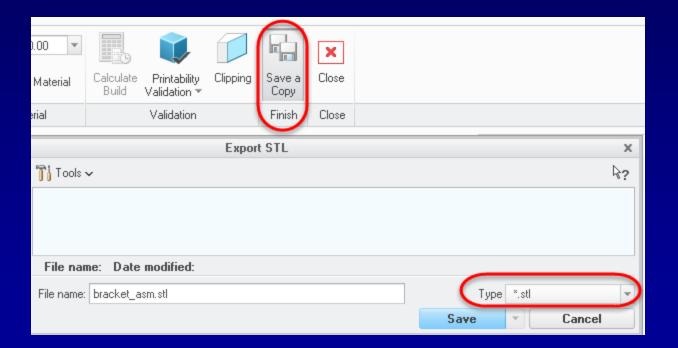
D - All of the Above

 When using a Stratasys Connex Printer, Creo allows you to print parts and assemblies directly, assign print materials, colors, and finish, and calculate the require amount of build and support materials



A - .STL

 Additive Manufacturing uses .STL file formats to export for 3D printer inputs.





are snapshots in the process of creating a design which can be rolled back to at any time.

A Leaves B Checkpoints **Snapshots Polaroids**

B - Checkpoints

 Checkpoints are stages in the design process capturing incremental changes.

Within Design Exploration, these allow different designs based on the same initial starting point



C - Branches

 Branches allow you to start a new design path based on a given checkpoint. 

These two methods are ways to view a Design Exploration session

A • Timeline & Tree view

B • Front & Back

C • Top down & Bottom up

• Pre & Post

A - Timeline & Tree View

- Timeline view shows checkpoints in chronological order
- Tree view shows checkpoints and branches in a hierarchy



When creating a Design Exploration, this is the initial state.

A **Empty State** B • - (Basic) **Pre-modified** Null

C - Pre-Modified

 Pre-Modified is the original start point for Design Exploration before any checkpoints or branches



To share the incremental changes in a Design Exploration, this kind of file can be saved out with all starting models.

A	• .DEX
В	• .ZIP
C	• .ABC
D	• .TMU

D - .TMU

 Formerly TMZ, the TMU file stores the Design Exploration session information and can optionally store the original models as well

The default installation location adds this new level of folders in the path.

\$200

A • Your childhood pet's name

B • Expiration Date

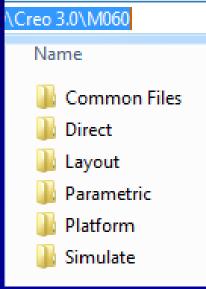
C • Build Number

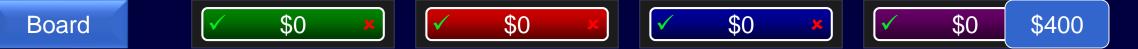
• Serial Number

Board \$0 \$0 \$0 \$0 \$0 \$200

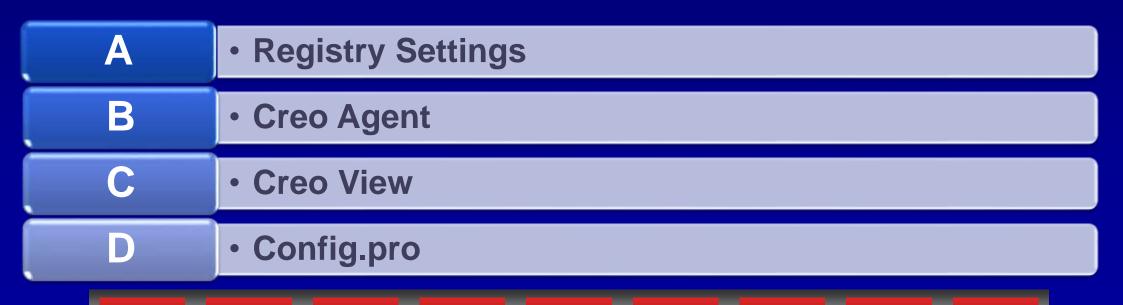
C - Build Number

 By default the installation path now includes the Build Number as a folder level above the Parametric and Common Files folder level. This allows you to have multiple builds installed separately on a PC.





This portion of the program can now be installed without requiring Elevated Privileges or installed on a network location.



B - Creo Agent

- Creo Agent can now be installed on a network or mass deployed without Elevated Privileges.
- Use the Environment Variable
 CREO_AGENT_EXE_PATH to set the Creo Agent Location



This software now comes included in the PTC Installation Download for Creo 3.0 Parametric.

A • Creo Schematics

B • Windchill

C • MathCAD Prime

D • Desktop Integration

C - MathCAD prime

 MathCAD is now included as part of the Creo Installation file.





New config options allow for the prevention of sending this data via the exit logger to the Performance Advisor.

Creo version & time to exit

User name & machine name

A

Active mapkeys & config options

How many times you've crashed Creo

B - User Name & Machine Name

 The following config options allow you to allow or block personalized information from being reported to the Performance Advisor

- session_log_username: Yes means provide real username; No provide "anonymous"
- session_log_machine: Yes means provide real machine name;
 No provide "anonymous"











\$1000

Modelcheck has a new setting which checks for this kind of feature.

A • Flexible Modeling

B • Shrinkwraps

C • Wall thickness

• Threaded holes

A - Flexible Modeling

 ModelCHECK setting FLEXIBLE_MODELING_FEATURES will allow you to return Flexible modeling features as an error or a warning.

The supporting structure in this picture would best be created with this Creo module.



A • Intelligent Fastener Extension

B • Advanced Framework Extension

C • Sheetmetal

• Cabling

B - Advanced Framework Extension

 Advanced Framework Extension allows you to create beam based structures and weldments quickly. It also allows you to customize profile cuts for each given beam.

This module would best be used in the design pictured.



A • Intelligent Fastener Extension

B • Cabling

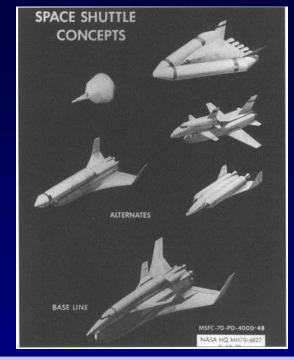
C • Piping

• ECAD collaboration

A - Intelligent Fastener Extension

 Intelligent Fastener Extension allows you to quickly assemble fastener stacks and make mating holes in one simple step.

This module would best be used in the design pictured.



A • Simulation

B • Intelligent Fastener Extension

C • Design Exploration

• Cabling

C - Design Exploration

 Design Exploration allows you to explore multiple design concepts before deciding on a final path. Board









\$800

This module would best be used in the design pictured.



Performance Advisor

• Sheetmetal

Additive Manufacturing

Intelligent Fastener Extension

B - Sheetmetal

 Sheetmetal allows you to make designs out of thin metal sheets including flat patterns, bends, punches, and relief cuts.

This module would best be used in the design pictured.



A • Advanced Framework Extension

B • Intelligent Fastener Extension

C • Welding

• Harness Manufacturing Extension

D - Harness Manufacturing Extension

 Harness Manufacturing Extension allows you to flatten out routed cable designs to document for harness manufacturing.



This tool sends data to PTC, and provides a dashboard of the status of all PCs including crash reasons

A • Local tech support personnel

B • Performance advisor

C • Config.pro

• Modelcheck

B - Performance Advisor

 Performance Advisor provides information received from Creo 2.0 M150 or Creo 3.0 for diagnostic and system status purposes.



This module allows you to quickly create a variety of models in different configurations by changing a series of checkboxes.



D - Options Modeler

 Options Modeler allows you to create custom configured designs based on checkboxes to determine which modules are selected for the new design. Board









\$600

This tool can find any Creo function in a matter of a few keystokes.

A • Google

B • Command Locator

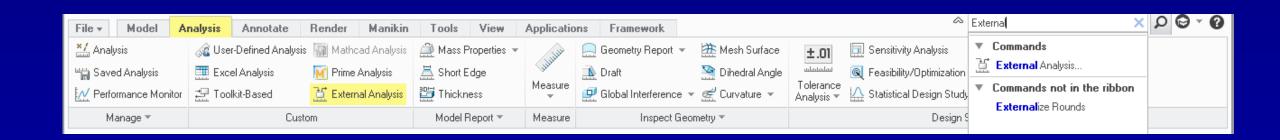
C • Find Tool (Binoculars)

• Your IT help desk

Board \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0

B - Command Locator

 The command locator search box in the upper right corner of Creo allows you to find commands as you start typing the name.



Recently popular among many software providers, this pricing model is now available from PTC on products such as Creo Parametric, and Windchill.

A Pay what you want pricing

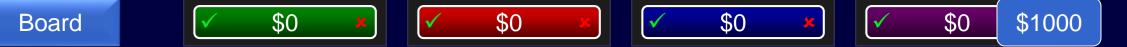
B • Free

C • Long-term contract pricing

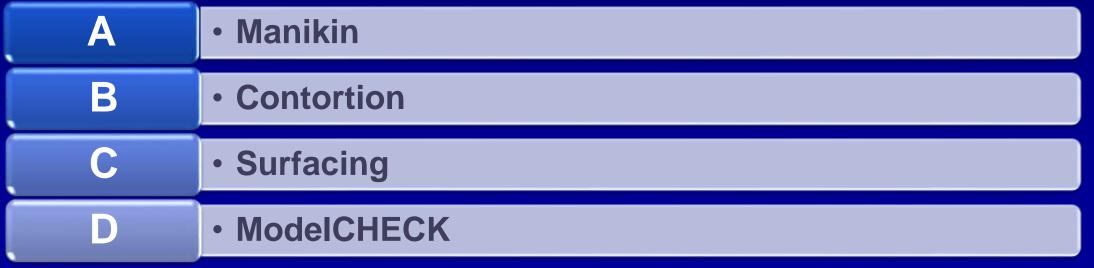
• Subscription pricing

D - Subscription Pricing

 To enable a more flexible solution for companies of varying size, PTC now offers Subscription based pricing in addition to perpetual licensing.



If it fits, it sits. This module can analyze whether people can interact inside or around a Creo model.



A - Manikin

 Manikin allows you to place a human sized form in your models and pose them to check for vision and reach in a given situation. Additional analysis can also be run to check for other safety issues.



Board \$0 \$0 \$0 \$0 Enter your wager:

55

Go!

Board \$0 \$0 \$0 \$0 Enter your wager:

Go!

Creo Parametric 4.0

This month and year Creo 4.0 is planned for release

Final Jeopardy Response

December 2016

