

PROPERTY WIZARDRY AT ITS FINEST

IPropWiz V6 Autodesk Inventor iProperties Management Tool

Most of the seasoned Autodesk Inventor users out there will have heard of iPropWiz. For those who haven't, or for those new to the game, iPropWiz is an Inventor Add-in created to simplify and ease the management of component properties. The native Inventor iProperty dialogue is clunky to use & although it supports the creation of custom iProperties the interface supporting those is horrid. iPropWiz presents all of the properties you are interested in, within a single view. Over the years it's matured, moving way beyond just presenting properties to the user. In doing so, it continues to expand into areas Inventor performs inadequately within.

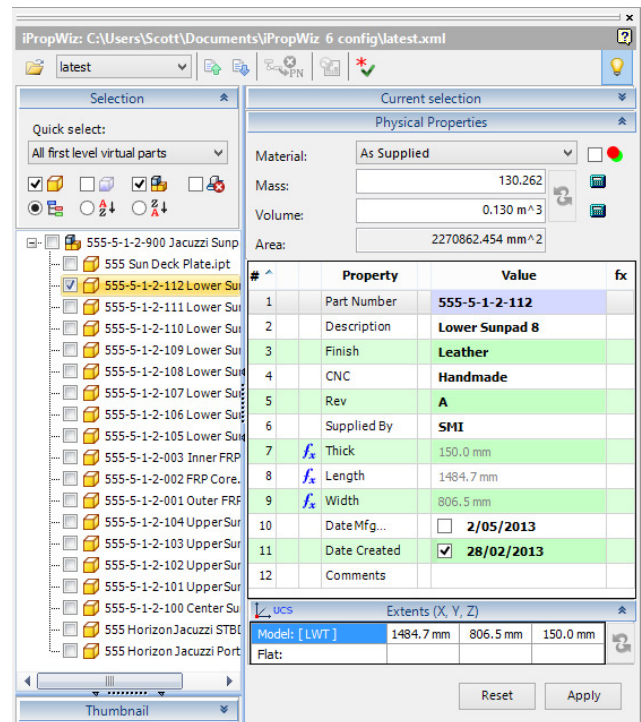


Figure 2: iPropWiz V6 Property Editor

IPropWiz HISTORY

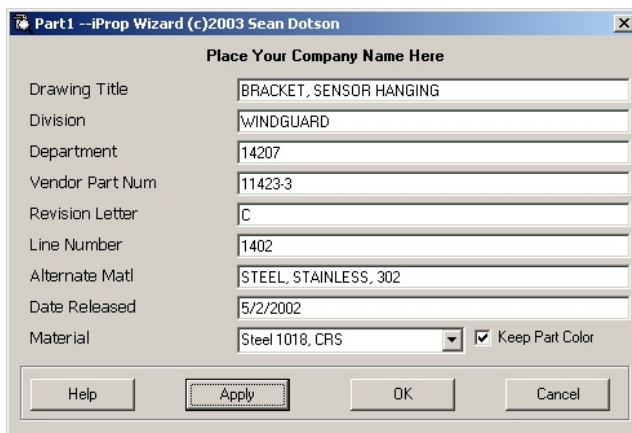


Figure 1: iPropWiz V1 Property Editor

- 2002 – iPropWiz V1
- 2004 – iPropWiz V2
- iPropWiz V3 (Never Released)
- Late 2008 - iPropWiz 2009 (V4)
- 2010 - iPropWiz V5
- 2013 - iPropWiz V6

A FEW QUESTIONS FOR THE WIZARDS

It's nearly been 3 years since I last got involved with beta testing iPropWiz V5. I'm at a loss to know where those 3 years have gone, but I do know they have most likely gone slower for me than for the wiser individuals among us. The upside to these foregone years is we now get to play with iPropWiz V6. I've taken this opportunity to not only fill you in on the new features, but also to ask its creators a few questions.

Scott: When & why did you start iPropWiz?

Sean: I first wrote iPropWiz in 2002 as a VBA macro. I was tired of users using the wrong fields for properties (Descriptions vs. Title etc.). It was fairly primitive compared to what we now have.

Amen to that & thank you for ripping into it.

Scott: Were you both always involved? If not how did the formidable partnership come to be?

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Sean: Sometime after V2.2 I knew I was getting over my head in regards to programming. I had turned it into an Add-in at this time but I lacked the skill set to evolve it further. Neil and I had worked together (with Charles Bliss) on 'Animator', another Add-in to do animations in Inventor. Since we worked well together, we partnered on iPropWiz and released v2009 soon after.

Scott: Are there any silent contributors to the program, other than the beta testers?

Sean: no, just Neil, myself, beta testers and of course the support of our beautiful wives.

Scott: What's your favourite new feature in iPropWiz V6?



Figure 3: Sean Dotson

Neil: That's a better question for users, but I like that the new Property Editor is a modeless (non-blocking) window.

Neil's a user as well, so his opinion very much counts. Exposing the Property Editor permanently like this brings property management to the forefront of the design process. Ideal!

Scott: How would you define iPropWiz V6's primary role?

Neil: Practices on how/when properties are filled in are so variable that we can't tailor it to fit one solution. The ability to make it easy to check & reasonably easy to fill in, is probably the best we can do. Encouraging users to fill in property info at the part level, or in small assemblies is part & parcel of making it as painless as possible.

Scott: Where do you see iPropWiz going in the future?

Sean: We would like it to become even more engrained into the Inventor workflow. We feel IPW offers the types of features that users want built into the product.

Scott: What would be your number one wishlist item for the Inventor API to improve iPropWiz?

Neil: Better tools for dockable windows in Inventor.

Scott: Do you plan to expand it into other products? If not why?

Sean: No. The time to learn other API's and the costs associated with that mean it's prohibitive.

I'm sure Neil & Sean would be open to coders from other platforms licensing the iPropWiz brand. 😊

Scott: Can you say roughly how many seats of active iPropWiz seats there are around the world? (Including 2009 & later)

Sean: We have roughly 350 separate companies using the product with approx. 2750 seats sold. However, we know there are some people still using iPropWiz V2.

Scott: Without naming names, can you say what your largest single installation of iPropWiz is?

Sean: We have a couple of companies with 100 seat installs and several with 50+.

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Scott: Why can't we purchase and download a licensed version of iPropWiz directly from the Inventor Exchange App store?

Sean: It has to do with our licensing structure. We are working with Autodesk to find a way to simplify this.



Figure 4: Neil Munro

Neil: I would add that we gear our sales to CAD managers or admins, not individual users (although we have lots of those as well). The Configuration Editor/Property Editor concept is there so standards can be better enforced by CAD managers.

Scott: How much is iPropWiz V6 going to cost, including upgrade pricing?

Sean: We have yet to set pricing for V6.

I've decided I'm going to ask this question at the end of every interview I do. Since we all know Sean is mad about sport & some of you may know Neil is a bike nut, I thought it was entirely appropriate.

Scott: Formula One or NASCAR?

Sean: I'm not going to answer that one.

Sean's sick of this debate raging on Twitter & refuses to partake there as well. I think the American in him

has to go with NASCAR, while he's torn by the engineer in him going with the technically superior Formula One

Neil: MotoGP, go "2" or go home!

Full respect to that answer, those lads are nuts & bloody good fun to watch.

WHAT'S NEW

The layout from V5 remains largely unchanged, albeit with an improved user interface experience.

There are quite a few changes with this release. A number of them are subtle, so I will focus on the big ticket features, since you can read the official 'What's New/Read me' document to find out everything. Most of the changes are within the configuration editor so let's start there.

CONFIGURATION EDITOR

GENERAL AWESOMENESS

- Maximum number of characters. (Figure 5)

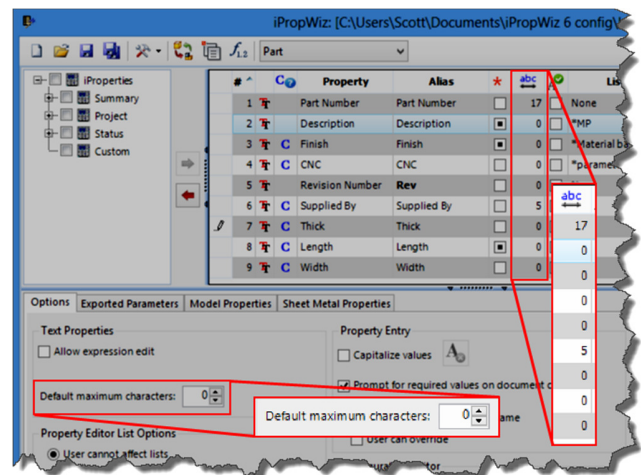


Figure 5: Maximum Character Settings

- Drag and drop property reordering.
- Capitalize values by property & configuration.
- Configuration setting to prompt for unfilled required values when a document is closed.

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- Improved Property Feedback: Modified aliases are bold, read-only checkboxes are filled in, assign expression buttons indicate availability.
- Configuration option to allow editing of properties in Inventor library parts.
- iPropWiz Copy/Paste tools now supports copy & paste across different document types. Including the choice between copying the expression or the value

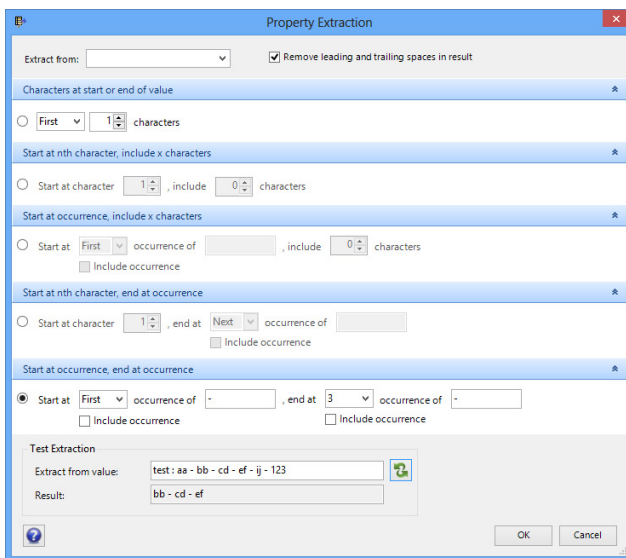


Figure 6: Property Extraction Tools

- Significant improvements in handling property expressions.

In conjunction with the traditional expression tools available within Inventor but also with iPropWiz, Neil & Sean have introduced a Property Extraction tool (Figure 6). Using this in combination with expressions will no doubt prove to be very handy. I look forward to getting rid of some iLogic code & those dastardly iLogic event triggers, once I set about leveraging this baby.

NEW LIST TYPES:

- Tree list
- Multi-property text list
- Material based multi-property list

- Parameter based multi-property list

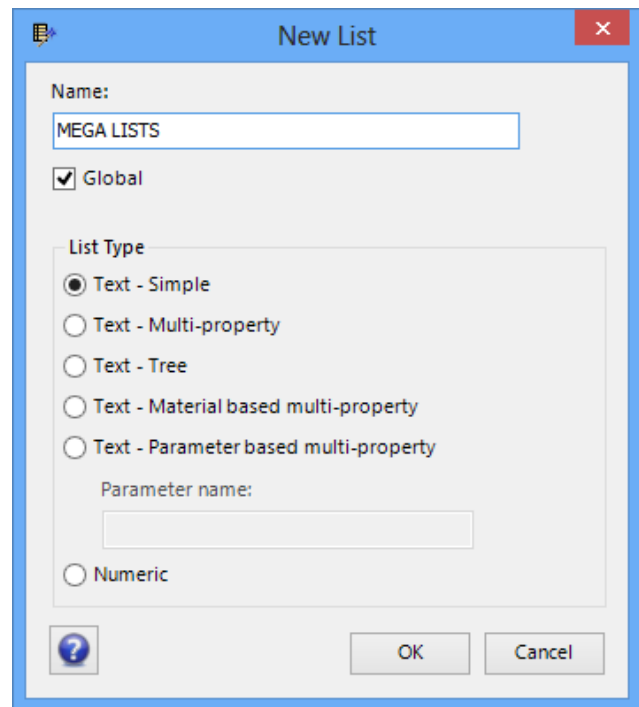


Figure 7: iPropWiz V6 sports clever new list types

These are one of the most powerful new features in iPropWiz V6 (Figure 7). The Multi-Property, Material & Parameter based multi-property lists allow the administrator to monitor the value of a targeted property. When that property matches the criteria set by the list rule, it takes control of other preset properties. This can either be in the form of enforcing a value, or chopping & changing lists assigned to these controlled properties. Using material as a good example, steel has a different set of finishing requirements than plastic. These tools allow you to present those options to the user. Very very cool stuff!

The Tree lists are a bit different, I personally wouldn't have much use for these. However, for companies with huge unruly lists, Tree lists provide a means to organize the list values into logical folders or categories.

- Importing data from Excel into lists has been improved. Commented samples for all list types are provided.

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EXPORTED MODEL & SHEET METAL PROPERTIES

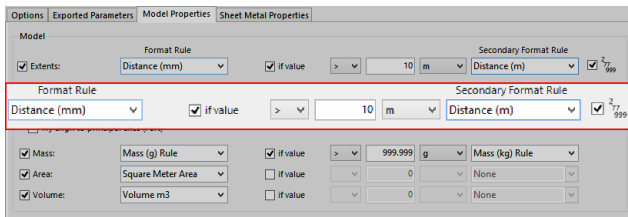


Figure 8: Exported Properties secondary format rule

- All exported properties now support an optional 2nd format rule. A single comparison operator provides the division of "primary" & "secondary" formatting. (Figure 8)
- iPropWiz can now export a set of ordered extents (smallest to largest). This is supported for both Model & Sheet metal extents.

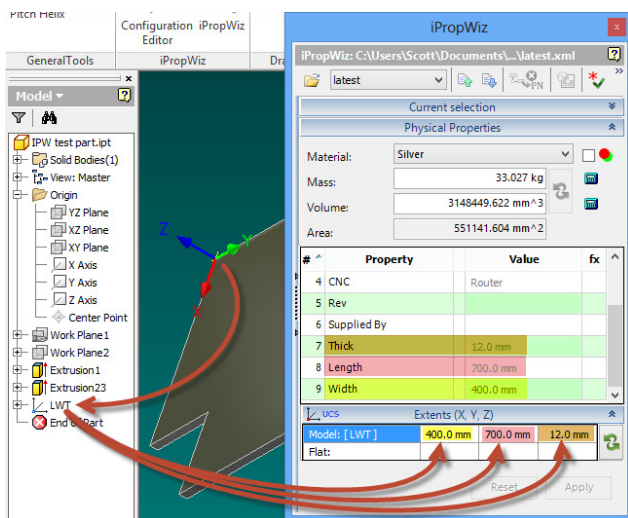


Figure 9: Extents aligned to user defined UCS

- Two additional model extents calculations
 - Align to User Defined UCS (**Error! Reference source not found.**)
 - Align to the Principle Axes
- Sheet metal properties
 - 3 options for exported flat pattern area. Bounding box, outer loop area & face area

- Additional sheet metal properties can now be exported.

These new features are by far my favourite by a long way. I'm hugely excited by the possibilities of combining User Defined UCS's with the ordered extents options. This will result in a far quicker way of obtaining reliable overall dimensions for parts lists & BOM's. In addition, this will allow Woodworkers to align their UCS X axis with the grain of their parts if they so choose. As a result they will be able to align the length of their parts with the X axis.

I also have some other very exciting plans which I have no intention of sharing here. For the time being at least.

PROPERTY EDITOR

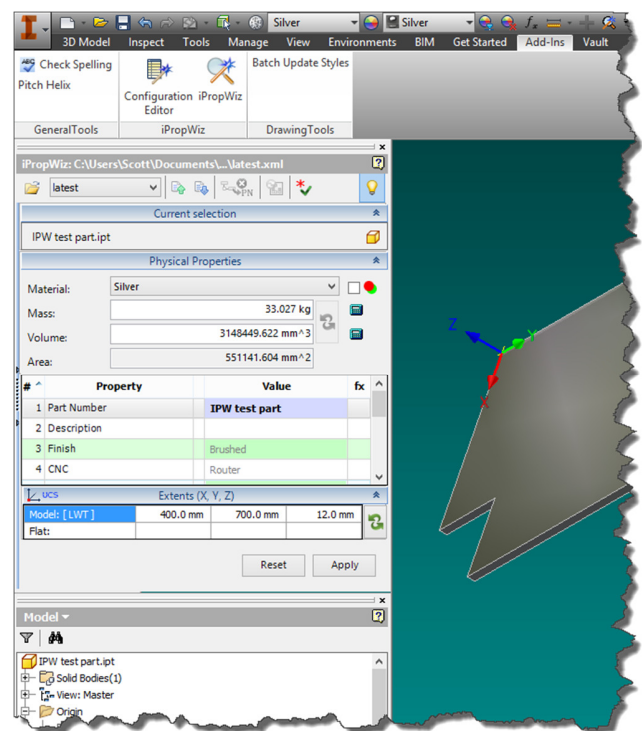


Figure 10: The PE is now dockable & modeless

Starting with the biggy:

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- The Property editor is now a modeless dockable window (Figure 10). Making property management omnipresent.

I don't see the value of docking it myself, unless of course you have a 30" monitor. However, being able to keep it on a second monitor means you are constantly aware and working with the properties fundamental to the design process.

- You can still open & close the PE just like in previous versions, however, now you can also enable or disable it. This is more of a benefit for when you have large assemblies open.
- The PE now has a toolbar (Figure 11) with a number of goodies including the ability to import & export currently listed properties.

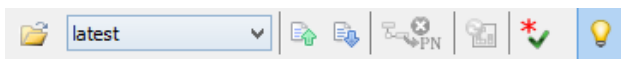


Figure 11: Property Editor Toolbar

THE GRID

- Shift & Shift + Tab navigation between cells is now supported. Awesome!
- Pressing 'T' while in a date cell will now set the value to Today's date.
- The Comments Property editor now supports pasting of Rich Text.
- Addition of a Reset button to wipe out non-committed changes.
- Virtual Component properties are now much better supported.

THE DOCUMENT BROWSER

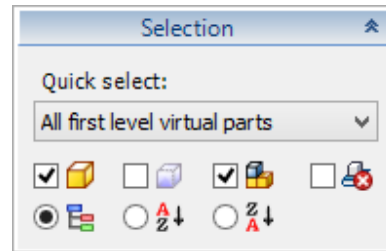


Figure 12: New view types & Document type filters

- Raft of new filters have been added in the quick select list. (Figure 13)
- New 'View Types' (Figure 12). You can now view the referenced documents in either a flat or sorted view. Of course you can still use the hierarchal view.

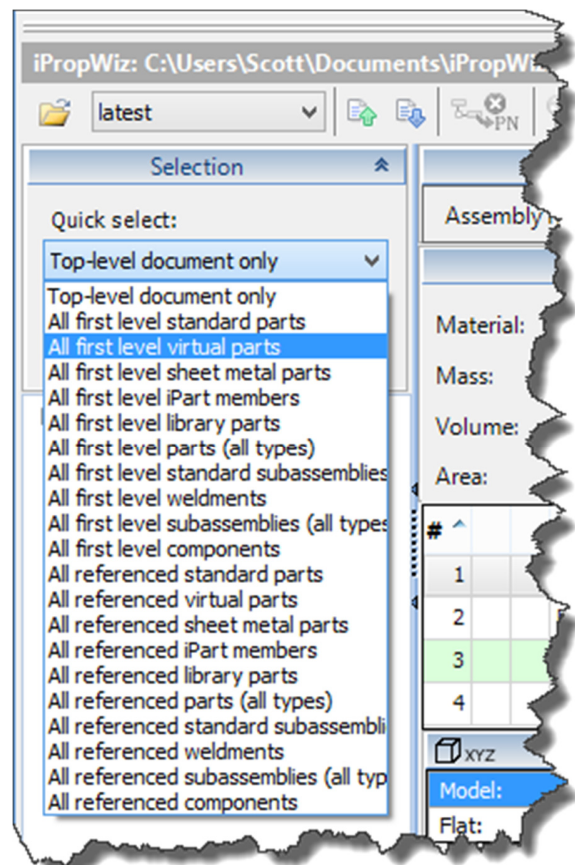


Figure 13: There are a lot more filters in this release

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- New Document type filters, including virtual components. (Figure 12)

One of the most annoying aspects of iPropWiz V5 was when you had made a chunk of property changes, but then selected another component to edit its properties, only to realize without warning all your work had been wiped out. This was because you have to apply your changes to commit them. Logical really, but easily forgotten. iPropWiz V6 takes care of that by prompting you of pending saves & asking if you want to save them. Not only does this occur when switching selections in the PE, but also in the Inventor browser, or by changing the active document. They've really covered all the bases there.

SOME BORING STUFF YOU NEED TO KNOW

- Supported for Autodesk Inventor 2013 & 2014
- Automated update of iPropWiz 2009 & V5 configuration & list information.
- \Admin\$ folder renamed to \Admin.
- Limited support for deactivation of a license for installation on a computer with a different name.

CLOSING THOUGHTS

I'm extremely excited about this release of iPropWiz. It's going to solve a number of problems I've been wrestling with in my office for years. Not only will it solve some of those problems, the tools it provides will improve the productivity of our own in house productivity add-ins.

iPropWiz is one of those add-ins within the Autodesk Inventor community, of which people consistently wonder why Autodesk haven't bought it and added it into the product so everyone can benefit. Although, it's hardly expensive, so there's really no excuse why every Inventor seat ever purchased, should just tack this onto their initial purchase cost.

During the review of this article with Neil & Sean, Neil revealed that more than 90% of user's requests had been implemented in this release. This incredible achievement really shows in the product, the more you tinker with it the more you realize just how good this tool is. The ROI this wizardry affords is a no brainer. Go get it & enjoy a veritable productivity jump.



Scott Moyle is the Design Manager for SMI Design, a high end bespoke interiors company in New Zealand. His background is in Motorsport Engineering & CNC programming. Scott has been using various Autodesk software over the last 10 years. He contributes regularly to DesignandMotion.net. Scott can be reached using Twitter [@scottmoyle](https://twitter.com/scottmoyle) or scott_moyle1@hotmail.com