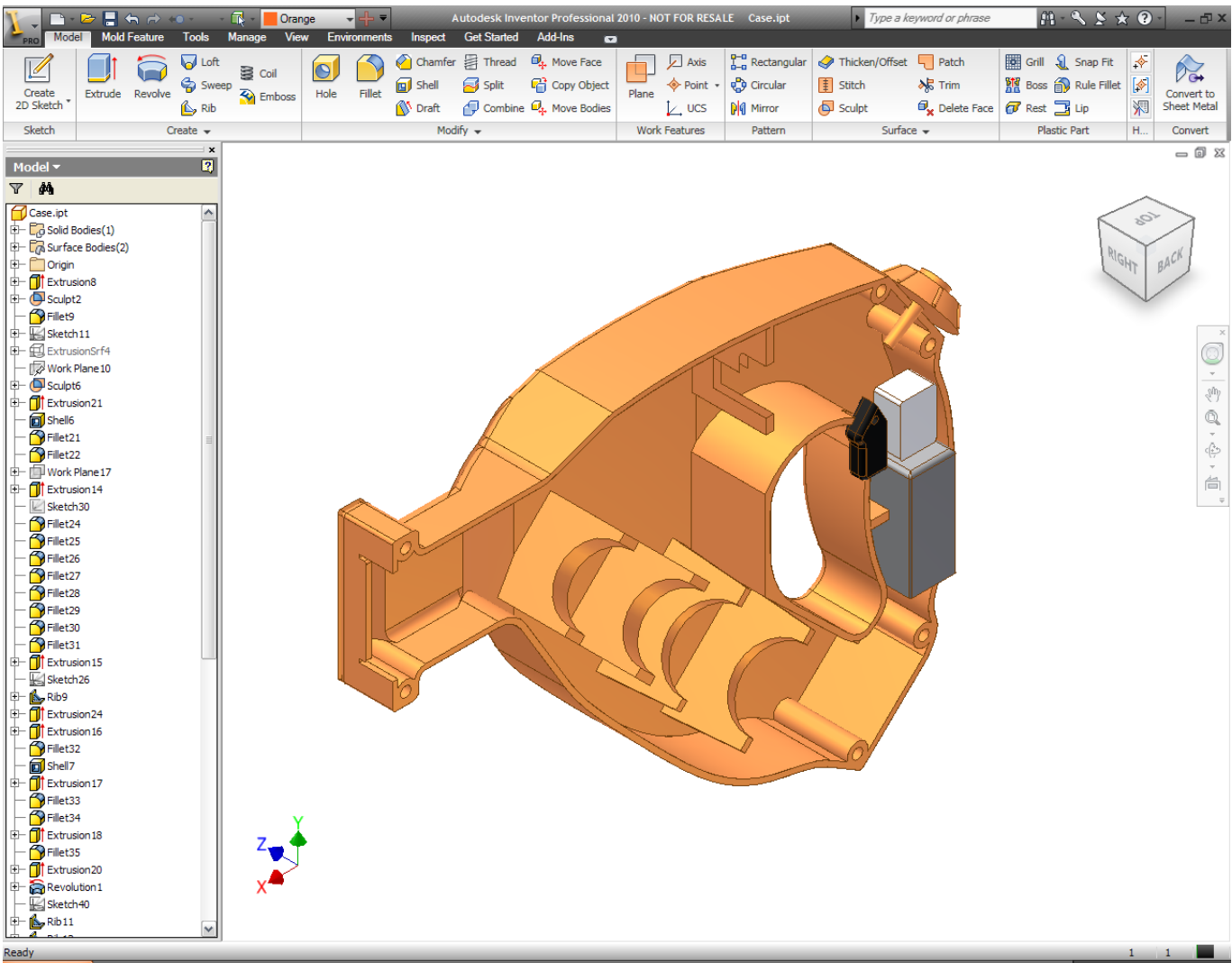


# The U and I of the New UI in Inventor 2010

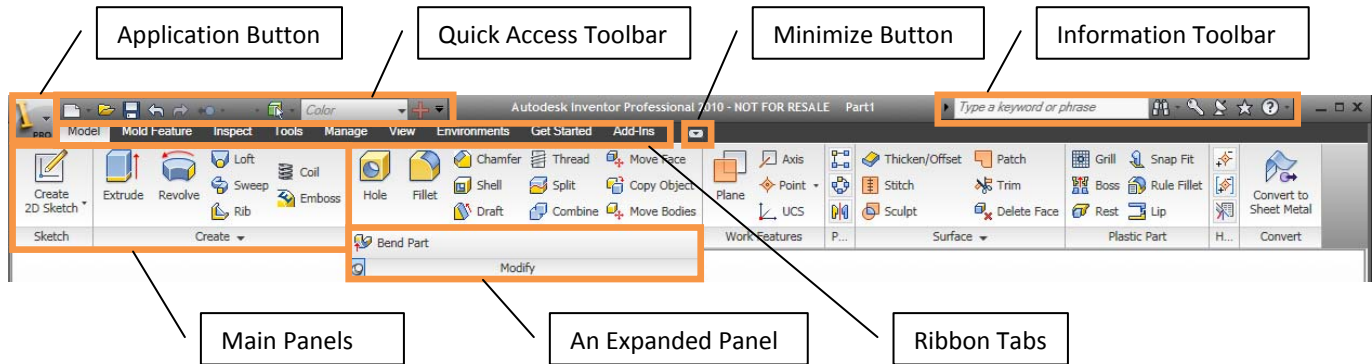
Starting with Inventor 2010, Inventor includes the Microsoft Fluent user interface (commonly referred to as Ribbon UI). Autodesk has always understood the relationship with their software and the human interaction that takes place. There is no better example of that than AutoCAD which introduced the Ribbon UI last release and allowed the user to revert to the Classic toolbars in order to aid in the transition of the interfaces. Many companies are just now turning to Office 2007 and newer operating systems that are using the Ribbon UI where AutoCAD may have already been upgraded to 2009. Other competing software companies jumped in too quickly and did not allow their users a choice or even customization of the Ribbon UI.

The purpose of this whitepaper is to discuss the enhancements the Ribbon UI Anatomy, Ribbon Productivity, Easing the Learning Curve, choosing between Classic and Ribbon, and the overall technology trend.



## The Ribbon Anatomy

The largest part of learning the Ribbon is understanding the flow of the interface and where to find commands you have become accustomed to. For new users, they don't have this dilemma. For Power users it becomes a lesson in patience and open mindedness during the transition. Ribbons aim to enhance usability; by consolidating the program's functions and commands in an easily recognizable place, one need not look through multiple levels of hierarchical menus, toolbars or task panes before finding the right command. Let's first take a look at the terminology of the Ribbon.



### The Inventor button

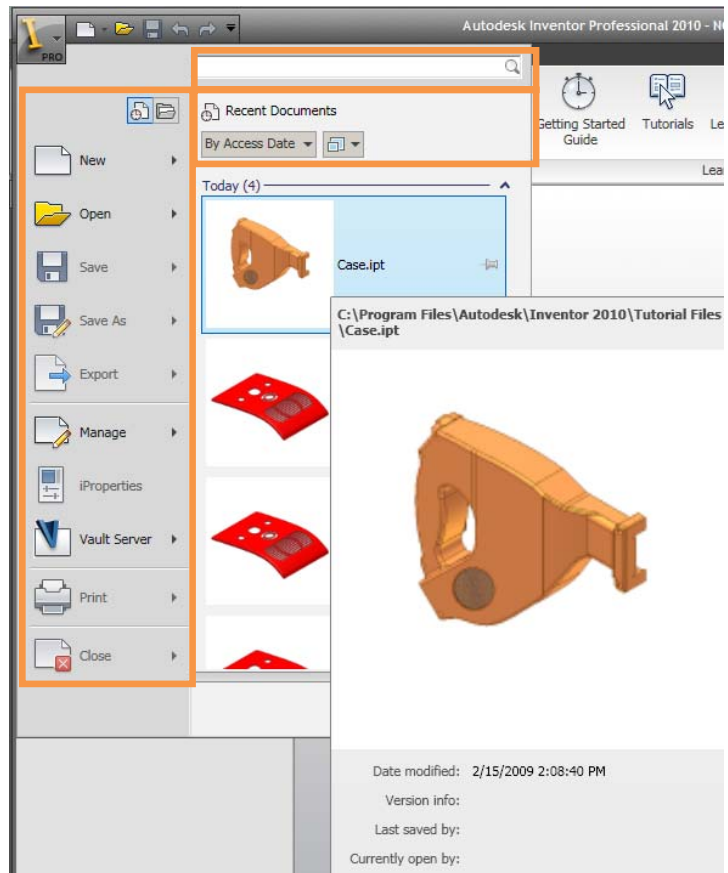



The Inventor button grants access to almost everything you would normally find in the old File Menu pull down. Start a New file, Open a file, Save and Save As (as well as the new Save As Template option for creating quick start parts), iProperties, Printing, Vault Server Access and Exporting to a large amount of file types.

The New Search function allows a very quick find method of activating commands. Simply start typing in the command name and it will auto complete based on Inventor's commands. As soon as the command desired starts to appear, simply click on it to activate the command.

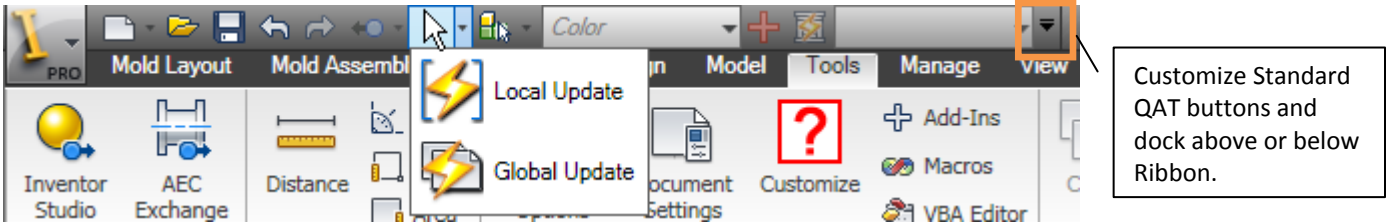
The enhanced Recent Documents allows users to view their recent files by:

- Access Date
- Ordered List
- Size
- Date
- Small Icons
- Large Icons
- Small Images
- Large Images



Quick Access Toolbar (QAT) 

Located in the upper left of the application window this QAT is fully customizable for commands that you would want available throughout any environment. The QAT remembers what was customized for each environment of Inventor and even has fly out support. To add commands to the QAT, right click on any command or fly out in the existing Ribbon and select the Add to Quick Access Toolbar option.

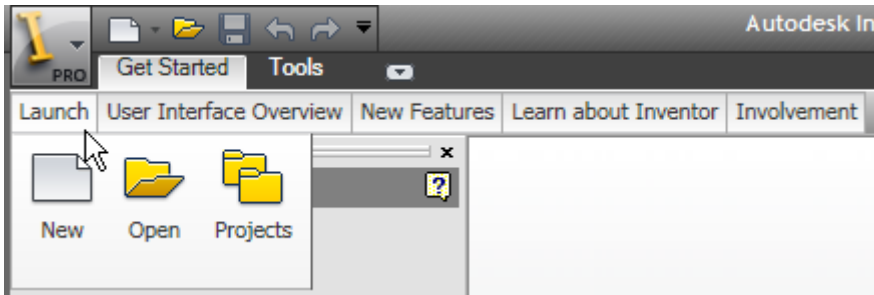


**Recommendations:** I have found that adding Measure, Parameters, and iProperties to the QAT is quite useful.

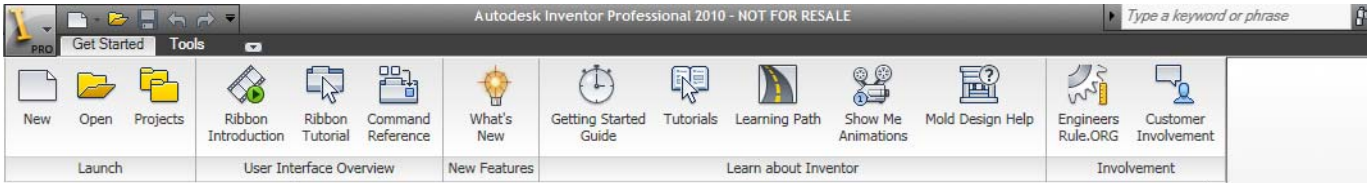
Minimize Button 

Use the Minimize button to decrease the Ribbon’s footprint on your screen quickly. Each of these (with the exception of the Full Ribbon) has different levels of Auto-hide functionality.

Minimize to Panel Titles – Click on Tabs and then Panels to get just the commands in chosen Panel



Minimize to Tabs – Only Panels are shown until clicked and then all commands shown for that Panel.

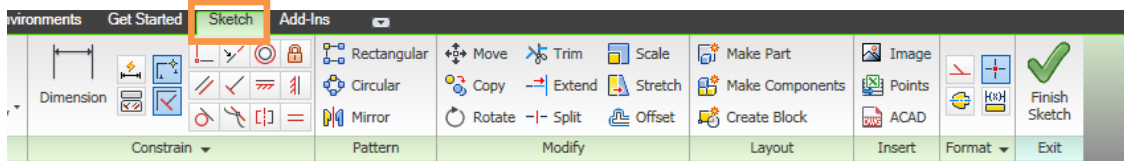


Search and Information 

Use this part of the Ribbon to access quick search for Help Topics, Subscription Center, Communication Center, Favorites and Inventor Help (F1). More importantly here is the little fly out on the Help bubble that grants access to the “About Inventor Professional” for license borrowing, Service Pack determination, and Build Number. The search function can also be minimized with the collapse arrow on the left hand side.

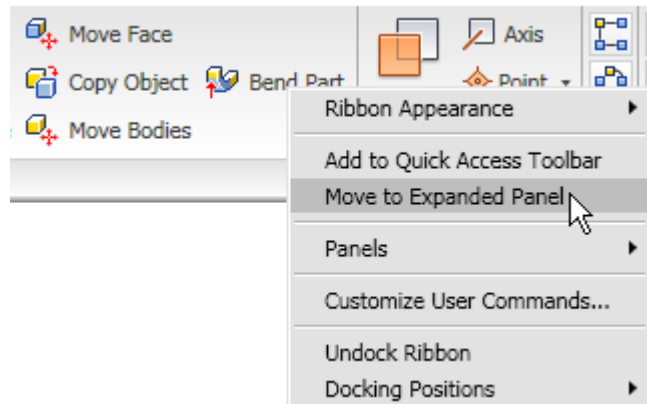
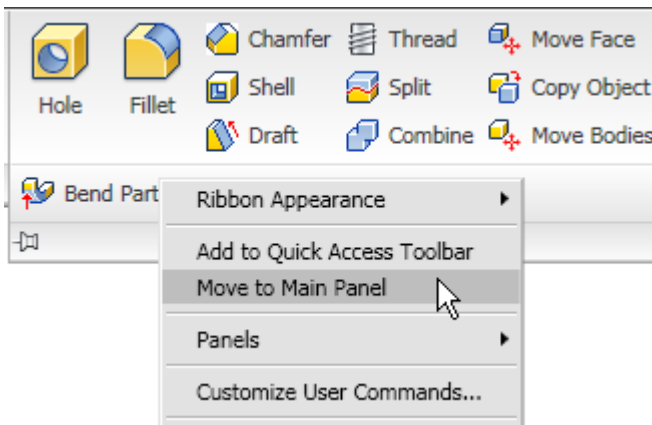
## Ribbon Tabs

The Tabs on the Ribbon are indicative of the older pull down menus in the Classic Interface. What is fantastic about Inventor’s Ribbon is that it will advance to the next logical tab in order to complete the desired operations. For instance, starting a new part file starts the Ribbon on the Sketch Tab and it will be highlighted Green. This is done so that if a user needs a command on a separate Panel then they know which one to go back to (I use this Green highlight a lot in the higher level environments where I forgot where I came from. When Sketching is finished it switches back to the Model Tab for Base Extrusions.



## Main and Expanded Panels

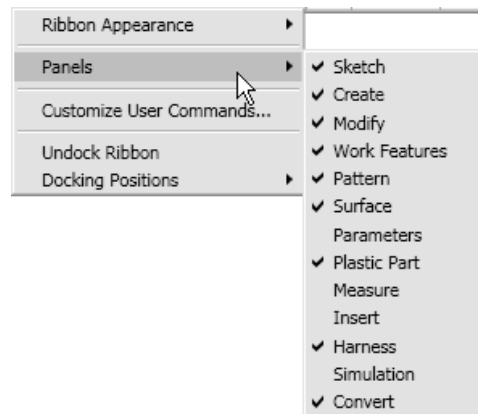
The Main Panel contains the most commonly used commands a user will encounter. The Expanded Panel is accessed by selecting the pull down arrow next to the Panel’s name. This will contain the lesser used commands and can be pinned with the thumbtack icon to remain open. If you are a user that finds a command that you use regularly in the Expanded Panel simply right click on it and select the “Move to Main Panel” option and likewise if you have a command that is not used as often if you want it on the Expanded Panel.



## Adding Panels

If a Panel does not exist in the Environment you can add Main Panels by right clicking and selecting the desired Panel from the list of available Panels for that Environment. You can also remove Panels from view if you are not a user of Cable and Harness Assemblies or do not work with Surfaces. This streamlines your environment further for the user and keeps commands that are not used from view.

The user can also add a new custom Panel with the “Customize User Commands...” selection. I recommend putting the commands you use most and such as the ones I added to the QAC (iProperties, Measuring commands, Parameters, Edit Member Scope, Edit Family Scope, etc).

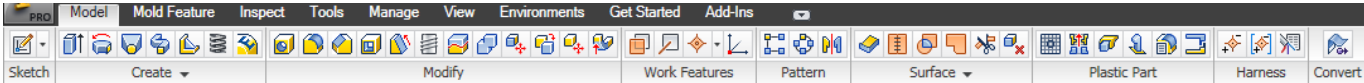


# Productivity and White Space with the Ribbon

Now that the fundamentals of the ribbon are understood here are some more advanced ways to use the Ribbon and the new interface.

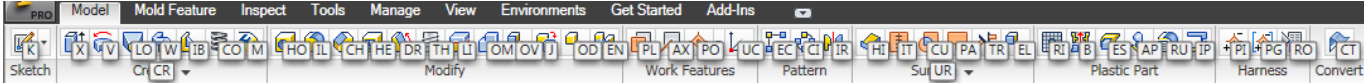
### Expert Mode:

To activate different levels of expert mode (display icons with no text) right click on the Ribbon and select “Ribbon Appearance” to change to different views of the Ribbon. This eliminates a large portion of the Ribbon and is preferred by long time users of the software.



### Use Alt Shortcuts

This one is for the hot keys users. There are less and less of them now that the interface has become so graphical but I do still see a nice advantage to knowing this if you forgot your mouse for your CAD laptop. Hold Alt for one second (does not have to be held) and the Ribbon will display a shortcut key on the QAC and the Tabs. Choose one of these and it will drill down to the commands in the Tab and show another set of shortcut keys to get the desired command.



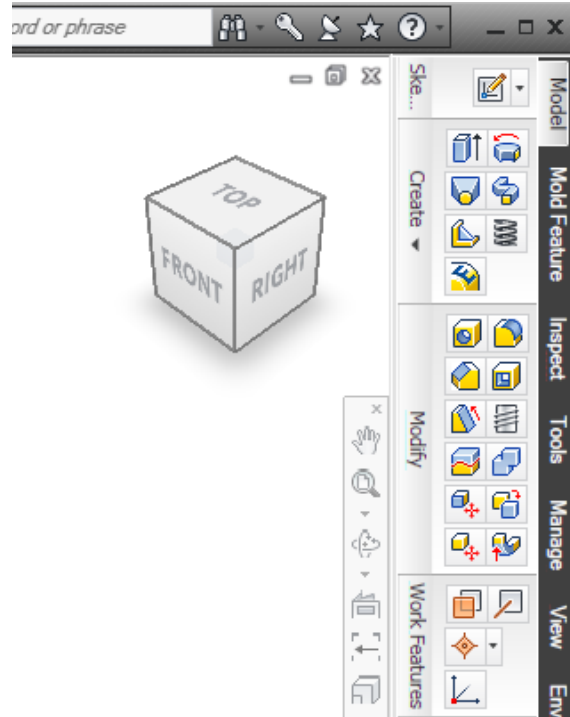
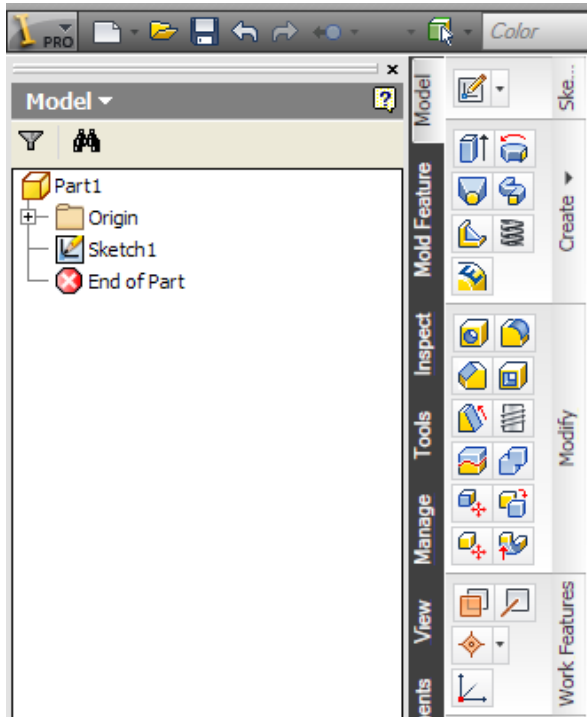
### Ungrouping Fly outs

I was very glad to find that the Assembly Tools from the SDK in earlier versions of Inventor was added to the normal command set. I was at first upset at the Ribbon integration until I found this nice toggle in the right click menu. Fly outs can be ungrouped and regrouped but not separated to Expanded Panels in this way.



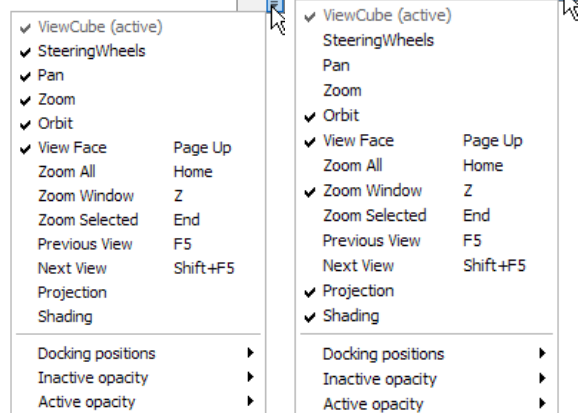
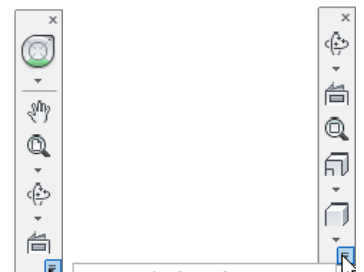
## Docking Areas

For widescreen users the default placement of the Ribbon across the top of the screen appears to be a large waste of space. Luckily Inventor allows docking and undocking of the Ribbon and placement on the left or right side of the screen as well.



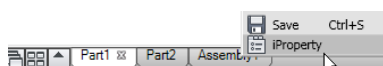
## Navigation Bar

The Navigation bar contains many commands that it almost allows the user to ignore the View Tab in the Ribbon. Shown right are the defaults, and on the far right are my recommendations. The defaults work really well for users of laptops without mice. My recommendations take out the clutter and add the substance. For instance using the mouse for Pan, Zoom, and Zoom All (double click the wheel) eliminates the need for the mouse selection.



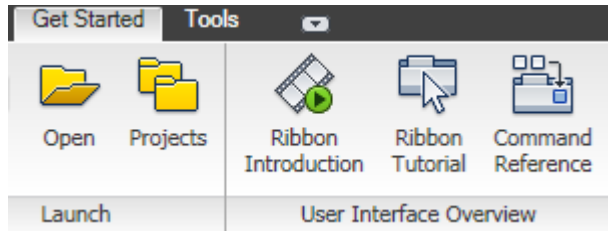
## Document Tabs

These are located at the bottom of the screen and aid the user in selecting which open document they would like to work on (previously done with CTRL+TAB). A right click of the mouse grants access to iProperties of a part even if the user is not active on it.



## Easing the Curve

A valid point about the Ribbon is that if the new interface is so easy to use, why have a video in the software involving an Introduction, a Tutorial, and a Command Reference. That's an easy one. Some users do not take update training, some users don't use a program with a Ribbon in it yet, some users are new to the software in general, and some users are old power users of the software. Having these resources, especially in a fairly new technology trend is rather important to easing the transition or introducing a user.



**Recommendation:** I also added the Command Reference to my QAC in order to help in the transition.



## The Classic

The Classic interface falls into this new technology as a crutch for users to fall back on until they are comfortable with the new Ribbon UI. New workflow methods that utilize the Ribbon will not be as clear with the Classic interface (no better example of that than the new Tooling Suite). One very nice advantage of the Classic UI is the usage of memory in the users system. This amount is very small compared to most systems nowadays though.

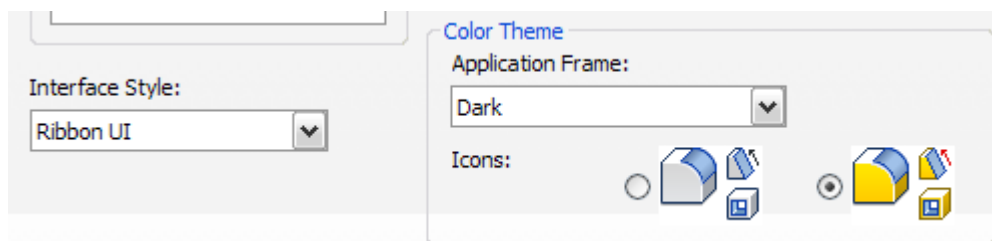
Image Name	User Name	CPU	Mem Usage	Image Name	User Name	CPU	Mem Usage
Inventor.exe	User	00	228,596 K	Inventor.exe	User	00	159,104 K
<b>Ribbon UI</b>				<b>Classic UI</b>			

## U and I

Which customization of the Ribbon is right for you? Which interface is right for you? That is the U and I of this new technology. Qualify yourself by:

- How much screen space you want?
- Do you have a widescreen monitor?
- Do you prefer a scaled back Ribbon?
- Have you eliminated clutter and added your functions?
- Do you often forget your mouse with your laptop?

Whatever choice you choose when you first approach Inventor 2010 you can select it in the Application Options on the Color Tab. Select either Ribbon UI or Classic UI from the pull down list. This will require a restart of Inventor. The Ribbon UI has more options for it such as the Application Frame and either the new default icons or the more familiar 2009 icons.



## The Future

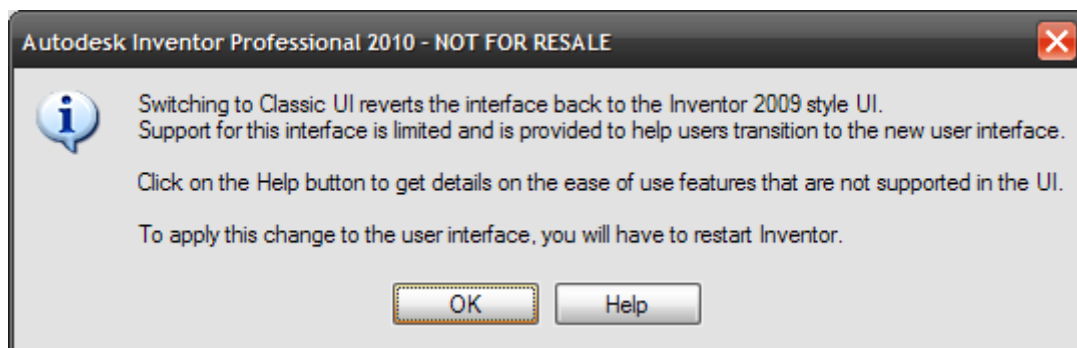
As mentioned above, some competing software companies have essentially used a like it or else deployment of their contextual Ribbon and others are simple enough to use programs that the Ribbon has not made much of a difference in either a good or bad way but only to conform to the Microsoft Office look and feel. Initially Autodesk was poised to drop the same hammer for 2010. They had released the Ribbon on the Autodesk Labs website about halfway into the 2009 release year. The feedback was overall very positive from those that downloaded it.

### UI Technology Preview for Inventor 2009

Added: June 16, 2008

Graduated: October 31, 2008

Generally speaking the inclusion of the Ribbon in 2010 should not be a surprise to anyone. It has been fairly open knowledge that Inventor would eventually switch to the new interface. In beta testing it was regarded as a surprise though since so many in the power users focus group did not want a new interface confusing their users or did not want to retrain them on the interface of their primary modeling software. Following a mentality of if it isn't broken, don't fix. Unbeknownst to the beta users, Autodesk programmers already knew to keep the Classic UI just in case of user anarchy and finally revealed this during beta3 of 2010. So did Autodesk bend to the will of the boisterous? For the time being yes, but with it comes a warning that Autodesk thought users would have understood for almost a year now maybe longer considering the competing software that forced users into it.



For the time being if you find yourself as one of those users that cannot stand the Ribbon, you might want to take another look. The Classic interface is bound to disappear in the future as technology trends change and develop (Inventor Project Fusion for example). I for one had the same apprehension as most power users having used Inventor since release 4 and having been so accustomed to what a toolbar means to my understanding of computing, but after spending a little time in the software I became more and more productive with it and missed my toolbars less and less. Probably the best example of this is the way the Ribbon flows through the commands involving Inventor's new Mold design package in the Tooling Suite. Given the robust customizing capabilities and access to any command when you want it without digging through multiple panels or enabling toolbars that just succeed in making your graphics area smaller, Inventor's new interface is not your typical Ribbon interface.



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