

# Excel® 2013



## IN DEPTH

QUE

Bill Jelen



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# Excel<sup>®</sup> 2013 IN DEPTH

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**que<sup>®</sup>**

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# EXCEL® 2013 IN DEPTH

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# ABOUT THE AUTHOR

**Bill Jelen**, Excel MVP and the host of MrExcel.com, has been using spreadsheets since 1985, and he launched the MrExcel.com website in 1998. Bill was a regular guest on *Call for Help* with Leo Laporte and has produced more than 1,500 episodes of his daily video podcast, Learn Excel from MrExcel. He is the author of 36 books about Microsoft Excel, writes the monthly Excel column for *Strategic Finance* magazine, and his Excel tips appear regularly in the CFO Excel Pro Newsletter and *CFO* magazine. Before founding MrExcel.com, Bill Jelen spent 12 years in the trenches—working as a financial analyst for finance, marketing, accounting, and operations departments of a \$500 million public company. He lives near Akron, Ohio with his wife, Mary Ellen.

## Dedication

*To Max Mahoney*

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## WE WANT TO HEAR FROM YOU!

As the reader of this book, you are our most important critic and commentator. We value your opinion and want to know what we're doing right, what we could do better, what areas you'd like to see us publish in, and any other words of wisdom you're willing to pass our way.

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# INTRODUCTION

The introduction is always written last. After updating 38 chapters, I reflect back on the things that simply knocked my socks off in this version of Excel.

For people who are new to Excel:

- The Flash Fill and Quick Analysis features will be huge timesavers. Read about those features in Chapter 2, “Introducing Flash Fill and Quick Analysis.”
- The new JavaScript Excel App Store holds a lot of promise. A few good apps are there right now. Microsoft is currently training more people to write apps, so hopefully by the time you are reading this, there will be many more apps. Read about apps in Chapter 5, “Extending Excel with Excel Apps and Add-Ins.”

For people who use Excel every day:

- After you create a chart, a paintbrush icon appears to the right of the chart. That icon offers 10 different ways to format the chart. They are all fabulous. This comes close to my favorite new feature in Excel 2013. It certainly wins the award for “the feature that I wasn’t expecting to be amazing, but it was.” Read about the charting changes in Chapter 32, “Graphing Data Using Excel Charts.”
- The Recommended Pivot Table feature is good—using this feature can trim the six clicks it usually takes to create a pivot table down to four clicks. Pivot tables are covered in Chapter 23, “Using Pivot Tables to Analyze Data.”

- PowerPivot evolves and becomes part of the core of Excel in this release. I gushed about it in Excel 2010. It actually gets a little harder to use in this release, but that's okay. For more information, read Chapter 25, "Mashing Up Data with PowerPivot."
- Power View enables you to take data stored in the PowerPivot model and do some amazing visualizations. Maps, pictures, tables, dashboards, and more are discussed in Chapter 26, "Creating Interactive Dashboards with Power View or GeoFlow."
- The most improved award for this version goes to the Excel Web App team. Excel Web Apps break new ground, enabling you to conduct surveys online, turn boring web pages into interactive gems, and more. Sometimes, I don't know what to tweet. Now that I can share my favorite spreadsheets to Twitter and LinkedIn via the Web App, I might be posting more to social media. Read about Excel Web Apps in Chapter 37, "Excel Web App and Other Ways to Share Workbooks."

For Excel gurus:

- The new `WEBSERVICE` and `FILTERXML` functions for returning data from a web service will be put to good use. Read about them in Chapter 12, "Using Powerful Functions: Logical, Lookup, Web, and Database Functions."

Microsoft marketing will be crowing a lot about the new Start screen (Chapter 1, "Staying Connected Using Excel 2013") and Timelines (Chapter 24, "Using Slicers and Filtering a Pivot Table"). I cover them both but also tell you how to live without them.

## How This Book Is Organized

The book is organized into the following parts:

- **Part I, "Mastering the New User Interface"**—This first part of the book shows you the ribbon, Flash Fill, the Quick Analysis, the big grid, and the new Excel App Store.
- **Part II, "Calculating with Excel"**—This part covers what Excel does best, from formulas to functions to linking.
- **Part III, "Business Intelligence"**—Sorting, filtering, subtotals, pivot tables. These are the tools of the Excel data analyst. Learn about these tools and the new PowerPivot add-in in Part III. The chapter on VBA macros is also in this part of the book.
- **Part IV, "Visual Presentation"**—This part covers charting, SmartArt, data visualizations, and picture tools. After you get done analyzing the data, a few features from this part will make your reports look good.
- **Part V, "Sharing Information"**—This part discusses printing and sharing your Excel workbooks by creating PDFs or publishing to the Web.

# Conventions Used in This Book

The special conventions used throughout this book are designed to help you get the most from the book as well as Excel 2013.

## Text Conventions

Different typefaces are used to convey various things throughout the book. They include those shown in Table I.1.

**Table I.1** Typeface Conventions

Typeface	Description
Monospace	Screen messages and Excel formulas appear in monospace.
<i>Italic</i>	New terminology appears in <i>italic</i> .
<b>Bold</b>	References to text you should type appear in <b>bold</b> .

Ribbon names, dialog names, and dialog elements are capitalized in this book (for example, Add Formatting Rule dialog, Home ribbon tab).

In this book, key combinations are represented with a plus sign. If the action you need to take is to press the Ctrl key and the T key simultaneously, the text tells you to press Ctrl+T.

There were not many changes from Excel 97 to Excel 2000 to Excel 2002 to Excel 2003. Most people upgrading to Excel 2013 will be coming from one of these versions of Excel. I collectively refer to these versions as “legacy versions of Excel.”

## Special Elements

Throughout this book, you’ll find tips, notes, cautions, cross-references, case studies, Excel in Practice boxes, sidebars, and Troubleshooting Tip boxes. These elements provide a variety of information, ranging from warnings you shouldn’t miss to ancillary information that will enrich your Excel experience but isn’t required reading.



### Tip

Tips point out special features, quirks, or software tricks that will help you increase your productivity with Excel 2013.



### Note

Notes contain extra information or alternative techniques for performing tasks.



### Caution

Cautions call out potential gotchas.

➔ See Chapter 99 for more information is a cross-reference to another section or chapter in this book.

### **Case Study: Other Elements**

Sections such as Case Study, Excel in Practice, and Troubleshooting Tips are set off in boxes such as this one:

- Case Studies walk you through the steps to complete a task.
- Excel in Practice boxes walk through real-life problems in Excel.
- Troubleshooting Tip boxes walk you through steps to avoid certain problems or explain how to react when certain problems occur.

### **Sidebars**

Historical glimpses and other information that is not critical to your understanding appear as sidebars. I imagine that if the Cliff Clavin character from *Cheers* knew a lot about Excel, these would be the kinds of things he would write.

## USING THE EXCEL INTERFACE

The Excel interface has had a major makeover over the last decade. Excel 2007 introduced the ribbon and Quick Access Toolbar to replace the familiar command bar at the top of Excel. Excel 2010 brought the expanded File menu. Excel 2013 brings the Start menu, plus new Open and Save As panes. These were discussed in Chapter 1, “Staying Connected Using Excel 2013.” This chapter reviews all of the remaining Excel interface elements.

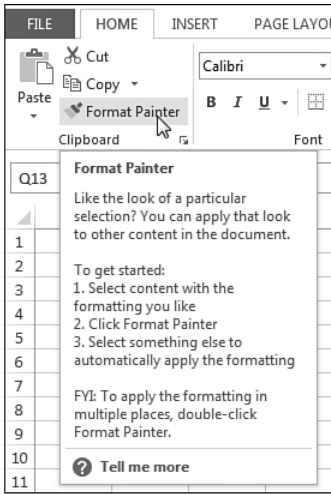
### Using the Ribbon

The ribbon is composed of seven permanent tabs labeled Home, Insert, Page Layout, Formulas, Data, Review, and View. Other permanent tabs appear if you install certain add-ins. For example, PowerPivot, Inquire, and Easy-XL are tabs that you see if you install certain add-ins. Other contextual ribbon tabs appear when you select a certain type of object, such as a chart, image, or pivot table.

Each tab is broken into rectangular groups of related commands. The group shown in Figure 3.1 is the Clipboard group on the Home tab.

The mantra of the ribbon is to use pictures and words. Many people have seen the little whisk broom icon in previous versions of Excel but never knew what it did. In Excel 2013, the same icon has the words “Format Painter” next to it. When you hover, the tooltip offers paragraphs explaining what the tool does. The tooltip also offers a little-known trick: You can double-click the Format Painter to copy the formatting to many places.





**Figure 3.1**  
Detail of the Clipboard group of the Home tab of the ribbon.

## Using Fly-out Menus and Galleries

The ribbon fits more commands in a smaller space by using new types of controls that were not available with the Excel 2003 menu bar and toolbars.

In Figure 3.1, the Cut icon is a pure command. You click the icon and Excel cuts the selection onto the Clipboard. In contrast, the Paste and Copy icons are a new type of element comprised of a button and a drop-down. If you click the top half of Paste or the left side of Copy, you invoke the command. But if you click the arrow in either icon, you get a fly-out menu with more choices.

Fly-out menus allow many choices from a single icon. For example, the Conditional Formatting icon on the Home tab takes up a 76×76 pixel area on the ribbon. Clicking Conditional Formatting leads to five new fly-out menus and three commands. In all, the fly-out menus lead to a total of 64 distinct commands, all driven from a single 76×76-pixel icon (see Figure 3.2).

Another new element in the ribbon is the gallery control. Galleries are used when there are dozens of options from which to choose. The gallery shows you a visual thumbnail of each choice. A gallery starts out showing a row or two of choices in the ribbon. The right side of the gallery offers icons for up, down, and open. If you click up or down, you scroll one row at a time through the choices (see Figure 3.3).

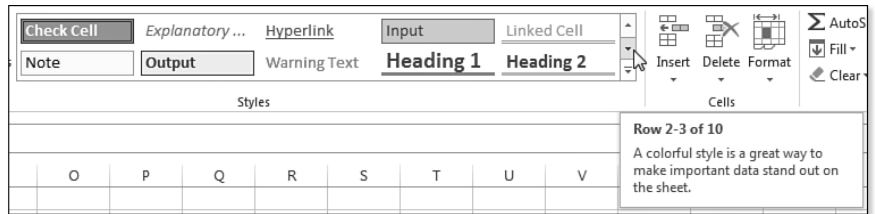
If you click the open control at the bottom-right side of the gallery, the gallery opens to reveal all choices at once (see Figure 3.4).

**Figure 3.2**

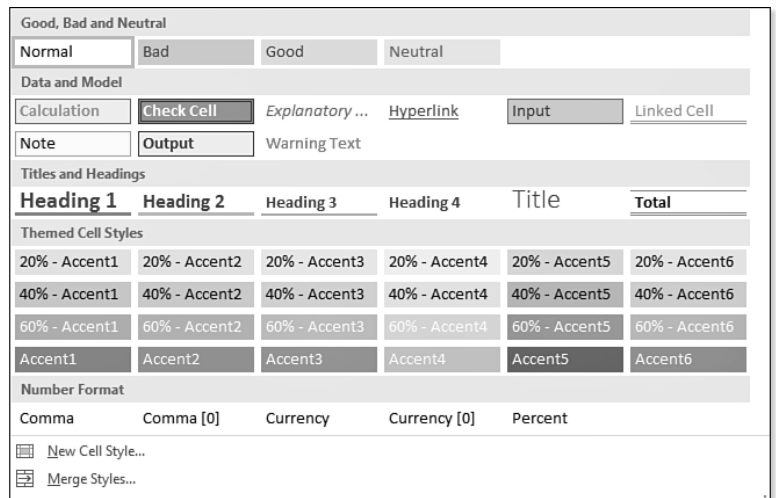
Fly-out menus offer dozens of choices from a single icon.

**Figure 3.3**

Use the up and down arrows on the right side of the gallery to move one row at a time through the choices.

**Figure 3.4**

If you open the gallery control, you can see all of the choices at one time.



## Rolling Through the Ribbon Tabs

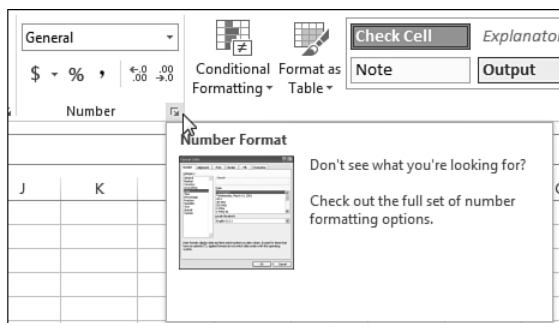
With Excel as the active application, move the mouse anywhere over the ribbon and roll the scroll wheel on top of the mouse. Excel quickly flips from ribbon tab to ribbon tab. Scroll away from you to roll toward the Home tab on the left. Scroll toward you to move to the right.

## Revealing More Commands Using Dialog Launchers, Task Panes, and “More” Commands

The ribbon holds perhaps 20% of the available commands. The set of commands and options available in the ribbon will be enough 80% of the time, but you will sometimes have to go beyond the commands in the ribbon. You can do this with dialog launchers, “More” commands, and the task pane.

A *dialog launcher* is a special symbol in the lower-right corner of many ribbon groups. Click the dialog launcher to open a related dialog with many more choices than those offered in the ribbon.

Figure 3.5 shows details of the Number group of the Home tab. In the lower-right corner is the dialog launcher. It looks like the top-left corner of a dialog, with an arrow pointing downward and to the right.



**Figure 3.5**  
The dialog launcher takes you to additional options.

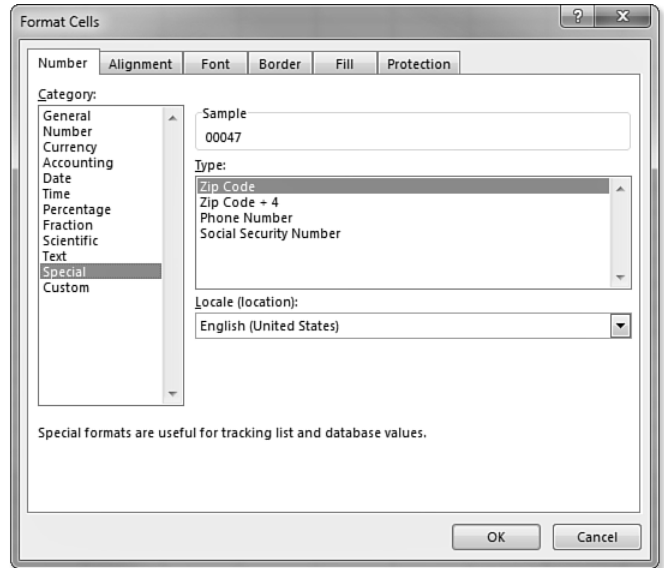
When you click the dialog launcher, you go to a dialog box that often offers many more choices than those available in the ribbon. In Figure 3.6, you see the Number tab of the Format Cells dialog.

Many menus in the ribbon end with an entry for “More *blank*...” or “*Blank* Options...”. You will see menu options for More Rules..., Effects Options..., and so on. Look for these menu items as the last entry in many menus. Clicking a More item takes you to a dialog or task pane with far more choices than those available in the ribbon.

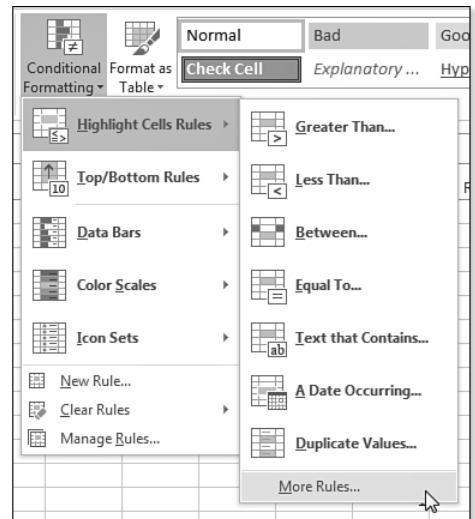
Figure 3.7 shows the More Rules menu item, which leads to the New Formatting Rule dialog.

**Figure 3.6**

After clicking the dialog launcher, you get access to far more choices.

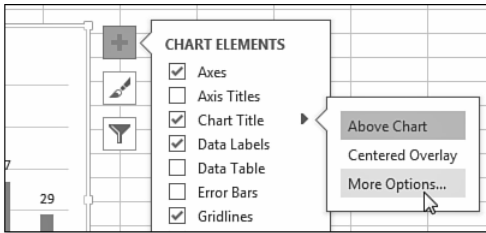
**Figure 3.7**

Choosing More Rules leads to a dialog with more choices.



Charts in Excel 2013 show a plus icon to the right of the selected chart. This icon leads to fly-out menus that eventually lead to a “More...” menu item (see Figure 3.8). When you select More... from a chart, you go to a redesigned task pane. Task panes were popular in Excel 2003. They were nearly

banished in Excel 2007 due to the edict that all commands must be at the top. However, they are back with a vengeance in Excel 2013.



**Figure 3.8**

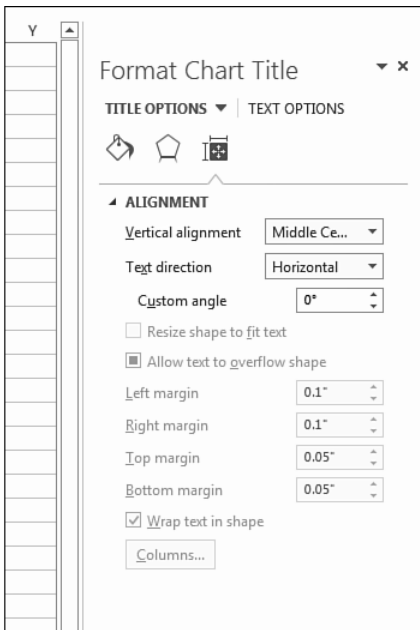
Choosing More... from the chart's plus icon leads to a task pane.

Task panes typically appear on the right side of the Excel window, although you can undock them and have them float above the worksheet. After a task pane appears, it typically stays visible until you close it by clicking the X button. Figure 3.9 shows a task pane for formatting the chart title. If you click a data label in the chart, the task pane changes to show options for chart labels. If you click a picture, SmartArt, or WordArt, the task pane changes to show options for the newly selected object.



### Caution

If you click away from an object and choose only a cell, the task pane stays visible with the choices for the last selected object. However, all of the choices are grayed out. This seems like a bug to me.



**Figure 3.9**

The Format dialog from Excel 2010 is now a task pane.

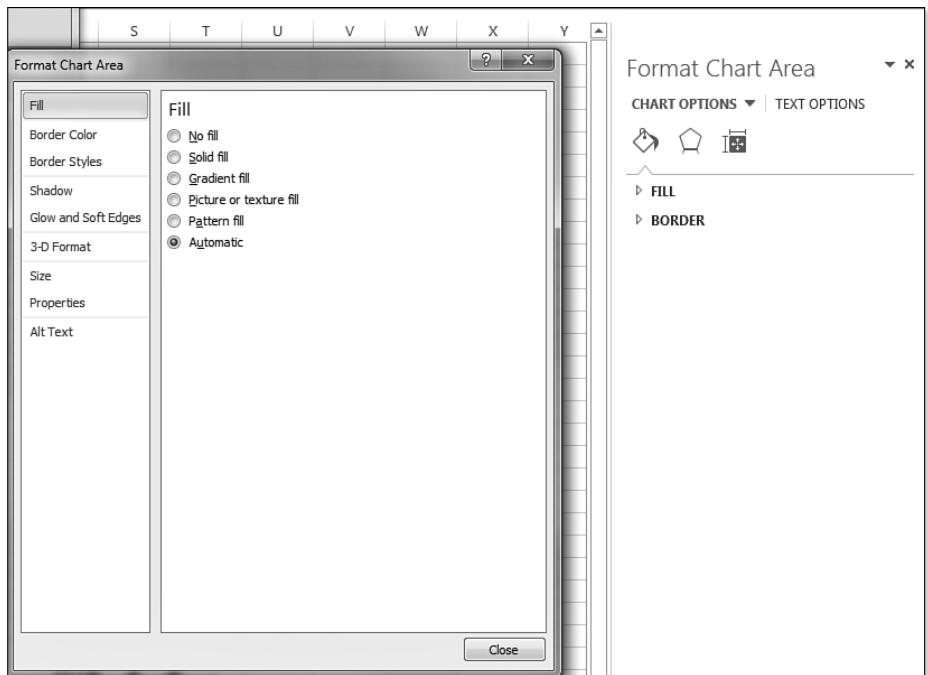
 **Tip**

To display the task pane for an object, press Ctrl+1. Although it is easy to display the task pane for a chart, it is not obvious how to display the task pane for an image or WordArt. However, as noted earlier, you can accidentally find your way to the Picture task pane by clicking a picture while the task pane is active. When you want to display a task pane but cannot figure out how to do it, try F1.

For charts, the task pane in Excel 2013 replaces the Format dialog from Excel 2010. It seems more confusing to use the task pane.

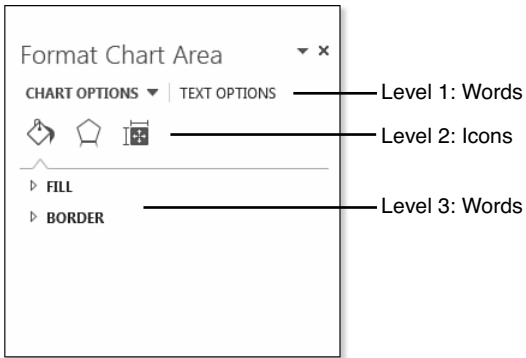
In Excel 2010, the Format dialog had a list of categories down the left side. These categories were arranged into groups with a horizontal separator between categories. For example, in Figure 3.10, the first group of categories is Fill, Border Color, and Border Styles. In a glance, you could see other categories such as Glow and Soft Edges, Properties, and Alt Text. I appreciated seeing a long list of words to choose from.

**Figure 3.10**  
The Format dialog from Excel 2010 offered easy-to-understand words in the left navigation pane.



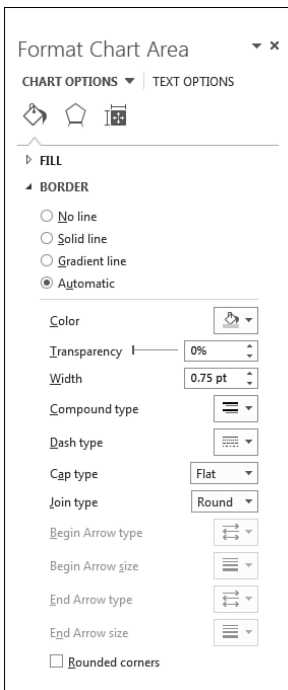
The Excel 2013 task pane offers a hierarchy of words, icons, and more words. In Figure 3.11, the equivalent task pane starts with two sets of words at the top: Chart Options and Text Options. It won't be obvious in the figure, but Chart Options is shown in green and is the currently selected

choice. When Chart Options is selected, you have three icons: a paint bucket, a pentagon with a reflection, and a square that someone appears to be measuring. Again, it is not obvious from the figure, but the paint bucket is in green and selected. When the paint bucket is selected, two word choices appear in the task pane: Fill and Border. Click the triangle next to either word to show all of the choices for that word. Figure 3.12 shows the Border category after expanding.



**Figure 3.11**

The task pane offers a three-level menu of words, icons, and then more words.



**Figure 3.12**

After choosing Chart Options, the paint bucket, and then Border, you get these options.

The task pane is confusing because you can't see all of the categories at one time. You will find yourself trying to guess which Level 1 word to choose and then clicking through each of the Level 2 icons trying to find the Level 3 category you want.

Figure 3.13 shows the name of each Level 2 icon and the types of categories you might find there.

**Figure 3.13**

Icons you might find in various task panes.

Icon	Icon Name	Sample Categories
	Fill & Line	Fill, Border
	Effects	Shadow, Glow, Soft Edges, 3-D Format
	Size and Properties	Size, Properties, Alt Text
	Series Options	Chart-specific categories
	Picture Options	Picture-specific categories
	Text Fill & Outline	Text Fill, Text Outline
	Text Effects	Shadow, Reflection, Glow, Soft Edges...
	Textbox	Text Box

## Resizing Excel Changes the Ribbon

The ribbon appears different as the size of the Excel application window changes. You should be aware of this when you are coaching a co-worker over the phone. You might be looking at your screen and telling him to “look for the big Insert drop-down to the right of the orange word *Calculation*.” Although this makes perfect sense on your widescreen monitor, it might not make sense on his monitor. Figure 3.14 shows some detail of the Home tab on a widescreen monitor. The Cell Styles gallery shows 10 thumbnails, and Insert, Delete, and Format appear side-by-side.

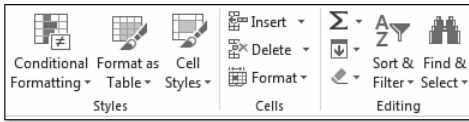
**Figure 3.14**

On a wide-screen monitor, you see 10 choices in the Cell Styles gallery.



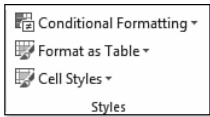
Figure 3.15 shows the typical view on a laptop. The Cell Styles gallery is collapsed to a single drop-down. The Insert, Delete, and Format icons are now arranged vertically.



**Figure 3.15**

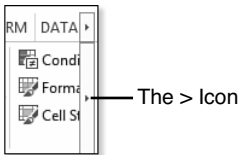
On a normal monitor, the cell styles gallery is collapsed.

As you resize the Excel screen, more items collapse. In Figure 3.16, the three icons for Insert, Delete, and Format are collapsed into a single drop-down called Cells.

**Figure 3.16**

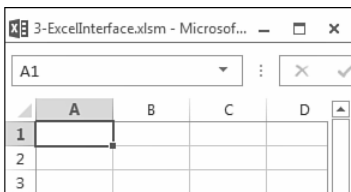
At small sizes, icons collapse into drop-downs.

New in Excel 2013, you can even coax a new right-arrow icon to scroll the ribbon right (see Figure 3.17).

**Figure 3.17**

Click the right-arrow icon to scroll the ribbon to the right.

Eventually, the Excel ribbon gets too small, and Excel hides the ribbon completely (see Figure 3.18).

**Figure 3.18**

When the Excel windows gets too narrow, the ribbon is hidden.

## Activating the Developer Tab

If you regularly record or write macros, you might be looking for the VBA tools in the ribbon. They are all located on the Developer tab, which is hidden by default. However, it is easy to make the Developer tab visible. Follow these steps:

1. Right-click the ribbon and choose *Customize the Ribbon*. Excel displays the *Customize Ribbon* category of the *Excel Options* dialog.
2. A long list box of ribbon tabs is shown on the right side of the screen. Every one of them is checked except for *Developer*. Check the box next to *Developer*.
3. Click *OK*. The *Developer* tab displays.

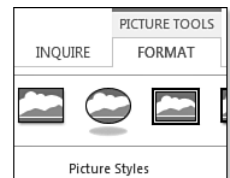
## Activating Contextual Ribbon Tabs

The ribbon tabs you see all the time are called the *main tabs*. Another 18 tabs come and go, depending on what is selected in Excel.

For example, Excel offers a whole series of commands for dealing with photographs that you insert into your worksheet. However, 90% of people never bother to dress up their worksheets with clipart or pictures, so there's really no reason to show all the commands for working with photographs on the ribbon. However, after you insert a picture and the picture is selected, the *Picture Tools, Format* tab appears in the ribbon (see Figure 3.19).

**Figure 3.19**

Anywhere from one to three contextual ribbon tabs display when you activate certain objects.



The 18 contextual tabs are identified in Figure 3.20.

Here is the frustrating thing: As soon as you click outside of the object (that is, the picture), it is no longer selected and the *Picture Tools Format* tab disappears.

If you need to format an object and you cannot find the icons for formatting it, try clicking the object to see if the contextual tabs appear.

Two other tabs occasionally appear, although Excel classifies them as main tabs instead of contextual tabs. If you add the *Print Preview Full Screen* icon to the interface, you arrive at a *Print Preview* tab. Also, from the *Picture Tools Design* tab, you can click *Remove Background* to end up at the *Background Removal* tab.

Contextual Tab Group	Analyze	Design	Format	Options	Pens	Displays When...
Chart Tools		●	●			Select a chart
Drawing Tools		●				Select a shape
Equation Tools		●				Insert, Equation
Header & Footer Tools		●				Page Layout View, Click in Header
Ink Tools					●	Insert, Ink
Picture Tools		●				Select a picture
PivotChart Tools	●	●	●			Select a pivot chart
PivotTable Tools	●	●				Cellpointer inside pivot table
Slicer Tools				●		Select a slicer
SmartArt Tools		●	●			Editing SmartArt
Sparkline Tools		●				Cellpointer in cell with sparkline
Table Tools		●				Cellpointer in a table
Timeline Tools				●		Select a timeline

Figure 3.20

This table shows which tabs appear and when.

## Finding Lost Commands on the Ribbon

Often, the command you need is front and center on the Home tab and everything is fine. However, there are times when you simply cannot find an obscure command that you know used to be in Excel 2003. Here is my strategy for finding those commands:

1. Right-click the ribbon and select Customize Quick Access Toolbar. Excel displays the Quick Access Toolbar category of the Excel Options dialog.
2. Open the top-left drop-down and change Popular Commands to All Commands. You now have an alphabetical list of over 2,000 commands.
3. Scroll through this alphabetical list until you find the command you are trying to locate in the ribbon.
4. Hover over the command in the left list box. A tooltip appears, showing you where you can find the command. In Figure 3.21, the Justify command is located on the Home tab, in the Editing group, under the Fill drop-down.

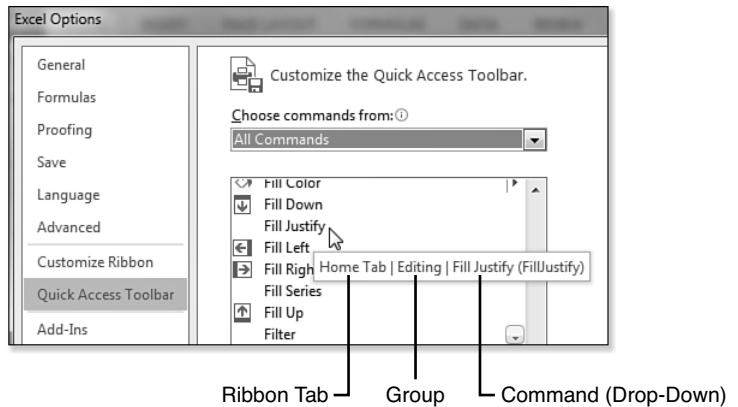
Microsoft offers a free interactive ribbon guide that can help you locate an Excel 2003 menu command on the ribbon. Type **Interactive Ribbon Guide** in any search engine to find the latest incarnation of the ribbon guide. I've seen the guide and tried it out once, but given that the tooltips are built into the Customize Quick Access Toolbar panel of Excel Options, it seems pointless to go out to the Web when you can find the answer quickly using the steps just outlined.

### Note

Sometimes, a command truly is not in the ribbon. If you hover over a command in the Customize dialog and the tooltip indicates that this is a command that is not in the ribbon, you have to use Customize to add this command to the Quick Access Toolbar or to the ribbon.

**Figure 3.21**

This tooltip shows you where to find a command.



## Shrinking the Ribbon

The ribbon does take up four vertical rows of space. This won't be an issue on a big monitor, but it could be an issue on a tiny netbook.

Starting in Excel 2013, to shrink the ribbon, you can right-click the ribbon and choose Collapse the Ribbon. The ribbon collapses to show only the ribbon tabs. When you click a tab, the ribbon temporarily expands. To close the ribbon, choose a command or press Esc.

To permanently bring the ribbon back to full size, right-click a ribbon tab and uncheck Collapse the Ribbon.

Note that you can also minimize the ribbon using the carat (^) icon at the bottom right of the expanded ribbon. To expand the ribbon, click any tab and then click the pushpin icon in the lower-right corner of the ribbon.



### Tip

Starting in Excel 2013, the ribbon often stays open after certain commands. For example, I frequently click the Increase Decimal icon three times in a row. When the ribbon is minimized, you can click Home and then click Increase Decimal three times without having the ribbon close.

## Using the Quick Access Toolbar

A problem with the ribbon is that only one-seventh of the commands are visible at any given time. You will find yourself moving from one tab to another. The alternative is to use the Quick Access Toolbar (QAT) to store your favorite commands.

The QAT starts out as a tiny toolbar with Save, Undo, and Redo. It is initially located above the File tab in the ribbon.

If you start using the QAT frequently, you can right-click the toolbar and choose Show Quick Access Toolbar Below the Ribbon.

## Adding Icons to the QAT

The drop-down at the right side of the QAT, shown on the right side in Figure 3.22, offers 12 popular commands you might choose to add to the Quick Access Toolbar. Choose a command from this list to add it to the QAT.

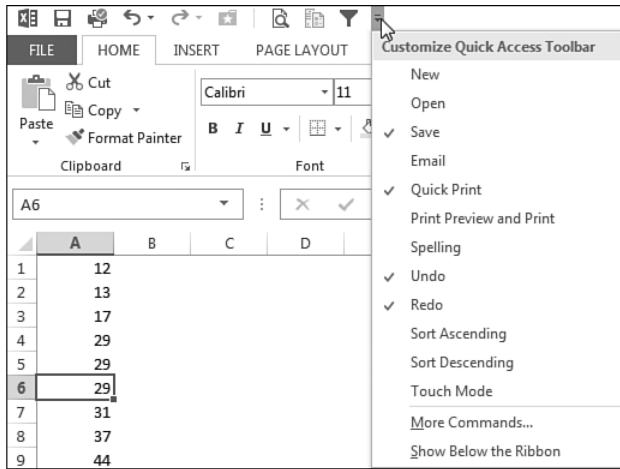


Figure 3.22

Use the drop-down at the right side of the QAT to add 12 popular commands.

Note that changes to the QAT made in Excel 2010 also appear in Excel 2013, and vice versa. The Open Recent File icon is no longer available in Excel 2013, but if you add it to the QAT in Excel 2010, it appears in Excel 2013. Unfortunately, the icon simply goes to the File, Open pane.

When you find a command in the ribbon you are likely to use often, you can easily add the command to the QAT. To do so, right-click any command in the ribbon and select Add to Quick Access Toolbar. Items added to the Quick Access Toolbar using the right-click method are added to the right side of the QAT.

The right-click method works for many commands, but not with individual items within commands. For example, you can put the Font Size drop-down on the QAT, but you cannot specifically put size 16 font in the QAT.

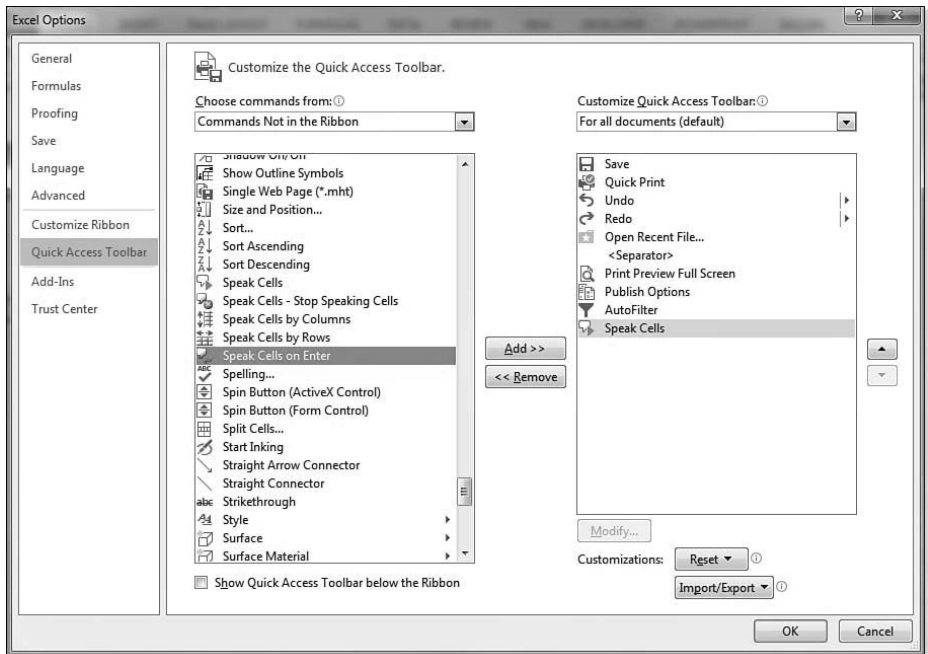
## Removing Commands from the QAT

You can remove an icon from the QAT by right-clicking the icon and selecting Remove from Quick Access Toolbar.

## Customizing the QAT

You can make minor changes to the QAT by using the context menus, but you can have far more control over the QAT if you use the Customize command. Right-click the QAT and select Customize Quick Access Toolbar to display the Quick Access Toolbar section of the Excel Options dialog, as shown in Figure 3.23.

**Figure 3.23**  
You can customize the QAT using the Excel Options dialog.



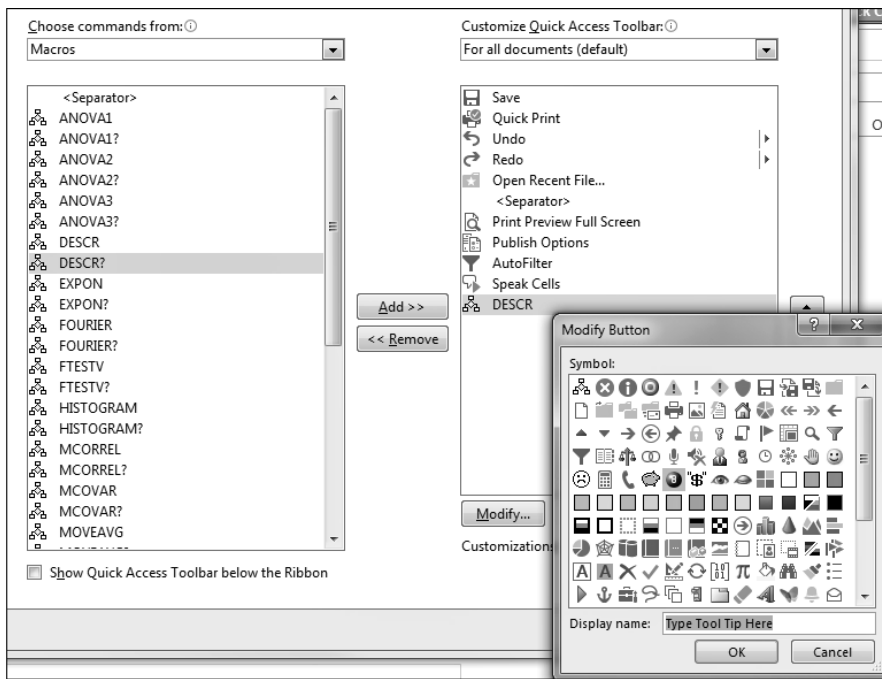
The Excel Options dialog offers many features for customizing the Quick Access Toolbar:

- You can choose to customize the QAT for all documents on your computer or just for the current workbook by using the top-right drop-down menu.
- You can add separators between icons to group the icons logically. A separator icon is available at the top of the left menu. Click the separator icon in the left list box and then click the Add>> icon in the center of the screen.
- You can resequence the order of the icons on the toolbar. Select an icon in the right list box and then click the up/down arrow icons on the right side of the dialog.
- You can access 2,000+ commands, including the commands from every tab and commands that are not available in the ribbon. Although the dialog starts with just 53 popular commands in the left list box, use the left drop-down to choose All Command or Commands Not in the Ribbon. When you find a command in the left list box, select the command and then click Add>> in the center of the dialog to add that command to the QAT.
- You can reset the QAT to its original default state using the Reset button in the lower right.
- You can export your custom QAT icons from your computer and import on another computer.
- You can move the QAT to appear above or below the ribbon using the check box in the lower right.

## Assigning VBA Macros to Quick Access Toolbar Buttons

Typically, a VBA macro is assigned to a shortcut key. In legacy versions of Excel, it was easy to customize the menu system to add commands to invoke macros. Excel 2013 offers a weak interface for adding custom macros to the QAT. In the Excel Options dialog is a drop-down called Macros. If you select this group, you see all public macros in all open workbooks. You can select a macro and click Add to add that macro to the QAT.

Initially, every macro added to the Quick Access Toolbar gets an identical flowchart icon. However, you can select an icon in the Customize Quick Access Toolbar list box and click the Modify button. The Modify Button dialog that appears enables you to choose from 55 available icons for a macro as shown in Figure 3.24. Most of these buttons are similar to icons that are already popular. For example, the Print icon is fairly well known and has a meaning. In addition to choosing from the 55 icons, you can type any text for a display name. The display name does not appear next to the button. However, if you hover your mouse over the icon on the QAT, you can see the display name in a tooltip.



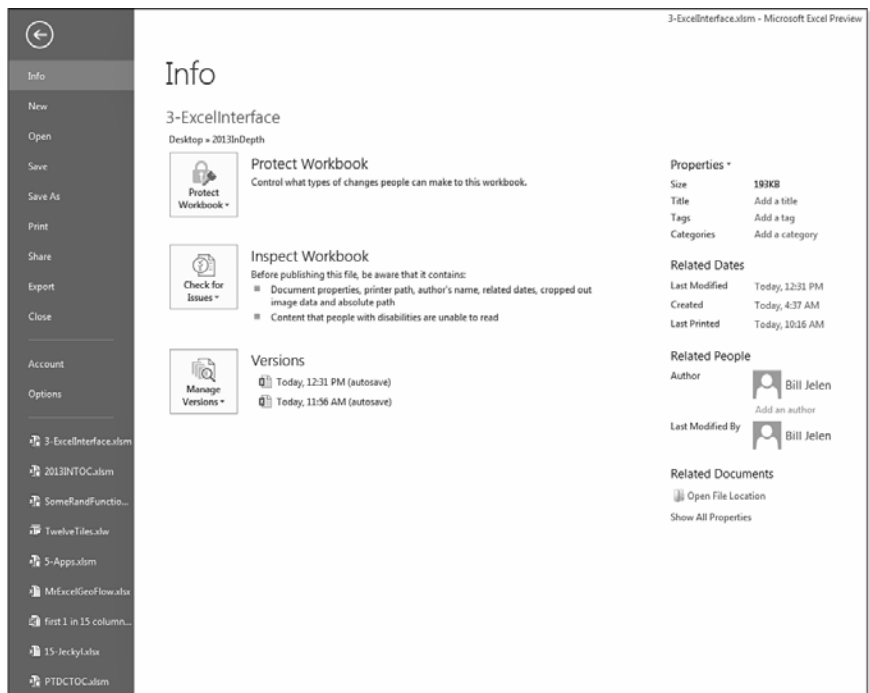
**Figure 3.24**  
For macros, you can customize the button image and add a display name on the QAT.

## Using the Full-Screen File Menu

Open the File menu in Excel 2013 and you might be shocked to see that it takes up 100% of your screen real estate. This panel is called the Backstage view and was introduced in Excel 2010. Here is the logic: When you are working on most ribbon tabs, you are working in your document. When you are about to change the font or something like that, you want to see the results of the change for the “in” commands. However, the Excel team feels that after you move to the File menu, you are done working in your document and you are about to do something with the whole document, such as send the workbook, print the workbook, post the workbook to Twitter, and so on. Microsoft calls these the “out” commands. The theory is that you don’t need to see the worksheet for the “out” commands, so Microsoft fills the entire screen with the File menu.

To open the Backstage view, click the File menu. The Backstage view fills the screen, as shown in Figure 3.25. Backstage is split into three sections: the narrow left navigation panel and two wider sections that provide information.

**Figure 3.25**  
The Backstage view  
fills the entire screen.



The left navigation panel includes these commands:

- **Info**—Provides information about the current workbook. This is discussed later in the “Getting Information About the Current Workbook” section.
- **New**—Used to create a new workbook or start from a template. Discussed in Chapter 1.



- **Open**—Used to access a file stored on your computer or the SkyDrive. Discussed in Chapter 1.
- **Save**—Saves the file in the same folder as it was previously stored. Note that Save is actually a command instead of a panel in Backstage.
- **Save As**—Stores the file on your computer or in the SkyDrive. Discussed in Chapter 1.
- **Print**—Used to choose print settings and print. Includes Print Preview. Discussed in Chapter 36, “Printing.”
- **Share**—Used to post your workbook to Facebook, Twitter, or LinkedIn or to send it via email. Discussed in Chapter 36.
- **Export**—Used to create a PDF, control web publishing options, or change the file type. Discussed in Chapter 37, “Excel Web App and Other Ways to Share Workbooks.”
- **Close**—Closes the current workbook. Like Save, this entry is a pure command.
- **Account**—Connects your copy of Excel to various social networking accounts. Discussed in Chapter 1.
- **Options**—Contains pages of Excel settings. See Chapter 4, “Customizing Excel,” for details.
- **Recent File List**—This list appears only if you’ve changed a default setting in Excel Options. Visit File, Options, Advanced Display and choose Quickly Access This Number of Recent Workbooks.

## Pressing the Esc Key to Close Backstage View

To get out of Backstage and return to your worksheet, you can either press the Esc key or click the back arrow in the top-left corner of Backstage.

## Recovering Unsaved Workbooks

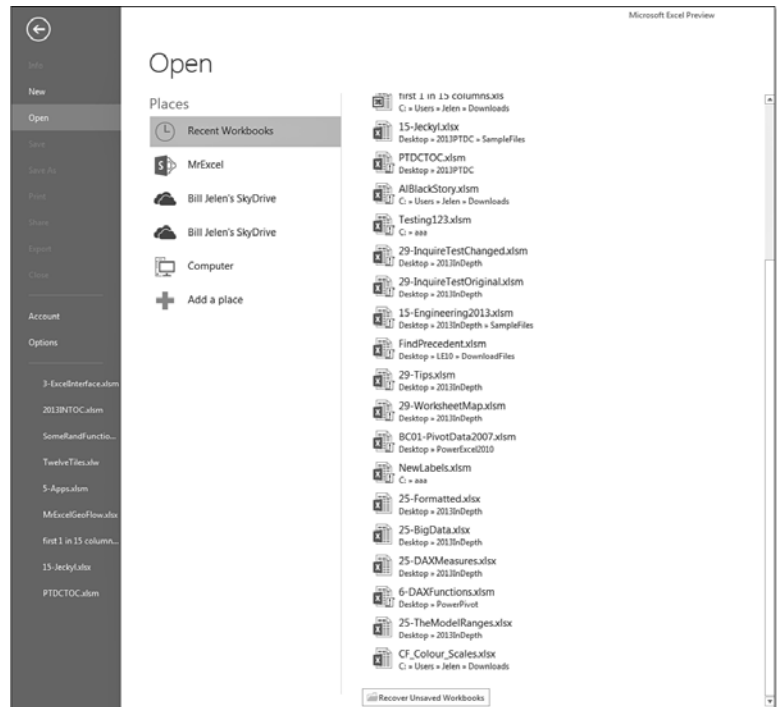
As in previous versions of Excel, the AutoSave feature can create copies of your workbook every  $n$  minutes. If an AutoSave version of your workbook exists, you can now access that file using the Recover Unsaved Workbooks icon at the bottom of the Recent Workbooks list. Note that you might have to scroll down to the bottom of the Recent Workbooks list to find the Recover Unsaved Workbooks icon (see Figure 3.26).

Do you ever get to the end of your workday, use Alt+F+X to close Excel, and then are greeted with a barrage of Do You Want to Save questions? I frequently forget that the  $n$ th workbook that I have open is not saved. I think that I had opened these workbooks to get information, that I had not made any significant changes, and will either start clicking Don’t Save repeatedly or will hold down Shift and click Don’t Save, which is equivalent to clicking the nonexistent Don’t Save to All selection.

As I see that important file get closed, I realize that I just lost all my changes to that file and cringe. This is a common problem that happens to everyone sooner or later. Provided that the file was open long enough to experience an AutoSave, you might be able to get the file back.

**Figure 3.26**

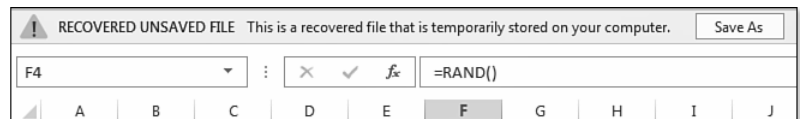
If you set Excel to display more recent workbooks than will fit on the screen, you have to scroll down to find the Recover Unsaved Workbooks icon.



Go to Recover Unsaved Workbooks and find the date and time of the last AutoSave. It might be within 5 minutes of the last time you edited a cell in that document. When you find the file and open it, the Information Bar reports that this is a “recovered unsaved file” (see Figure 3.27). Click Save As to give the file a name.

**Figure 3.27**

Excel recovers the file. You need to use Save As to make the recovery permanent.



## Clearing the Recent Workbooks List

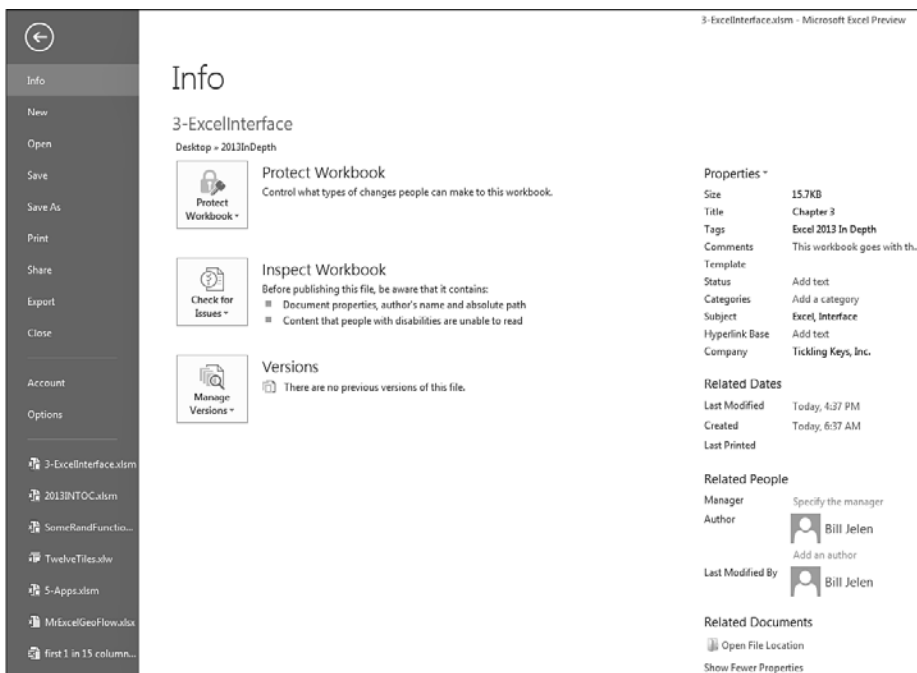
If you need to clear out the Recent Workbooks list, you should visit File, Options, Advanced, Display. Set the Show This Number of Recent Documents list to zero. This is unlike the behavior in Excel 2003. In Excel 2003, to clear out the ninth item from the list, you had to reset only the number of files back to eight and Excel would forget about the ninth. In Excel 2013, if you switch from 50

files to one file, then back to 50 files, all 50 files will come back. The only way to clear the Recent Workbooks list is to set the value back to zero. You can then reset it to 50 and Excel will start collecting history again.

## Getting Information About the Current Workbook

When a workbook is open and you go to the File menu, you start in the Info gallery for that workbook. As shown in Figure 3.28, the Info pane lists all sorts of information about the current workbook:

- The workbook path is shown at the top of the center panel.
- You can see the file size.
- You can see when the document was last modified and who modified it.
- If any special states exist, these will be reported at the top of the middle pane. Special states might include the following:
  - Macros not enabled
  - Links not updated
  - Checked out from SharePoint



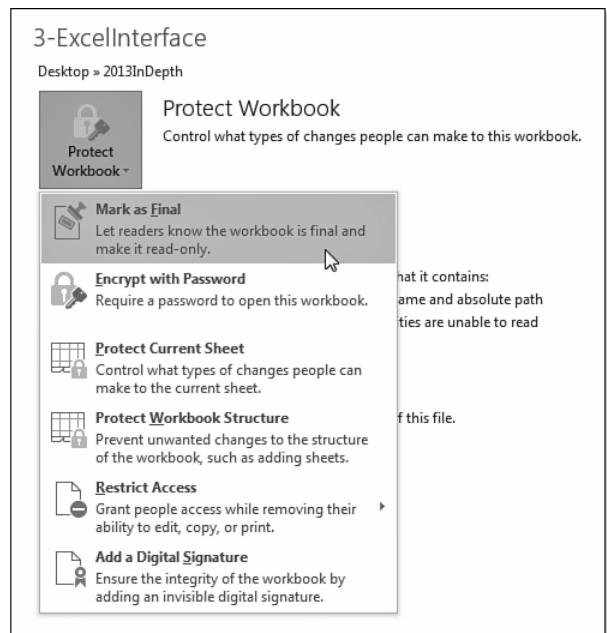
**Figure 3.28**  
The Info gallery includes all of the properties of the file.

- You can see if the file has been AutoSaved and recover those AutoSaved versions.
- You can mark the document as final, which will cause others opening the file to initially have a read-only version of the file.
- You can edit links to other documents.
- You can add tags or categories to the file.
- Using the Check for Issues drop-down, you can run a compatibility checker to see if the workbook is compatible with legacy versions of Excel. You can run an accessibility checker to see if any parts of the document will be difficult for people with disabilities. You can run a Document Inspector to see if any private information is hidden in the file.

## Marking a Workbook as Final to Prevent Editing

Open the Protect Workbook icon in the Info gallery to access a setting called Mark as Final (see Figure 3.29). This marks the workbook as read-only. It prevents someone else from making changes to your final workbook.

**Figure 3.29**  
Mark a document as read-only.



Of course, if the other person visits the Info gallery, that person can reenable editing. This feature is simply designed to warn the other people that you've marked it as final and no further changes should happen.

If you can convince everyone in your workgroup to sign up for a Windows Live ID, you can use the Restrict Permission by People setting. This layer of security enables you to define who can read, edit, and/or print the document.

## Finding Hidden Content Using the Document Inspector

The Document Inspector can find a lot of hidden content, but it is not perfect. Still, finding 95% of the types of hidden content can protect you a lot of the time.

To run the Document Inspector, select File, Info, Check for Issues, Inspect Document, and click OK. The results of the Document Inspector will show that the document has personal information stored in the file properties (author's name) and perhaps a hidden worksheet.



### Caution

The Document Inspector is not foolproof. Do you frequently hide settings by changing the font color to white or by using the ;;; custom number format? This won't be found by the Document Inspector. The Document Inspector also won't note that you scrolled over outside the print area and jotted your after-work grocery list in column X.

## Using Other Excel Interface Improvements

This is a recap of interface changes introduced in Excel 2007 through Excel 2013:

- **Slot-machining (2013)**—When you change an input cell, all of the calculated cells in view of the window animate as they change. This looks a lot like the spinning wheel in a slot machine.
- **Touch mode (2013)**—If you are using Excel on a touch screen or a tablet, you can put Excel in touch mode. A tiny bit of space appears around each icon, which hopefully gives you more of a chance to touch the correct icon.
- **Less chrome (2013)**—Microsoft really believes a lot of people will be using Excel on touch devices once Windows 8 begins to catch on. They tried to make the touch zones bigger by eliminating any decorations in the interface. Microsoft called these decorations the “chrome” in the interface. In addition to losing the chrome, you also lose some tiny icons that would be hard to use in touch mode. For example, the tiny icons in the edge of the scrollbars used to split a window are gone in Excel 2013. The set of four controls used to move between worksheets is reduced to two icons.
- **Paste options (2010)**—An expanded Paste Options menu introduces many popular shortcut key sequences to Excel.

- **Live preview (2007)**—You can preview formatting changes before you actually select the change.
- **Mini toolbar (2007)**—The mini toolbar appears whenever you select text. Although this might happen rarely when you edit cells in Excel, it does happen frequently when you work with charts, text boxes, and so on. The mini toolbar offers quick access to font, size, bold, italic, alignment, color, indenting, and bullets.
- **Formula bar (2007)**—The formula bar includes the capability to expand or contract itself at your whim instead of the whim of Excel.
- **Zoom slider (2007)**—The Zoom slider enables you to quickly change from seeing one page to hundreds of pages at a time.
- **Status bar (2007)**—The status bar appears at the bottom of your worksheet window. Although you probably never noticed it, the status bar in legacy versions of Excel reported the total of any selected cells. This information is now improved and expanded, offering multiple statistics at one time.
- **View control (2007)**—The View control gives you one-click access to Page Break Preview mode, Normal mode, and the Page Layout view introduced in Excel 2007.
- **New Sheet icon (2007/2013)**—The New Sheet icon enables you to add new worksheets to a workbook with a single click. In Excel 2013, the new sheet is added to the right of the active sheet.

## Adding White Space Around Icons Using Touch Mode

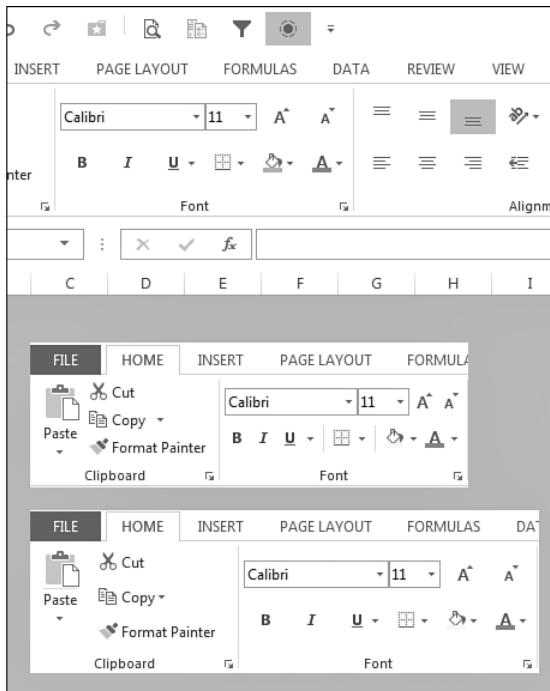
If you are trying to use Excel on a tablet or a touch screen, you want to try touch mode. Follow these steps:

1. Go to the right side of the QAT and open the drop-down that appears there.
2. The twelfth command is called Touch Mode. The icon is a blue dot with a ring of white space and then dashed lines around the white space. Choose this command to add it to the QAT.
3. Click the icon on the QAT. You see white space added around all of the icons.

Figure 3.30 compares the first two groups of the Home tab in regular and touch mode.

### Note

As a public service to you, the reader, I went out and bought a Planar touch screen so I could try the touch gestures in Excel. Other than having some fun scribbling using the Ink tools, there really isn't any good reason to have a touch screen in Excel. However, one hot August day, I was writing this book and a house fly zoomed past me and landed on the touch screen. It landed with enough force to select cell C33, which I thought was pretty funny. Had it actually typed a VLOOKUP formula, it would definitely be the most proficient Excel house fly ever.

**Figure 3.30**

Touch mode adds white space around each icon, thus making the touch points larger.

## Previewing Paste Using the Paste Options Gallery

Here's a quick survey: Have you ever opened a Notepad window, pasted your data to Notepad, copied from Notepad, and then pasted to your application? This is a great but tedious way to remove formatting from a selection. If you have discovered this painful workaround, you are going to love this feature that was added starting in Excel 2010: the Paste Options gallery.

Here is another survey: Suppose you have to copy a column of formulas and paste them as values. Do your fingers know how to do Ctrl+C, Alt+E+S+V+Enter? If so, you are going to love the new Ctrl+V, Ctrl, V keystrokes available in the Paste Options gallery. If you've ever done Ctrl+C, Alt+E+S+V+Enter, Alt+E+S+T+Enter, you will love the new Context+E keyboard shortcut.

As someone who uses both of those old keyboard shortcuts frequently, I love the Paste Options gallery. You can keep slicers, sparklines, even PowerPivot; the Paste Options gallery is going to be the one feature that makes a difference in my life every single hour of every single workday.

Microsoft discovered that Paste was the number-one command that was immediately followed by Undo. To improve the Paste command, Microsoft added the Paste Options gallery in three places in Excel 2010. These galleries support Live Preview and keyboard shortcuts. They should make mouse-centric as well as keyboard-centric people very happy.

You encounter the gallery when you have something on the Clipboard and one of these three events happens:

- You right-click a cell to access the context menu.
- You open the Paste drop-down from the Home tab.
- After you perform a typical Paste operation, the old Paste Repair menu icon appears with the tip that you can press Ctrl to access the gallery.

## Accessing the Gallery After Performing a Paste Operation

Suppose that you copy a range with Ctrl+C and then paste with Ctrl+V. The icon for the old Paste Repair appears next to the paste, but this time it notes that you can open the menu by pressing Ctrl. When you press Ctrl, you are presented with a gallery of paste options.

The options available in the gallery are as follows:

- **Paste**—This is the standard paste that you would get using Ctrl+V.
- **Formulas**—Pastes only formulas, with no formatting. This is common when you are copying down from the first row of a table that has an outline border. To prevent the top border from copying, you can paste formulas. You then find that you have to reapply the number formatting.
- **Formulas & Number Formatting**—Copies formulas as previous formulas, along with the number formatting.
- **Keep Source Formatting**—This is particularly useful when copying from another application such as a web page. The formatting from the other application is pasted along with the values.
- **No Borders**—Pastes everything but the borders.
- **Column Widths**—Includes the column widths from the copied area.
- **Transpose**—Turns the data on its side. A 12-row-by-1-column copied range would paste as 1 row by 12 columns.
- **Values**—Converts formulas to values.
- **Values and Number Formatting**—Converts the formulas to values and includes the number formats from the copied data.
- **Values & Source Formatting**—Converts the formulas to values and includes all formatting such as cell styles, font color, number formatting, and borders.
- **Formats**—Does not bring any values, only the cell formatting. Similar to using the Format Painter but not as annoying.
- **Paste Link**—Creates formulas here that point back to the copied range.
- **Paste as Picture**—Pastes a picture of the original cells in this location.



- **Paste as Linked Picture**—Pastes a live picture of the original cell in this location. This is the elusive Camera tool from Excel 2003.
- **Open Paste Special**—Used to access the old Paste Special dialog. The Paste Special dialog still offers some choices not available in the Paste Options gallery: Comments, Validation, All using Source Theme, Add, Subtract, Multiply, Divide, and Skip Blanks.

## Accessing the Paste Options Gallery from the Right-Click Menu

The Paste Options gallery appears in the right-click context menu and includes Live Preview. The top six options appear directly in the menu. A fly-out menu offers all 14 options.

As you start to hover over the various paste icons, Live Preview takes over. The rest of the context menu disappears so that you can see the worksheet. Hover over Transpose, and you get a preview of what Transpose actually does. Hover over Formatting and you see that the Formatting option copies only the cell formats and not the numbers. If you hover over Paste Special and then move out to the full gallery, all the context menu except the full gallery disappears, and Live Preview continues to work.

### Why Keyboard-Centric People Like the Context Gallery

I am not a right-click person. I always use keyboard shortcuts instead of the mouse. I can press Alt+E+S+V+Enter before most people can even move their hand over to the mouse.

Take a close look at your keyboard. To the left of the spacebar, between the FN and Alt keys, do you have the Flying Windows key? I've memorized a few of its shortcuts, such as Win+E to open Windows Explorer. Now, look over to the right of the spacebar. What do you have between Alt and Ctrl there? I have a key that I had never used before today. This key looks like the right-click menu and is the Context Menu key. When I press that key in Excel, the right-click menu appears in the worksheet.

Those six icons in the Paste Options gallery in the right-click menu each have a keyboard accelerator:

**P**—Normal Paste

**V**—Paste Values

**F**—Formulas

**T**—Transpose

**R**—Formats

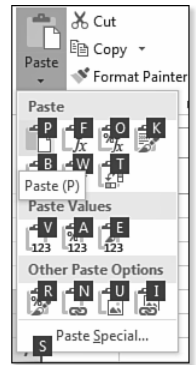
**N**—Paste Link

This means that there is an even faster keyboard method for converting formulas to values. Press Ctrl+C to copy, press the Context Menu key, and then press V to convert to values. You probably have to use two hands: Ctrl+C with the left hand, Context Menu key with the right hand, and V with the left hand. It takes a little practice until this is as fast as Ctrl+C, Ctrl+V, Ctrl, V, but it is worth a shot if you rely on keyboard shortcuts to speed your way through tasks.

## Accessing the Paste Options Gallery from the Paste Drop-Down

The Paste Options gallery also appears when you open the Paste drop-down on the Home tab. Figure 3.31 shows the menu there.

**Figure 3.31**  
The gallery replaces the old Paste drop-down in the Home tab.



## Using the New Sheet Icon to Add Worksheets

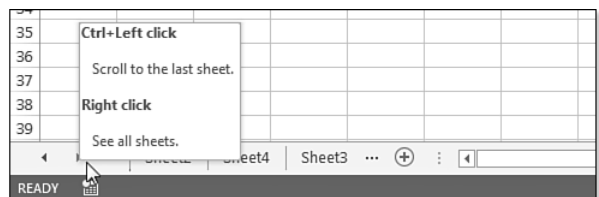
The Insert Worksheet icon looks different in Excel 2013 and behaves differently as well. The icon is a circle with a plus sign that appears to the right of the last sheet tab. It also looks like an aerial view of a Phillips-head machine screw.

When you click this icon, a new worksheet is added to the right of the active sheet. This is better than Excel 2010, where the new worksheet was added as the last worksheet in the workbook and then had to be dragged to the correct position.

## Navigating Through Many Worksheets Using the Controls in the Lower Left

Previous versions of Excel had four controls for moving through the list of worksheet tabs. Due to the new “less chrome” mantra, the worksheet navigation icons are now a left and right arrowhead in the lower left (see Figure 3.32).

**Figure 3.32**  
These worksheet navigation controls have been streamlined in Excel 2013.



The controls are only active when you have more tabs than are visible across the bottom of the Excel window. Click the left or right icon to scroll the tabs one at a time. Ctrl+click either arrow to scroll to the last tab. Note that scrolling the tabs does not change the active sheet. It just brings more tabs into view so you can then click the selected tab.

Just as in prior versions of Excel, you can right-click the worksheet navigation arrows to see a complete list of worksheets. Click any item in the list to move to that worksheet.

In certain circumstances, an ellipsis (...) icon appears in the worksheet navigation area. This icon selects the worksheet to the left of the active sheet.

## Using the Mini Toolbar to Format Selected Text

When you select some text in a chart title or within a cell, the mini toolbar appears above the selected text. If you move away from the mini toolbar, it fades away. However, if you move the mouse toward the mini toolbar, you see several text formatting options.

In your initial use of Excel 2013, you might not see the mini toolbar. Although you often select cells or ranges of cells, it is rare to select only a portion of a cell value in Cell Edit mode. However, as you begin using charts, SmartArt diagrams, and text boxes, you will have the mini toolbar appearing frequently.

To use the mini toolbar, follow these steps:

1. Select some text. If you select text in a cell, you must select a portion of the text in the cell by using Cell Edit mode. In a chart, SmartArt diagram, or text box, you can select any text. As soon as you release the mouse button, the mini toolbar appears above and to the right of the selection.
2. Move the mouse pointer toward the mini toolbar. The mini toolbar stays visible if your mouse is above it. If you move the mouse away from the mini toolbar, it fades away.
3. Make changes in the mini toolbar to affect the text you selected in step 1.
4. When you are done formatting the selected text, you can move the mouse away from the mini toolbar to dismiss it.

## Getting the Mini Toolbar Back

The shyness of the mini toolbar might be the most frustrating part of using it. If you move the mouse away from the mini toolbar, it fades away. If you immediately move back toward the mini toolbar, it comes back. If you use the mouse for some other task, such as scrolling, the mini toolbar permanently goes away. In this case, you might have to reselect the text to get the mini toolbar to come back.

## Disabling the Mini Toolbar

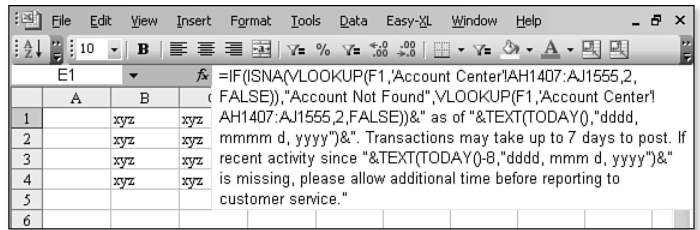
If you are annoyed by the mini toolbar, you can turn it off for all Excel workbooks. To do this, select File, Options. The first choice in Excel Options is a check box for Show Mini Toolbar on Selection. Clear this check box.

## Expanding the Formula Bar

Formulas range from very simple to very complex. As people started writing longer and longer formulas in Excel, an annoying problem began to appear: If the formula for a selected cell was longer than the formula bar, the formula bar would wrap and extend over the worksheet (see Figure 3.33). In many cases, the formula would obscure the first few rows of the worksheet. This was frustrating, especially if the selected cell was in the top few rows of the spreadsheet.

**Figure 3.33**

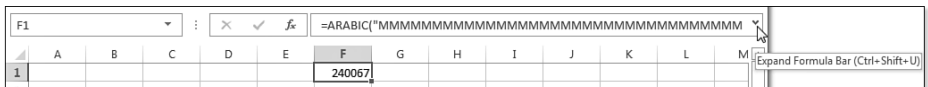
In legacy versions of Excel, the formula bar could obscure cells on a worksheet.



Excel 2013 includes a formula bar that prevents the formula from obscuring the spreadsheet. For example, in Figure 3.34, cell F1 contains a formula that is longer than the formula bar. Notice the down-arrow icon at the right end of the formula bar. This icon expands the formula bar.

**Figure 3.34**

Initially, Excel shows only the first row of the formula.



Press **Ctrl+Shift+U** or click the down arrow icon at the right side of the formula bar to expand the formula bar. The formula bar expands, but the entire worksheet moves down to accommodate the larger formula bar.

The formula in this example is too long for the default larger formula bar. You have to hover your mouse near the bottom of the formula bar until you see the up/down white arrow cursor. Click and drag down until you can see the entire formula (see Figure 3.35).

### Note

Excel MVP Bob Umlas keeps suggesting the formula bar should change color when you are not seeing the entire formula. That is a great suggestion that perhaps the Excel team will one day add to Excel.



You can customize which statistics are shown in the status bar. Right-click the status bar and choose any or all of Min, Max, Numerical Count, Count, Sum, and Average.

Note that the panel might show values for items that you have recently unselected. These figures will be wrong if the selection has changed.

## Switching Between Normal View, Page Break Preview, and Page Layout View Modes

Three shortcut icons to the left of the zoom slider enable you to quickly switch between three view modes:

- **Normal view**—This mode shows worksheet cells as normal.
- **Page Break preview**—This mode draws the page breaks in blue. You can actually drag the page breaks to new locations in Page Break preview. This mode has been available in several versions of Excel.
- **Page Layout view**—This view was introduced in Excel 2007. It combines the best of Page Break preview and Print Preview modes.

In Page Layout view mode, each page is shown, along with the margins, header, and footer. A ruler appears above the pages and to the left of the pages. You can make changes in this mode in the following ways:

- To change the margins, drag the gray boxes in the ruler.
- To change column widths, drag the borders of the column headers.
- To add a header, select Click to Add Header.

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