



Become an Image Forensics Expert

How to Analyze
Images in InDesign

By Keith Gilbert

CSI: Creative Suite Investigation

Become an expert in InDesign image forensics

The scene: You've inherited a complicated InDesign file from a coworker, and you're burning the midnight oil making layout changes. Wait a minute! One of the images doesn't look right; you suspect it's been stretched. And what's this? The mole is on the wrong side of a person's face! Has the image been reflected? And where did the images on pages 6 through 16 come from? Do you have legal rights to use them?

Answering these and other burning questions takes some detective work, but I'll show you how to sift through the scene of the crimes using forensic techniques in InDesign CS3 and CS4.



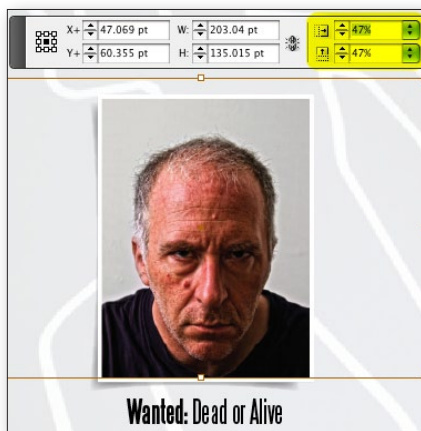
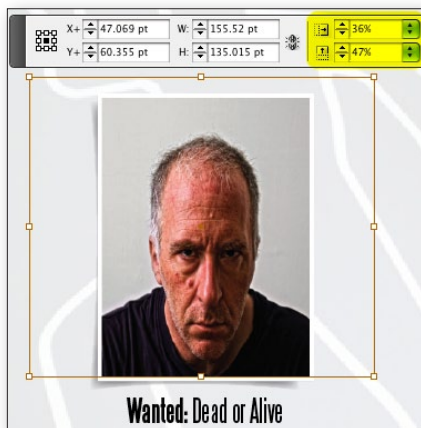
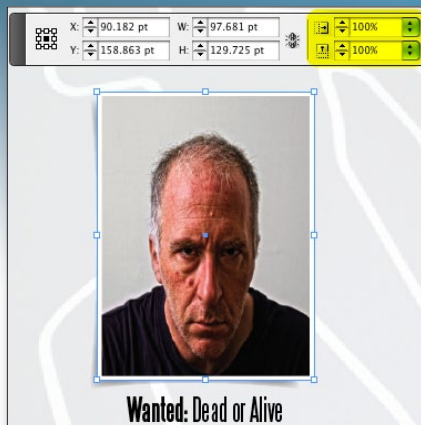
Has the Image Been Stretched?

The dastardly villain pictured in [Figure 1](#) appears to be stretched horizontally. Yet, when you select the image with the Selection tool (black arrow), the Scale fields in the Control panel show that the image is 100% in both X (width) and Y (height). What's going on?

Images always display as 100% in the Control panel when selected with the Selection tool. But when you select the image with the Direct Selection tool (white arrow), you'll see the true scaling of the image. In this case, the image is scaled to 36% in width and to 47% in height. To return the image to its original proportions, enter equal values in both scale fields.

To catch non-proportional scaling as soon as it happens, use the Live Preflight feature of InDesign CS4. Just add the "Non-Proportional Scaling of Placed Object" condition to your Preflight Profile in the Preflight panel (**Window > Output > Preflight**). For more information about how to use the Preflight feature of CS4, see the [October/November 2008 issue \(#26\)](#) of *InDesign Magazine*.

Figure 1. When chosen with the Selection tool, the image doesn't appear to be stretched (top). Using the Selection tool shows you the truth (middle), and lets you make both values equal (bottom).



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Has the Image Been Cropped?

There are several easy ways to tell if an image has been cropped in InDesign. One way is to select the image with the Selection (black arrow) tool, and note the location of the edges of the frame. Then triple click on the image to switch to the Direct Selection (white arrow) tool and select the contents of the frame, and look at the position of the bounding box. If these two boxes are different, then the image has been cropped in InDesign (Figure 2).

Another way to quickly tell if an image is cropped in InDesign is to double-click on one of the corner handles of the frame with the Selection tool. If the image has been cropped, it will immediately be uncropped. You can then return to the way it was with **Edit > Undo**.

Here's a third way: click and hold down the Direct Select (white arrow) tool on the image; after about one second, any cropped area will appear "ghosted" back outside the graphic frame.



Figure 2. If an image has been cropped, the graphic frame (top) will be different than the image bounding box (bottom).

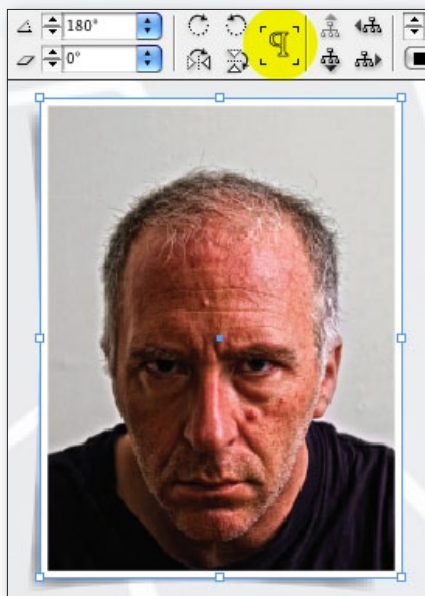


Figure 3. An image that has been flipped horizontally or vertically will be recognizable by the inverted "P" symbol in the Control panel.

Has the Image Been Flipped?

In the past, editors and fact checkers couldn't tell for sure if an image was flipped after it was placed in InDesign. Back to our scary felon in Figure 3. Is the mole supposed to be under his right eye or his left eye? Prior to InDesign CS3, an image that was flipped in InDesign would display as having a rotation angle of 180°, which is incorrect. Finally in CS3, Adobe got it right. Now, an image that has been flipped will display a reverse "P" symbol in the Control panel when the image is selected with either of the selection tools. Alas, if the image was flipped in Photoshop, saved, and then placed in InDesign, there's no trail of evidence left behind.

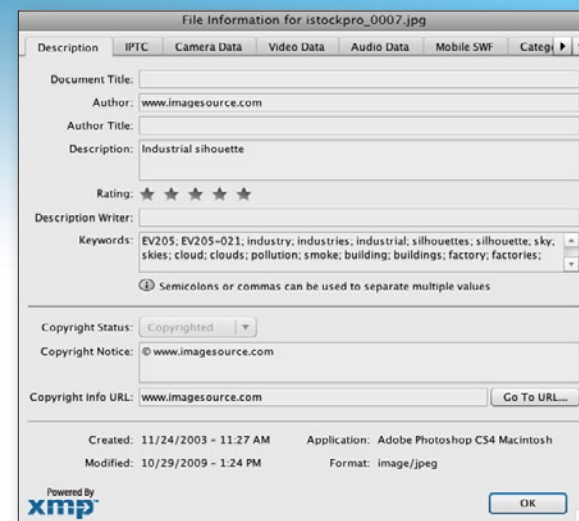


Figure 4. The InDesign CS4 File Information dialog box.

Copyright, Location, and More

Depending on where your image came from, you may have access to all sorts of rich metadata (data about data) associated with the image. This metadata could reveal useful information about the image, such as a caption, the geographic location, or copyright and usage information. Select an image in InDesign and choose **File Info** from the Info panel menu, or choose **Utilities > XMP File Info (CS4)** or **Link File Info (CS3)** from the Info panel menu. The dialog box in Figure 4 will appear. In CS3 the dialog box has the same information but is laid out differently.

With InDesign CS3 you can copy information from the File Info dialog and paste it in your layout. This is used in some publishing workflows to pass caption information between photographers or photo editors and designers. Unfortunately, in CS4 the information in the File Info dialog is read-only unless you use a script, such as the LabelGraphics script inside the Samples folder in the Scripts folder. (See page 40 for more on this script.)

Will the Image Print with High Quality?

The Info panel also helps in determining whether a selected graphic is vector (made up of mathematical curves) or raster (made up of pixels). Whenever you see a number next to the Effective PPI field in the Info panel, you can be sure that the image is raster. In this case, consult with your print vendor to determine if the Effective PPI of your images is sufficient for your type of output.

If no number is displayed, the image is probably vector and can be scaled to any size you need. An exception would be a Photoshop EPS file, or when a raster image is used in a vector drawing program like Illustrator. In these cases, just make sure that View > Display Performance > High Quality Display is chosen, and then zoom way, way in on the image. A vector image will always display smoothly, since vector images are resolution-independent. A raster image will



Figure 5. The fingerprint on the left is a raster image, the fingerprint on the right is a vector image.

eventually begin to display large pixels if you zoom in far enough, as shown in [Figure 5](#).

Is the Correct Color Being Used?

Let's say you have a client that uses a very specific bright orange, PANTONE 1595, as their corporate color. But they don't always print with spot color, so they have an alternate version of their logo using a specific CMYK mixture to achieve the best orange they can get. Their logo appears in your project, and you want to double check that indeed, the spot color version of the logo is what is being used. Just choose Window > Output > Separations Preview, select



Figure 6. The Separations Preview panel is an easy way to check the exact color used in an image, regardless of whether it is spot or process color.

HOW TO EXTRACT EMBEDDED IMAGES

Did you know that you can "extract" an image that has been embedded in an InDesign file? Even if the original image was a CMYK PSD file with multiple layers that was placed in InDesign and then cropped, rotated and scaled, the original uncropped, layered, unscaled image can be retrieved from the InDesign file. How? Simply right-click on the image in the Links panel and choose Unembed Link. You will see a confusing dialog box on the screen asking you if you want to "link to the original files". Just choose "No" (which seems wrong) and click the OK button, choose a location for the file, and it will be extracted from the InDesign file in all its original glory.

Separations from the View drop down list, and point at the orange part of the logo with your mouse. The actual ink that will be used to output that part of the logo appears as percentages in your separations preview panel ([Figure 6](#)).





Has the Image Been Recolored?

Look at [Figure 7](#) and you'll see something strange. The Info panel says that the color space of the image is Grayscale, yet the image is clearly in color. What unsolved mystery do we have here? InDesign allows you to apply color to grayscale TIFF, JPEG, BMP or PSD images, and that is what has been done here. On an image like this, if you select the frame with the Selection tool and look at the Swatches panel, you'll see the color of the frame (in this case yellow) highlighted. When you switch to the Direct Selection tool and select the contents of the frame you will discover that the content of the frame has been colored also (blue in this case). Mystery solved!

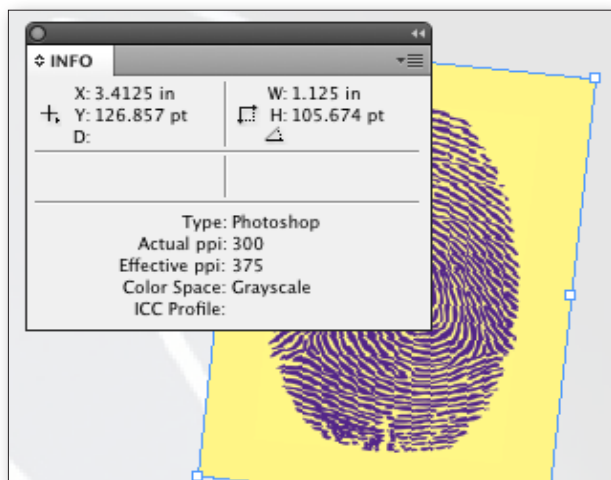


Figure 7. A placed grayscale image, colored in InDesign. Adobe PDF will display in the Info panel for both placed AI files and placed PDF files. When artwork is saved in Illustrator in AI format, the Create PDF Compatible File option must be checked in order for the image to be placed in InDesign. InDesign will recognize the file as a PDF file.

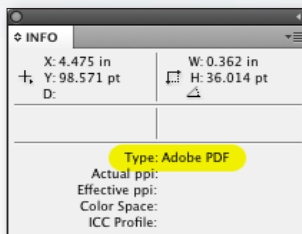


Figure 8. The small icon to the right of the image name indicates the image has been embedded, and is no longer linked to the original graphic.

What Kind of Image Is It?

The Info panel or the Links panel is the quickest way to tell if the image is a TIFF, JPEG, PSD, AI, EPS, etc. If you see PDF displayed in the panel, you might be confused. PDF will appear for both placed PDF files and for placed AI (Adobe Illustrator) files. See [Figure 8](#). Even though you might be accustomed to placing AI files directly into InDesign (and, by the way, there are numerous advantages to this over using EPS files), InDesign technically can't import AI files, it only can import PDF files. When you save an AI file out of Illustrator, you see the box displayed in [Figure 9](#).

You must check the "Create PDF Compatible File" option. InDesign then sees the file as a PDF and displays that in the Info panel. This is one example of why it's important to always use filename extensions such as .PDF or .AI to help distinguish one file type from another. Otherwise, there's no way to tell whether a linked image in InDesign is a generic placed PDF file, or an editable AI file.

Where Does the Image Reside?

You might wonder where on your vast corporate network a particular imported image resides. One way

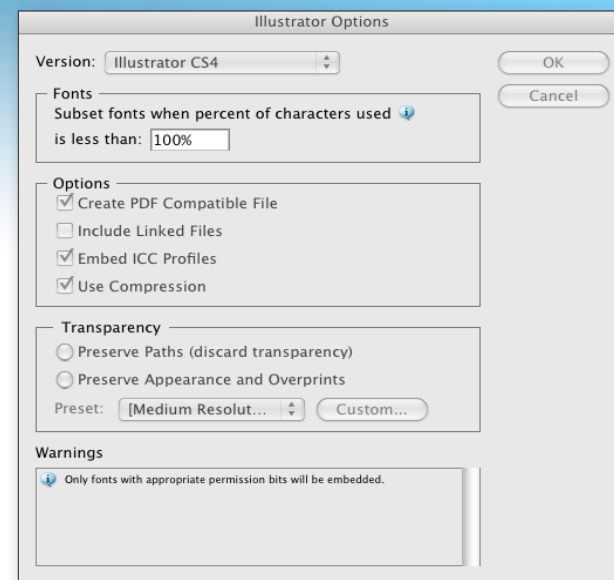


Figure 9. When artwork is saved in Illustrator in AI format, the Create PDF Compatible File option must be checked in order for the image to be placed in InDesign. InDesign will recognize the file as a PDF file.

to find out is to select the image, right-click or ctrl-click on it, and then choose **Graphics > Reveal in Finder** (Mac) or **Graphics > Reveal in Explorer** (Windows). This will open a Finder or Explorer window and bring you right to the image. Or, you can right-click/Ctrl-click on the image name in the Links panel and choose **Reveal in Finder/Reveal in Explorer**. You may also hover over the name of the linked graphic in the Links panel, and after a brief pause you'll see the full path to the image displayed in a pale yellow tool tip.

You may run across images where the **Reveal in Finder/Explorer** option doesn't appear in the menu. In this case, one of two things is going on: The image is either embedded or it has been pasted into InDesign. Look closely at the Links panel in these cases. If the image is embedded, you'll see a small icon to the right



of the image as shown in Figure 10. If you don't see anything listed in the links panel, the graphic has been pasted into InDesign from another program, which is never a good practice. There is no way to get at the original graphic in this case.

Does the Image have Additional Layers, Clipping Paths, or Channels?

Placed PSD, AI, PDF, and INDD files may contain multiple layers, all of which may not be visible in InDesign. To see if the image has additional layers, select the image, right-click/Ctrl-click on the image, and choose Object Layer Options. If the image contains additional layers, a dialog will appear that will let you manipulate the layer visibility. A single image can appear in multiple places in your layout, each time with a different set of layers displayed!

A raster EPS, PSD, or TIFF file may contain paths that can help you mask an image or apply a varnish to part of an image. To see if the image contains any paths, select the image and choose **Object > Clipping Path > Options**. Choose Photoshop Path for the type, and then use the drop down next to Path to choose the path you want. If Photoshop Path is grayed out, the image doesn't contain any paths.

Extra channels may have been built and saved with the image to allow the image to be masked. If so, you can build a clipping path from one of these channels, or for higher-quality results, go to Photoshop and turn the channel into a layer mask. To see if the image contains any extra channels, select the image and choose **Object > Clipping Path > Options**, and choose

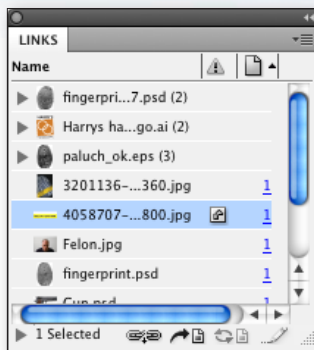


Figure 10. The small icon to the right of the image name indicates the image has been embedded, and is no longer linked to the original graphic.

Alpha Channel for the Type. This is just for seeing if an alpha channel is in there—I don't recommend actually using the alpha channel as a clipping path, so click Cancel to leave this dialog box.

You're a CSI: Creative Suite Investigator

Now that you've learned these image forensic techniques, you can solve any difficult image situation. Hopefully, images used in your layouts will be less mysterious, and any image crimes committed in layouts you encounter will be easily solved.

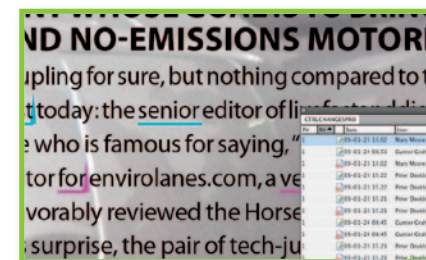
Keith Gilbert is a design-industry consultant and educator with clients such as Apple, Adobe, Best Buy, Cargill, General Mills, Lands' End, Medtronic, Target, and the United Nations. His work has taken him throughout the world. He is an Adobe Certified Instructor in InDesign, InCopy, Illustrator, Photoshop, and Acrobat, and is the Chapter Representative for the Minneapolis InDesign User Group. Visit his Tips & Techniques blog at blog.gilbertconsulting.com.



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