Information Technology Services

Scanning in Windows XP: Basics
Learning guide

If you have ever wanted to scan documents and images on different scanners in your department, you've probably faced the difficulties that arise from needing to use different software with each of your scanners. Now, for any scanners connected to PCs running Windows XP, you can use the new tools in Windows to scan without learning how to use the software for each scanner. As a result, your scanning skills are now more portable (from scanner to scanner) than ever.

This course guide assumes that your scanner has been properly installed & connected to your PC. Before beginning to scan, be sure that your scanner is powered on. Most scanners will have a power light on their front panel. If this light is glowing green, the scanner is receiving power and is ready to scan your document.

Scanning concepts

When you're working with digital images, each image's resolution tells you about the quality of that image. An image with a higher resolution appears crisper, and its colors will often be more clear and vibrant. Unfortunately, a high-resolution image will also have a large file size – sometimes several megabytes for a single image. Large image files require lots of storage space, are more difficult to move from one computer to another, and require more time to open and save.

By contrast, a low-resolution image will have a much smaller file size. However, that image will also be far less clear and crisp, and its colors might appear muddled. The trick, when scanning, is to scan your image at a resolution that produces a clear image without making your image file too large.

Some rules of thumb

- Resolution is often expressed in dpi (dots per inch). Images are made up of tiny dots next to each other, so a higher dpi value produces a clearer, higher-resolution image.
- The higher the resolution (dpi), the larger your image file will be.
- If people will only view your image on the screen (for example, on your web site), select a resolution between 70 and 100 dpi.
- When scanning images for output on your printer, choose a resolution that is approximately one third of your printer's resolution.

When viewing/printing on....	Scan at....
The screen	75-100 dpi
A 300 dpi laser printer	100 dpi
A 600 dpi laser printer	200 dpi

Tip: *Why scan at a low resolution when displaying your image on the screen? Because your monitor is a low-resolution device. Although some would say that the PC monitor displays only 72 dpi, it actually displays somewhere between 75-100 dpi under normal conditions. This low resolution is the primary cause of eyestrain for people who work at their computers all day.*

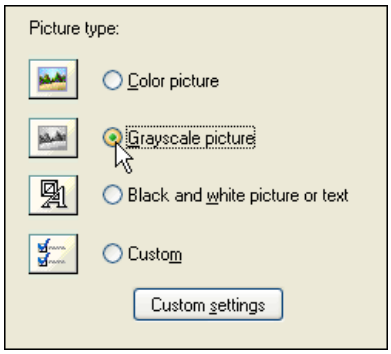
First steps for scanning

Starting the scan

- Place your document on the scanner glass and close the lid.
- From the **Start** menu, select the **All Programs** submenu and then the **Accessories** submenu.
- Click on the **Scanner and Camera Wizard** menu item.
- The **Scanner and Camera Wizard** window will appear.
- To begin the scanning process, click on the button labeled **Next**.

Choosing the image type

- In the **Picture type** list at the left of the **Scanner and Camera Wizard** window, click on the option button labeled with the kind of image you plan to scan.

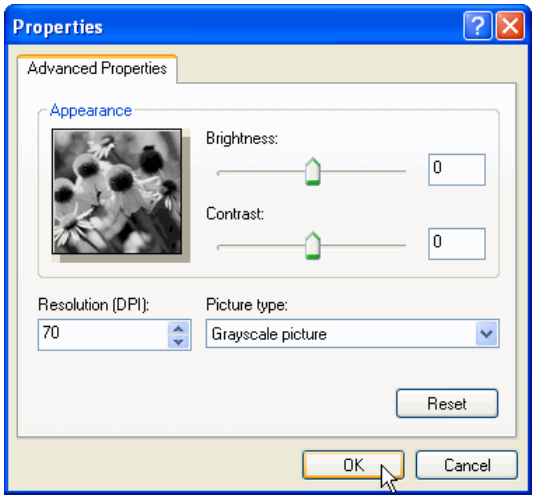


For best results when scanning....	Choose...
A color photograph, image, or document	Color picture
An image or document with shades of gray	Grayscale picture
Text or a diagram	Black and white picture or text

Specifying a custom image resolution
By default, the Scanner and Camera Wizard scans new images at 150 dpi. However, in some cases, you may wish to choose a custom resolution for your scanned image. If your image will only be displayed on the web, you may wish to scan it at a lower resolution. On the other hand, if you plan to print your image on a laser printer, you may want to scan at a higher resolution.

To change the image's resolution:

- In the **Picture Type** list at the left of the **Scanner and Camera Wizard** window, click on the option button labeled **Custom**.
- Click on the button labeled **Custom Settings**.
- In the **Resolution** box at the lower left of the **Properties** window that appears, enter the new resolution for your scanned image.
- Click **OK** to return to the **Scanner and Camera Wizard** window.



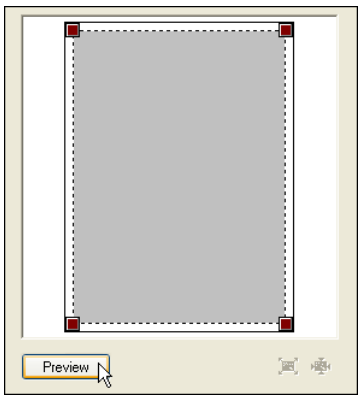
When scanning for….	Choose…
The web	Screen/Web (96 dpi)
Standard printing	Laser Printer (200 dpi)
Text capture	OCR (300 dpi)

Tips:

- *Be aware that greater resolution produces larger (sometimes dramatically larger) file sizes!*
- *Each time you scan, you'll use slightly unique settings so that the digital image you create from your document is sharp and clear. Don't be afraid to experiment with these settings to determine the scan configuration that works best for your document.*

Previewing your image

- Near the bottom of the **Scanner and Camera Wizard** window, click on the button labeled **Preview**.
- The wizard will quickly scan a low-resolution version of your image.



Selecting the scan area

- Using this preview scan, the wizard will automatically determine the size of your image and surround your image with an animated dotted border.
- The scanner will only capture image information within this **scan area** (not from the rest of the space on the scanner glass).

Moving & rezising the scan area

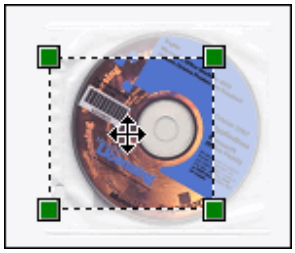
In some cases, you may only want to scan a portion of your image. In these cases, you may wish to shrink or reposition the box representing the scan area.

To decrease the size of the scan area:

- Place your cursor on one of the square boxes at the corners of your image.
- Drag inward toward the center of the image until the scan area box is the appropriate size.

To reposition the scan area:

- Place your cursor anywhere within the scan area box.
- Drag the box to its new location.



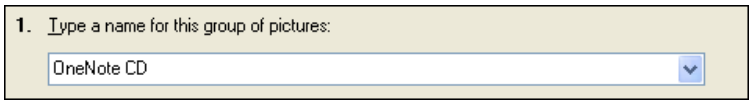
- Click the button labeled **Next** to proceed.

Scanning and saving your image

Choosing a name for your image

Once you've specified the size and position of the scan area, you'll need to choose the filename, image type, and destination folder for the image you're about to scan.

- In the box labeled **Type a name for this group of pictures**, enter a descriptive filename for your image.



Choosing a file format for your image

Once you've scanned your image, you'll need to save it using a file format that will offer high image quality and a small file size. The Scanner and Camera Wizard will allow you to save in one of the following formats.

BMP (Windows Bitmap)

- The native Windows image format
- Supported by most Windows image editors
- Offers no compression

JPEG

- The best format for photographs, or images with subtle changes in color.
- Offers compression to reduce the size of your files for easier storage & transfer.
- Doesn't work well for images that have large stretches of a single color – JPEG compression tends to make these color bands look poorly.
- Offers a 24-bit compression scheme that allows for 16.7 million colors.

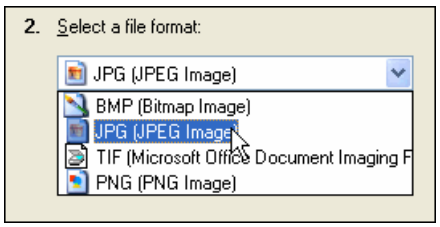
TIFF

- The native format for most scanners
- Offers no compression
- Primarily for print
- Developed in 1986 as a format for images used in desktop publishing; now owned by Adobe

PNG (Portable Network Graphics format)

- This new format is intended to provide a patent-free replacement for the common but proprietary GIF image format.
- Works in many, but not all, applications.
- Works well for saving images that contain large areas of single color, such as screenshots or simple paint images; also for logos, line art, diagrams or line art that need extra sharpness.
- Permits transparent backgrounds.

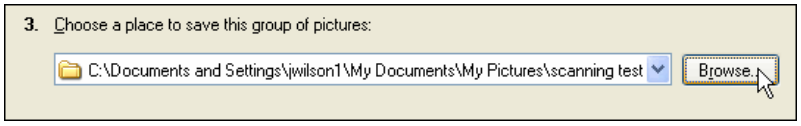
- Once you've chosen a file format for your image, click on the down-facing arrow to the right of the box labeled **Select a file format**.
- From the drop-down menu that appears, choose a file format for your image.



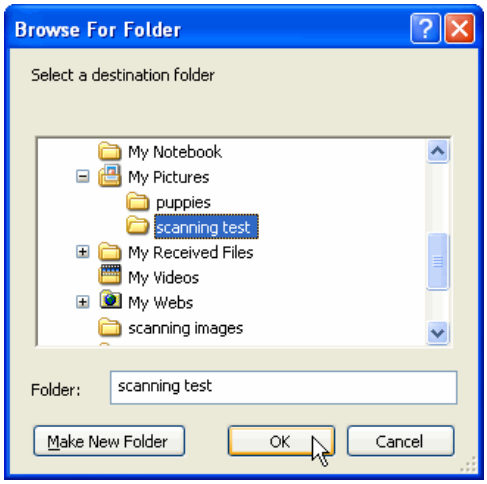
Tip: *If you're not sure which file format to choose, select* ***TIF****.*

Choosing a destination folder for your image

- Next to the box labeled **Choose a place to save this group of images**, click on the button labeled **Browse**.



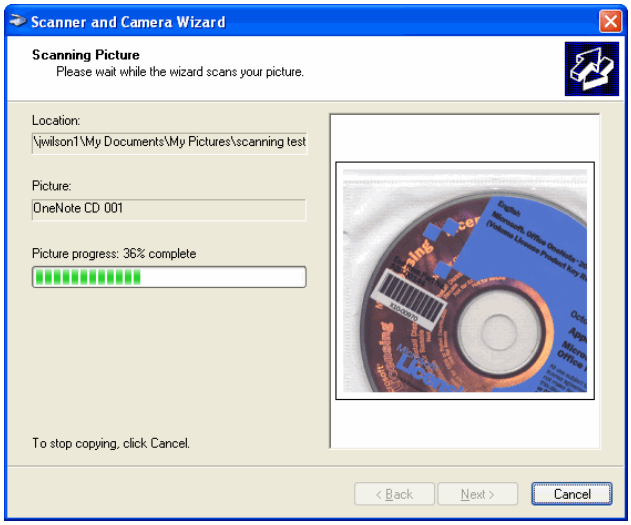
- From the **Browse for Folder** window that appears, click on the folder in which you'd like to save your new image.
- Click **OK** to confirm your selection.



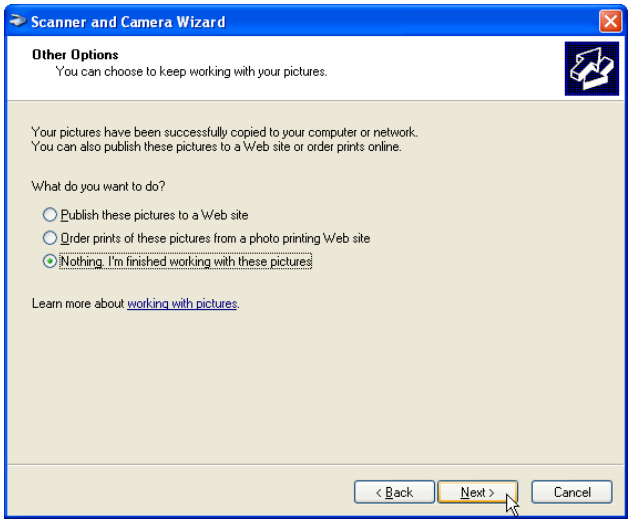
- Click on the button labeled **Next** to continue.

Final steps

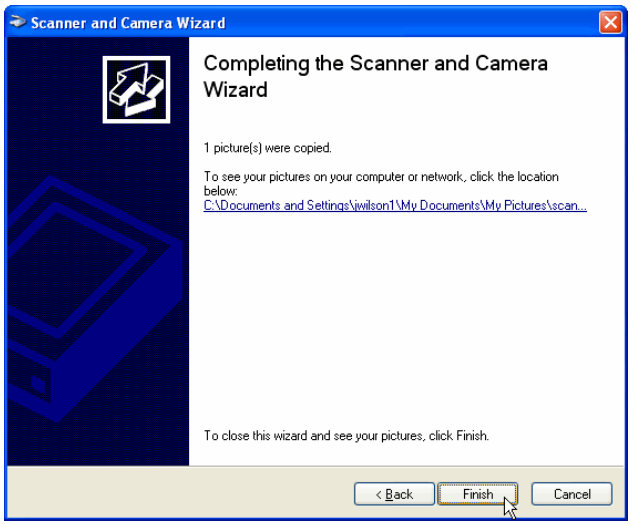
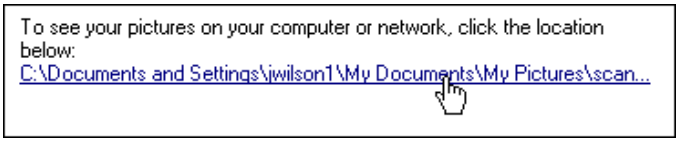
- The Scanner and Camera Wizard will now begin scanning your image.
- While the scan is ongoing, you'll see this window on your screen:



- When the scan is complete, the wizard will display another window informing you that your image has been successfully scanned.
- Click **Next** to proceed.



- Finally, the wizard will display a window telling you that the scanning process is complete.
- To close the wizard window, click on the button labeled **Finish**.



Tip: *You can view the image you just scanned by clicking on the blue underlined link in the middle of the window.*