

SCANNING AND GRAPHICS

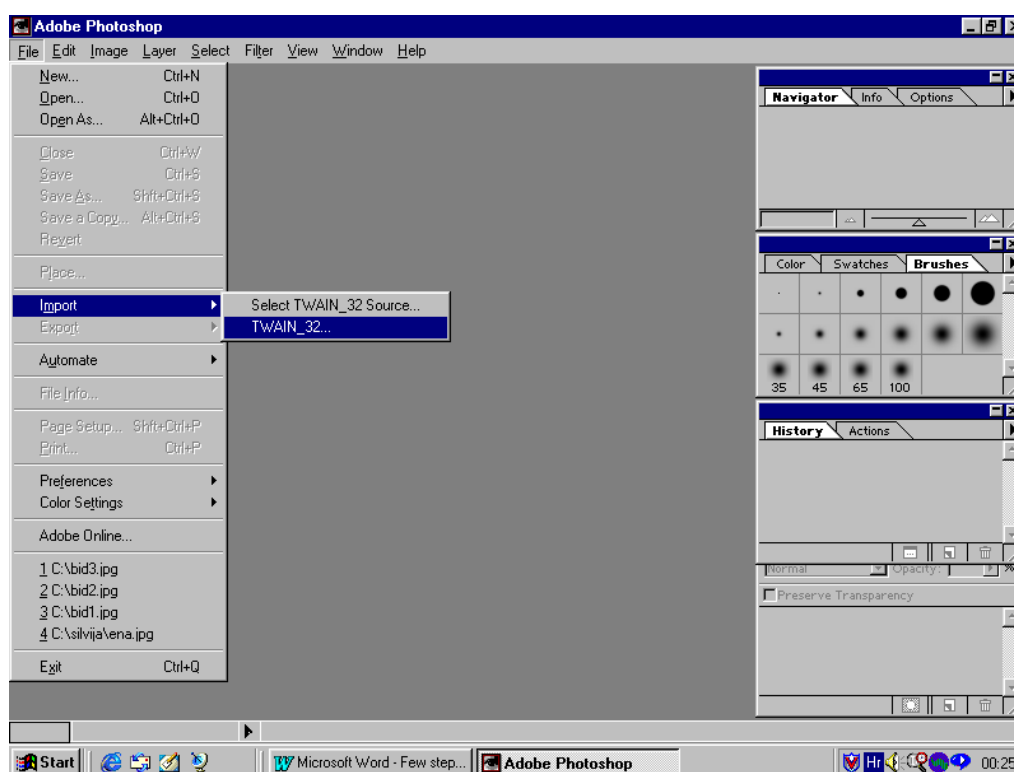
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Few steps to successful scanning

Assuming that your scanner is properly connected and working, you can start using it for what it is originally designed: transferring a picture into digital format and storing it into computer. This section will help you to do it successfully.

Driver

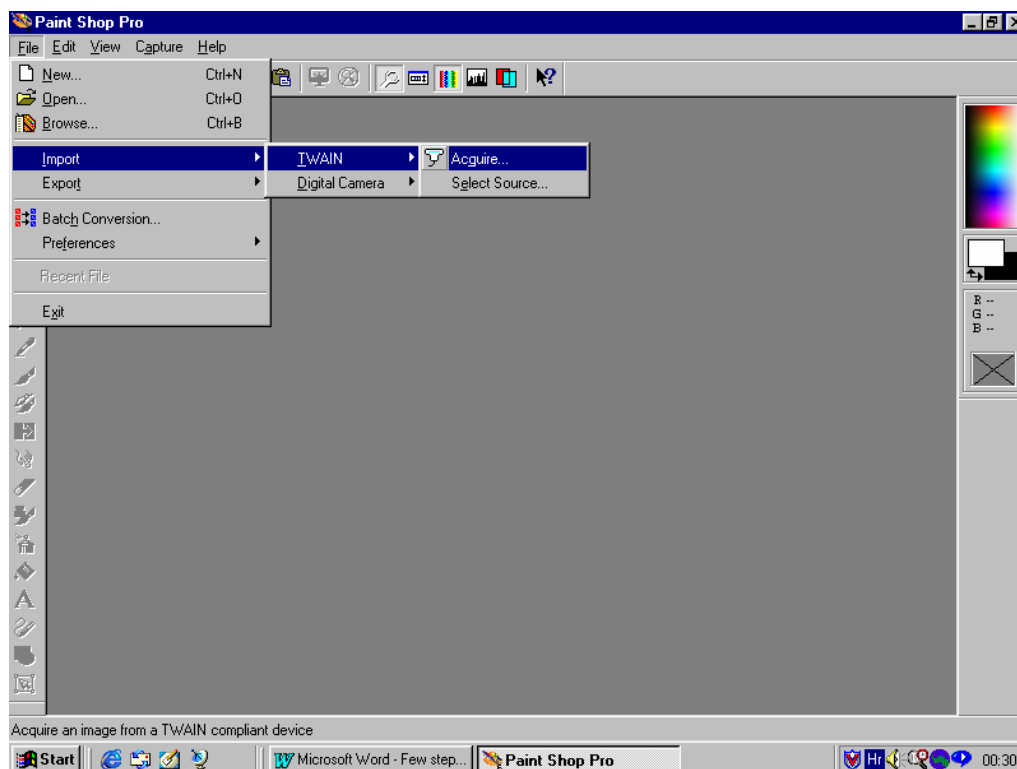
In order to use scanner you must have installed proper driver. The driver depends on type of your scanner. Every scanner is coming with its own driver and usually it is not possible to replace it with some other. That means that each user has to spend some time to get familiar with his scanner driver and figure out where to adjust certain scanning parameters. But, characteristics of today's scanners are so similar that information given here could be applied on any scanner without any problems. Software protocol for your driver is called TWAIN (Technology Without an Interesting Name). It is used for transferring your image from your program driver into your picture editing software. If you have this on mind it will be difficult to find scanning option in any such software. You just have to import image by selecting TWAIN source. Scanner, digital camera, videographer are devices who are using TWAIN protocol in this picture transfer.



Picture 1: Adobe Photoshop File Import command

Aquire

There are two examples shown how to get your picture into your picture editing software. *Picture 1* shows **Adobe Photoshop** (that is one of the best software products for this purpose, but unfortunately it is not shareware), and *Picture 2* **Paint Shop Pro** (shareware software with many options, good enough even for more serious picture editing). Both programs are using File Import command to get picture from TWAIN device (scanner in our case). Chose File/Import/TWAIN_32 for Photoshop or File/Import/TWAIN/Aquire for Pint Shop Pro. Your scanning driver program will pop up.



Picture 2: Paint Shop Pro File Import command

Adjusting scanning parameters

As mentioned before your scanning driver will look depending on type you received with your scanner. But thy all have some parameters that you can adjust before you do scanning. Those are *color*, *resolution*, *contrast*, *brightness*, *size* and some others depending on your driver. Although you can always change some like contrast and brightness on your image after the picture is scanned and into your editing program, it is wised that you adjust everything prior the scanning so you will already have good scan for a start and then you can adjust some minor details. *Picture 3* shows driver for **Scantac** scanner.



Picture 3: Scantac scanner driver

Color

Today's scanners are usually using from 24 bits for basic models to 36 bits for professional ones for storing one pixel of the picture. It is called *color dept*. Usually your scanner is already preset and you have option of choosing if you are going to scan in full color (usually 32bit for standars scanners), gray scale (8 bits) or black and white (1 bit). Usually you will use full color for your picture, but you can use gray scale scanning for drawings or black and white for scanning documents.

Resolution

This parametar is one of the most important. It depends mainly on what the image you have got from your scanned picture will be used for. Scanner resolution goes up to 1200 dpi. This is called *optical resolution*. It is possible to get higher resolution through software *interpolation*, but the quality of your image will not necessary improve. Actually you can experience fall in sharpness and contrast. There is no realy any need to scan at very high resoolutions. You have to be aware of the fact that higher resolution means more storage memory used. For A4 formate picture scanned at 300dpi in 32 bit color you will need up to 25MB of memory to store it. If you will use your scanned image to be displayed on the computer screen ther is no need to go higher that 100dpi. That is because the computer screen has resolution from 72 to 100dpi, depends on size of the screen. If we scan some picture and we want to print the image we should use higher resolutions. But still, we do not want to go too high.

In the most cases the best results we get if we use resolution half of the resolution of the printer. Today's laser printers have resolution of 600dpi, so picture scanned at 300dpi will be more then enough. There is a question: why then there are optical resolutions up to 1200dpi. The answer is *enlargement*. If we have a picture 5x5cm big and want to enlarge it to 10x10cm for use as a image for DTP we will have to use 600dpi instead of 300dpi that we would normaly use. Or if we want to scann a 35mm slide film (we need a transparency scanner adaptor in order to do this) and enlarge it to A4 page size, we will need to set up resolution of at least 2400dpi. Scanning of some black and white drawing will need also some higher resolutions (800 to 1200dpi). If you are scanning black and white documents for use with OCR software, the higher resolution (300-600dpi) will give better character recognision.

Brightness and contrast

Although you can easily adjust those latter after you have scanned a picture, it is advisable to make some adjustments prior the scanning. It will give you better quality of your scann to start with.

Size of the picture

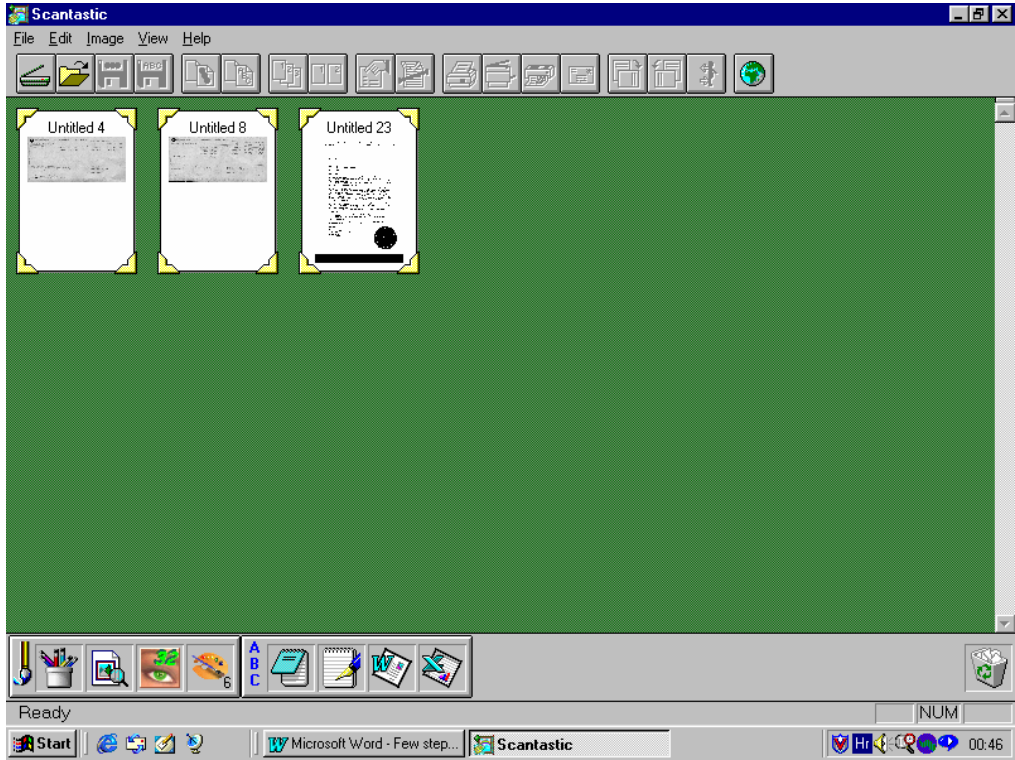
Usualy you do not need whole picture to be scanned. It takes up space and lowers the scanning speed. Get a preview of your picture and then choose the area you want to scann. You can easily do that by marking the area with mouse pointer. Later it is possible to additionally crop the image inside of your editing program.

Scanning

Press Scan and wait untill your image showes as imported into your picture editing program. If you are not satisfied with your image you can repaeat the whole procedure by changing some parameters.

Image editing

Once you have your image inside of your picture editing program, you can do almost anything you want with it including resizing, changing colors and aplying filters. If you want to inport image as a character document you will have to use some OCR software program like *Recognita*. Instead of using all this priograms separately you can always start with some software program that serves as user interface for scanning and then transferring a scanned image to any othe rprogram depending on what you want to do with it (save it as image file or use it as OCR document). Usualy you will receive such program with your scanner. Picture 4 shows Scantastis, a program that comes with Scantec scanner. The use of such software is not necessary for sucesfull scanning.



Picture 4: Scantastic scanning software