Making TIFF and EPS files from Drawing, Word Processing, PowerPoint and Graphing Programs

In the worlds of electronic publishing and video production programs, the need for TIFF or EPS formatted files is a necessity. Unfortunately, most of the imaging work done in research for presentation is done in PowerPoint, and this format simply cannot be used in most situations for these three ends.

Files can be generally be saved or exported (by using either *Save As* or *Export* under *File*) into TIFF, PICT or JPEG files from PowerPoint, drawing, word processing and graphing programs—all called vector programs—but the results are often poor in resolution (in Photoshop these are shown as having a resolution of 72dpi when opening the *Image Size* dialogue box: under *Image* on the menu select *Image Size*).

Here are four ways to save as TIFF (generally the way in which image files are saved) or EPS (generally the way in which files are saved which contain lines or text):

Option 1. Use the Program's *Save As* or *Export* option.

If it exists, use the *Export* or *Save As* option in your vector program. This only works well when a dialogue box appears so that specific values for height, width and resolution can be typed in (as in the programs Canvas and CorelDraw). Anti-aliasing should be checked. Resolution values of 300 dots per inch or pixels per inch is for images, 600 dpi is for images with text and 1200 dpi is for text, graphs and drawings. If no dialogue box exists to type in these values, go to option 2 - 4.

Option 2. Scale to 4 times the dimensions, save as PICT or BMP.

1. Make the file 4 times as large as desired in the vector program. For example, if your file is at page size, arbitrarily enlarge the file to 4 times those dimensions Under *File*, select *Save As* or *Save*. Look for the option to save as PICT (Macintosh only) or BMP (Windows only). Avoid saving as a JPEG because the resulting file will have information that is thrown away and some blurring can be introduced.

2. Open the PICT or BMP file in Photoshop. Now reduce the size of the file to its original dimensions by selecting *Image Size* under *Image* and type these values into the *Width* and *Height* boxes. If these are going to a publisher, the width and height of columns can be found on the journal's instructions to the author. Be sure that *Resample Image* and *Constrain Proportions* are both checked. For resolution put in

> 300 pixels/inch for images
> 600 pixels/inch for images and text
> 1200 pixels/inch for text and graphs and drawings

Note: this method may not yield adequate resolution. See page 4 for information on how to evaluate resolution.

Option 3. Save as Acrobat file, then make a TIFF/EPS file in Photoshop.

If files cannot be saved as PICT, TIFF, EPS or BMP using either option above, or if you wish to know one means for working with nearly every application (as long as the application has a Print function), it is worth your while to learn how to convert files to the Acrobat format. This method will consistently yield the best resolution and the most favorable color matching. See the next page for information about the use of Acrobat.

Option 4. Print the Screen.

When print functions do not exist on the program and no means is available for high resolution saving or exporting, the only option is to print the screen. Go into your control panel and set the screen resolution as high as possible given your display card and monitor limitations. Make the image fill the screen as much as possible.

On a Macintosh: Hold down the Command (Apple) key, the Shift key and the number 3 key at once. You may hear a click. Go to your hard disk and look for a file (or several files if you pressed these keys more than once) named *Picture 1*, *Picture 2*, etc. Open these images in Photoshop by first opening Photoshop, then finding these files (versus the "normal" way of double clicking on the file itself).

On a PC: Press the Print Screen button. Open Photoshop, under *File* select *New*. You will see a dialogue box. Leave values where they are, but you may want change the *Mode* at the bottom of the box to either Grayscale (if it is a grayscale image) or RGB Color.

You will have to crop out extraneous image information using the Crop tool in the toolbar. Outline the area of interest and double click inside the outlined area to complete the crop. If the image doesn't have to be reproduced at larger than a column width, this means can work fairly well. Set image size to 300dpi for images, 600dpi for text and images and 1200dpi for text, drawings and line art. Under *Image* select *Image Size* to do so.

MAKING TIFF FILES USING ADOBE ACROBAT

Vector to Image Files. Vector files—such as those generated by graphing programs, Microsoft Word and PowerPoint—can be converted to high resolution TIFF or EPS files by using Adobe Acrobat.   In order to convert these files, you will need the full version of Adobe Acrobat and NOT the free version of Acrobat (called Acrobat Reader). You can also download a converter to Acrobat at the Microsoft website if you are only needing to convert from Word.

If the conversion is done correctly using the steps that follow, lettering on images will be free of "chunkiness' or pixelation and images will remain at high resolution.

Troubleshooting. You may, however, have some images that "drop out" or become negative images, or you may get an error message indicating that the file cannot be converted. That's because image files have been cut and pasted into your document, or the image file formats in your document are unreadable by Acrobat. To fix this problem, remove all the images from the document and make the Adobe Acrobat file and see if everything works. One by one drop the images into Adobe, until the "corrupt" image is found.

Another problem that could occur is that is that the file structure cannot be recognized due to a change in platforms (Mac to PC or PC to Mac). To correct this follow the earlier suggested steps to find the "corrupt" file.

Some things to know about Acrobat:

> Only limited editing can take place in Acrobat using what are called "touch up" tools. It's best to go back to the program in which the document was originally made to make changes.

> The point of Acrobat is to COMPRESS your file for the web. Thus default settings may create compressed JPEG files unless these are changed.

> All conversions to Acrobat come through the PRINT function (unless dragging to the Acrobat Printer icon on a Macintosh).

> ONLY print one page at a time to Acrobat in PowerPoint and other programs containing multiple pages of images and text.

GENERAL RULES FOR MAKING ACROBAT FILES

1. Under *File* in your vector application, choose *Print.*

2. From Printer drop down, choose *Acrobat PDF Writer*; or, when that option doesn't exist, *Acrobat Distiller.*

3. Click on *Properties*, *Options*, or *Settings* button to bring up more choices. Look for **Adobe PDF Settings**, or *Acrobat Settings* or something with the word "Settings" in it (dialogue box naming conventions seem infinitely variable depending upon software and operating system). You may have to do some searching around. In many circumstances it is CRITICAL to find these settings. If these don't exist, then continue on to the next step.

4. Be sure to choose *Press* when choosing *Conversion Settings* versus *eBook* or *Web*. Again, naming conventions change: look for a drop down box which gives you the *Press* selection if such a thing exists.

5. That should be the only setting you need to choose for turning off compression and maintaining resolution, but, to be sure, click on a button normally situated in the same dialogue box named *Edit Conversion Settings* or *Edit Settings*, etc. In the *Compression* dialogue box, uncheck *Downsampling* and *Compression* for all Color and Grayscale Images. Click *Okay* (you may be required to save the setting before proceeding).

6. Click *Okay* buttons to return to *Print* box and print. It may take a while to generate the file. You are prompted when it is done, but the dialogue box doesn't close (so close the box). On the Macintosh, the prompt lets you know the file has been generated, but the prompt is generally premature and some indeterminate time needs to pass before the file is REALLY generated.

6. Open these files in Photoshop. You may see a dialogue box asking for width, height and resolution settings. Leave the width and height the same, but change the resolution to:

> 300dpi for images
> 600dpi for color graphs (re-sample as 1200dpi before saving final file AFTER cropping)
> 1200dpi for text and black and white graphs.

7. If necessary, use the crop tool to outline the graph or image and double click inside the outline to crop out extraneous white area (the white area is considered by Photoshop to be a part of the image, not some kind of white page in the background as in Word).

8. Flatten the image: under *Layer* in the menu select *Flatten Image* (Photoshop inserts an invisible layer into both Acrobat and Illustrator files).

9. Re-save as either *TIFF* or as *Photoshop EPS* format: the TIFF format is generally intended for images and it works best with inkjet printers, photographic printers and to publishers; EPS is more ideal for text and drawings for the laser jet printer and to publishers. These can also be saved as JPEG for insertion into Word, PowerPoint or for posting on the web.

TO BE SURE FILE HAS BEEN MADE AT HIGH RESOLUTION

Do NOT print to a laser jet printer unless your file is saved in the EPS format.
Do NOT check for pixelation in the image on the computer screen UNLESS zoomed in.

Screen resolution is generally poor for the evaluation of vertical, diagonal and horizontal lines. You must first zoom way in with the magnifier tool in order to evaluate resolution, or print out on a good ink jet printer.

THE EXCEL TO PDF GUIDE

This guide is to help you make Adobe Acrobat files from your Excel files. This is useful in making your graphs into high quality TIFF files for printing. This is written for Windows and Macintosh platforms, using Excel 2002 and Adobe Acrobat 5 for Windows and Excel 1998 and Adobe Acrobat 6 for Macintosh.
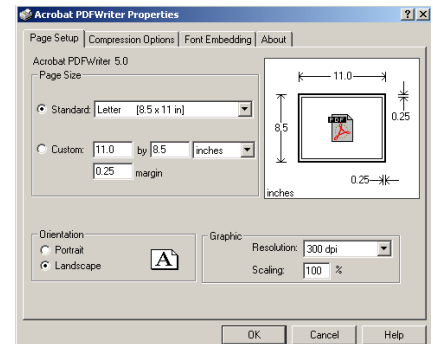
WINDOWS:

First, you need to open your Excel file and click on the graph you would like printed. Next, under *File* on the menu, select *Print*.
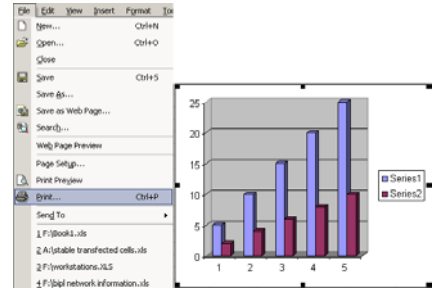
In the Printer Name box, you should select the Acrobat PDF writer. Click on the Properties box.
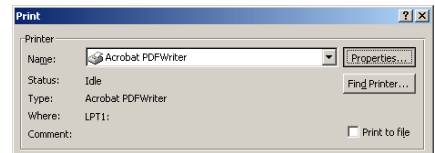
Now you can set the size of your image, the resolution, and the scaling. For most purposes, you will want to have 300 dpi resolution and no scaling (100%).

Under compression, make sure all the compression options are turned OFF. No boxes should be checked. If all your setting are too your liking, click OK.
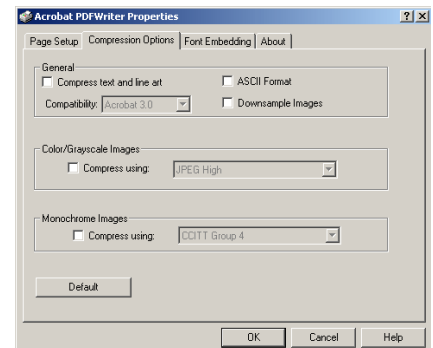
Now, you have an Adobe Acrobat file that you can open up. Once you have opened your Acrobat file, under *File* on the menu, choose *Export>Extract as TIFF*.
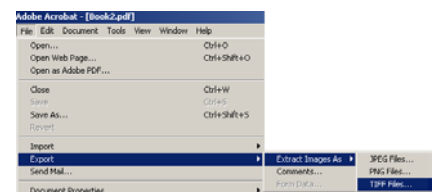
Again, under settings, you should choose no compression. You now have a high-quality TIFF image to work with, which makes life much easier.
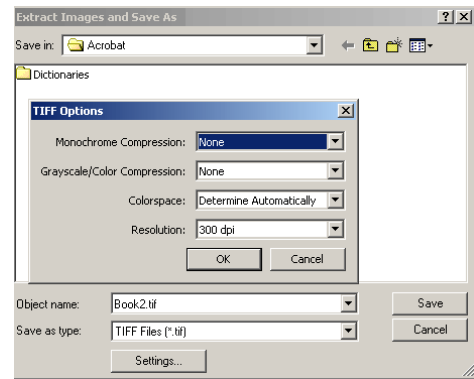
MACINTOSH:

First, you need to open your Excel file and click on the graph you would like printed. Next, under *File* on the menu, select *Print*.
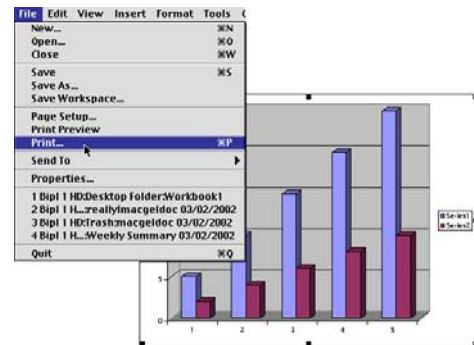
A Print screen will appear. This screen may vary for different versions of Excel. Under **Printer:** you will want to select Create Adobe PDF if possible, if this does not show up, such as in the example shown, you simply choose Acrobat PDF as the **Format:**. (Note: this method will only work if you choose a LaserJet (Postscript) Printer. Make sure the **Destination:** is File. Make sure that **no compression or downsample options** are checked. There may be a option entitled **After PDF creation:** you can choose Launch Nothing, (unless you would like Acrobat to open automatically after your file is created, in which case you would choose Launch Adobe Acrobat.) If there is an option entitled **Job Options**, choose Press, do not choose Ebook. After going through all of these options, click Save to create your PDF file.
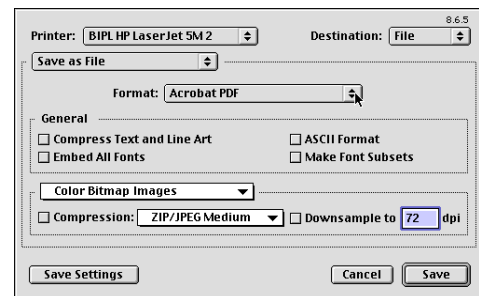
Once your PDF file is created, open it. Now you can save your image as a TIFF file. To do this, go to *File>Export>Extract images>TIFF Files*.
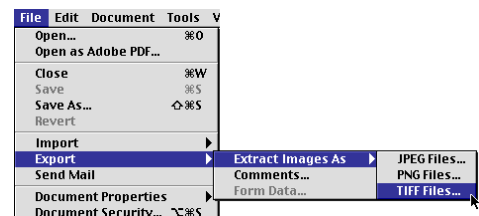
POWERPOINT TO PDF GUIDE

This guide is to help you make PDF files from Powerpoint files. The reason you might want to do this is so that you can make your Powerpoint slide, poster, image or whatever into a high quality TIFF file for printing. This is written for both Macintosh and Windows platforms, using Powerpoint 2000 and Adobe Acrobat 5.0 for Windows, and 4.0 for Macintosh. You must have both Powerpoint and Acrobat to use this method, and while it is recommended to use the latest versions of both programs, this guide will still be generally helpful for earlier versions as well.

WINDOWS:

First, you need to open a saved Powerpoint file. Then, if everything looks good, you can proceed. Under *File* on the menu, select *Print*. There is another way to do this, using the "acrobat" menu, but this method seems to be more reliable.
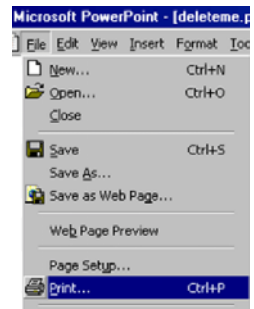
Assuming you have Acrobat installed, in the Printer Name box, you should select the Acrobat Distiller option. Note: **Do not check the "print to file" box**. Don't need to worry about any of the other stuff in the print dialogue box either, as none of it has to do with PDF options. Once you have Acrobat Distiller selected, click on the box marked Properties.
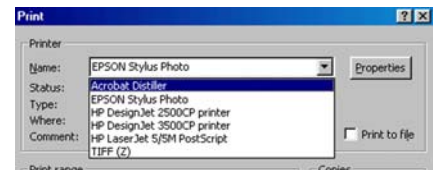
First you need to select your paper size. It is best if you select the same size you eventually want to print on. You also need to select whether it is portrait or landscape orientation. If the paper size options it gives work for you, great. Otherwise, scroll to the right, and select the Custom option. A button marked Custom will appear below. Click on this to set the paper size.
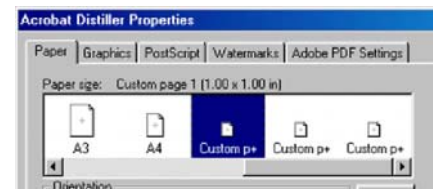
Put in the width and height of your document. Note that if you're making multi-page PDFs, say from a series of slides, the width and heighth will be the same for all of them. If you need different sizes/orientations for various slides, you should do them individually.
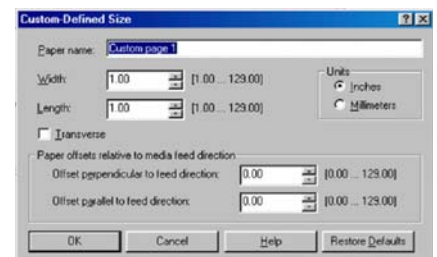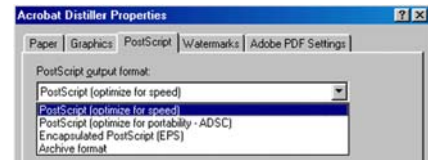
Click ok, and go next to the Graphics tab. For most purposes, 300 dpi is quite good resolution. You can use 600 dpi if you need to, but remember it will create a much bigger file size. You can change the scaling if you need to.
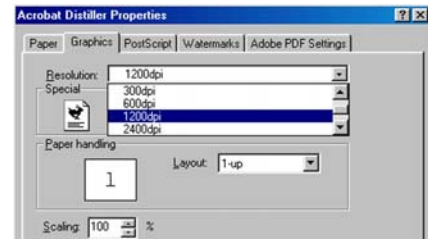
Under the next tab, Postscript, you should choose "postscript optimize for speed."

Don't worry about the Watermarks tab.

Under the Adobe PDF Setting tab, you should choose the Print setting, as it gives you the best image quality for file size.

Also, deselect View Result in Acrobat unless you want Acrobat to immediately open every file right after you save it.

You can click on "edit conversion settings" if you want. You shouldn't actually need to change anything here though unless you want to. If you change anything, click ok, if not, click cancel.
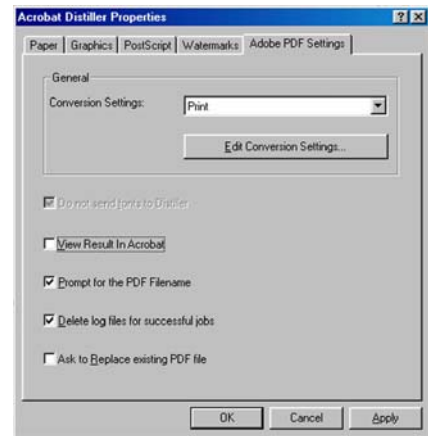
If everything else is ok, click OK, which takes you back to your print menu, and then click Print. You will be prompted to enter a filename and location to save with, and then it will make a PDF of your Powerpoint file.


Once you have your PDF file, you can open it in Photoshop and save it as a high-quality TIFF. This may seem like a lot of work but believe us, it's worth it.

MACINTOSH:

First you should open a saved Powerpoint file. Then, if everything looks good, you can proceed. Under the *File* on the menu, select *Print*. Note that not all print windows have the PDF option. You probably have to choose a laserjet printer in your Chooser. Once in the print window, you must select "file" as the destination.
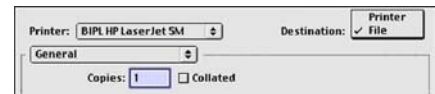
Then, under settings (where it says General), go to the "Save as File" option.
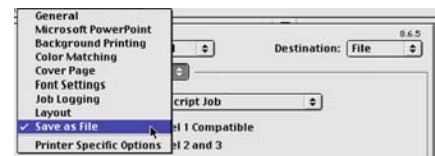
From the **Format** list, Choose Acrobat PDF.
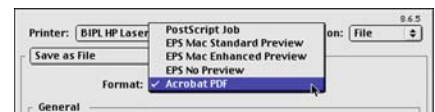
At the bottom, you should select the appropriate setting depending on whether your image is black and white, grayscale, or color. Then, you should **deselect** the compress text and line art, as well as the zip/jpeg compression. For most purposes you can leave downsample on, only you should change the resolution to 300 dpi. For grayscale images you can go as high as 600 dpi if you wish.
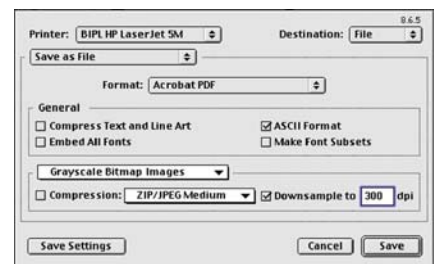
Then, hit save. You will be prompted to enter a name and choose a location to save your file. It may take a while, and your computer may seem very slow, but eventually you will get a PDF file.