Instructions for Creating IEEE Xplore Compatible PDFs (v1.0)

These instructions explain how to adjust your Adobe Acrobat Distiller to the proper settings to produce IEEE Xplore Compatible PDFs. <u>This is a crucial step in the preparation of your final manuscript!</u> (The alternative is rejection or a scanned-in paper.)

Do NOT use any kind of password protection, print restriction or edit restriction on your PDF. Turn these protections OFF!

(File --> Document Info --> Security)

For those of you who are **true experts** with Distiller, you may download the Distiller job options zip file located at http://www.rawcon.org/Acrobat_IEEE_job_option_files.ZIP and proceed directly to the IEEE web page that explains how to adjust your Adobe Distiller settings: www.ieee.org/confstandards   This document may also be helpful: http://www.rawcon.org/rawcon2004/IEEEAuthorPDFGuideV32.pdf

A word of caution, however, the instructions on the IEEE web page are not straightforward to use. Furthermore, users of Acrobat 6 should take care: Once a PDF file is created ("distilled"), it must **not** be "Saved" using Acrobat 6 or Acrobat 6 Reader—this has been found to render PDFs incompatible with IEEE Xplore PDF compatibility requirements.

If you have any doubts about how to do this, **please** follow the detailed step-by-step instructions that follow. **Finally, be sure to perform the simple verification test shown on of these instructions!**

Detailed Step-by-Step Instructions:

For the rest of us who are **not** experts with Distiller, here are detailed step-by-step instructions, along with screen shots, showing how to adjust your Distiller. Note that "Acrobat PDFWriter" will **not** produce IEEE Xplore compliant documents. Adobe "Acrobat Distiller" **must** be used instead. Also note that this procedure depends on which version of Adobe Acrobat you are using to create PDFs. The three versions are 4, 5 and 6.

As of this writing, the IEEE has recently determined the proper settings for Acrobat 6; therefore, users of Acrobat 6 no longer need to set their Distiller to "mimic" Acrobat 5. Be forewarned, however, that users of Acrobat 6 (Reader or Distiller) should take care **not** to use the 'Save' function **after** a file has been distilled using Acrobat Distiller. This has been found to render PDFs incompatible with IEEE PDF requirements.

Instructions are shown separately for Acrobat 4, Acrobat 5 and Acrobat 6. Choose the instructions appropriate for your version of Distiller. **Note that there is a simple verification test shown on** **that you should use to test your newly created PDF for IEEE Xplore Compatibility.**

## A Special Note for Users with Adobe Acrobat 4:

When creating a PDF from a Word document, many (but not all) users of Acrobat 4 must select an "Acrobat Distiller" printer icon in the print menu. This seems a bit odd at first encounter—the document does not print, but is created locally in the PDF Output file. We first describe the settings to create a PDF using this approach for Acrobat 4. Again, note that the "Acrobat PDFWriter" printer icon will **not** create IEEE Xplore compatible PDFs! The "Acrobat Distiller" printer icon must be used.

Configuring Your Distiller the Easy Way or the Hard Way

There are two ways to configure your computer, the easy way or the hard way. For the easy way, you must download the customized Job Settings file from the RAWCON 2004 web site, and store it in a folder on your computer. Otherwise, you can do it by following a detailed series of screen captures that will show you every button press to enter manually. Either approach will work equally well:

Downloading Customized IEEE Parameters for Acrobat 4.0, 5.0 or 6.0 (the Easy Way)

Step 1. Locate and open the "Settings" folder for your particular version of Acrobat Distiller. In the next few steps, you will be moving a new job option file into this folder. Typically, the Settings folder is located as shown on your hard drive (C: or D:), in the Program Files folder, in the Adobe folder, in the Acrobat X.0 folder (pick the version that has Distiller), in the "Distillr" folder, in the Settings folder. This is shown below:
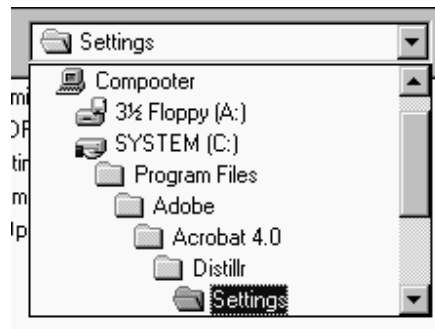
(next page)

When you open the Settings folder, it will appear something like this:
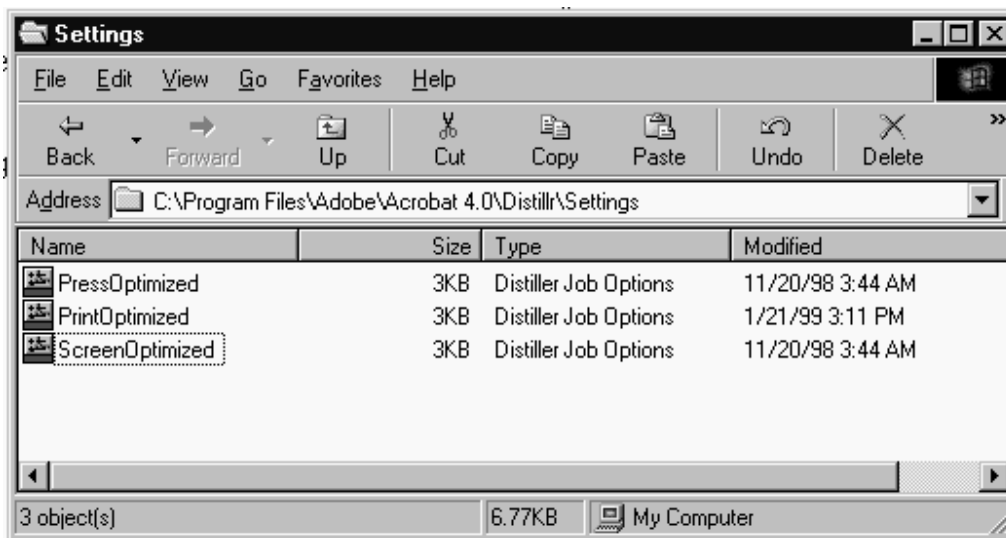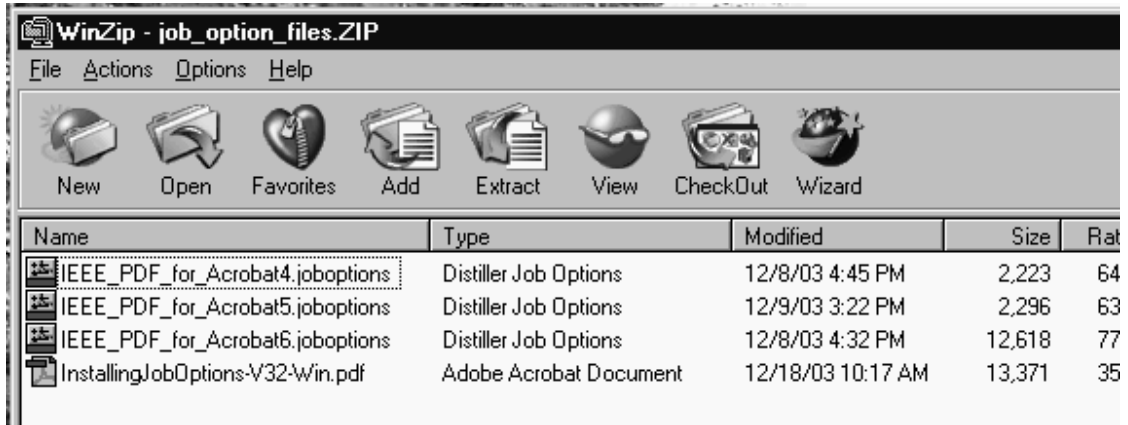

None of these three standard choices (Press, Print, Screen Optimized) are IEEE Xplore compatible!

Next, you will add a job option file that is compatible.

Step 2. Download the zip file located at:

http://www.rawcon.org/Acrobat_IEEE_job_option_files.ZIP

Step 3. Open (or Save and unzip) this file on your computer. You will see the following:


Step 4. Click (and hold) on the appropriate job option file and drag & drop this file into your Settings folder from Step 1. The Settings folder will now appear as follows:
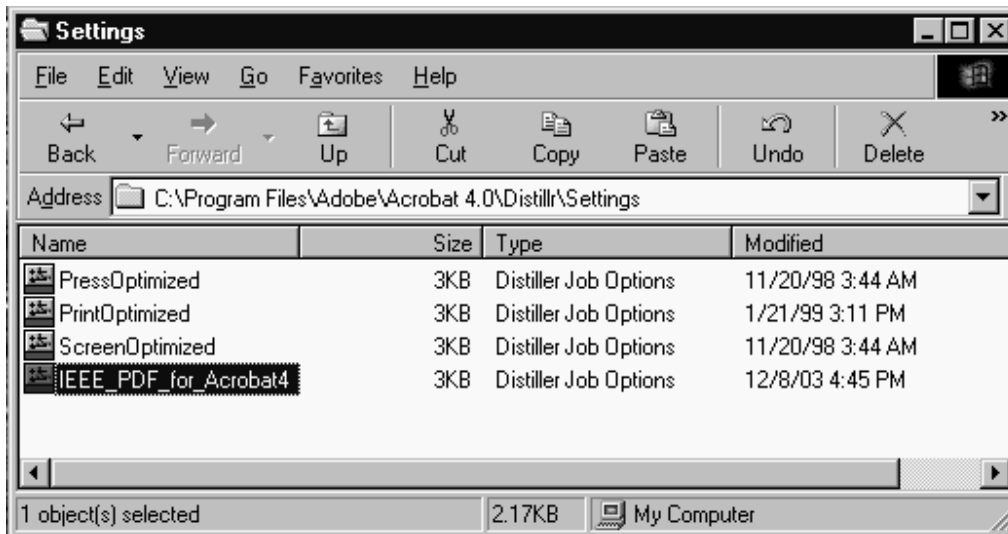
**Step 5.** Close the Settings folder by clicking on the "**x**" in the upper right corner.

(next page)

Step 6. Next, you must select the Job Option file that you just downloaded to your computer. The steps required to do this are given in detail. (The screen shots that follow are shown for Acrobat version 4.0) Press the **Start** button, usually located on the lower left portion of your screen. A pull-down menu will appear. Click on "**Programs**". Another pull-down menu will appear. Click on "**Adobe Acrobat X.0**". Yet another pull-down menu will appear. Click on "**Acrobat Distiller X.0**":
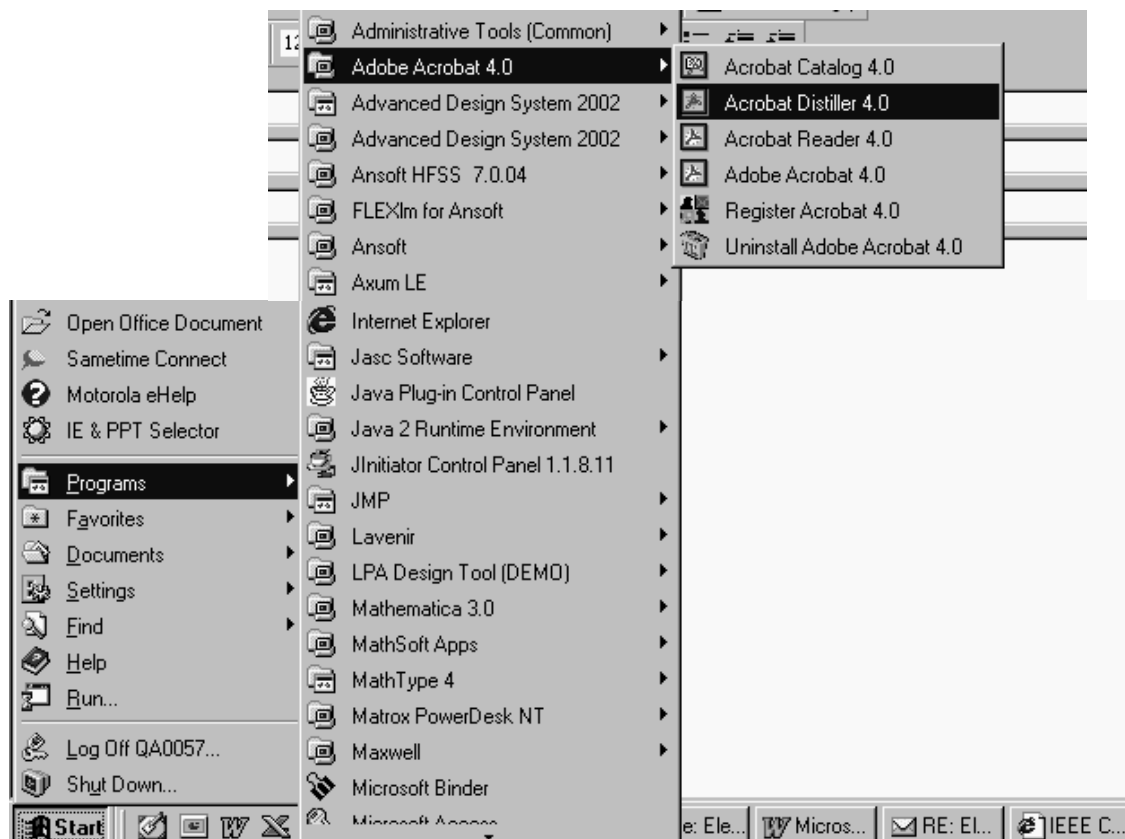
(next page)

Step 7. Adobe Distiller will begin running and a window will appear:
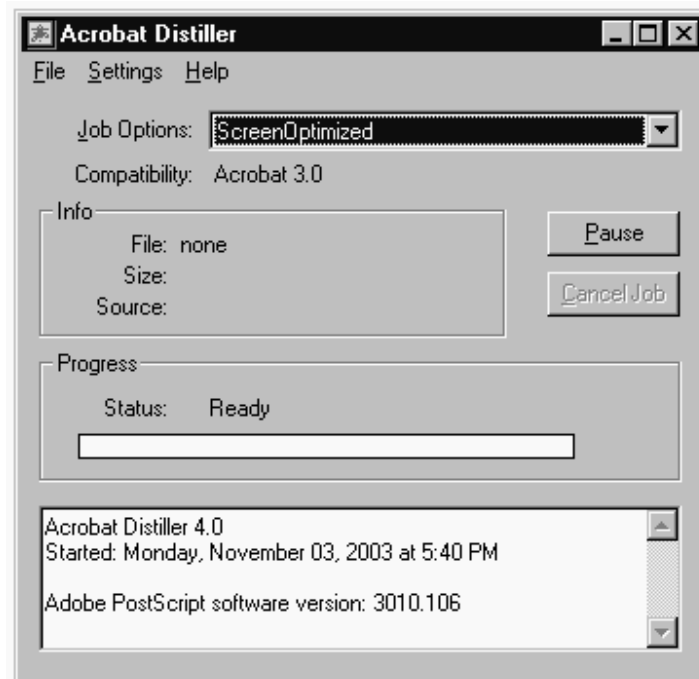
Step 8. Click on the "Job Options" pull-down menu and select "IEEE_PDF_for_AcrobatX".


(next page)

Step 9. The window will now appear as follows:

Notice that there is no "Save" button. At this point, you simply click on the little "**x**" to close this box. Acrobat will remember these settings and apply them to every PDF that you create from now on. That's it! You can now proceed to convert your Word document into an IEEE Xplore compatible PDF file.

Step 10. Note that you should **UNCHECK the "Use Local Fonts" feature** under the "View" pull-down menu on the Acrobat distiller screen. See the next page for a screen-shot.

Step 10, continued...
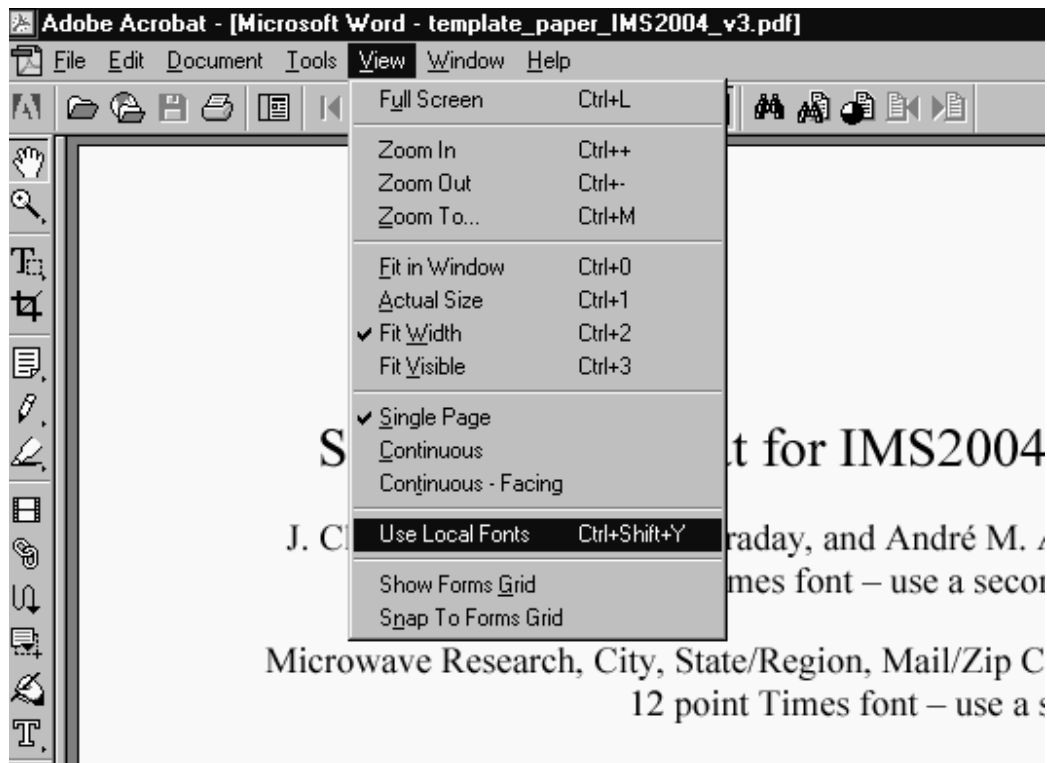
**The "Use Local Fonts" feature should NOT be checked!**

AFTER YOU CREATE YOUR PDF FILE, GO TO AND
PERFORM THE COMPATIBILITY VERIFICATION STEP!

<p style="text-align:center; color:blue;">Setting Parameters **Manually** for Acrobat 4 (the Hard Way)</p>

If for some reason you do not wish to modify Acrobat 4 using the Easy method on page 3, you can do it **manually** by following these steps:

Step 1. (for version 4 of Adobe Acrobat): Press the **Start** button, usually located on the lower left portion of the screen. A pull-down menu will appear. Click on "**Programs**". Another pull-down menu will appear. Click on "**Adobe Acrobat 4.0**". Yet another pull-down menu will appear. Click on "**Acrobat Distiller 4.0**":
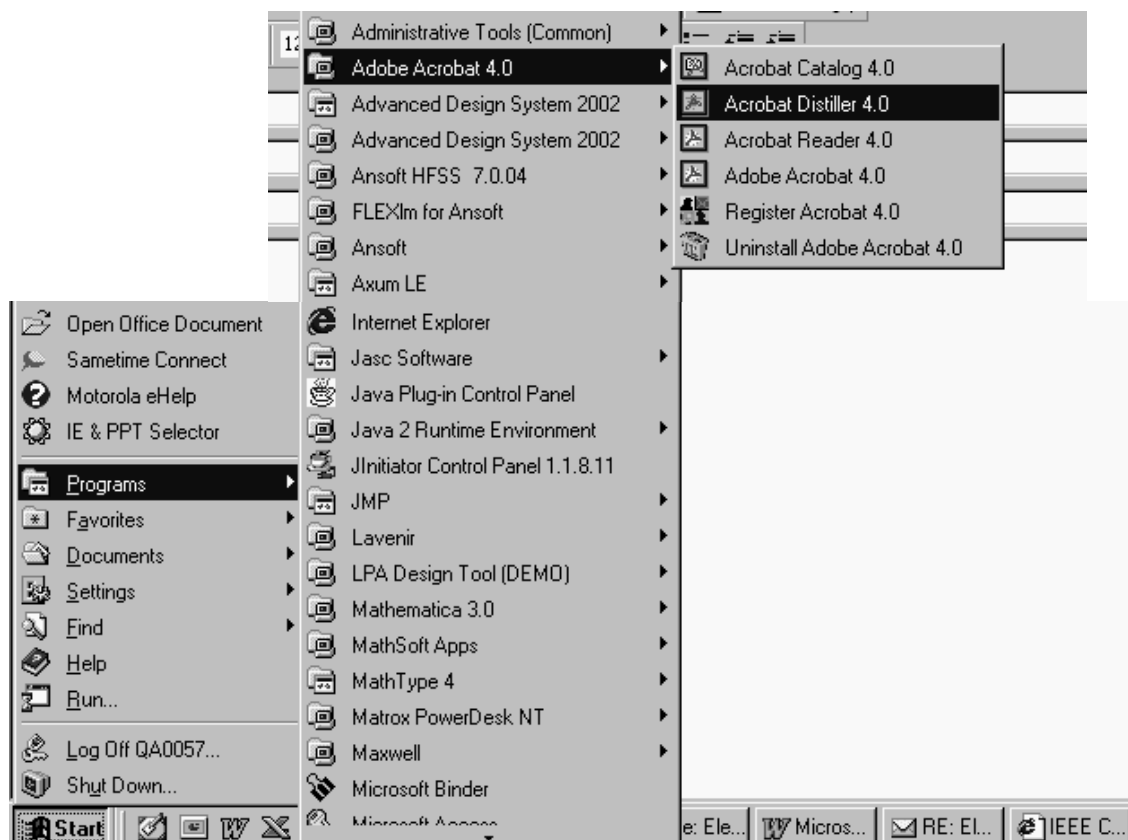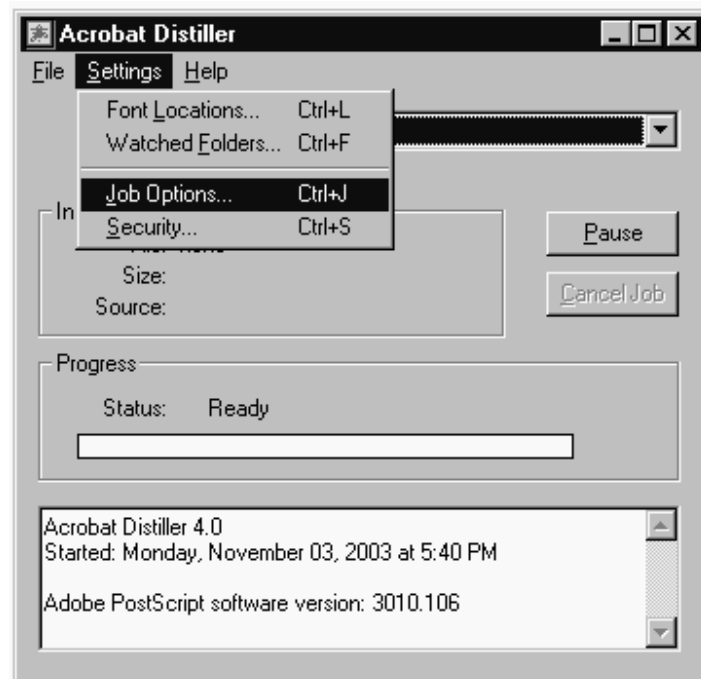

(next page)

Step 2. Adobe Distiller will begin running and a window will appear:
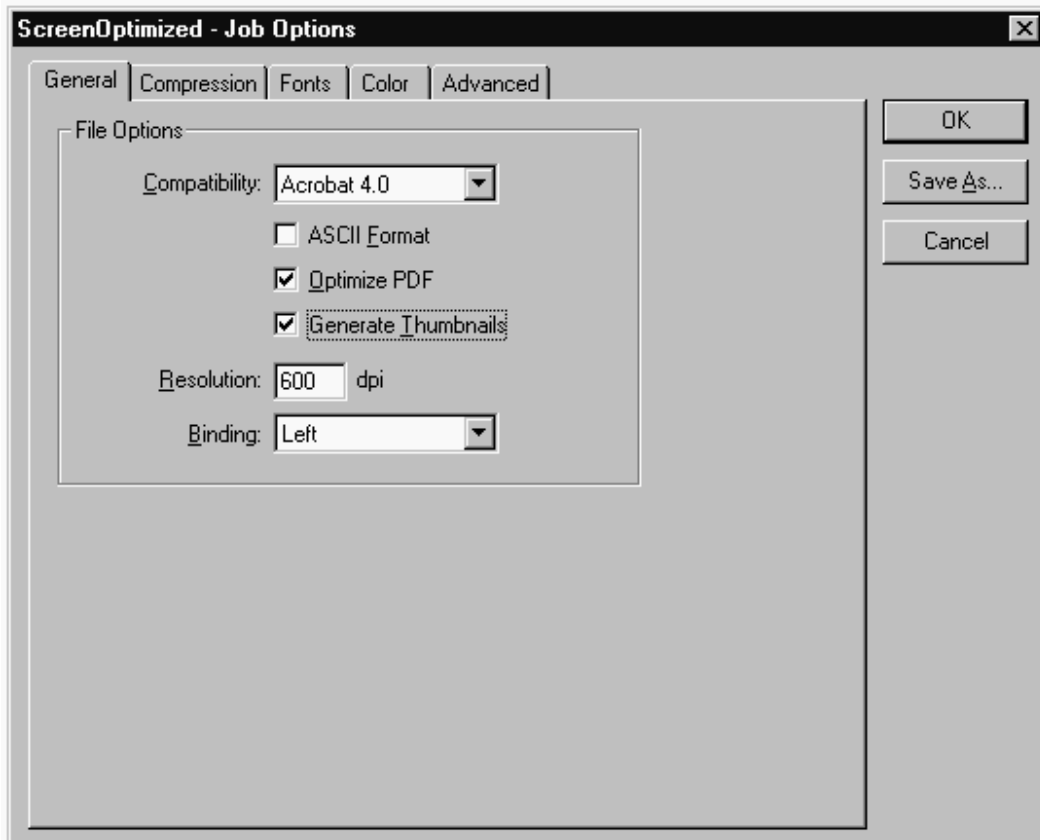

Step 3. Click on "Settings" and then click on "Job Options", as shown below:

(next page)

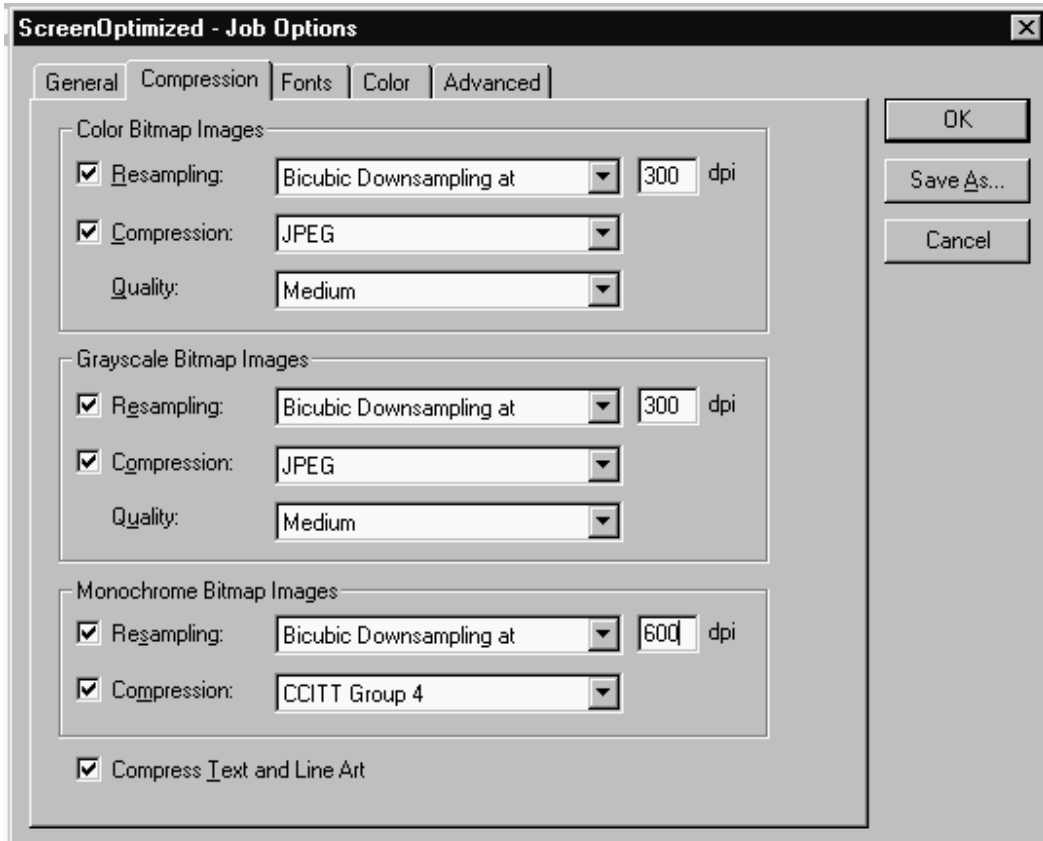**Step 4.** Adobe Distiller will begin running and another window will open:

Under the **General** Tab, as shown below,
Choose Compatibility: **Acrobat 4.0**
Activate **Optimize PDF**
Activate: **Generate Thumbnails**
Enter Resolution: **600 dpi**
Choose Binding: **Left**

(next page)

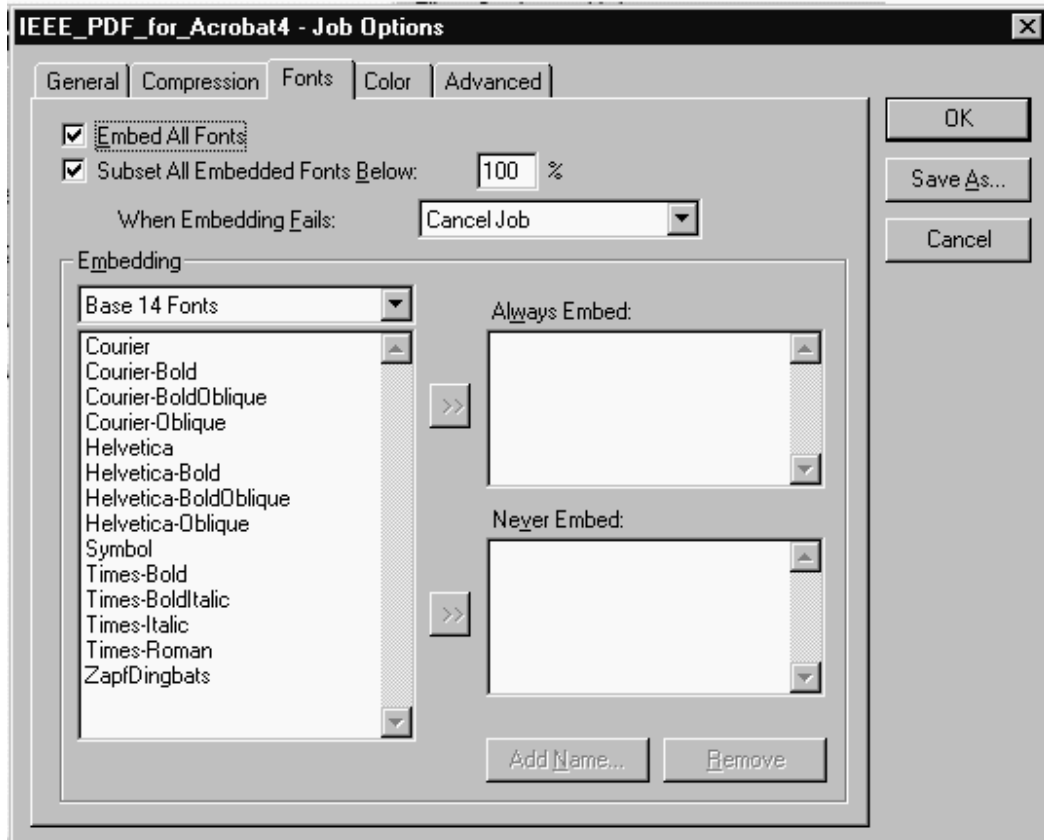**Step 5.** Click on the **Compression** Tab, as shown below,

Click on the check boxes to activate them and adjust the pull-down screens as indicated. Enter the dpi (dots per inch) settings as indicated:

(next page)

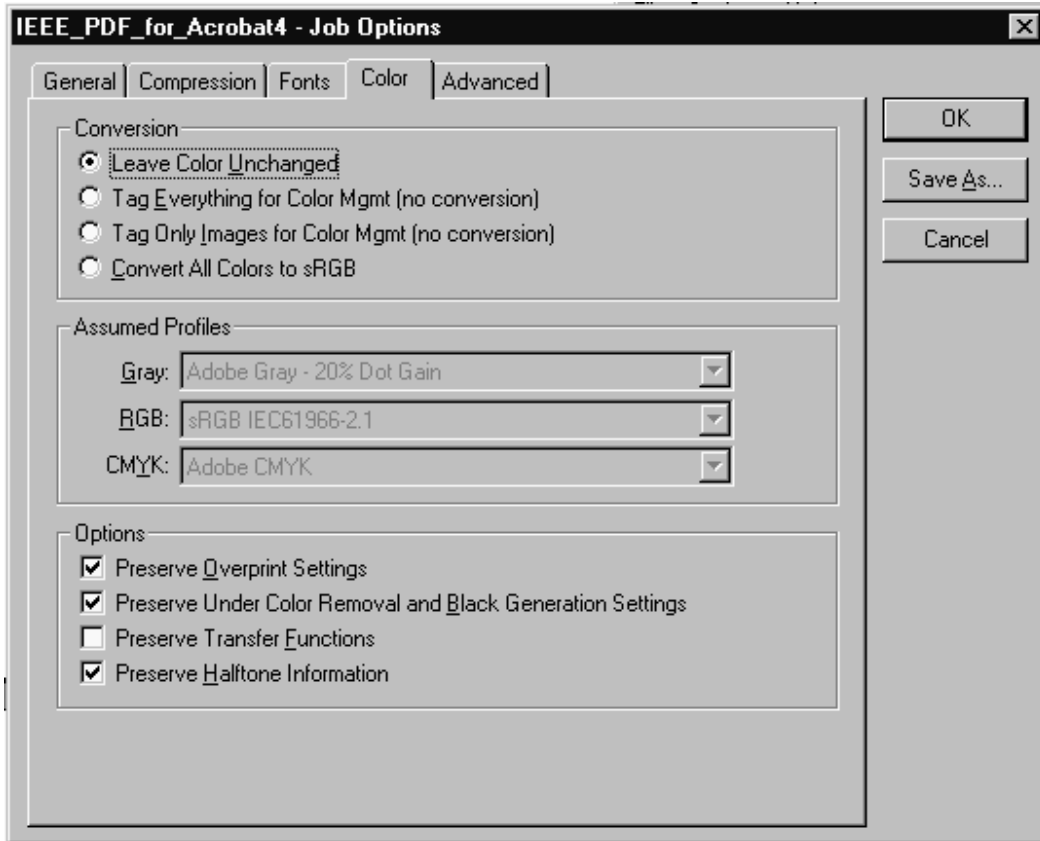**Step 6.** Click on the **Fonts** Tab, as shown below,

Click on the check boxes to activate them and adjust the pull-down screens as indicated. Enter the settings exactly as indicated:

(next page)

**Step 7.** Click on the **Color** Tab, as shown below,

Click on the check boxes to activate or deactivate them, exactly as indicated below:

```
IEEE_PDF_for_Acrobat4 - Job Options                                    [X]

 General | Compression | Fonts | Color | Advanced |
                                                              ┌──────────┐
 ┌─Conversion────────────────────────────────────────────┐   │    OK    │
 │  ⊙ Leave Color Unchanged                               │   └──────────┘
 │  ○ Tag Everything for Color Mgmt (no conversion)       │   ┌──────────┐
 │  ○ Tag Only Images for Color Mgmt (no conversion)      │   │ Save As... │
 │  ○ Convert All Colors to sRGB                          │   └──────────┘
 └────────────────────────────────────────────────────────┘   ┌──────────┐
                                                              │  Cancel  │
 ┌─Assumed Profiles───────────────────────────────────────┐   └──────────┘
 │    Gray: │Adobe Gray - 20% Dot Gain          ▼│         │
 │                                                        │
 │    RGB:  │sRGB IEC61966-2.1                   ▼│         │
 │                                                        │
 │    CMYK: │Adobe CMYK                          ▼│         │
 └────────────────────────────────────────────────────────┘

 ┌─Options────────────────────────────────────────────────┐
 │  ☑ Preserve Overprint Settings                          │
 │  ☑ Preserve Under Color Removal and Black Generation Settings │
 │  ☐ Preserve Transfer Functions                          │
 │  ☑ Preserve Halftone Information                        │
 └────────────────────────────────────────────────────────┘
```
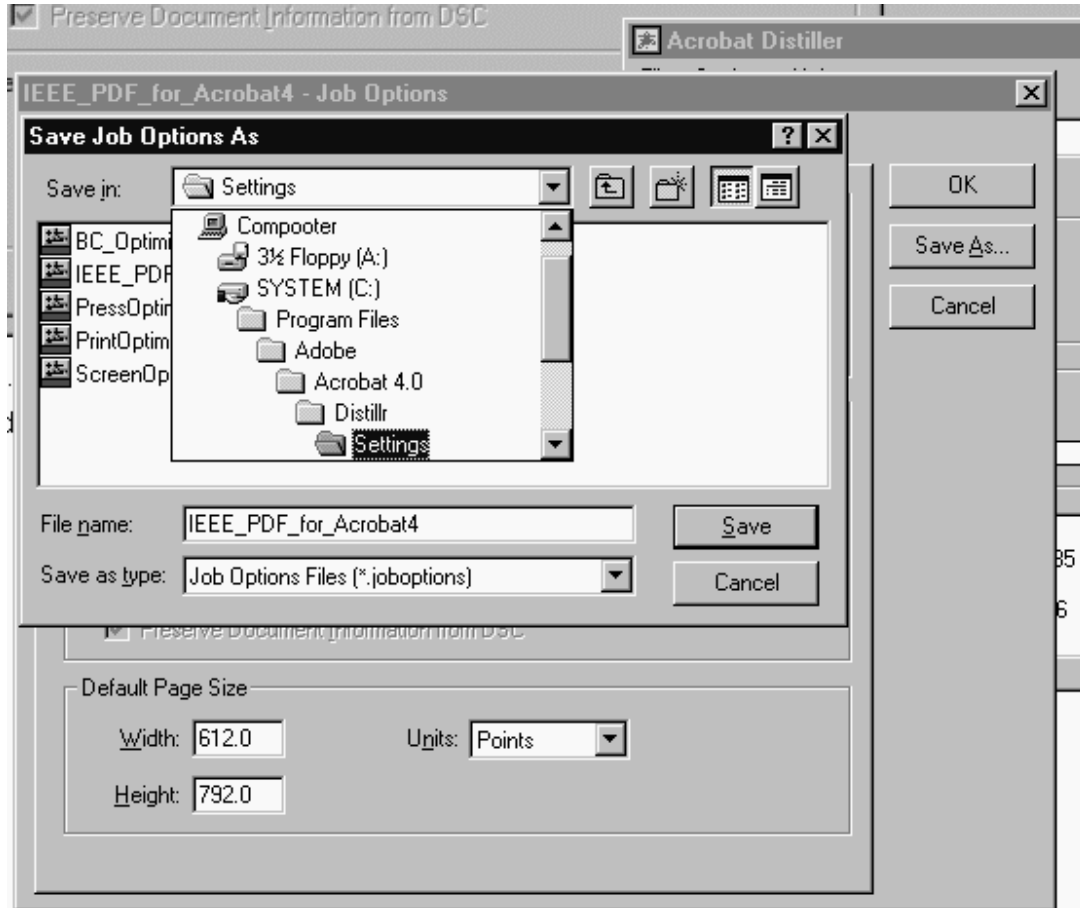
(next page)

14

Step 8. Click on the **Advanced** Tab, as shown below,

Click on the check boxes to activate or deactivate them, exactly as indicated below. If necessary, configure the Page Default Size as shown:
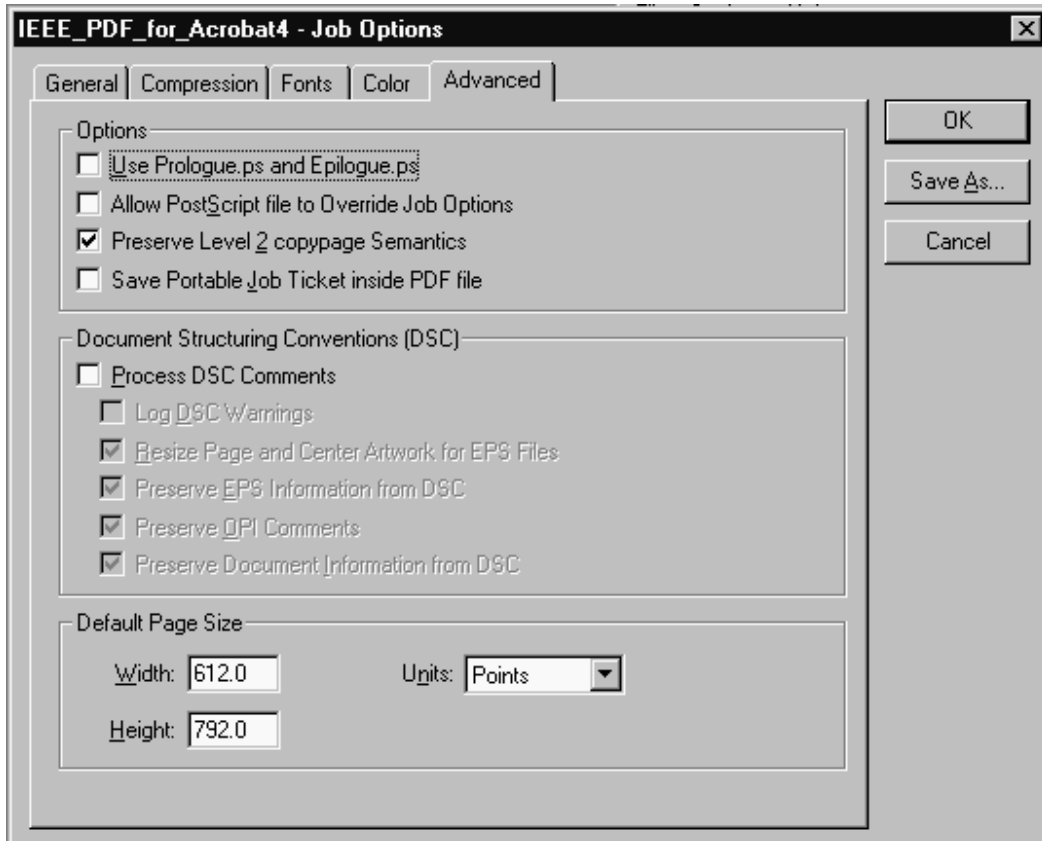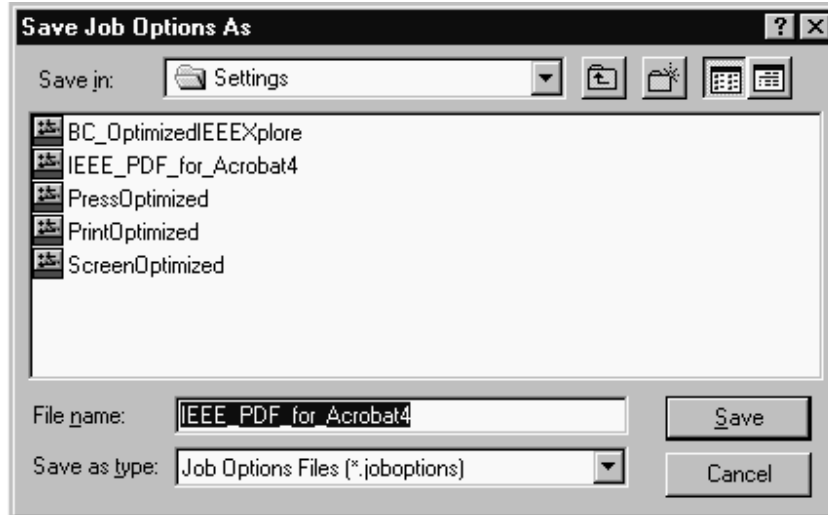

(next page)

Step 9. Click "Save As" and a Save Job Options pop-up window will appear. If necessary, click the "Save in" pull-down menu and navigate to the "Settings" folder under the Adobe Acrobat 4.0 folder. This is illustrated below:
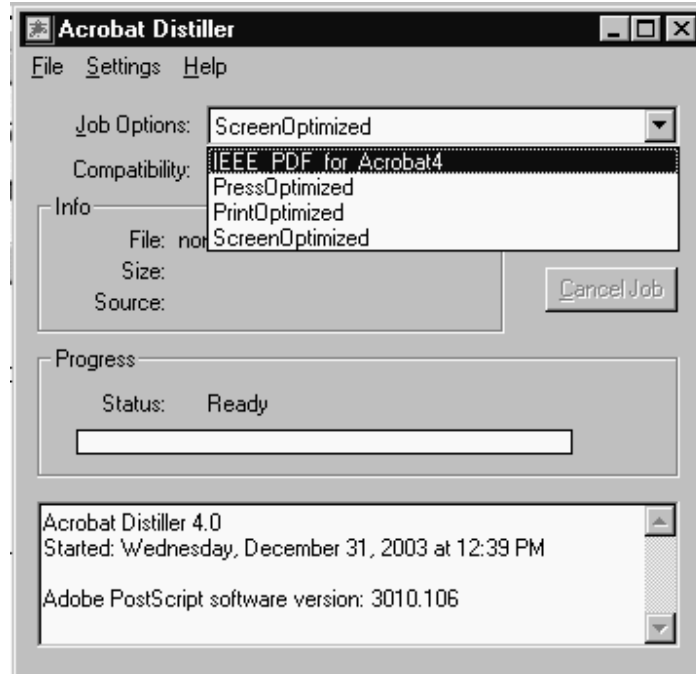

(next page)

Step 10. Give this newly created job option a file name you will remember, such as IEEE_PDF_for_Acrobat4, or something to that effect. Type it in the File name box. Then click Save:

Then click "OK" on the pop-up window shown in Step 9.

Step 11. In the Acrobat Distiller Box from Step 2 on page 10, click on the Job Options pull-down menu and select your newly created Job Option.

(next page)

Step 12. The Acrobat Distiller Box from Step 11 will now appear as shown below:

Notice that there is no "Save" button. At this point, you simply click on the little "**x**" to close this box. Acrobat will remember these settings and apply them to every PDF that you create from now on. That's it! You can now convert your Word document into an IEEE Xplore compatible PDF file.

Step 13. Note that you should **UNCHECK the "Use Local Fonts" feature** under the "View" pull-down menu on the Acrobat distiller screen. (See page 8 for a screen-shot.)

<p style="text-align: center; color: blue;">Setting Parameters **Manually** for Acrobat 5.0 (the Hard Way)</p>

If for some reason you do not wish to modify Acrobat 5 using the Easy method on page 3, you can do it **manually** by following these steps:

Step 1. Start up Adobe Acrobat Distiller 5.0. Press the **Start** button, usually located on the lower left portion of the screen. A pull-down menu will appear. Click on "**Programs**". Another pull-down menu will appear. Click on "**Adobe Acrobat 5.0**". Yet another pull-down menu will appear. Click on "**Acrobat Distiller 5.0**":

Step 2. Adobe Distiller will begin running and a window will appear:
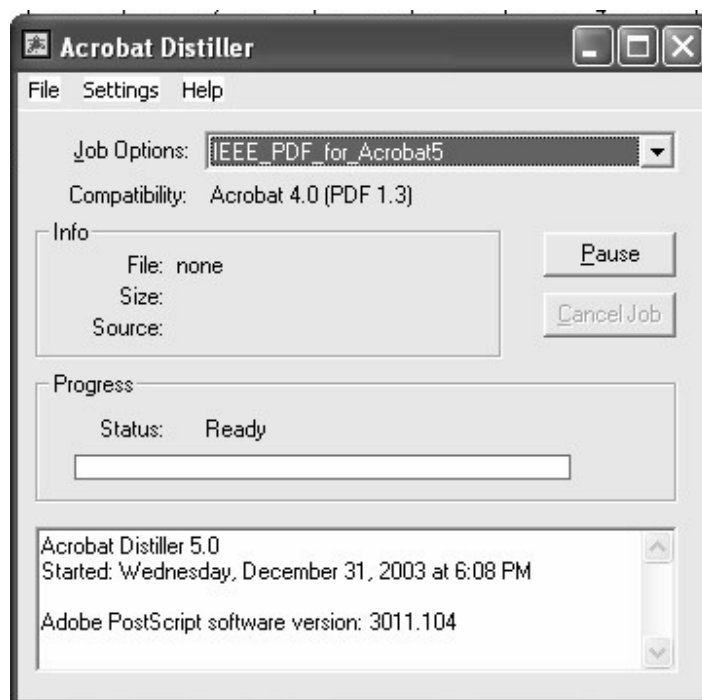
(next page)

Step 3. Click on "Settings" and then click on "Job Options", as shown below:
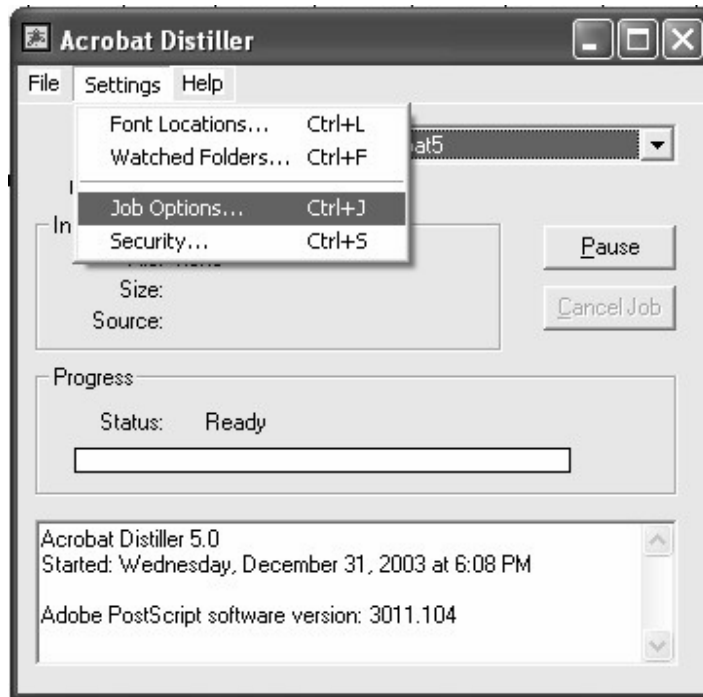
(next page)

Step 4. Adobe Distiller will begin running and another window will open:

Under the **General** Tab, as shown below,
Choose Compatibility: **Acrobat 4.0 (PDF 1.3)**
Activate **Optimize for Fast Web View**
Activate: **Embed Thumbnails**
Activate: Page Range**: All**
Choose Binding: **Left**
Enter Resolution: **600** dpi
Set Default Page Size and Units as shown below:
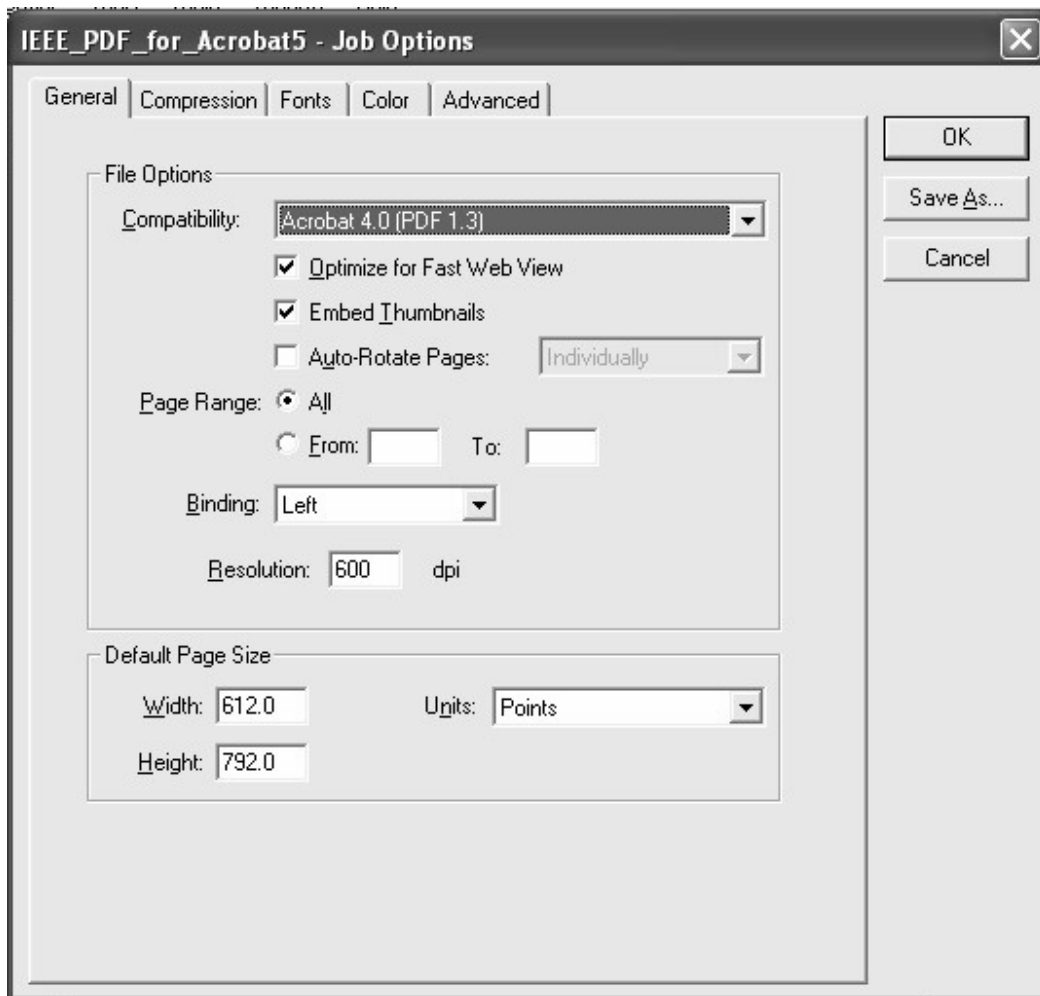
(next page)

Step 5. Click on the **Compression** Tab, as shown below,

Click on the check boxes to activate them and adjust the pull-down screens as indicated. Enter the dpi (dots per inch) settings as indicated:
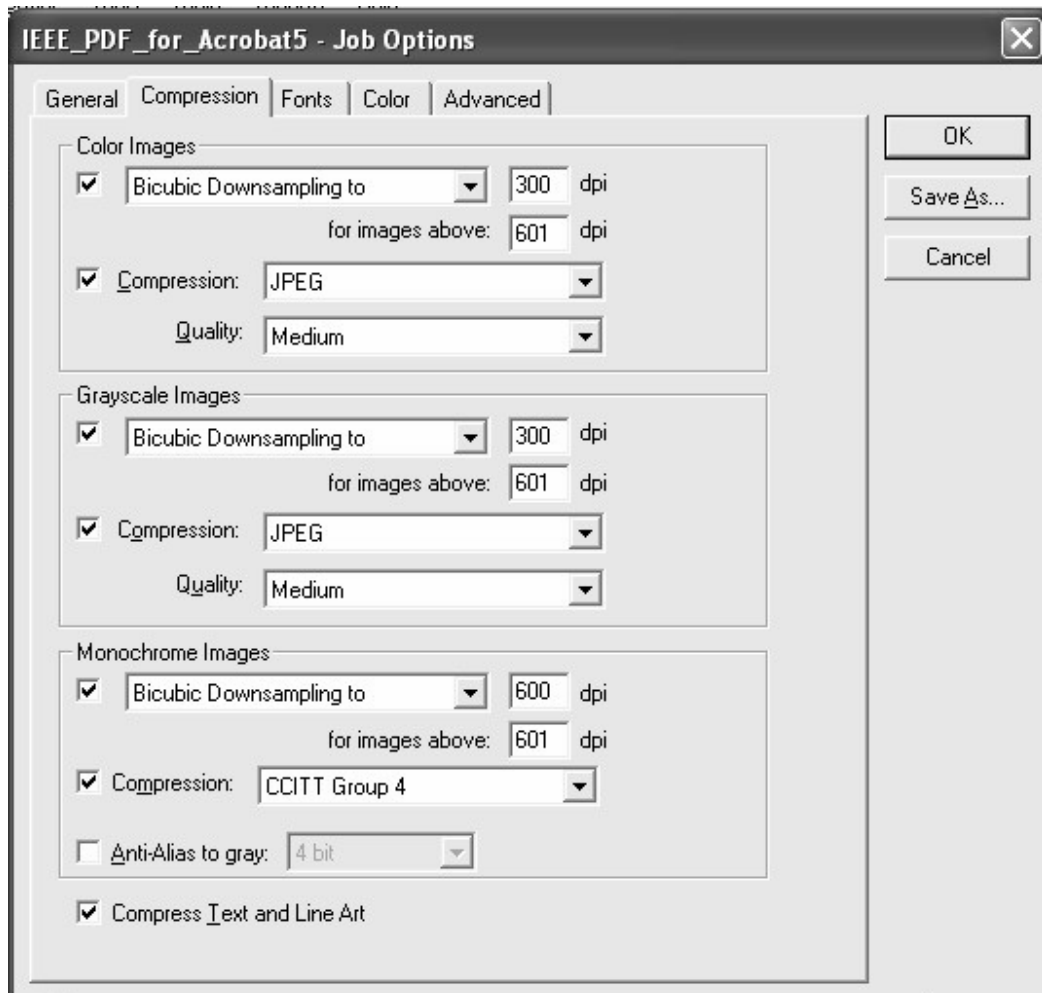
(next page)

Step 6. Click on the **Fonts** Tab, as shown below,

Click on the check boxes to activate them and adjust the pull-down screens as indicated. Enter the settings exactly as indicated:

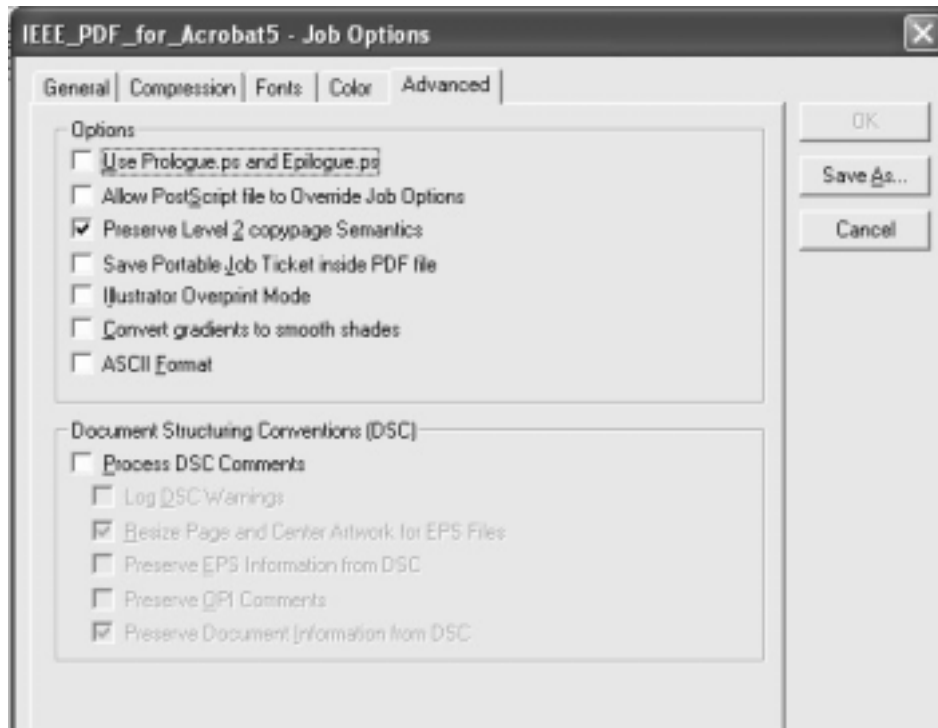(next page)

Step 7. Click on the **Color** Tab, as shown below,

Click on the check boxes to activate or deactivate them, exactly as indicated below:
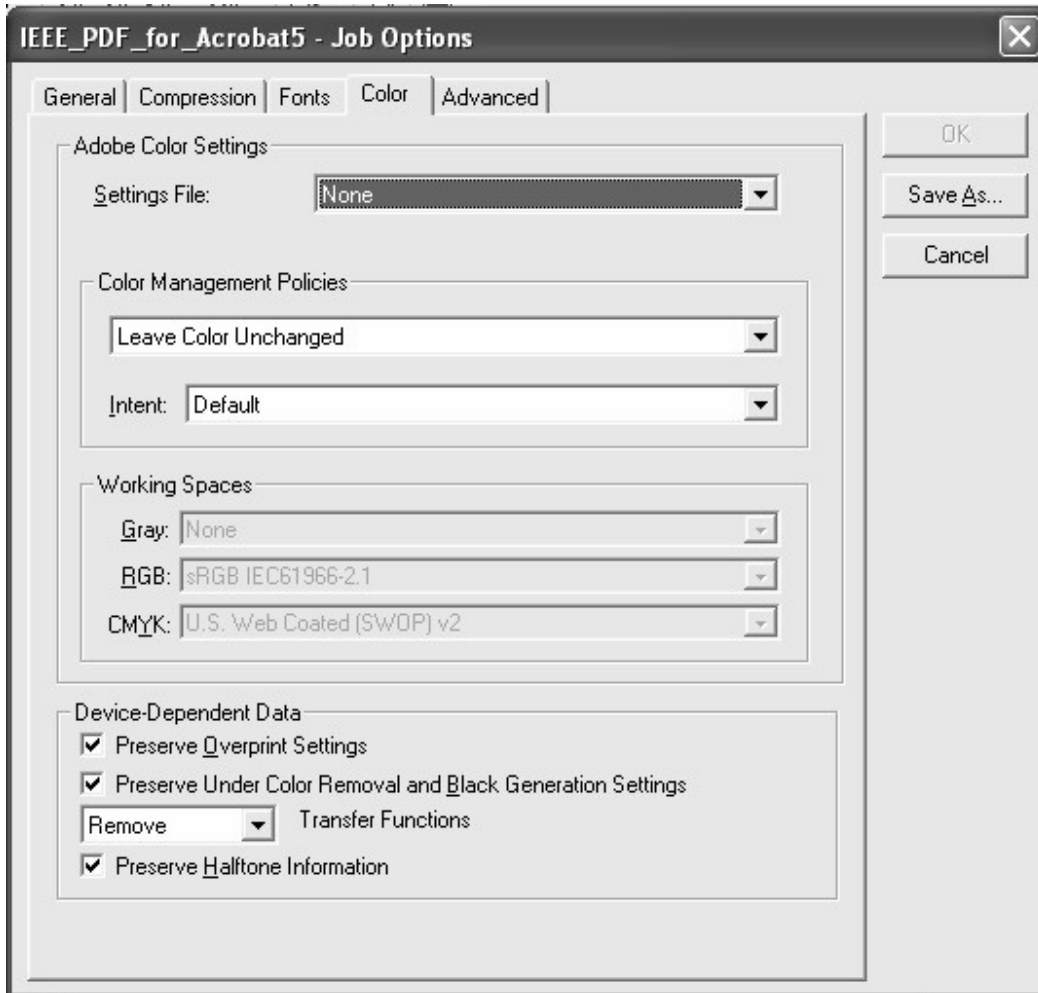
(next page)

Step 8. Click on the **Advanced** Tab, and click on the check boxes to activate or deactivate them, exactly as indicated below:

Step 9. Click "Save As" and a Save Job Options pop-up window will appear. If necessary, click the "Save in" pull-down menu and navigate to the "Settings" folder under the Adobe Acrobat 4.0 folder. (This is illustrated on page 16 of these instructions for Acrobat 4.0)

Step 10. Give this newly created job option a file name you will remember, such as IEEE_PDF_for_Acrobat5, or something to that effect. Type it in the File name box. Then click Save. (This is illustrated on page 17 of these instructions for Acrobat 4.0.)

Step 11. In the Acrobat Distiller Box from Step 2 on page 19, click on the Job Options pull-down menu and select your newly created Job Option. (This is illustrated on page 17 for Acrobat 4.0.)

Step 12. The Acrobat Distiller Box from Step 11 will now appear as shown below: If there is a save button, click Save. If there is no "Save" button, simply click on the little "**x**" to close this box. Acrobat will remember these settings and apply them to every PDF that you create from now on. That's it! You can now convert your Word document into an IEEE Xplore compatible PDF file.

Step 13. Note that you should **UNCHECK the "Use Local Fonts" feature** under the "View" pull-down menu on the Acrobat distiller screen. (See page 8 for a screen-shot.)

<p style="text-align:center; color:blue;">Setting Parameters **Manually** for Acrobat 6.0 (the Hard Way)</p>

If for some reason you do not wish to modify Acrobat 6 using the Easy method on page 3, you can do it **manually** by following these steps:

Step 1. Start up Adobe Acrobat Distiller 6.0. Follow the steps as previously shown for Acrobat 5 so that you get to the Adobe PDF Settings panel. Click on the **General** Tab and adjust your settings exactly as shown below:
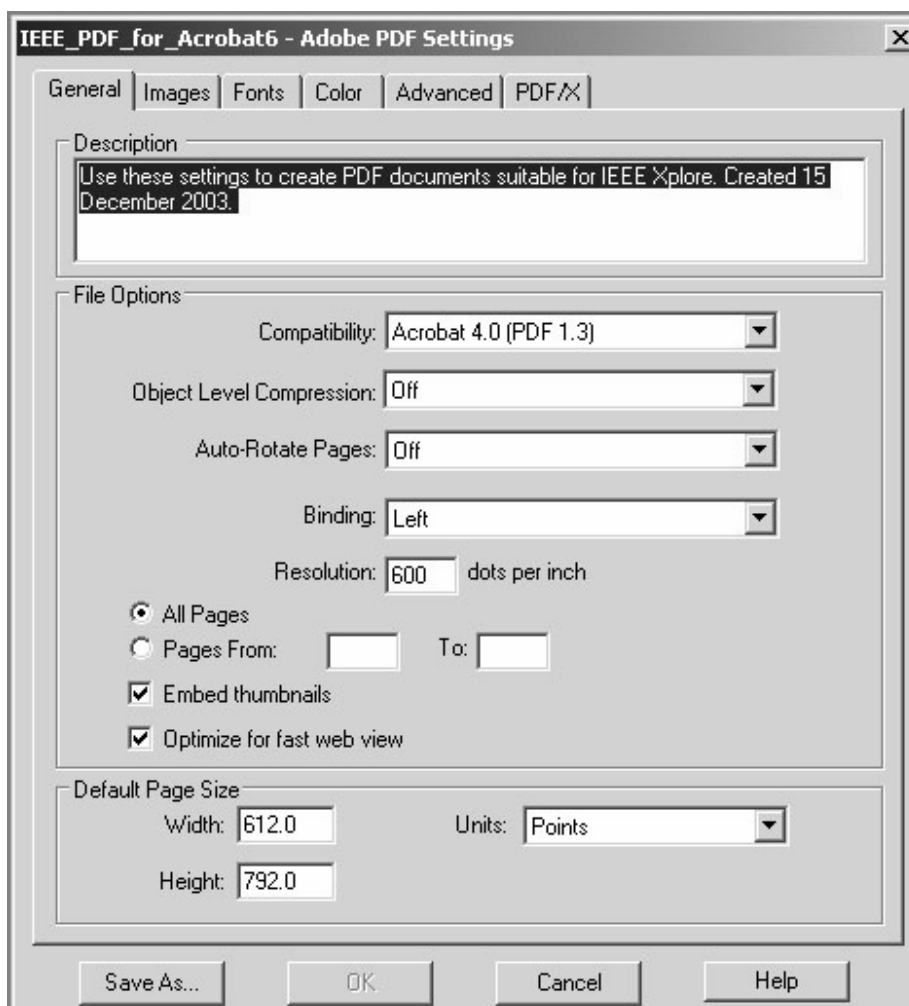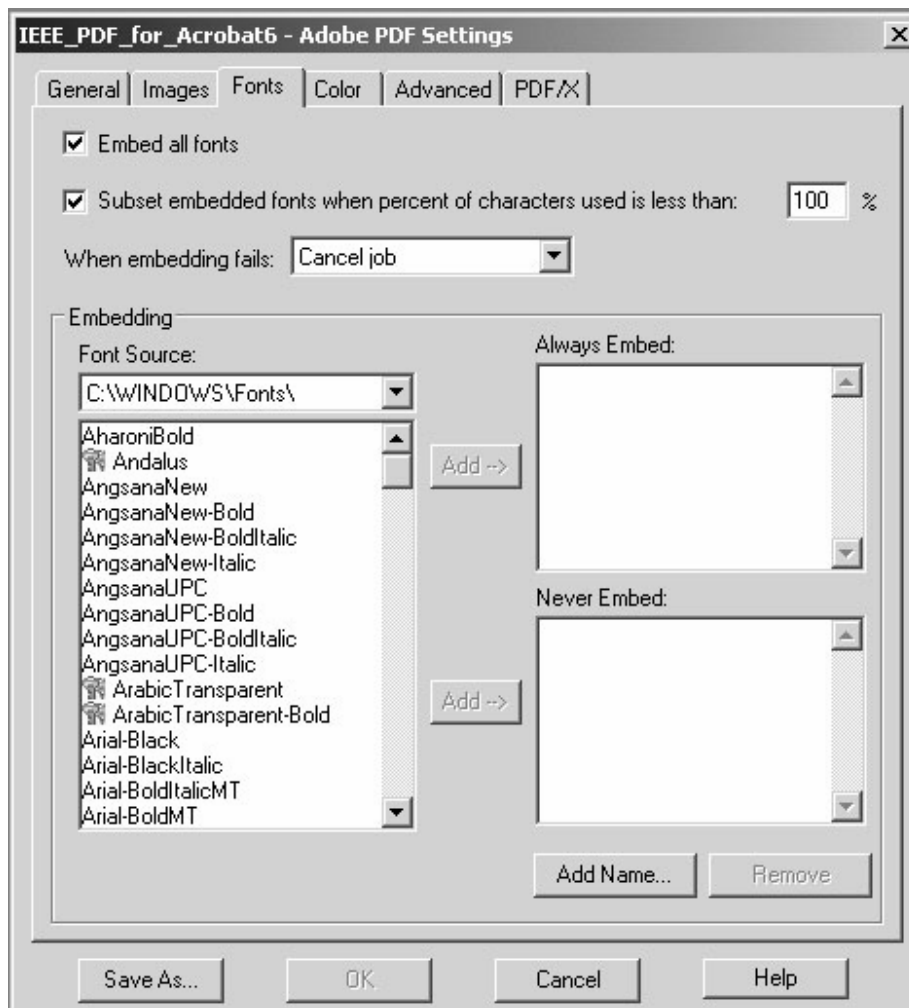

(next page)

Step 2. Click on the **Images** Tab and adjust your settings exactly as shown below:
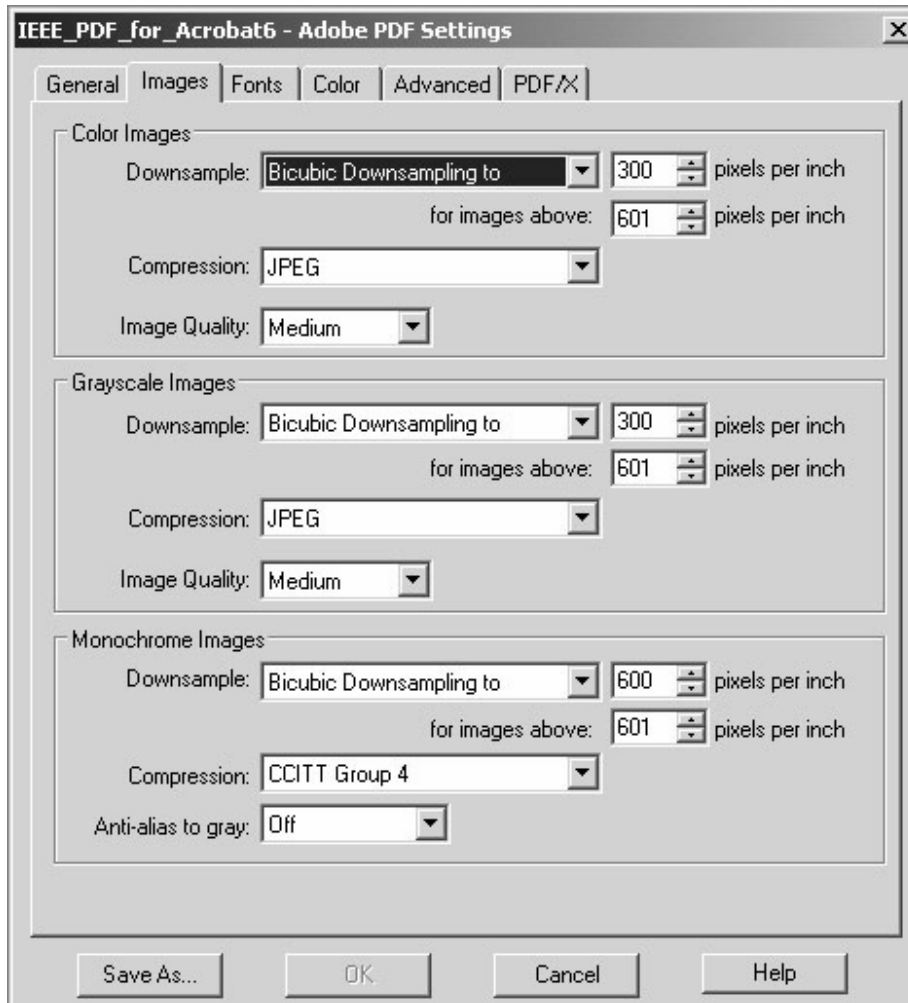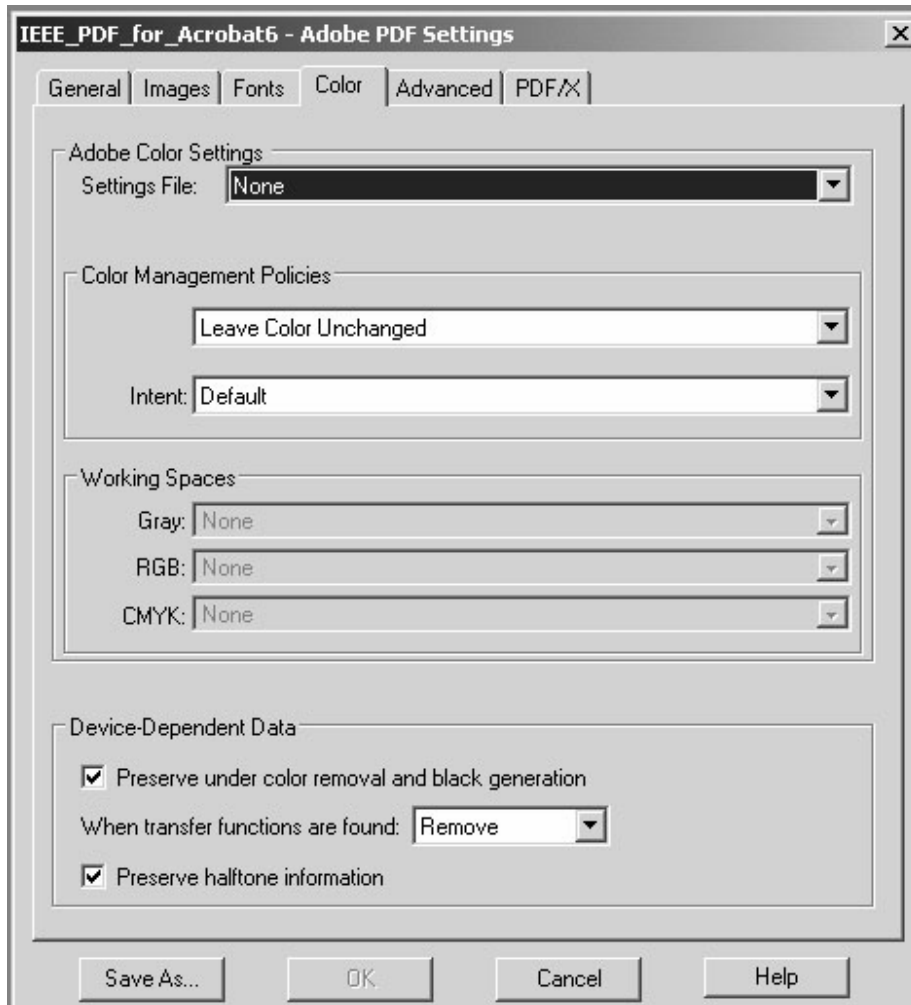

(next page)

Step 3. Click on the **Fonts** Tab and adjust your settings exactly as shown below:
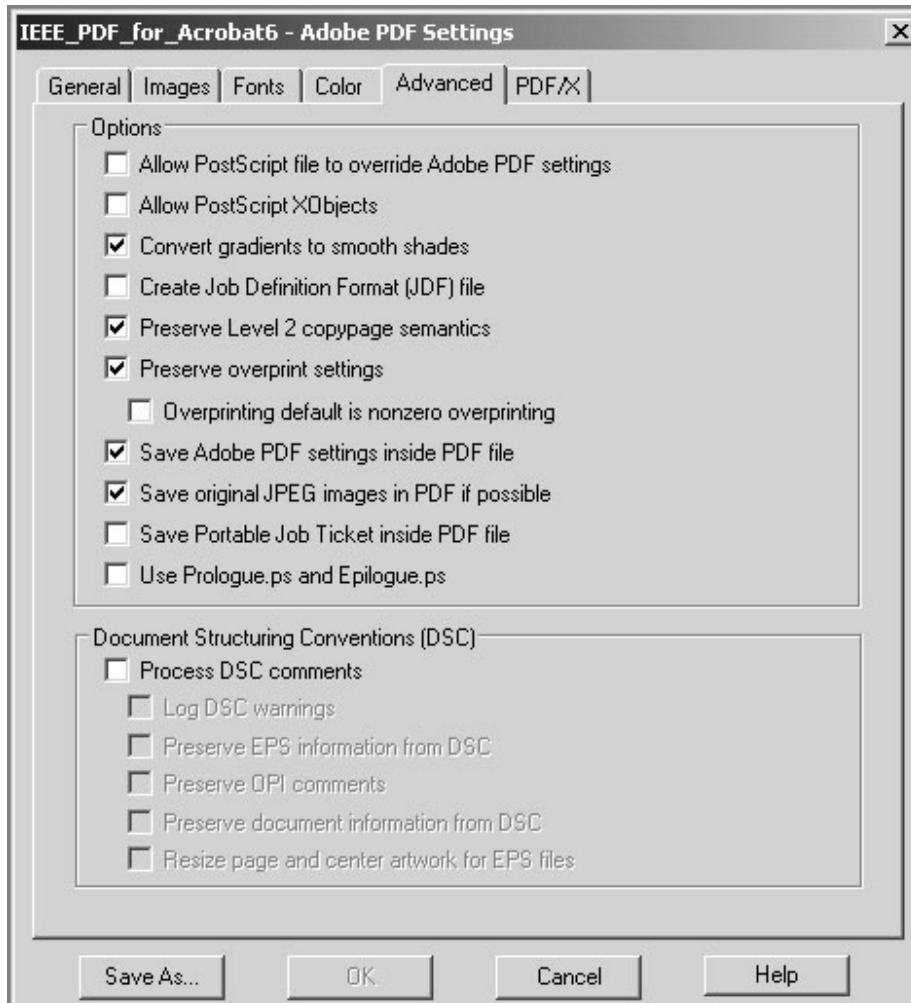

(next page)

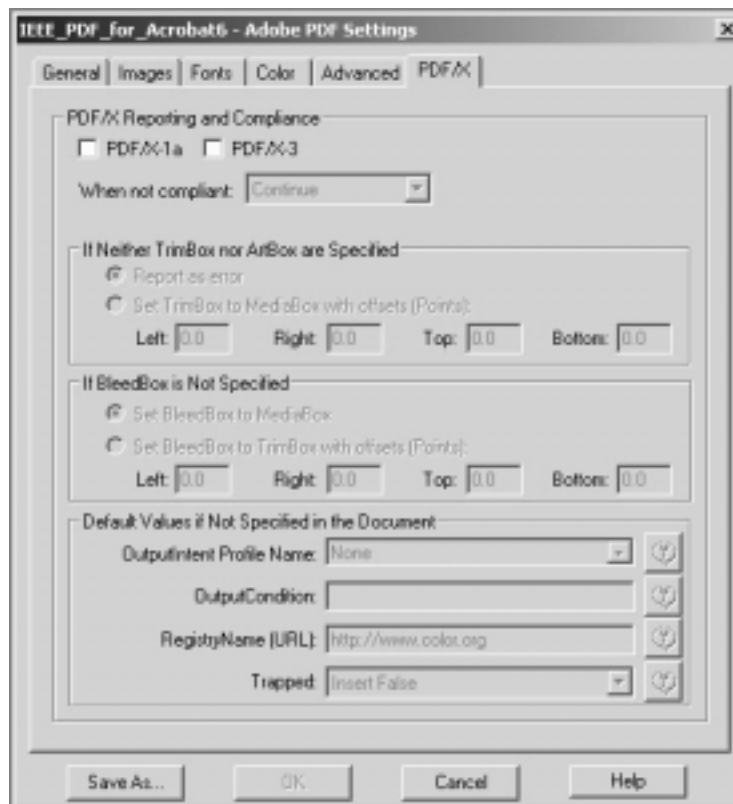**Step 4.** Click on the **Color** Tab and adjust your settings exactly as shown below:

(next page)

Step 5. Click on the **Advanced** Tab and adjust your settings exactly as shown below:

(next page)

Step 6. Click on the **PDF/X** Tab and adjust your settings exactly as shown below:

Step 7. Click "Save As" and a Save Job Options pop-up window will appear. If necessary, click the "Save in" pull-down menu and navigate to the "Settings" folder under the Adobe Acrobat 6.0 folder. (This is illustrated on page 16 of these instructions for Acrobat 4.0)

Step 8. Give this newly created job option a file name you will remember, such as IEEE_PDF_for_Acrobat6, or something to that effect. Type it in the File name box. Then click Save. (This is illustrated on page 17 of these instructions for Acrobat 4.0.)

Step 9. In the Acrobat Distiller Box, click on the Job Options pull-down menu and select your newly created Job Option. (This is illustrated on page 17 for Acrobat 4.0.) If there is a save button, click Save. If there is no "Save" button, simply click on the little "**x**" to close this box. Acrobat will remember these settings and apply them to every PDF that you create from now on. That's it. You are done! You can now convert your Word document into an IEEE Xplore compatible PDF file.

Step 10. Note that you should **UNCHECK the "Use Local Fonts" feature** under the "View" pull-down menu on the Acrobat distiller screen. (See page 8 for a screen-shot.)

<div style="text-align:center; color:blue">

AFTER YOU CREATE YOUR PDF FILE, GO TO THE NEXT PAGE AND PERFORM THE COMPATIBILITY VERIFICATION STEP!

</div>

A Simple Test to Verify that Your Newly Created PDF is IEEE Xplore Compliant

We recommend this **manual** process to check for font embedding, the single biggest obstacle to PDF file compliance with the IEEE Xplore specifications:

1) Once the PDF file is created, open it with Acrobat.
2) Open the Acrobat Print panel ("File" > "Print") and check the "Print to file" button:
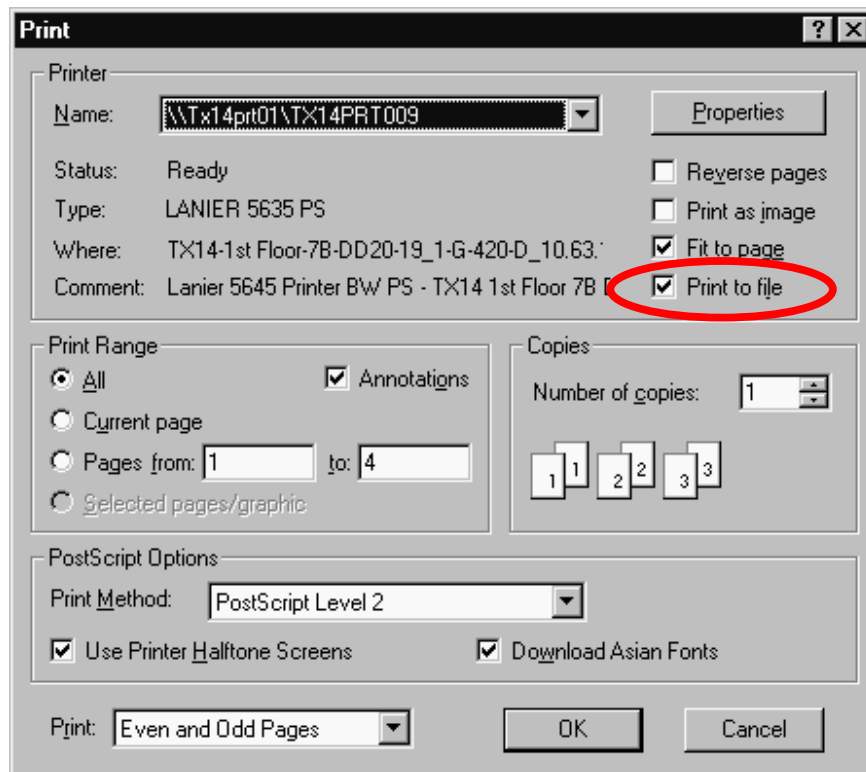
This will cause Acrobat to try to assign fonts to all of the fonts in the document.

3) Click "OK". Another pop-up window will appear:
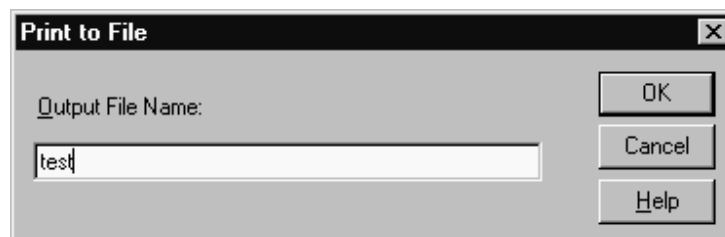
Give it a name and press "OK".

4) On the Acrobat screen, click on "File" > "Document Properties" (or "Document Info") > "Fonts". A "Font Info" window will appear.

5) Click on the "List all fonts" button, and give it a moment to update itself.

- In the "Font Info" panel, the first column gives the Original Font name.
- The second column ("Type") gives the font type (i.e., Type 1 or TrueType).
- The third column ("Encoding") can be ignored.
- The fourth column ("Used Font"), **must** read "Embedded Subset". It should **not** be blank. It is a failure if it reads "Embedded" rather than "Embedded Subset"!
- The fifth column ("Type") **must** match the second column ("Type").
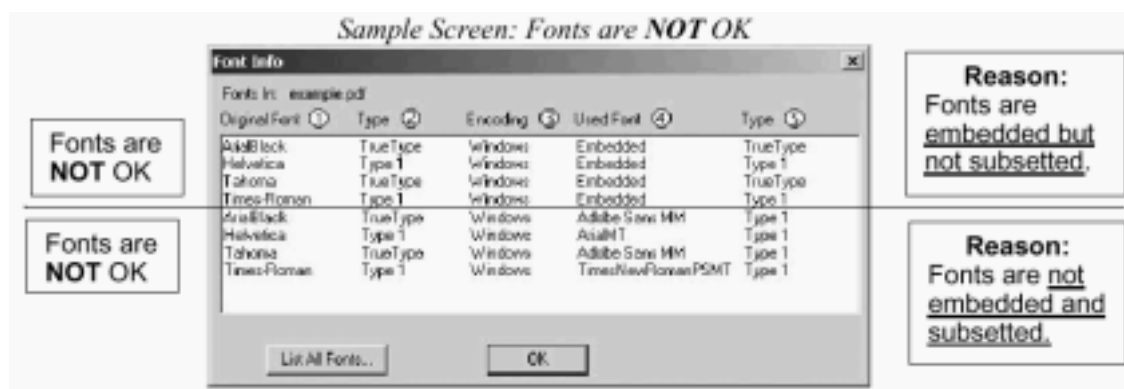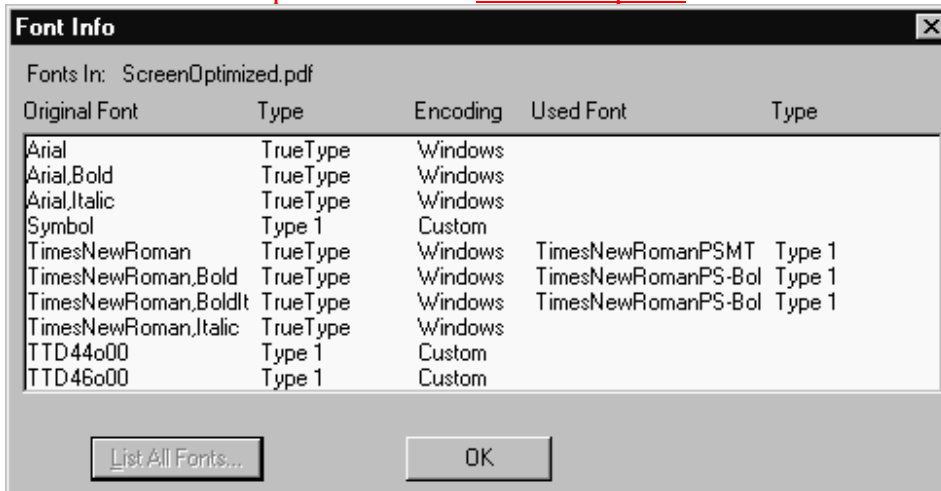

Example Screen for an IEEE Xplore Compliant PDF:
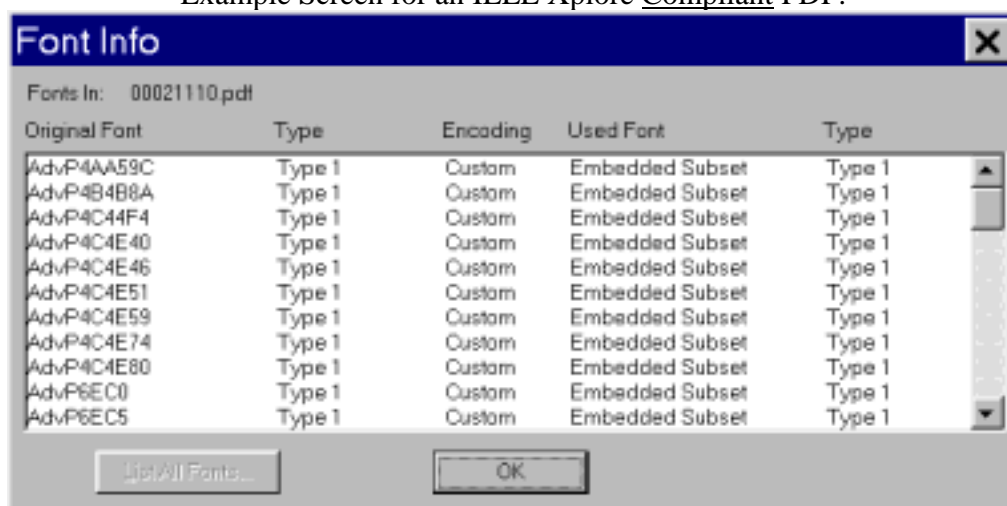

(continued on next page)

Example Screen for a NON-Compliant PDF:

Notice that the second and fifth columns do not match each other. The "Used Font" column does not read "Embedded Subset" and cannot be blank.

Finally, as a test of your computer, you can convert the RAWCON2004 Word template into an IEEE Compatible PDF using your current settings. The "Font Info" test should give a result similar or identical to what you see below:

Example Screen for a Compliant PDF:
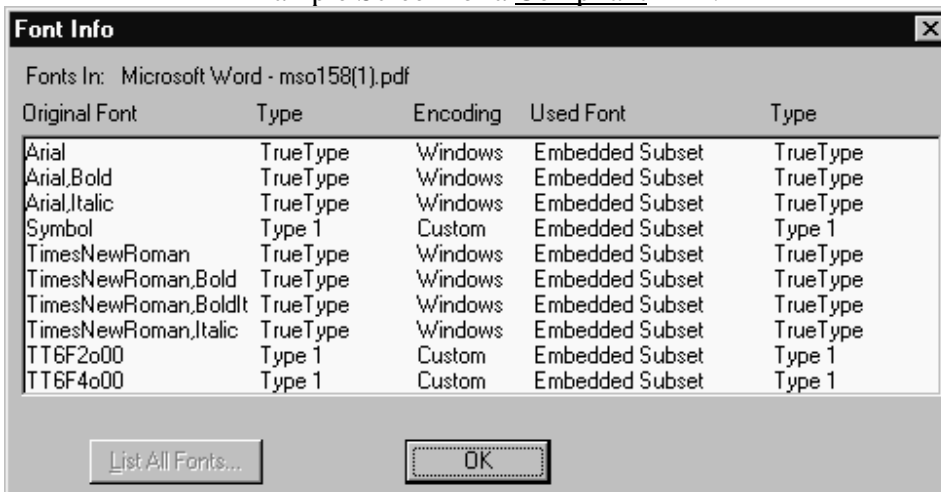
If your screen displays the font information shown above, you should have a compatible PDF for submission to the RAWCON 2004 Proceedings & CD-ROM. If any of the fields show errors, please go to the detailed Author Instructions to modify your settings.

Thank you very much for your cooperation to produce a quality document.

The RAWCON 2004 Publication Team.