
**AUTHOR GUIDELINES
FOR
CREATING PDF DOCUMENTS**

VERSION 2.2B

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DOCUMENT STATUS RECORD

Release Date	Status	Version	Amendment / Purpose
14 April 2003	Final	2.2B	Adjusted graphics settings to provide print production quality graphics. Clarifies how to embed fonts.
22 January 2003	Final	2.2A	Changed graphics downsampling parameters. Reworked spec. for use by authors
21 January 2002	Final	2.2	Summarizes requirements for Acrobat 5 compatible PDF files.
18 May 2001	Final	2.1	Summarizes PDF parameter settings; describes the requirements for scanned PDFs.
30 April 2001	Final	2.0	Initial release

1 SUMMARY OF PDF SETTINGS

This document is both a specification for creating IEEE Xplore compliant PDF files as well as suggestions as to how best create them. Whenever possible the PDF files must be created from either application (e.g., Microsoft Word) or PostScript files. When these files are not available the PDF file is created from scans of each page. The settings for both of these cases are summarized below.

These settings are for Adobe Acrobat Distiller version 4. They are also valid for Acrobat Distiller version 5. When using Acrobat version 5 the Compatibility option must be set to Acrobat 4.0.

1.1 PDF Settings for PDF Files Created from Application or PostScript Files

Compatibility: Acrobat 4.0

File Format: Binary

Optimize PDF: Yes

Generate Thumbnails: Yes

Resolution: 600 dpi

Color Images: Bicubic Downsampling at 300 dpi

Grayscale Images: Bicubic Downsampling at 300 dpi

Compression for Color and Grayscale Images: JPEG/Medium Quality

Monochrome Images: Bicubic Downsampling at 600dpi

Compression for Monochrome Images: CCITT Group 4

Compress Text and Line Art: Yes

Subset all Font if less than 100% of the Font is used. Otherwise embed the entire Font.

Color Management: No. All colors remain in the original color space or model.

Preserve any Overprint, Under Color Removal (UCR), Black Generation, and Halftone information from the application or PostScript files.

Preserve the PostScript Level 2 cpage Semantics. Preserving this setting gives maximum flexibility when viewing and printing the PDF file.

1.2 PDF Settings for PDF Files Created from Scans

PDF files that are created from scans are image only files (the text is not searchable). Thus, these files are simply a collection of page images that have been converted to the PDF format. For this reason this method of creating PDF files should be avoided if at all possible.

Pages must be scanned at 300dpi and in the appropriate Image Mode (e.g., black and white, grayscale, color, etc.). Scanning in the inappropriate Image Mode will make the PDF file larger than is necessary and slower to download.

2 CHECKLIST OF ADOBE ACROBAT 4.X DISTILLER SETTINGS

2.1 General Settings

Compatibility: 4.0 (*When using Acrobat Distiller version 5.0 this must be set to 4.0*)

ASCII Format: No

Optimize PDF: Yes

Generate Thumbnails: Yes

Resolution: 600 dpi

Binding: Left

2.2 Compression Settings

“Automatic Compression” should not be selected for Color, Grayscale, and Monochrome Images. The following compression settings are required.

2.2.1 Color Bit Map Images

Resample/Downsample: Bicubic at 300 dpi

Compression: JPEG

Quality: Medium

2.2.2 Grayscale Bit Map Images

Resample/Downsample: Bicubic at 300 dpi

Compression: JPEG

Quality: Medium

2.2.3 Monochrome Bit Map Images

Resample/Downsample: Bicubic at 600 dpi

Compression: CCITT Group 4

Compress Text and Line Art: Yes

2.3 Font Settings (*See Section 5.2 for specific information regarding font embedding*)

Embed all fonts: Yes

Maximum Subset %: 100

When embedding fails: Warn and Continue (optional)

Always embed list: None

Never embed list: None

2.4 Color Settings

2.4.1 Conversion

Leave Color Unchanged: Yes

2.4.2 Options

Preserve Overprint settings: Yes

Under Color Removal/Black Generation: Yes

Transfer Function: No

Preserve Halftone Screen Information: Yes

2.5 Advanced Settings

2.5.1 Options

Use Prologue.ps and Epilogue.ps: No
Allow PostScript to Override Job Options: No
Preserve Level 2 cypage Semantics: Yes
Save Portable Job Ticket inside PDF file: No

2.5.2 Document Structuring Conventions (DSC)

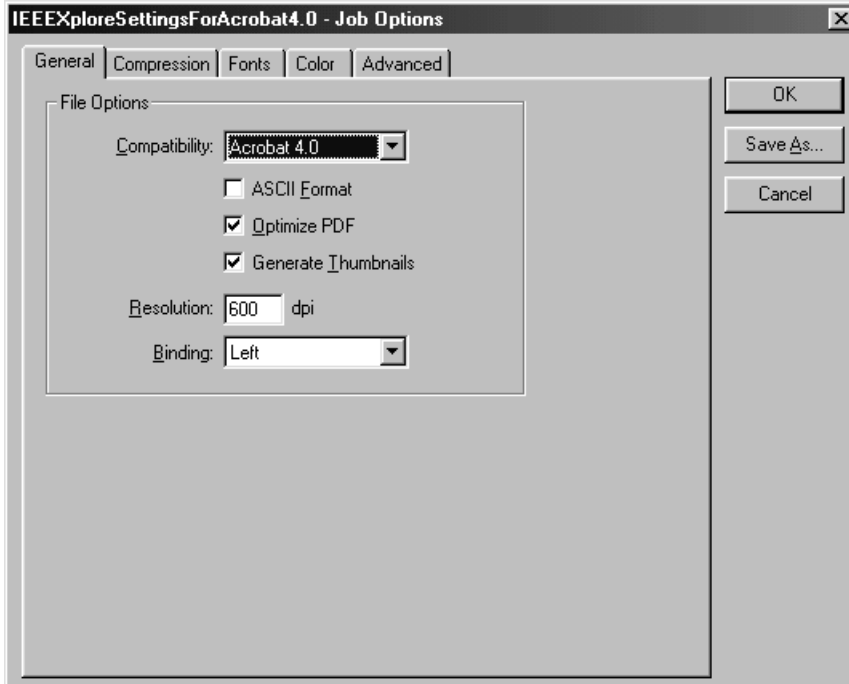
Process DSC Comments: No

2.5.3 Default Page Size

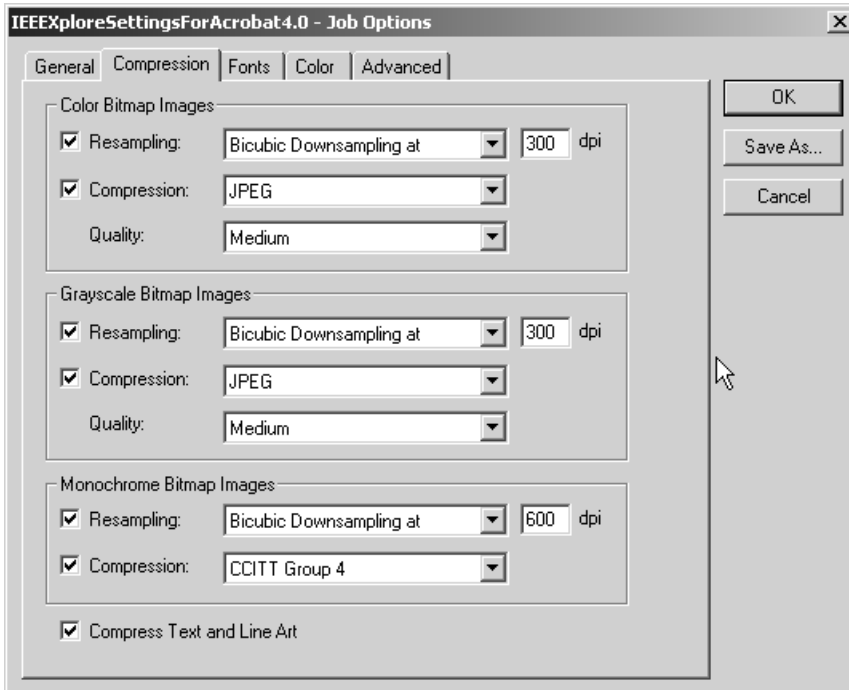
Width: 612.0
Length: 792.0
Units: Point

3 SCREEN CAPTURES OF ADOBE ADOBE DISTILLER 4.X

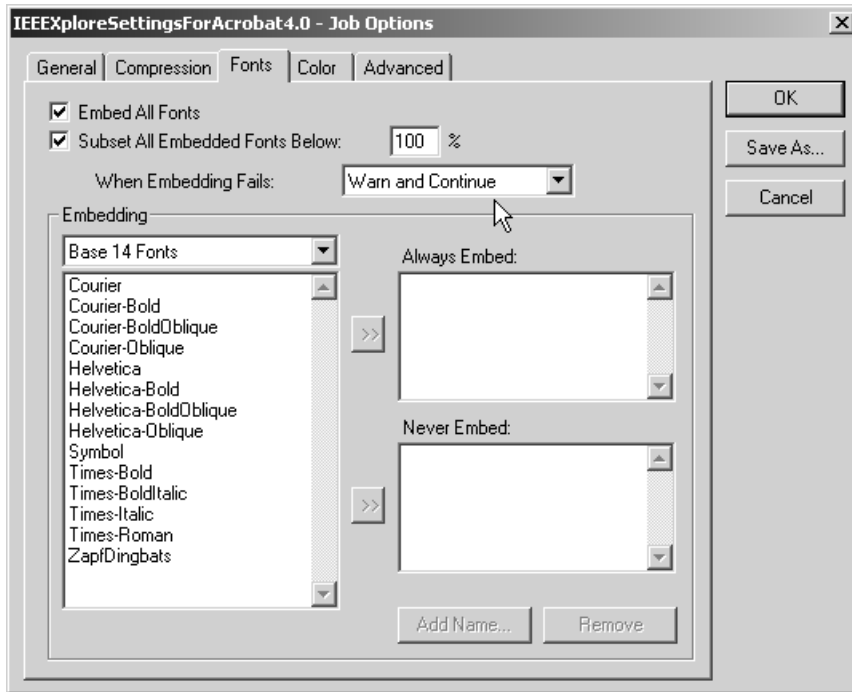
3.1 General Options



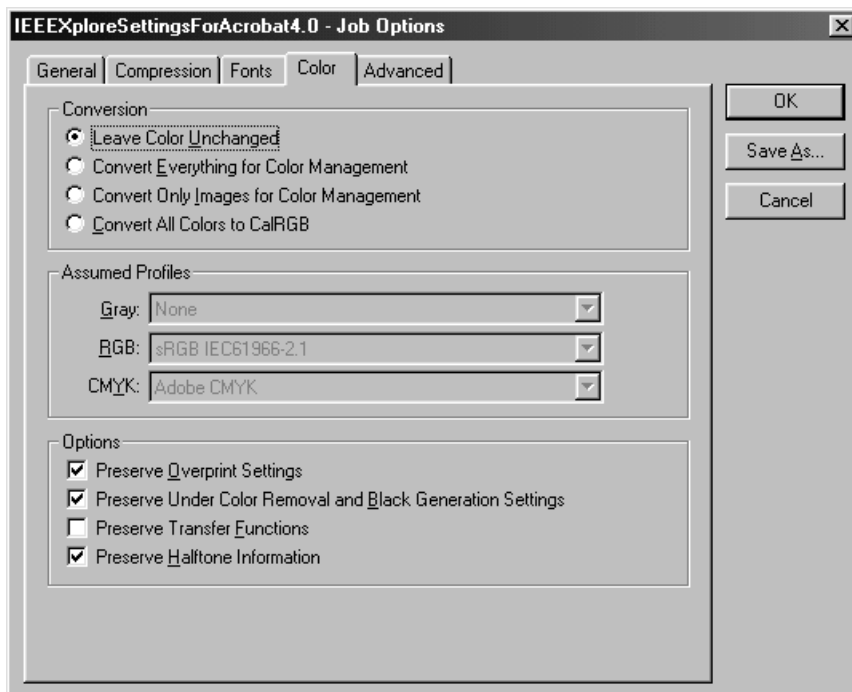
3.2 Compression Options



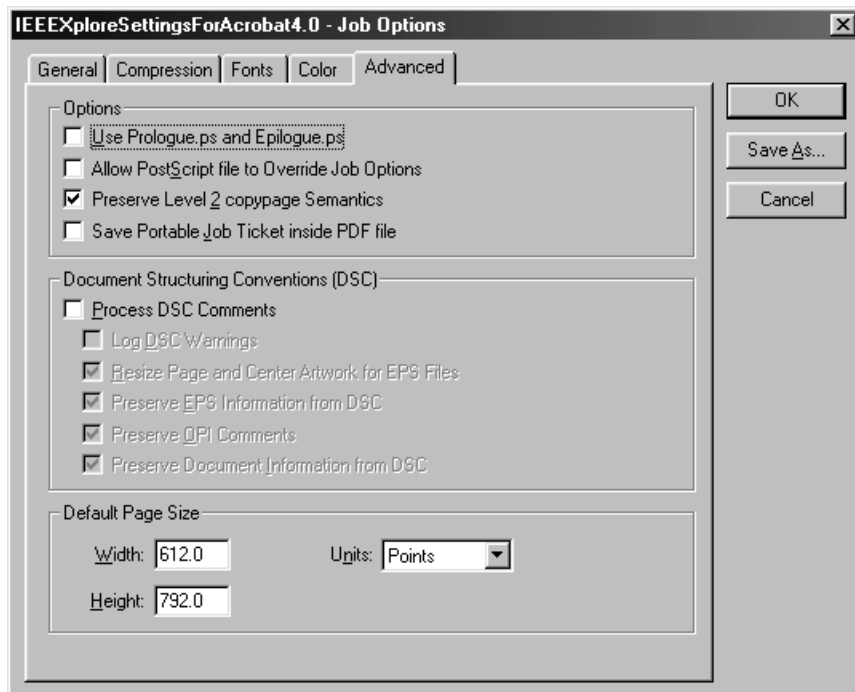
3.3 Font Options



3.4 Color Options



3.5 Advanced Options



APPENDIX A DETAILED DESCRIPTION OF DISTILLER SETTINGS

4 OVERVIEW

The settings in this specification are intended to optimize PDF file size and produce reasonable quality files that download quickly. This is accomplished through a combination of graphic compression settings, downsampling settings, font embedding strategies, and optimization of the PDF file. It is assumed that PDFs are created using Adobe Acrobat version 4.x. *Other means for producing PDFs are acceptable provided the resultant files comply with all the requirements set forth in this specification.*

5 GENERAL REQUIREMENTS FOR APPLICATION, POSTSCRIPT, AND PDF FILES

5.1 General Page Characteristics (Application, PostScript, and PDF Files)

The pages in a PDF file must not contain crop marks, registration marks, date stamps, time stamps, or any other mark that does not appear in the published version. Page size must be 8.5" x 11".

5.2 Fonts (Application, PostScript, and PDF Files)

PDF files must contain only PostScript or TrueType fonts or a combination of the two. In order for the PDF files to match the printed version all fonts must be properly embedded. There are generally two ways to accomplish this. The first way is for the application to include all the fonts used when the PostScript file is created. The second way is to give Acrobat access to the fonts at the time the PostScript file is converted to PDF.

Including fonts within a PostScript file depends on the application and the printer driver chosen. Since each computer is different, please refer to the appropriate operating system and application documentation for more information.

Giving Acrobat access to the fonts takes only a little bit of effort. Typical installations of Acrobat do not look in the system's font folder after the completion of installation. To get Acrobat to do so choose "Settings→Folder Options". Click on "Add" to select the folder that contains the system's fonts. Choosing "Settings→Folder Options" will show which folders Acrobat currently looks at for font information.

To properly embed fonts the following items in the Acrobat "Fonts" tab must be selected (i.e., checked):

1. Embed All Fonts
2. Subset All Embedded Fonts Below
3. If the fonts are not included in the PostScript file Acrobat must be given access to the fonts (see the beginning of Section 5.2 for more information).

(If it is unclear that fonts will be properly embedded in a PDF file change the "Fonts" tab so that "when embedding fails" the job is canceled prior to distilling the PostScript file.) Refer to the Acrobat documentation for specific information regarding accessing fonts.

5.3 Graphics and Figures (Application Files)

Graphics used in the source application must have resolutions in excess of that given in this specification (see Sections 7.2.1, 7.2.2, and 7.2.3).

5.4 Security

All security options must be turned off and no passwords should be assigned.

6 REQUIREMENTS FOR PDF FILES CREATED FROM SCANS (SCANNED PDFS)

PDF files that are created from scans are image only files (the text is not searchable). For this reason “Scanned PDFs” are created only when the original application or PostScript files are not available. Each page is scanned at 300dpi and in the proper image mode. For instance, if a group of pages do not contain color the resultant PDF file will download faster and is much smaller if the pages are scanned as black and white instead of as color.

It is assumed that the “Import→Scan” command in Adobe Acrobat 4 is used to create a “Scanned PDF” file. If other means for producing Scanned PDFs are used the resultant files must be the same as those provided by “Import→Scan” command of Adobe Acrobat 4. Such a file is simply a series of images stored in a single file. As long as there is no additional information in the PDF file no specific settings are required other than scanning at the proper resolution and mode.

7 REQUIREMENTS FOR PDF CREATED USING ADOBE ACROBAT 5.X OR COMPATIBLE SOFTWARE

PDF files may be created with Acrobat 5 or compatible software provided that the PDF files meet all the requirements in this document. Files created with Acrobat 5 must be compatible with Acrobat 4.