

# Creating PDF/E-ready files

Using Adobe® Acrobat® to create ISO  
24517-1:2008-compliant files

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## Introduction

PDF/E (ISO 24517-1:2008), a document standard ratified by ISO in 2007, evolved from the need for an open, neutral exchange format for engineering and technical documentation. While multiple proprietary formats exist, they each have their own viewers, making it difficult to repurpose 3D and engineering data for downstream uses. The cost of distributing and storing paper contributes to the high cost of managing distribution and change throughout the project for product development teams as well as for extended supply chains.

Like PDF, PDF/E is a digital container which supports a wide variety of content and can be viewed and marked up using free and widely available Adobe Reader® software. PDF/E can help support the secure distribution of sensitive information and reduce the complexity and costs associated with distributing and storing paper. While PDF/E is an open standard developed and maintained by an ISO working group, it also leverages U3D, another open standard, for the representation of 3D content.

Documents that could be repurposed as PDF/E can be created using Adobe Acrobat 8 software as described in this guide. Direct creation of PDF/E files from various applications is an important direction for Adobe. While there are many PDF file creation tools available, some functionality required to create PDF/E-ready files may not be supported by all of them. For best results, use the latest version of Acrobat to create these files and the latest version of Adobe Reader to view them.

## Using Adobe Acrobat PDFMaker vs. the Print to PDF option

The best way to generate PDF files is to use the PDFMaker that is available for Microsoft Office applications, AutoCAD®, and Microsoft Visio. Because PDFMaker works on the actual authored content, it can capture content and attributes that aren't available with the Print to PDF function, promoting the highest fidelity conversion to PDF. For example, PDFMaker for Visio and AutoCAD can maintain layers present in the original document in the final PDF file. Layer information, however, is not sent to a printer.

### Setting up Adobe Acrobat Distiller® job options

1. Open Acrobat Distiller 8 (Start Menu>All Programs>Acrobat Distiller 8) (see Figure 1).
2. Choose Settings>Edit Adobe PDF Settings (see Figure 1).
3. Click Save As and enter “PDFE Ready” as the filename.
4. Set the compatibility level to Acrobat 7.0 (PDF 1.6).
5. Set object-level compression to Maximum.
6. Click Images in the panel on the left (see Figure 2).
7. Set the Color and Grayscale compression to Automatic (JPEG2000).
8. Click Fonts in the panel on the left.
9. Remove all the fonts from the Never Embed list on the right.
10. Change when embedding fails to “cancel job.”
11. Click Color in the panel on the left.
12. Choose North American Web/Internet as the settings file.
13. Click Advanced in the panel on the left (see Figure 3).
14. Deselect Allow Postscript XObjects.
15. Click OK.

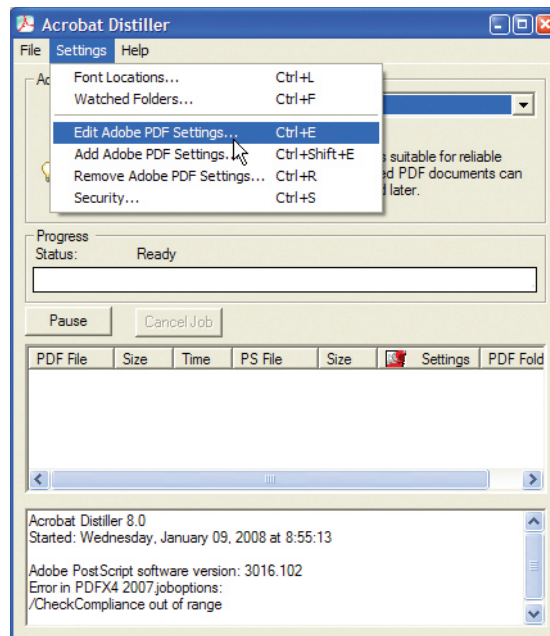


Figure 1: Distiller Edit Settings file

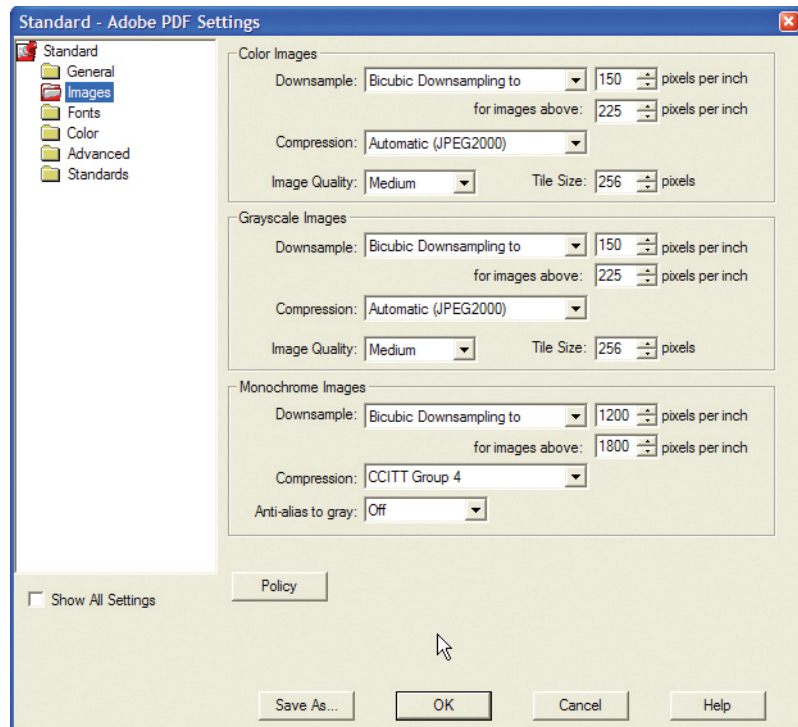


Figure 2: Distiller Images file

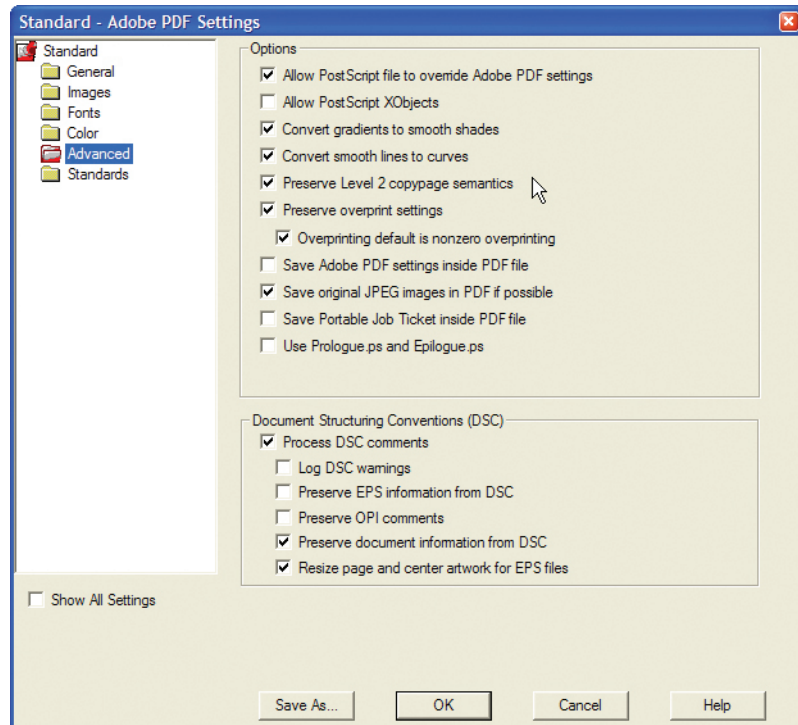


Figure 3: Distiller Advanced file

### **Defining settings for PDFMaker**

Once Distiller settings have been set, PDFMaker will need to be adjusted to generate PDF/E-ready files. To change PDFMaker settings, use the Adobe PDF drop-down menu within each application noted and click “Change conversion settings.”

#### **Microsoft Word**

1. In the PDFMaker dialog box, click Settings, and in the conversion settings menu, choose the PDFE Ready option.
2. Click the Word tab, and make sure that the following two options are checked: “Convert cross references” and “Convert footnote and endnote links.”
3. Click the Bookmarks tab, and select the option to Convert Word Headings to Bookmarks.

#### **Microsoft Excel**

1. In the PDFMaker dialog box, click Settings, and in the conversion settings menu, choose the PDFE Ready option (see Figure 4).
2. Make sure that the “Convert comments to notes” option is deselected.

#### **Microsoft PowerPoint**

1. In the PDFMaker dialog box, click Settings, and in the conversion settings menu, choose the PDFE Ready option.
2. Make sure that the following options are deselected: “Convert hidden slides” and “Convert speaker notes.”

To promote reliable, consistent rendering and file format stability, certain features are restricted in PDF/E, such as:

- Color spaces
- External references (not allowed)
- Appearance (constrained)
- Layers, 3D, multimedia (allowed, but constrained to provide predictability)
- Hyperlinks (can be disabled by interactive readers)

## Microsoft Visio

1. In the PDFMaker dialog box, click Settings, and in the conversion settings menu, choose the PDFE Ready option.
2. Make sure that the following options are deselected: “Convert Comments to Adobe PDF Comments” and “Always flatten layers in Adobe PDF.” However, make sure that “Open Layers Pane when viewed in Acrobat” under “Always flatten layers in Adobe PDF” is selected.
3. When you invoke PDFMaker by clicking the Create Adobe PDF button in your toolbar (or from the menu), make sure that “Include custom properties” is selected in the dialog boxes that appear.
4. Make sure that “Retain all layers” is selected.
5. When using the Visio PDFMaker, be sure to retain all layers; otherwise, the resulting PDF file will not reflect all of the Visio layers.

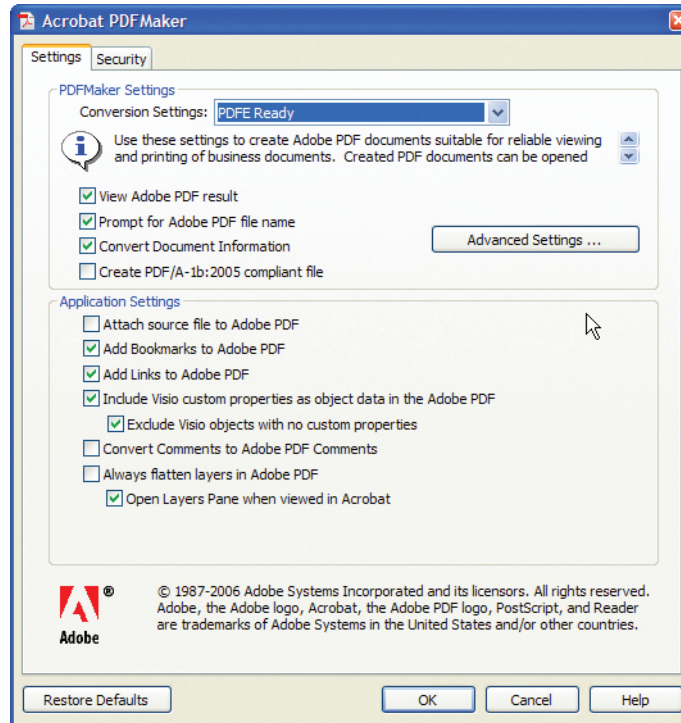


Figure 4: Visio PDFMaker Settings file

PDF documents that have already been merged—but not produced with the PDF/E-ready setting—will not likely result in a final document that is PDF/E-ready. Likewise, the packages function in Acrobat does not produce PDF/E-ready documents.



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