

Errata for PDF Reference, third edition  
(as published in the first printing, November 2001)

-----  
Copyright (c) 2001-2003 Adobe Systems Incorporated. All rights reserved.  
Last modified: 18 June 2003

General

-----  
Front Matter

-----  
Chapter 1

-----  
Pages 6 - 7, bullet that begins "Software that accepts...": Replace  
bullet with:

Authors of software that accepts input in the form of the Portable  
Document Format must make reasonable efforts to ensure that the  
software they create respects the access permissions and permissions  
controls listed in Table 3.15 of this specification, to the extent  
that they are used in any particular document.

Following the last bullet, insert a non-bulleted paragraph containing  
the second sentence of the former bullet:

Accessing the document in ways not permitted by the document's access  
permissions is a violation of the document author's copyright.

Chapter 2

-----  
Chapter 3

-----  
Page 40, Note: Append "See implementation note in Appendix H." The  
implementation note is: "Acrobat 5 and earlier require that the name  
object used as a key in a dictionary entry be a direct object; an  
indirect object reference to a name is not accepted."

Page 76, Table 3.14, R entry: change "V value greater than 2" to "V  
value of 2 or greater".

Page 85, URI entry: should be tagged "(Optional; PDF 1.1)".

Page 89, BoxColorInfo entry: should be tagged "(Optional; PDF 1.4)".

Page 93, Table 3.19, EmbeddedFiles entry, description should be: "A  
name tree mapping name strings to file specifications for embedded  
file streams."

Page 122, Table 3.32, Type entry, append: "(See implementation note xx  
in Appendix H.)"

Page 124, first full paragraph, last sentence should end: "...name  
tree that maps name strings to file specifications that in turn refer  
to embedded file streams through their /EF entries. (See  
implementation note xx in Appendix H.)"

The new implementation note xx should be: "In Acrobat 5, file  
specifications accessed through /EmbeddedFiles have a /Type entry  
whose value is /F instead of the correct /Filespec. Acrobat 6 and  
later accept a file specification whose /Type entry is either  
/Filespec or /F."

## Chapter 4

-----

Page 167, Table 4.10, f operator, append: "Any subpaths that are open are implicitly closed before being filled."

Page 187, formula for Y[C]: The second term in the numerator for the large fraction should be changed from "(X[W] - X[G]) \* Y[W]" to "(X[W] - X[G]) \* Y[R]".

Page 206, second bullet, append: "The colorant names must all be different from one another, except that /None may be repeated."

Page 244, Decode entry: Type should be "array", not "rectangle".

Page 259: The formulas that describe a Coons patch as a special case of a tensor-product patch are completely wrong (although the descriptions of the two kinds of patches themselves are correct). The correct choice of internal control points is given by the following linear combinations of the external control points (where x and y components are computed independently):

```
p11 = 1/9 * [
  - 4 * p00
  + 6 * (p01 + p10)
  - 2 * (p03 + p30)
  + 3 * (p31 + p13)
  - 1 * p33
]
```

```
p12 = 1/9 * [
  - 4 * p03
  + 6 * (p02 + p13)
  - 2 * (p00 + p33)
  + 3 * (p32 + p10)
  - 1 * p30
]
```

```
p21 = 1/9 * [
  - 4 * p30
  + 6 * (p31 + p20)
  - 2 * (p33 + p00)
  + 3 * (p01 + p23)
  - 1 * p03
]
```

```
p22 = 1/9 * [
  - 4 * p33
  + 6 * (p32 + p23)
  - 2 * (p30 + p03)
  + 3 * (p02 + p20)
  - 1 * p00
]
```

Page 290, Table 4.44: A PostScript XObject can alternatively be represented as an XObject dictionary whose Subtype entry has the value Form and additionally contains a Subtype2 entry whose value is PS.

## Chapter 5

-----

Page 308, top: Add the following material to clarify the semantics of the implicit transparency group that is imposed on a text object to achieve the text knockout behavior:

\* The implicit transparency group is a non-isolated knockout group.

\* Graphics state parameters, including transparency parameters, are inherited from the context in which the text object appears. They are not saved and restored, nor are the transparency parameters reset at the beginning of the transparency group, as would be in the case of explicit invocation of a transparency groupXObject. Changes made to graphics state parameters within the text object persist beyond the end of the text object.

\* After the transparency group for the text object has been completely evaluated, the group results are composited with the backdrop using Normal blend mode and alpha and soft mask values of 1.0. In other words, the transparency parameters are applied to the glyphs individually rather than to the implicit transparency group as a whole.

Page 329, second full paragraph: Change "Windows and Mac OS" to "Mac OS and Windows".

Page 347, append the following to Table 5.15:

Generic:

Identity-H/V    Adobe-Identity-0    Adobe-Identity-0    Adobe-Identity-0

Chapter 6  
-----

Chapter 7  
-----

Page 435: the final formula is incorrectly given as:

$$C[i] = \frac{(1-f[s[i]]) * a[i-1] * C[i-1] + f[s[i]] * \alpha[t]}{a[i]}$$

It should be:

$$C[i] = \frac{(1-f[s[i]]) * a[i-1] * C[i-1] + f[s[i]] * C[t]}{a[i]}$$

Chapter 8  
-----

Page 478, Table 8.3, Outline dictionary, First and Last entries: Change "Required" to "Required if there are any outline entries (open or closed)".

Page 489, bottom, remove the reference to implementation note 58 and replace it with the following:

A given annotation dictionary may be referenced from the Annots array of only one page. Attempting to share an annotation dictionary among multiple pages will produce unpredictable behavior.

Note: This requirement applies only to the annotation dictionary itself, not to subsidiary objects, which can be shared among multiple annotations without causing any difficulty.

Page 491, Table 8.10, CA entry: Remove the sentence beginning "The specified value is used as the initial alpha constant..." and replace it with the following: "The specified value is not used if the annotation has an appearance stream; in that case, the appearance stream itself must specify any desired transparency. (However, if the

viewer regenerates the annotation's appearance stream, it may incorporate the CA value into the stream's content.)"

Page 493, Table 8.11, Annotation flags: Add an entry for the following flag, which was included in PDF 1.4 but was inadvertently omitted from the specification:

Bit position 8 -- Locked -- (PDF 1.4) If set, do not allow the annotation to be deleted or its properties (including position and size) to be modified by the user. However, this does not restrict changes to the annotation's contents, such as a form field value. (See implementation note in Appendix H.)

The new implementation note is: "Acrobat 5 obeys the Locked flag only for widget annotations."

Page 496, Section 8.4.4, replace the second and third paragraphs with the following:

[Begin replacement]

The following method is used to map from the appearance object's coordinate system (as defined by its Matrix) to the annotation's rectangle in default user space.

1. The appearance's BBox is transformed using the appearance's Matrix to produce a quadrilateral with arbitrary orientation. The transformed appearance box is defined as the smallest upright rectangle which encompasses this quadrilateral.
2. A matrix, A, is computed which scales and translates the transformed appearance box to align with the edges of the annotation's Rect. The matrix maps the lower-left corner (the one with the least x and y coordinates) and the upper-right corner (the one with the greatest x and y coordinates) of the transformed appearance box to the corresponding corners of the annotation's Rect.
3. The appearance's Matrix is concatenated with A to form a matrix, AA, which maps from the appearance's coordinate system to the annotation's rectangle in default user space:

$$AA = A * Matrix$$

The annotation may be further scaled and rotated if either the NoZoom or NoRotate flag is set (see Section 8.4.2, "Annotation Flags"). Any transformation applied to the annotation as a whole will also be applied to the appearance within it.

In PDF 1.4, an annotation appearance can include transparency. If the appearance dictionary does not contain a Group entry, it is treated as a non-isolated, non-knockout transparency group; otherwise, the isolated and knockout values specified in the group dictionary are used. The transparency group is composited with a backdrop consisting of the page content along with any previously painted annotations, using a blend mode of Normal, an alpha constant of 1.0, and a soft mask of None. (See implementation note xx in Appendix H.)

[End replacement]

The new implementation note is: "Acrobat 5.0 treats the annotation appearance as an isolated group, whether or not a Group entry is present. This behavior is corrected in Acrobat 6.0."

Page 501, Table 8.16, /H entry, change the description of the /P value to read:

/P (Push) Display the annotation as if it were being "pushed" below the surface of the page (see implementation note xx in Appendix H).

The new implementation note is: "Acrobat viewers ignore any down appearance for a link annotation. When a link annotation specifies a value of /P for the /H entry (highlighting mode), Acrobat viewers display the link appearance with a beveled border."

Additionally, remove the next sentence, beginning "A highlighting mode other than /P...".

Page 531, Table 8.49, Kids entry: Change "Optional" to "Sometimes required, as described below", and append this:

In a non-terminal field, the Kids array is required to refer to field dictionaries that are immediate descendants of this field. In a terminal field, the Kids array ordinarily must refer to one or more separate widget annotations that are associated with this field. However, if there is only one associated widget annotation, whose contents have been merged into the field dictionary, Kids must be omitted.

Page 546, Table 8.59, /Opt entry: Change "Required; inheritable" to "Optional". Append to description: "If this entry is not present, no choices should be presented to the user."

Page 546, Table 8.59, /TI entry: Change "Optional; inheritable" to "Optional". Append to description: "Default value: 0."

Page 546, Table 8.59, /I entry: Remove "inheritable" from the description.

Page 560, trailer example below table 8.67: Change "Root c 0 R" to "/Root c 0 R".

Page 566, Table 8.73: All three entries are Optional, not Required.

Chapter 9  
-----

Page 579, Table 9.5, remove the "Document catalog" entry.

Page 594, Table 9.11, Stm entry, replace the description with the following:

(Optional; must be an indirect reference) The content stream containing the marked-content sequence. This entry should be present only if the marked-content sequence resides in a content stream other than the content stream for the page -- for example, in a form XObject (see Section 4.9, "Form XObjects") or an annotation's appearance stream (Section 8.4.4, "Appearance Streams"). If this entry is absent, the marked-content sequence is contained in the content stream of the page identified by Pg (either in the marked-content reference dictionary or in the parent structure element).

Appendix A  
-----

Appendix B  
-----

Appendix C  
-----

Appendix D  
-----

Appendix E  
-----

Appendix F

-----

Page 748, Table F.7, items 2 and 10: Remove the clause "specified as an offset from the beginning of the file to that thumbnail image, minus the length of the thumbnail hint table." [As stated, this is simply incorrect. These locations are expressed in a way that is no different from any other locations contained in the hint table, as described on pages 741-742.]

Page 748, Table F.7, item 9: Change "(a subsection of part 8)" to "(a subsection of part 9)".

Appendix G

-----

Appendix H

-----

Bibliography

-----

Index

-----