

ISO 32000-2:2017-07 (E)

Document management - Portable document format - Part 2: PDF 2.0

Contents		Page
Foreword		vii
Introduction		viii
1	Scope	1
2	Normative references	2
3	Terms and definitions	7
4	Notation	15
4.1	General	15
4.2	Established notations	15
5	Version designations	17
6	Conformance	18
6.1	General	18
6.2	Conforming PDF documents	18
6.3	PDF processors	18
7	Syntax	20
7.1	General	20
7.2	Lexical conventions	21
7.3	Objects	23
7.4	Filters	34
7.5	File structure	52
7.6	Encryption	70
7.7	Document structure	95
7.8	Content streams and resources	109
7.9	Common data structures	113
7.10	Functions	121
7.11	File specifications	130
7.12	Extensions dictionary	139
8	Graphics	142
8.1	General	142
8.2	Graphics objects	142
8.3	Coordinate systems	146
8.4	Graphics state	153
8.5	Path construction and painting	165
8.6	Colour spaces	173
8.7	Patterns	216
8.8	External objects	250
8.9	Images	251
8.10	Form XObjects	267
8.11	Optional content	273
9	Text	290
9.1	General	290
9.2	Organisation and use of fonts	290
9.3	Text state parameters and operators	297

9.4	Text objects	303
9.5	Introduction to font data structures	308
9.6	Simple fonts	309
9.7	Composite fonts	324
9.8	Font descriptors	340
9.9	Embedded font programs	348
9.10	Extraction of text content	352
10	Rendering	357
10.1	General	357
10.2	Raster output device native colour	358
10.3	CIE-Based colour to device colour	358
10.4	Conversions among device colour spaces	358
10.5	Transfer functions	361
10.6	Halftones	362
10.7	Scan conversion details	379
10.8	Rendering for separations	382
11	Transparency	384
11.1	General	384
11.2	Overview of transparency	384
11.3	Basic compositing computations	386
11.4	Transparency groups	399
11.5	Soft masks	411
11.6	Specifying transparency in PDF	412
11.7	Colour space and rendering issues	422
12	Interactive features	434
12.1	General	434
12.2	Viewer preferences	434
12.3	Document-level navigation	438
12.4	Page-level navigation	455
12.5	Annotations	462
12.6	Actions	502
12.7	Forms	524
12.8	Digital signatures	563
12.9	Measurement properties	591
12.10	Geospatial features	597
12.11	Document requirements	602
13	Multimedia features	610
13.1	General	610
13.2	Multimedia	610
13.3	Sounds	633
13.4	Movies	634
13.5	Alternate presentations	636
13.6	3D Artwork	638
13.7	Rich media	696
14	Document interchange	709
14.1	General	709
14.2	Procedure sets	709
14.3	Metadata	710
14.4	File identifiers	714
14.5	Page-piece dictionaries	715
14.6	Marked content	716
14.7	Logical structure	718
14.8	Tagged PDF	741
14.9	Repurposing and accessibility support	789
14.10	Web capture	795
14.11	Prepress support	807
14.12	Document parts	827

14.13	Associated files	831
	Annex A (informative) Operator Summary	837
	Annex B (informative) Operators in Type 4 Functions	841
	Annex C (informative) Advice on maximising portability	843
	Annex D (normative) Character sets and encodings	846
	Annex E (normative) PDF Name Registry	870
	Annex F (normative) Linearized PDF	872
	Annex G (informative) Linearized PDF access strategies	894
	Annex H (informative) Example PDF files	898
	Annex I (normative) PDF versions and compatibility	928
	Annex J (informative) XObject comparison	930
	Annex K (normative) XFA forms	936
	Annex L (normative) Parent-child relationships between standard structure elements	939
	Annex M (informative) Standard structure elements in the default (PDF 1.7) namespace	958
	Annex N (informative) Best practice for halftones	959
	Annex O (normative) Fragment identifiers	962
	Annex P (informative) An algorithm to determine the actual blending colour space of a transparency group	965
	Annex Q (normative) Method for determining transparency on a page	967
	Bibliography	969