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Information technology — Processing languages — Standard Page Description Language (SPDL)

*Technologies de l'information — Langages de traitement — Langage de
description de page normalisée (SPDL)*



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Contents

Page

1	Scope	1
1.1	Scope	1
1.2	Field of Application	1
1.3	Relationship to Other Standards	2
2	Normative References	2
3	Definitions	3
4	SPDL General Architecture	9
4.1	Document Processing Model	9
4.1.1	Creation and Editing Process	9
4.1.2	Revisable Form Document	10
4.1.3	Composition and Layout Process	10
4.1.4	Final Form Document	11
4.1.5	Presentation Process	11
4.2	SPDL Document	11
4.2.1	Sources of SPDL Documents	11
4.2.2	SPDL Document Presentation	11
4.2.3	Uses of SPDL Documents	12
4.3	SPDL Document Architecture	12
4.3.1	Document Structure	12
4.3.2	Document Content	13
4.3.3	External structure elements	13
4.3.4	Resources	14
4.3.5	Document Presentation	14

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4.3.6	Representation and Interchange Format	14
4.4	Relationship to Print Services	15
4.4.1	Document Production Instructions	15
4.4.2	Relationship to ISO/IEC 10175	16
5	SPDL Structure	17
5.1	Hierarchical structure	17
5.1.1	Structure elements	17
5.1.2	Composite structure elements	17
5.1.3	Base structure elements	17
5.1.4	Subordinates and immediate subordinates	17
5.1.5	Superiors and immediate superiors	18
5.1.6	Most immediately superior structure elements	18
5.1.7	Peers	18
5.1.8	Highest structure level	18
5.1.9	Document Structure Elements	18
5.1.10	Scope	18
5.2	Sequential Order	19
5.2.1	Sequential Order and Hierarchical Structure	19
5.2.2	Example	19
5.2.3	Presentation Order	19
5.2.4	Ordinal Page Number	19
5.2.5	Pages and Imposition	19
5.3	Identification of Information Objects	20
5.3.1	Public Object Identifiers	20
5.3.2	Assignment of Public Object Identifiers	21
5.3.3	Notation	21
5.3.4	Environment Names	21
5.4	Representation and Interchange Format	22
5.5	Instances of the Standard Page Description Language	23

5.5.1	Binary Structure Representation and Interchange Format	23
5.5.2	Clear Text Structure Representation and Interchange Format	23
5.5.3	TOP LEVEL STRUCTURE	23
5.5.4	Comments	24
6	Types	24
6.1	Boolean type	24
6.2	Enumerated types	24
6.3	Integer type	25
6.4	Cardinal type	25
6.5	Positive Integer Type	25
6.6	Real type	25
6.7	Number type	25
6.8	Non-Negative Number type	25
6.9	Printable String type	26
6.10	Octet String type	26
6.11	Name type	26
6.12	Object Identifier type	26
6.13	Public Identifier type	26
6.14	Public Object Identifier type	26
6.15	Environment Name type	27
6.16	Environment Identifier type	27
6.16.1	Structured Glyph Name type	27
6.16.2	ISO10036 Glyph Name type	27
6.16.3	Simple Glyph Name type	27
6.16.4	AFII Glyph Name type	28
6.16.5	Glyph Identifier type	28
7	Document Structure	28
7.1	DOCUMENT	28
7.2	PAGESET	29



7.2.1	PAGESET Processing	29
7.3	PAGE	29
7.4	PICTURE	30
7.4.1	CONTENT REPRESENTATION IDENTIFIER	30
7.4.2	PICTURE BODY	30
7.4.3	NON-SPDL PICTURE BODY	31
7.4.4	SPDL PICTURE Processing	31
7.4.5	NON-SPDL PICTURE Processing	31
7.5	PROLOGUE	32
7.6	INFORMATIVE DECLARATION	32
7.6.1	HINT	32
7.6.2	HINT NAME	33
7.6.3	HINT VALUE	33
7.6.4	INFORMATIVE DECLARATION Processing	33
7.7	Hints	33
7.7.1	Bounding Box	33
7.7.2	Number of Pages	34
7.7.3	Orientation	34
7.7.4	Font References	35
7.7.5	External References	35
7.7.6	Resources Used	35
7.7.7	Color Space Families Used	36
7.7.8	Media Used	36
7.7.9	Colorant Sets Used	36
7.8	NON-SPDL OPERATION	37
7.8.1	OPERATION NAME	37
7.8.2	OPERATION VALUE	37
7.8.3	NON-SPDL OPERATION Processing	37
7.9	CONTEXT DECLARATION	37

7.9.1	CONTEXT DECLARATION Processing	38
7.10	CONTEXT ADDITION	38
7.10.1	CONTEXT ADDITION Processing	38
7.11	SETUP PROCEDURE	39
7.11.1	SETUP PROCEDURE Processing	39
8	External Structure Elements	39
8.1	INCLUDABLE STRUCTURE	40
8.2	EXTERNAL DECLARATION	41
8.2.1	STRUCTURE ELEMENT CLASS IDENTIFIER	41
8.2.2	STRUCTURE ELEMENT IDENTIFIER	42
8.2.3	EXTERNAL DECLARATION Processing	42
8.3	LOCATION IDENTIFIER	43
8.3.1	PUBLIC LOCATION IDENTIFIER	43
8.3.2	LOCAL LOCATION IDENTIFIER	44
8.3.3	ENCODING DEPENDENT LOCATION IDENTIFIER	44
8.4	Referenced Structure Element Identification	45
8.5	EXTERNAL REFERENCE	46
8.5.1	EXTERNAL REFERENCE Processing	46
9	Resource Definitions	46
9.1	General	47
9.1.1	Resource Definition	47
9.1.2	Resource Identification	47
9.1.3	Resource Undefined	47
9.1.4	Resource Reference Objects	48
9.1.5	Resource Declaration	48
9.2	ENVIRONMENT RESOURCE	48
9.2.1	RESOURCE UNDEFINITION	49
9.2.2	ENVIRONMENT RESOURCE Processing	49
9.3	RESOURCE DEFINITION	50

9.3.1	RESOURCE CLASS IDENTIFIER	50
9.3.2	ENVIRONMENT RESOURCE IDENTIFIER	51
9.3.3	RESOURCE SPECIFICATION	51
9.3.4	RESOURCE DEFINITION Processing	51
9.4	RESOURCE DECLARATION	52
9.4.1	INTERNAL RESOURCE IDENTIFIER	52
9.4.2	RESOURCE DECLARATION Processing	52
9.5	Context Dictionary	53
9.5.1	DICTIONARY SPECIFICATION	53
9.5.2	DICTIONARY SPECIFICATION Processing	53
9.6	Color Space	54
9.6.1	Color Space Family Identifiers	54
9.6.2	COLOR SPACE SPECIFICATION	55
9.6.3	COLOR SPACE FAMILY IDENTIFIER	55
9.6.4	PRIMARY SET SPECIFICATION	55
9.6.5	PRIMARY SET IDENTIFIER	56
9.6.6	PRIMARIES LIST	56
9.6.7	PRIMARY COLOR IDENTIFIER	56
9.6.8	COLOR SPACE SPECIFICATION Processing	56
9.6.9	Standard Color Space Resources	56
9.7	Data Source	57
9.7.1	DATA SOURCE SPECIFICATION	57
9.7.2	DATA BLOCK	57
9.7.3	DATA SOURCE SPECIFICATION Processing	57
9.7.4	Standard Data Source Resources	58
9.8	Filter	58
9.8.1	Filter RESOURCE SPECIFICATION	59
9.8.2	Standard Filters	59
9.9	Pattern	59

9.9.1	PATTERN SPECIFICATION	59
9.9.2	PATTERN SPECIFICATION Processing	59
9.10	Form	60
9.10.1	FORM SPECIFICATION	60
9.10.2	FORM SPECIFICATION Processing	60
10	Fonts	60
10.1	General	61
10.1.1	Font Resources	61
10.1.2	Glyph Index Maps	61
10.1.3	Indexed Fonts	61
10.1.4	Other Indexed Fonts	61
10.2	Representation of Glyph Identifiers	62
10.2.1	Conversion of ISO10036 Glyph Names	62
10.2.2	Conversion of Other Structured Glyph Names	62
10.2.3	Conversion of Simple Glyph Names	62
10.3	Font References	63
10.3.1	Font Resource Identifiers	63
10.3.2	Font Properties	63
10.3.3	Unsatisfied Font References	63
10.4	FONT SPECIFICATION	64
10.5	FONT IDENTIFIER FONT SPECIFICATION	64
10.6	FONT REFERENCE FONT SPECIFICATION	64
10.6.1	GLYPH INDEX MAP IDENTIFIER	64
10.6.2	FONT REFERENCE FONT SPECIFICATION Processing	65
10.7	FONT REFERENCE	65
10.7.1	FONT RESOURCE IDENTIFIER	65
10.7.2	REQUIRED PROPERTIES	66
10.7.3	ADVISORY PROPERTIES	66
10.7.4	MATCH RULES	66

10.7.5	SATISFACTION CRITERION	66
10.7.6	FONT REFERENCE Processing	67
10.7.7	Standard FONT RESOURCE IDENTIFIER Values	68
10.8	FONTTYPE1 FONT SPECIFICATION	68
10.9	REMAPPED FONT SPECIFICATION	68
10.9.1	REMAP	69
10.9.2	GLYPH INDEX TRANSLATION TABLE	69
10.9.3	REMAPPED FONT SPECIFICATION Processing	69
10.9.4	Errors and Warnings	70
10.10	COMPOSITE FONT SPECIFICATION	70
10.10.1	FMAPTYPE	70
10.10.2	FMAPTYPE PARAMETERS LIST	70
10.10.3	FONT INDEX MAP	71
10.10.4	FONT LIST	72
10.10.5	COMPOSITE FONT SPECIFICATION Processing	72
10.11	USER FONT SPECIFICATION	73
10.12	GLYPH INDEX MAP SPECIFICATION	73
10.12.1	GLYPH INDEX MAP SIZE	73
10.12.2	GLYPH IDENTIFIER LIST	73
10.12.3	GLYPH INDEX MAP SPECIFICATION Processing	74
10.12.4	Standard Glyph Index Maps	74
11	Document Production Instructions	74
11.1	General	74
11.2	Sources of Document Production Instructions	75
11.2.1	Document Structure	75
11.2.2	Supplementary DPI	75
11.2.3	Additional DPI	75
11.2.4	Reconciliation of Document Production Instructions	76
11.3	Classes of Document Production Instructions	76

11.4	Fallback	77
11.5	Useful Structure elements	77
11.5.1	DIMENSION	77
11.5.2	XYDIMENSIONS	78
11.5.3	HEAD LOCATIONS	79
11.5.4	EDGE	80
11.6	DPI DECLARATION	80
11.7	Additional Document Production Instructions	81
11.7.1	ADDITIONAL DPI	81
11.7.2	DPI NAME	81
11.7.3	DPI VALUE	82
11.7.4	ADDITIONAL DPI Semantics	82
12	Medium Document Production Instructions	82
12.1	Medium Declaration	83
12.1.1	Medium Specification	83
12.1.2	Selection of Physical Media	83
12.1.3	Medium-list presentation parameter	84
12.1.4	Default medium	84
12.2	Association of Media with Ordinal Page Numbers	84
12.2.1	Medium Selection by Medium Select	85
12.2.2	Medium Selection by Current Medium	85
12.3	Medium Document Production Instruction	85
12.3.1	MEDIUM DPI	85
12.3.2	MEDIUM Document Production Instruction Processing	86
12.3.3	Medium Document Production Instruction Reconciliation	86
12.3.4	Medium Document Production Instruction Fallback	87
12.4	MEDIUM SPECIFICATION	87
12.4.1	MEDIUM NAME	87
12.4.2	MEDIUM MESSAGE	87

12.4.3	MEDIUM SPECIFICATION Processing	87
12.5	MEDIUM PROPERTIES	88
12.5.1	MEDIUM SIZE	88
12.5.2	MEDIUM COLOR	89
12.5.3	MEDIUM WEIGHT	89
12.5.4	MEDIUM TYPE	89
12.5.5	MEDIUM TOOTH	90
12.5.6	MEDIUM GRAIN	90
12.5.7	MEDIUM PRE-PUNCH	90
12.5.8	MEDIUM MULTI-PART	92
12.5.9	MEDIUM FINISHED EDGES	93
12.5.10	MEDIUM LABELS	93
12.5.11	ADDITIONAL PROPERTY	94
12.6	Medium Select Document Production Instruction	95
12.6.1	MEDIUM SELECT DPI	95
12.6.2	Medium Select Document Production Instruction Processing	96
12.6.3	Medium Select Document Production Instruction Reconciliation	96
12.6.4	Medium Select Document Production Instruction Fallback	96
12.7	Current Medium Document Production Instruction	96
12.7.1	CURRENT MEDIUM DPI	96
12.7.2	Current Medium Document Production Instruction Processing	96
12.7.3	Current Medium Document Production Instruction Reconciliation	96
12.7.4	Current Medium Document Production Instruction Fallback	97
13	Presentation Document Production Instructions	97
13.1	Copies Document Production Instruction	97
13.1.1	COPIES DPI	97
13.1.2	Copies Document Production Instruction Processing	97

13.1.3	Copies Document Production Instruction Reconciliation	98
13.1.4	Copies Document Production Instruction Fallback	98
13.2	Page Select Document Production Instruction	98
13.2.1	PAGE SELECT DPI	98
13.2.2	Page Select Document Production Instruction Processing	99
13.2.3	Page Select Document Production Instruction Reconciliation	99
13.2.4	Page Select Document Production Instruction Fallback	100
13.3	Supplementary Page Select Document Production Instruction	100
13.3.1	SUPPLEMENTARY PAGE SELECT DPI	100
13.3.2	Supplementary Page Select Document Production Instruction Processing	100
13.3.3	Supplementary Page Select Document Production Instruction Reconciliation	101
13.3.4	Supplementary Page Select Document Production Instruction Fallback	101
13.4	Sides Document Production Instruction	101
13.4.1	SIDES DPI	101
13.4.2	Sides Document Production Instruction Processing	101
13.4.3	Sides Document Production Instruction Reconciliation	101
13.4.4	Sides Document Production Instruction Fallback	101
13.5	Plex Document Production Instruction	101
13.5.1	PLEX DPI	102
13.5.2	Plex Document Production Instruction Processing	102
13.5.3	Plex Document Production Instruction Reconciliation	102
13.5.4	Plex Document Production Instruction Fallback	102
13.6	X-Image-Shift Document Production Instruction	102
13.6.1	X-IMAGE SHIFT DPI	102
13.6.2	X-Image-Shift Document Production Instruction Processing	102
13.6.3	X-Image-Shift Document Production Instruction Reconciliation	102

13.6.4	X-Image-Shift Document Production Instruction Fallback	103
13.7	Y-Image-Shift Document Production Instruction	103
13.7.1	Y-IMAGE SHIFT DPI	103
13.7.2	Y-Image-Shift Document Production Instruction Processing	103
13.7.3	Y-Image-Shift Document Production Instruction Reconciliation	103
13.7.4	Y-Image-Shift Document Production Instruction Fallback	103
13.8	Current Side Document Production Instruction	103
13.8.1	CURRENT SIDE DPI	103
13.8.2	Current Side Document Production Instruction Processing	104
13.8.3	Current Side Document Production Instruction Reconciliation	104
13.8.4	Current Side Document Production Instruction Fallback	104
14	Finishing Document Production Instruction	104
14.1	Finishing Model	104
14.2	Finishing Process Presentation Parameters	106
14.2.1	Inherited Finishing Process Presentation Parameters	107
14.2.2	Other Finishing Process Parameters	107
14.2.3	Reference Size	107
14.2.4	Reference Edge	108
14.2.5	Jog Edge	108
14.2.6	Process Offset	108
14.2.7	Head Locations	108
14.3	Finishing Document Production Instruction	109
14.3.1	FINISHING DPI	109
14.3.2	Finishing Document Production Instruction Processing	110
14.3.3	Finishing Document Production Instruction Reconciliation	110
14.3.4	Finishing Document Production Instruction Fallback	110
14.4	FINISHING PROCESS SPECIFICATION	110
14.5	STITCHING SPECIFICATION	111

14.5.1	NAMED STITCHING	111
14.5.2	STITCHING PARAMETERS	112
14.5.3	STITCH TYPE	112
14.5.4	Stitching Finishing Process	112
14.6	BINDING SPECIFICATION	112
14.6.1	NAMED BINDING	113
14.6.2	BINDING PARAMETERS	113
14.6.3	BINDING TYPE	113
14.6.4	BINDING COLOR	113
14.6.5	Binding Finishing Process	114
14.7	TRIMMING SPECIFICATION	114
14.7.1	NAMED TRIMMING	114
14.7.2	TRIMMING PARAMETERS	114
14.7.3	TRIM OFFSET	114
14.7.4	TRIM DIMENSIONS	114
14.7.5	Trimming Finishing Process	115
14.8	DIE CUTTING SPECIFICATION	115
14.8.1	NAMED DIE CUTTING	115
14.8.2	DIE CUTTING PARAMETERS	115
14.8.3	DIE CUT POSITION	116
14.8.4	DIE CUT NAME	116
14.8.5	Die Cut Finishing Process	117
14.9	PUNCHING SPECIFICATION	117
14.9.1	NAMED PUNCHING	117
14.9.2	PUNCHING PARAMETERS	117
14.9.3	PUNCH DIAMETER	117
14.9.4	Punching Finishing Process	118
14.10	PERFORATING SPECIFICATION	118
14.10.1	NAMED PERFORATION	119

14.10.2	PERFORATION PARAMETERS	119
14.10.3	PERFORATION TYPE	119
14.10.4	Perforating Finishing Process	119
14.11	SLITTING SPECIFICATION	120
14.11.1	NAMED SLITTING	120
14.11.2	SLITTING PARAMETERS	120
14.11.3	Slitting Finishing Process	120
14.12	INSERT SPECIFICATION	120
14.12.1	NAMED INSERTING	121
14.12.2	INSERTING PARAMETERS	121
14.12.3	INSERT SHEET LIST	121
14.12.4	INSERT SHEET	121
14.12.5	INSERT IDENTIFIER	121
14.12.6	INSERT NAME	122
14.12.7	INSERT BIN	122
14.12.8	INSERT TOP SURFACE	122
14.12.9	INSERT AFTER	122
14.12.10	INSERT MESSAGE	122
14.12.11	Inserting Finishing Process	123
14.13	COVERS SPECIFICATION	123
14.13.1	NAMED COVERS	123
14.13.2	COVERS PARAMETERS	123
14.13.3	FRONT COVER	123
14.13.4	BACK COVER	124
14.13.5	COVER NAME	124
14.13.6	Covers Finishing Process	124
14.14	FOLDING SPECIFICATION	124
14.14.1	NAMED FOLDING	124
14.14.2	FOLDING PARAMETERS	124

14.14.3	Folding Finishing Process	125
14.15	OTHER FINISHING SPECIFICATION	125
14.15.1	FINISHING OP NAME	125
14.15.2	FINISHING OP PARAMETERS	125
14.15.3	NAMED FINISHING OP PARAMETERS	125
14.15.4	SPECIFIED FINISHING OP PARAMETERS	126
14.15.5	ADDITIONAL PARAMETERS	126
14.15.6	OTHER FINISHING SPECIFICATION Finishing Processes	126
15	Management Document Production Instructions	126
15.1	Colorant Set Document Production Instruction	127
15.1.1	COLORANT SET DPI	127
15.1.2	Colorant Set Document Production Instruction Processing	129
15.1.3	Colorant Set Document Production Instruction Reconciliation	129
15.1.4	Colorant Set Document Production Instruction Fallback	129
15.2	Document Start Message Document Production Instruction	129
15.2.1	DOCUMENT START MESSAGE DPI	129
15.2.2	Document Start Message Document Production Instruction Processing	129
15.2.3	Document Start Message Document Production Instruction Reconciliation	129
15.2.4	Document Start Message Document Production Instruction Fallback	129
15.3	Auxiliary Page Type Document Production Instruction ..	130
15.3.1	AUXILIARY PAGE TYPE DPI	130
15.3.2	START PAGE TYPE	130
15.3.3	SEPARATOR PAGE TYPE	131
15.3.4	END PAGE TYPE	131
15.3.5	Auxiliary Page Type Document Production Instruction Processing	131
15.3.6	Auxiliary Page Type Document Production Instruction Reconciliation	131

15.3.7	Auxiliary Page Type Document Production Instruction Fallback	132
15.4	Document Comment Document Production Instruction ..	132
15.4.1	DOCUMENT COMMENT DPI	132
15.4.2	Document Comment Document Production Instruction Processing	132
15.4.3	Document Comment Document Production Instruction Reconciliation	132
15.4.4	Document Comment Document Production Instruction Fallback	132
15.5	Timeout Document Production Instruction	132
15.5.1	TIMEOUT DPI	132
15.5.2	Timeout Document Production Instruction Processing	132
15.5.3	Timeout Document Production Instruction Reconciliation	133
15.5.4	Timeout Document Production Instruction Fallback	133
15.6	Document Abort Policy Document Production Instruction	133
15.6.1	ABORT POLICY DPI	133
15.6.2	Document Abort Policy Document Production Instruction Processing	133
15.6.3	Document Abort Policy Document Production Instruction Reconciliation	134
15.6.4	Document Abort Policy Document Production Instruction Fallback	134
15.7	Output Bin Document Production Instruction	134
15.7.1	OUTPUT BIN DPI	134
15.7.2	Output Bin Document Production Instruction Processing	135
15.7.3	Output Bin Document Production Instruction Reconciliation	135
15.7.4	Output Bin Document Production Instruction Fallback ..	135
15.8	Output Specification Document Production Instruction ..	135
15.8.1	OUTPUT SPECIFICATION DPI	135
15.8.2	COLLATED	136
15.8.3	OFFSET	136

15.8.4	BURST	136
15.8.5	ADDITIONAL OUTPUT	137
15.8.6	Output Specification Document Production Instruction Processing	137
15.8.7	Output Specification Document Production Instruction Reconciliation	137
15.8.8	Output Specification Document Production Instruction Fallback	138
15.9	Document End Message Document Production Instruction	138
15.9.1	DOCUMENT END MESSAGE DPI	138
15.9.2	Document End Message Processing	138
15.9.3	Document End Message Reconciliation	138
15.9.4	Document End Message Fallback	138
16	Document Structure and Content Processing	138
16.1	BLOCK	139
16.2	Block State	139
16.2.1	Current Virtual Machine State	139
16.2.2	Initial Block State of a TOP LEVEL STRUCTURE	140
16.2.3	Initial Block State of a Subordinate BLOCK	141
16.3	Current Page Image	143
16.4	Interface to the Content Processor	143
16.4.1	Content value	143
16.4.2	Context of Interpretation	144
16.4.3	Current Page Image	145
16.4.4	Content Processing	145
16.4.5	Return	145
16.5	TOKENSEQUENCE	146
16.6	Association of Page Images with Instances of the Media	146
16.6.1	Page Selection and Numbering	146
16.6.2	Medium Declaration and Selection	147
16.6.3	Current Side Presentation Parameter	147

16.6.4	Association of Page Images with Instances of the Media	148
16.6.5	One sided printing	148
16.6.6	Two sided printing	148
16.7	Placement of the Page Image on the Medium	149
16.7.1	Location and Orientation of the Reference Coordinate System on the Medium	149
16.7.2	Placement of the Page Image on the Imageable Surface of the Medium	150
16.7.3	Initial CurrentTransformation	151
17	Document Content Processing Model	152
17.1	Virtual Machine	153
17.1.1	Basic Concepts	154
17.1.2	Parser	156
17.1.3	Sequence of tokens	156
17.1.4	Interpreter	156
17.1.5	Operand Stack	157
17.1.6	Context Stack	157
17.1.7	Set of Referenced Objects	158
17.1.8	State Variables	158
17.1.9	Graphics State and the Graphics State Stack	159
17.1.10	Ordered set of SaveObjects	159
17.1.11	Imager	159
17.1.12	Current Page Image	160
17.1.13	Set of Declared Resources	160
17.1.14	Current Abort Policy	160
17.1.15	Initial CurrentTransformation	160
17.2	Imaging Model	160
17.2.1	Ink	161
17.2.2	Mask	161
17.2.3	Clipping Region	162

17.2.4	Page Image	162
17.3	Coordinate Systems	163
17.3.1	Reference Coordinate System	163
17.3.2	User Coordinate Systems	163
17.3.3	Initial <i>CurrentTransformation</i>	164
17.4	Notation	164
17.4.1	Literals	164
17.4.2	Objects	164
17.4.3	Object Types	165
17.4.4	Abbreviated Forms	165
17.4.5	Sequences of objects	166
17.4.6	Operators	166
17.4.7	State and Graphics State Variables	166
17.4.8	Operand Stack	167
17.4.9	Operator descriptions	167
18	Content Data Types	168
18.1	Value types	168
18.1.1	Any	168
18.1.2	Boolean	168
18.1.3	Cardinal	168
18.1.4	Dictionary Key	169
18.1.5	Identifier	169
18.1.6	Integer	169
18.1.7	Mark	169
18.1.8	Name	169
18.1.9	Null	169
18.1.10	Number	169
18.1.11	Operator	170
18.1.12	Real	170

18.1.13	SaveObject	170
18.1.14	StreamObject	170
18.2	Composite object types	170
18.2.1	Dictionary	170
18.2.2	OctetString	171
18.2.3	Path	171
18.2.4	Vector	172
18.3	Object reference types	172
18.3.1	Indexed Font	172
18.3.2	Glyph String	173
18.3.3	Procedure	173
18.3.4	Transformation	173
18.4	Attributes	174
18.4.1	Executability Attribute	174
18.4.2	Access Attribute	174
19	State Variables	175
19.1	Current Black Generation	175
19.2	Current Clipping Region	175
19.3	Current Color	175
19.4	Current Color Rendering	176
19.5	Current Color Space	176
19.6	Current Dash Pattern	176
19.7	Current Font	176
19.8	Current Halftone	176
19.9	Current Miter Limit	176
19.10	Current Path	177
19.11	Current Position	177
19.12	Current <i>OverPrint</i>	177
19.13	Current Stroke Adjust	177

19.14	Current Stroke End	177
19.15	Current Stroke Join	177
19.16	Current Stroke Width	178
19.17	Current Transformation	178
19.18	Current UnderColor Removal	178
19.19	Device Description Dictionary	178
19.19.1	Process Color Class	178
19.19.2	Current Resolution	179
19.19.3	Current Medium Size	179
19.19.4	Current Imageable Region	179
20	Arithmetic and Logic Operators	180
20.1	AbsoluteValue	180
20.2	Add	180
20.3	ArcTangent	181
20.4	And	181
20.5	Ceiling	182
20.6	Cosine	182
20.7	Divide	182
20.8	Equal	182
20.9	Exponentiate	183
20.10	False	183
20.11	Floor	183
20.12	GreaterOrEqual	184
20.13	GreaterThan	184
20.14	IntegerDivide	184
20.15	LessOrEqual	184
20.16	LessThan	185
20.17	Logarithm	185
20.18	LogicalShift	185

20.19	Multiply	185
20.20	NaturalLogarithm	186
20.21	Negate	186
20.22	Not	186
20.23	NotEqual	186
20.24	Null	187
20.25	Or	187
20.26	Rand	187
20.27	RandSetState	187
20.28	Remainder	187
20.29	Round	188
20.30	Sine	188
20.31	SquareRoot	188
20.32	Subtract	188
20.33	True	189
20.34	Truncate	189
20.35	Xor	189
21	Stack and Composite Object Operators	190
21.1	Operators for Manipulating Values on the Operand Stack	190
21.1.1	ClearStack	190
21.1.2	ClearToMark	190
21.1.3	ConvertToExecutable	190
21.1.4	ConvertToIdentifier	190
21.1.5	ConvertToInteger	190
21.1.6	ConvertToReal	191
21.1.7	ConvertToString	191
21.1.8	Copy	192
21.1.9	Count	193
21.1.10	CountToMark	193

21.1.11	Dup	193
21.1.12	Exchange	193
21.1.13	Index	194
21.1.14	Mark	194
21.1.15	Pop	194
21.1.16	Roll	195
21.1.17	Type	196
21.2	Operators for Manipulating Dictionaries, Vectors, and OctetStrings	196
21.2.1	AnchorSearch	196
21.2.2	Capacity	197
21.2.3	ContextStack	197
21.2.4	Define	197
21.2.5	EntriesUsed	198
21.2.6	Get	198
21.2.7	GetCurrentDictionary	198
21.2.8	GetInterval	199
21.2.9	GetTest	199
21.2.10	GetValue	199
21.2.11	GetValueTest	199
21.2.12	MakeDictionary	200
21.2.13	MakeString	200
21.2.14	MakeVector	200
21.2.15	MakeandStoreDictionary	201
21.2.16	MakeandStoreVector	201
21.2.17	PopContextStack	202
21.2.18	PushContextStack	202
21.2.19	Put	202
21.2.20	PutInterval	202

21.2.21	PutValue	203
21.2.22	Search	203
21.2.23	StoreVector	204
21.2.24	VectorLoad	204
21.3	Attribute and Resource Operators	204
21.3.1	CheckIfExecutable	204
21.3.2	CheckIfReadable	205
21.3.3	CheckIfWritable	205
21.3.4	FindResource	205
21.3.5	QueryResource	207
21.3.6	MakeReadOnly	208
21.3.7	MakeExecuteOnly	208
22	Flow of Control, Procedure, and State Operators	208
22.1	Execute	208
22.2	Exit	209
22.3	For	209
22.4	ForAll	209
22.5	GetDeviceDescription	210
22.6	If	210
22.7	IfElse	210
22.8	Loop	211
22.9	Noop	211
22.10	Repeat	211
22.11	RestoreGraphicsState	211
22.12	RestoreGraphicsStateXCP	211
22.13	RestoreSavedGraphicsState	211
22.14	RestoreState	212
22.15	SaveGraphicsState	212
22.16	SaveState	212

23	Coordinate Transformation Operators	212
23.1	ScaleT	213
23.2	Scale	213
23.3	TranslateT	213
23.4	Translate	214
23.5	RotateT	214
23.6	Rotate	214
23.7	ConcatT	214
23.8	Concat	215
23.9	SetTrans	215
23.10	GetTrans	215
24	Character Text and the Indexed Font Architecture	215
24.1	Fonts	216
24.1.1	Font Resources	216
24.1.2	Font Size, scaling and rotation	216
24.1.3	Bold and italic text	216
24.1.4	Writing modes	217
24.2	Glyphs, Glyph Mappings and Indexed Fonts	217
24.2.1	Glyph identifiers	217
24.2.2	Strings	217
24.2.3	Indices	217
24.2.4	Indexed Fonts	218
24.2.5	Glyph Mappings	218
24.3	Indexed Fonts	218
24.3.1	Indexed Font Specification Dictionaries	218
24.3.2	Indexed Fonts	221
24.4	Indexed Font Dictionaries	222
25	Base Indexed Font Specification Dictionaries	223
25.1	FontType 3 Indexed Font Specification Dictionaries	223

25.1.1	FontMatrix	223
25.1.2	FontBBox	223
25.1.3	Encoding	223
25.1.4	Metrics	223
25.1.5	ConstructGlyph	224
25.2	FontType 3	224
25.2.1	WMode	224
25.2.2	OtherMetrics	224
25.3	FontType 1 Indexed Font Specification Dictionaries	225
25.3.1	Key/Value pairs with same semantics as in FontType 3	225
25.3.2	PaintType	225
25.3.3	CharStrings	225
25.3.4	FontType 3 keys that are not present in FontType 1	225
25.4	FontType 1 Indexed Font Specification Dictionary	226
25.4.1	Metrics	226
25.4.2	Metrics2	227
25.4.3	OtherMetrics	227
25.4.4	CDevProc	227
25.4.5	WMode	228
25.5	FontType 1 Indexed Font Specification Dictionaries	228
25.6	Base Font Glyph Mapping	228
25.7	Standard GLYPH INDEX MAPs	229
25.7.1	Latin1 Publishing GLYPH INDEX MAP	229
25.7.2	Latin1 Publishing (A) GLYPH INDEX MAP	229
25.7.3	Algorithmic AFII GLYPH INDEX MAPs	229
26	Composite Indexed Font Specification Dictionaries	229
26.1	FontType 0 Indexed Font Specification Dictionaries	229
26.1.1	FontMatrix	229
26.1.2	Encoding	229

26.1.3	FDepVector	230
26.1.4	FMapType	230
26.2	Other Key/Value Pairs	230
26.3	Optional Key/Value Pairs	230
26.3.1	WMode	230
26.4	Composite Font Glyph Mappings	230
26.4.1	Composite Font Glyph Mapping Algorithms	231
26.4.2	8/8 Mapping	232
26.4.3	1/7 Mapping	233
26.4.4	9/7 Mapping	233
26.4.5	Interval Mapping	233
26.4.6	Escape Mapping	234
26.4.7	Double Escape Mapping	234
26.4.8	ShiftOut/ShiftIn Mapping	235
26.5	Standard FONT INDEX MAPs	235
26.5.1	Algorithmic FONT INDEX MAPs	235
27	Font and Character Text Operators	236
27.1	Font Accessing and Manipulation Operators	236
27.1.1	DefineFont	236
27.1.2	FindFont	236
27.1.3	GetRootFont	236
27.1.4	GetSelectedFont	237
27.1.5	OpenFont	237
27.1.6	PutWMode	237
27.1.7	ScaleFont	237
27.1.8	TransformFont	238
27.2	Graphics State Manipulation Operators	238
27.2.1	GetPosition	238
27.2.2	SetFont	238

27.2.3	SetPosition	239
27.2.4	SetPositionRelative	239
27.3	Character Text Operators	239
27.3.1	ShowGlyph	239
27.3.2	ShowString	241
27.3.3	ShowStringEscapedX	241
27.3.4	ShowStringEscapedY	242
27.3.5	ShowStringEscapedXY	242
27.3.6	StringWidth	243
28	Raster Graphics Operators	244
28.1	Model for Raster Graphics	244
28.1.1	Sampled Raster Graphics	245
28.1.2	Bitmap Raster Graphics	246
28.1.3	Raster Graphics Image Data	246
28.2	Image Dictionaries	246
28.2.1	Image Dictionary Contents and Semantics	246
28.2.2	Data Sources	248
28.2.3	In-Line Data	249
28.2.4	Decode Vector	250
28.2.5	Interpolation	250
28.3	Operators	250
28.3.1	ImageRasterElement	251
28.3.2	MaskBitMap	252
29	Geometric Graphics Operators	252
29.1	Model for Geometric Graphics	252
29.2	Path Construction and Manipulation Operators	253
29.2.1	AppendPath	253
29.2.2	ArcToClockwise	253
29.2.3	ArcToCounterClockwise	254

29.2.4	ClosePathSegment	255
29.2.5	CurveTo	255
29.2.6	CurveToRelative	256
29.2.7	GetPath	256
29.2.8	GlyphToPath	256
29.2.9	LineTo	257
29.2.10	LineToRelative	257
29.2.11	NewPath	257
29.2.12	OutlineStroke	257
29.2.13	SetPath	258
29.3	Stroking and Filling Operators	258
29.3.1	FillPath	258
29.3.2	FillPathEvenOdd	258
29.3.3	StrokePath	258
29.4	Rectangular Fill and Stroke Operators	261
29.4.1	RectangleFill	261
29.4.2	RectangleStroke	261
29.5	Graphics State Variable Operators	262
29.5.1	GetDashPattern	262
29.5.2	GetMiterLimit	263
29.5.3	GetStrokeAdjust	263
29.5.4	GetStrokeEnd	263
29.5.5	GetStrokeJoin	263
29.5.6	GetStrokeWidth	263
29.5.7	SetDashPattern	263
29.5.8	SetMiterLimit	264
29.5.9	SetStrokeAdjust	264
29.5.10	SetStrokeEnd	264
29.5.11	SetStrokeJoin	264

29.5.12	SetStrokeWidth	265
30	Clipping Operators	265
30.1	Model for Clipping	265
30.2	Operators	266
30.2.1	ClipPath	266
30.2.2	ClipPathEvenOdd	266
30.2.3	RectangleClip	267
31	Filters	267
31.1	Model for Filters	268
31.1.1	Data Sources for Filters	268
31.1.2	End-of-Data	269
31.1.3	Filter Identifiers	269
31.2	Standard Filters	269
31.2.1	ASCIISHexDecode	269
31.2.2	ASCII85Decode	269
31.2.3	LZWDecode	270
31.2.4	RunLengthDecode	270
31.2.5	CCITTFaxDecode	270
31.2.6	NullDecode	271
31.3	Operators	272
31.3.1	Filter	272
32	Patterns	273
32.1	Creation and Use of Patterns	273
32.2	Pattern Dictionaries	273
32.2.1	PaintType	274
32.2.2	PaintProc	274
32.2.3	BBox	275
32.2.4	XStep	275
32.2.5	YStep	275

32.2.6	Tiling	275
32.2.7	TilingType	275
32.2.8	Implementation	276
32.3	Pattern Semantics	276
32.3.1	Colored Patterns	276
32.3.2	Mask Patterns	276
32.4	Obtaining a Prototype Pattern Dictionary for Use in Content	277
32.5	Operators	277
32.5.1	MakePattern	277
32.5.2	SetPatternColor	278
33	Forms	278
33.1	Model for Forms	278
33.2	Form Dictionaries	278
33.2.1	BBox	279
33.2.2	Matrix	279
33.2.3	PaintProc	279
33.2.4	UniqueID	279
33.2.5	Implementation	279
33.3	Obtaining a Form Dictionary for Use in Content	280
33.4	Imaging a Form	280
33.5	ExecuteForm	280
34	Color Space and Color Operators	282
34.1	Model for Color Spaces and Colors	282
34.2	Color Spaces and Color Space Families	282
34.3	CIE and CIE-based Color Spaces	283
34.3.1	CIELAB	283
34.3.2	CIELUV	284
34.3.3	CIEBasedABC	285
34.3.4	CIEBasedA	289

34.4	Device Color Spaces	291
34.4.1	DeviceRGB	292
34.4.2	DeviceCMYK	292
34.4.3	DeviceKX	293
34.4.4	DeviceGray	293
34.5	Special-Purpose Color Spaces	294
34.5.1	Indexed	294
34.5.2	NamedColor	295
34.6	Operators	296
34.6.1	SetColorSpace	296
34.6.2	GetColorSpace	296
34.6.3	SetColor	297
34.6.4	GetColor	297
34.6.5	SetOverPrint	297
34.6.6	GetOverPrint	298
35	Rendering and Rendering Control Operators	298
35.1	Model for Rendering	298
35.2	Conversions from CIE Color > to Device Color	299
35.2.1	Transforming CIE Color to Device Color	299
35.3	Color Rendering Dictionaries	300
35.3.1	Color Rendering Type 1 Dictionary	301
35.4	Conversions among Device Color Spaces	306
35.4.1	Conversion between DeviceRGB and <i>DeviceGray</i>	307
35.4.2	Conversion between DeviceCMYK and <i>DeviceGray</i>	307
35.4.3	Conversion from DeviceRGB to DeviceCMYK	307
35.4.4	Conversion from DeviceCMYK to DeviceRGB	309
35.5	Transfer Functions	309
35.5.1	Specifying Transfer Functions	309
35.6	Halftone Functions	310

35.6.1	Model for Halftone Screens	310
35.6.2	Generating Halftone Screens	311
35.7	Halftone Dictionaries	312
35.7.1	HalftoneType 1 Halftone Dictionaries	312
35.7.2	HalftoneType 3 Halftone Dictionaries	314
35.7.3	HalftoneType 5 Halftone Dictionaries	314
35.8	Defining Halftone Functions	315
35.9	Operators	315
35.9.1	CIE Color Conversion Operators	315
35.9.2	Device Color Conversion Operators	316
35.9.3	Halftone Function Operators	316
36	Exception Handling	317
36.1	Structure Exceptions	317
36.1.1	Syntax error in structure	317
36.1.2	Illegal specification in structure	318
36.1.3	Implementation constraint violation	318
36.1.4	Unhandled content exception in content	318
36.1.5	Unhandled structure exception in subordinate BLOCK	318
36.2	Structure Exception Handling	318
36.2.1	dpi::abort-policy::struggle-on	318
36.2.2	dpi::abort-policy::on-error, dpi::abort-policy::on-warning	319
36.3	Content Exceptions	319
36.4	Content Exception Handling	320
36.4.1	Handled exceptions	320
36.4.2	Unhandled exceptions	320
36.5	Content Exception Operators and Procedures	320
36.5.1	RaiseException	320
36.5.2	RaiseError	320
36.5.3	RaiseWarning	321

36.5.4	Print	321
36.5.5	ExecuteTrapped	321
36.5.6	StoreErrorInfo	321
36.5.7	ReportErrorInfo	322
36.6	Interpreter Errors	322
36.6.1	Error Procedures and Dictionaries	322
36.6.2	Possible Interpreter Errors	323
36.7	ErrorInfoDict	324
36.7.1	newerror	324
36.7.2	errorname	324
36.7.3	command	324
36.7.4	ostack	324
36.7.5	dstack	325
36.7.6	recordstacks	325
36.8	Print requestor	325
37	Clear Text Representation and Interchange Format	325
37.1	Clear Text Structure Representation and Interchange Format	325
37.1.1	Base Structure Element Value Types	325
37.1.2	SPDL Document Type Definition	327
37.2	Clear Text Content Representation and Interchange Format	345
37.2.1	Token structure and delimiters	345
37.2.2	Token types	345
37.2.3	Encodings for content object types	345
37.2.4	In-line Raster Graphic Image Data Tokens	349
38	Binary Representation and Interchange Format	349
38.1	Binary Structure Representation and Interchange Format	349
38.2	Base Structure Element Value Types	350
38.2.1	Boolean type	350
38.2.2	Enumerated types	350

38.2.3	Integer type	350
38.2.4	Real type	350
38.2.5	Printable String type	350
38.2.6	Octet String type	350
38.2.7	Name type	350
38.2.8	Object Identifier type	350
38.2.9	Public Identifier type	350
38.2.10	Environment Name type	350
38.2.11	Structured Name type	350
38.2.12	Comments	350
38.3	SPDL Structure Definition Module	351
38.4	SPDL Document Module	352
38.5	External Reference Module	355
38.6	Resource Definition Module	357
38.7	Fonts and Glyph Index Map Module	359
38.8	Document Production Instructions Module	362
38.9	Binary Content Representation and Interchange Format	369
38.9.1	Token structure and notation	369
38.9.2	Token types	370
38.9.3	Representation of values	371
38.9.4	Short Opcode tokens	373
38.9.5	Type/Value tokens	374
38.9.6	Type/Length/Value tokens	374
38.9.7	Short Integer tokens	375
38.9.8	Encoding values for operators	375
39	Conformance	375
39.1	SPDL Instances	375
39.2	SPDL Presentation Processes	376
39.3	Representation and Interchange Format	376

39.4	Structure Syntax	376
39.5	Resources	376
39.5.1	Resource Definitions which are Subordinate to an ENVIRONMENT RESOURCE	376
39.5.2	Resource Definitions which are Subordinate to a DOCUMENT	377
39.5.3	Resources in the Environment of the Presentation Process	377
39.5.4	Color Space Families	379
39.6	External Structure Elements	380
39.7	Document Production Instructions	380
39.8	Content Processing	380
39.8.1	Ability to construct and save objects	380
39.8.2	Ability to represent values	381
39.9	Exception Handling	381
39.10	Imaging	381
Annexes		
A	Operator Encodings	382
B	ASN.1 Object Identifiers and SGML Formal Public Identifiers defined by this International Standard	389
B.1	Object Identifiers and SGML Formal Public Identifiers defined by this International Standard.	389
B.1.1	Public identifiers	389
B.1.2	ASN.1 Object Identifier Values	389
B.1.3	Object Identifier Value Declarations Module	393
C	SPDL Indexed Font Representation Format	396
C.1	Introduction	396
C.2	Conventions	396
C.3	Definitions	397
C.4	SPDL Indexed Font Representation	397
C.4.1	Header	397

C.4.2	PerFont Attributes	397
C.4.3	Glyph Shape Information	401
D	SPDL mandatory font set for interchange	407
E	Glyph Index Maps	417
E.1	GlyphIndexMap::Latin1Publishing	417
E.2	GlyphIndexMap::Latin1PublishingA	426
F	ASN.1 Object Identifiers and Public Identifiers for Document Production Instructions defined by ISO/IEC 10175	435
F.1	ASN.1 Object Identifiers and Public Identifiers for Document Production Instructions defined by ISO/IEC 10175	435
F.1.1	Document Production Instruction Values and Meanings	435
F.1.2	ASN.1 Object Identifiers and Public Identifiers	447
F.1.3	Object Identifier Value References	447
F.1.4	ASN.1 Object Identifier Definitions	458
G	Bibliography	464

Foreword

ISO (the International Organization for Standardization) and IEC (the International Electrotechnical Commission) form the specialized system for worldwide standardization. National bodies that are members of ISO or IEC participate in the development of International Standards through technical committees established by the respective organization to deal with particular fields of technical activity. ISO and IEC technical committees collaborate in fields of mutual interest. Other international organizations, governmental and non-governmental, in liaison with ISO and IEC, also take part in the work.

In the field of information technology, ISO and IEC have established a joint technical committee, ISO/IEC JTC 1. Draft International Standards adopted by the joint technical committee are circulated to national bodies for voting. Publication as an International Standard requires approval by at least 75 % of the national bodies casting a vote.

International Standard ISO/IEC 10180 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*.

Annexes A, B, C, D and E form an integral part of this International Standard. Annexes F and G are for information only.

Introduction

The development of laser printers in the early 1970's provided the opportunity for the low cost printing of documents containing not only character text but also general graphical material. This has in turn resulted in increasing interest in a standard printer interface which would make the capabilities of these printers available to document creation systems. Initial efforts to provide such an interface have in general taken two directions: the enhancement of existing printer interfaces to take advantage of additional printer capabilities, and the development of new document description technologies which are more appropriate to the new printing technology's enhanced imaging capabilities. The most successful of these efforts involved a departure from techniques and standards existing at that time for printing text in favor of techniques based on the model of computer languages. These printer interfaces have come to be known as "Page Description Languages" or "PDLs".

This International Standard specifies a device-independent means of describing documents comprised of text and graphical material, for presentation on paper or other media. SPDL also allows processes other than the presentation process to select pages or portions of SPDL documents for their use.

This International Standard is organized as follows:

- a) The general architecture of SPDL is specified.
- b) The major components and semantics of SPDL structure are specified.
- c) The interface between structure processing and content processing is specified.
- d) The major components and semantics of the SPDL content notation are specified.
- e) Exception handling in both structure processing and content processing are specified.
- f) Two interchange formats are specified.
- g) Statements covering both document conformance and presentation process conformance are provided.
- h) Normative annexes are provided which specify information objects which are defined by this International Standard and a font object format.

- i) An informative annex is provided to identify information objects defined by ISO/IEC 10175 which are included in this International Standard by reference.

Withdrawn

Information technology - Processing languages - Standard Page Description Language (SPDL)

1 Scope

1.1 Scope

This International Standard defines a language for the specification of electronic documents, comprised of black and white, gray scale, or full color text, images, and geometric graphics, in a form suitable for presentation (printing or displaying on other suitable media).

This International Standard is intended to be extensible in order to accommodate future developments in imaging technology.

This International Standard is intended to be used in a variety of configurations meeting a variety of connectivity needs. It is specifically compatible with use over OSI networks.

In addition to specifying how document images are represented, this International Standard specifies how Document Production Instructions affect document presentation.

1.2 Field of Application

This International Standard is intended for use in a wide variety of printing and publishing environments, including:

- electronic publishing;
- office systems;
- information networks;
- demand printing.

Documents conforming to this International Standard are termed SPDL documents. SPDL documents may be:

- interchanged;
- processed by locally connected presentation devices;
- sent to presentation devices connected to OSI or non-OSI networks;
- stored for presentation at a later time.

1.3 Relationship to Other Standards

The encoding of the document structure of documents conforming to this International Standard conforms to ISO/IEC 8824 and ISO/IEC 8825 if the binary encoding is used or to ISO/IEC 8879 if the clear text encoding is used.

This International Standard provides a detailed specification of the effect produced when a font resource conforming to the architecture of ISO/IEC 9541 is used in the presentation of character text. Structured Names as used in this International Standard for glyph identification are as defined in ISO/IEC 9541-2 and ISO/IEC 9070.

This International Standard provides a straightforward and efficient way of representing documents which are generated for printing by ODA systems. It also provides a capability of representing documents generated by SGML applications whose formatting is described by ISO/IEC 10179.

This International Standard provides for the efficient implementation of Print Services conforming to ISO/IEC 10175 which incorporate an SPDL Presentation Process for document presentation. This International Standard also specifies the specific semantics of applicable Document Production Instructions.

2 Normative References

The following standards contain provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO/IEC 646:1991, *Information technology - ISO 7-bit coded character set for information interchange*.

ISO/IEC 8824:1990, *Information technology - Open Systems Interconnection - Specification of Abstract Syntax Notation One (ASN.1)*.

ISO/IEC 8825:1990, *Information technology - Open Systems Interconnection - Specification of Basic Encoding Rules for Abstract Syntax Notation One (ASN.1)*.

ISO 8879:1986, *Information processing - Text and office systems - Standard Generalized Markup Language (SGML)*.

ISO/IEC 9070:1991, *Information technology - SGML support facilities - Registration procedures for public text owner identifiers*.

ISO/IEC 9541-1:1991, *Information technology - Font information interchange - Part 1: Architecture*.

ISO/IEC 9541-2:1991, *Information technology - Font information interchange - Part 2: Interchange Format*.

ISO/IEC 9541-3:1994, *Information technology - Font information interchange - Part 3: Glyph shape representation*.

ISO/IEC 10175-1¹⁾, *Information technology - Text and office systems - Document printing application - Part 1: Abstract service definition and procedures*.

ISO/IEC 10175-2²⁾, *Information technology - Text and office systems - Document printing application - Part 2: Protocol specification*.

IEEE 754:1985, *IEEE Standard for Binary Floating-Point Arithmetic*.

1) To be published

2) To be published