

MS-ODRAW:

Office Drawing Binary File Format Structure Specification

Intellectual Property Rights Notice for Format Documentation

- **Copyrights.** This format documentation is covered by Microsoft copyrights. Regardless of any other terms that are contained in the terms of use for the Microsoft website that hosts this documentation, you may make copies of it in order to develop implementations of the formats, and may distribute portions of it in your implementations of the formats or your documentation as necessary to properly document the implementation. This permission also applies to any documents that are referenced in the format documentation.
- **No Trade Secrets.** Microsoft does not claim any trade secret rights in this documentation.
- **Patents.** Microsoft has patents that may cover your implementations of the formats. Neither this notice nor Microsoft's delivery of the documentation grants any licenses under those or any other Microsoft patents. However, the formats may be covered by Microsoft's Open Specification Promise (available here: <http://www.microsoft.com/interop/osp>). If you would prefer a written license, or if the formats are not covered by the OSP, patent licenses are available by contacting iplg@microsoft.com.
- **Trademarks.** The names of companies and products contained in this documentation may be covered by trademarks or similar intellectual property rights. This notice does not grant any licenses under those rights.

Reservation of Rights. All other rights are reserved, and this notice does not grant any rights other than specifically described above, whether by implication, estoppel, or otherwise.

Tools. A format specification does not require the use of Microsoft programming tools or programming environments in order for you to develop an implementation. If you have access to Microsoft programming tools and environments you are free to take advantage of them.

Revision Summary			
Author	Date	Version	Comments
Microsoft Corporation	June 27, 2008	1.0	First release

Table of Contents

1	Introduction.....	19
1.1	Glossary	19
1.2	References	22
1.2.1	Normative References.....	22
1.2.2	Informative References	23
1.3	Structure Overview (Synopsis)	23
1.3.1	Records.....	24
1.3.2	Record Headers	25
1.3.3	Containers	25
1.3.4	Properties	25
1.3.5	Bit Format	26
1.3.6	Extended Colors	26
1.4	Relationship to Protocols and Other Structures	26
1.5	Applicability Statement.....	27
1.6	Versioning and Localization	27
1.7	Vendor-Extensible Fields.....	30
2	Structures	31
2.1	Custom OfficeArt Types	31
2.1.1	MSODGID	31
2.1.2	MSOSPID	31
2.1.3	FRID.....	31
2.1.4	MSOFO.....	31
2.2	OfficeArt Record Types.....	31
2.2.1	OfficeArtRecordHeader	31
2.2.2	OfficeArtCOLORREF	32
2.2.3	MSOSHADE.....	34
2.2.4	MSOTINT	34
2.2.5	MSOCOLORMODUNDEFINED	35
2.2.6	MSOTINTSHADE	35
2.2.7	OfficeArtFOPTE.....	35
2.2.8	OfficeArtFOPTEOPID.....	36
2.2.9	OfficeArtFOPT	38
2.2.10	OfficeArtSecondaryFOPT	45
2.2.11	OfficeArtTertiaryFOPT	46
2.2.12	OfficeArtDggContainer	53
2.2.13	OfficeArtDgContainer	54
2.2.14	OfficeArtSpContainer	56
2.2.15	OfficeArtInlineSpContainer.....	58
2.2.16	OfficeArtSpgrContainer.....	59
2.2.17	OfficeArtSpgrContainerFileBlock	59

2.2.18	OfficeArtSolverContainer	59
2.2.19	OfficeArtSolverContainerFileBlock	60
2.2.20	OfficeArtBStoreContainer	60
2.2.21	OfficeArtBStoreDelay	61
2.2.22	OfficeArtBStoreContainerFileBlock	61
2.2.23	OfficeArtBlip	62
2.2.24	OfficeArtBlipEMF	62
2.2.25	OfficeArtBlipWMF	63
2.2.26	OfficeArtBlipPICT	65
2.2.27	OfficeArtBlipJPEG	66
2.2.28	OfficeArtBlipPNG	67
2.2.29	OfficeArtBlipDIB	69
2.2.30	OfficeArtBlipTIFF	70
2.2.31	OfficeArtMetafileHeader	71
2.2.32	OfficeArtFBSE	72
2.2.33	OfficeArtFDGSL	73
2.2.34	OfficeArtFCalloutRule	74
2.2.35	OfficeArtFArcRule	74
2.2.36	OfficeArtFConnectorRule	75
2.2.37	OfficeArtFPSPL	76
2.2.38	OfficeArtFSPGR	77
2.2.39	OfficeArtChildAnchor	78
2.2.40	OfficeArtFSP	79
2.2.41	OfficeArtFRITContainer	80
2.2.42	OfficeArtFRIT	80
2.2.43	OfficeArtColorMRUContainer	81
2.2.44	MSOCR	81
2.2.45	OfficeArtSplitMenuColorContainer	82
2.2.46	OfficeArtIDCL	82
2.2.47	OfficeArtFDGG	83
2.2.48	OfficeArtFDGGBlock	83
2.2.49	OfficeArtFDG	84
2.2.50	MSOSHADETYPE	85
2.2.51	IMsoArray	85
2.2.52	IMsoInkData	86
2.2.53	MSOPATHINFO	87
2.2.54	MSOPATHESCAPEINFO	87
2.2.55	POINT	87
2.2.56	RECT	88
2.2.57	ADJH	88
2.2.58	SG	91
2.2.59	TABLEFLAGS	94

2.2.60	IHlink	95
2.3	Properties	95
2.3.1	OfficeArtRGFOPTE	95
2.3.2	Shape	96
2.3.2.1	hspMaster	96
2.3.2.2	cxstyle	96
2.3.2.3	bWMode	97
2.3.2.4	bWModePureBW	98
2.3.2.5	bWModeBW	98
2.3.2.6	idDiscussAnchor	99
2.3.2.7	dgmLayout	99
2.3.2.8	dgmNodeKind	100
2.3.2.9	dgmLayoutMRU	101
2.3.2.10	equationXML	102
2.3.2.11	equationXML_complex	102
2.3.2.12	Shape Boolean Properties	103
2.3.3	Callout	105
2.3.3.1	unused832	105
2.3.3.2	dxyCalloutGap	105
2.3.3.3	spcoa	106
2.3.3.4	spcod	107
2.3.3.5	dxyCalloutDropSpecified	108
2.3.3.6	dxyCalloutLengthSpecified	108
2.3.3.7	Callout Boolean Properties	109
2.3.4	Group Shape	111
2.3.4.1	wzName	111
2.3.4.2	wzName_complex	111
2.3.4.3	wzDescription	112
2.3.4.4	wzDescription_complex	112
2.3.4.5	pihlShape	112
2.3.4.6	pihlShape_complex	113
2.3.4.7	pWrapPolygonVertices	113
2.3.4.8	pWrapPolygonVertices_complex	114
2.3.4.9	dxWrapDistLeft	114
2.3.4.10	dyWrapDistTop	115
2.3.4.11	dxWrapDistRight	115
2.3.4.12	dyWrapDistBottom	116
2.3.4.13	lidRegroup	116
2.3.4.14	unused906	117
2.3.4.15	wzTooltip	117
2.3.4.16	wzTooltip_complex	117
2.3.4.17	wzScript	118

2.3.4.18	wzScript_complex.....	118
2.3.4.19	posh.....	119
2.3.4.20	posrelh.....	119
2.3.4.21	posv.....	132
2.3.4.22	posrelv.....	132
2.3.4.23	pctHR.....	145
2.3.4.24	alignHR.....	145
2.3.4.25	dxHeightHR.....	147
2.3.4.26	dxWidthHR.....	147
2.3.4.27	wzScriptExtAttr.....	148
2.3.4.28	wzScriptExtAttr_complex.....	148
2.3.4.29	scriptLang.....	148
2.3.4.30	wzScriptLangAttr.....	149
2.3.4.31	wzScriptLangAttr_complex.....	150
2.3.4.32	borderTopColor.....	150
2.3.4.33	borderLeftColor.....	150
2.3.4.34	borderBottomColor.....	151
2.3.4.35	borderRightColor.....	151
2.3.4.36	tableProperties.....	152
2.3.4.37	tableRowProperties.....	152
2.3.4.38	tableRowProperties_complex.....	153
2.3.4.39	wzWebBot.....	153
2.3.4.40	wzWebBot_complex.....	154
2.3.4.41	metroBlob.....	154
2.3.4.42	metroBlob_complex.....	154
2.3.4.43	dhgt.....	155
2.3.4.44	Group Shape Boolean Properties.....	155
2.3.5	Group Shape 2.....	158
2.3.5.1	pctHoriz.....	158
2.3.5.2	pctVert.....	159
2.3.5.3	pctHorizPos.....	160
2.3.5.4	pctVertPos.....	160
2.3.5.5	sizerelh.....	161
2.3.5.6	sizerelv.....	161
2.3.6	Geometry.....	162
2.3.6.1	geoLeft.....	162
2.3.6.2	geoTop.....	163
2.3.6.3	geoRight.....	163
2.3.6.4	geoBottom.....	164
2.3.6.5	shapePath.....	165
2.3.6.6	pVertices.....	165
2.3.6.7	pVertices_complex.....	166

2.3.6.8	pSegmentInfo	166
2.3.6.9	pSegmentInfo_complex	167
2.3.6.10	adjustValue	167
2.3.6.11	adjust2Value	167
2.3.6.12	adjust3Value	168
2.3.6.13	adjust4Value	169
2.3.6.14	adjust5Value	169
2.3.6.15	adjust6Value	170
2.3.6.16	adjust7Value	171
2.3.6.17	adjust8Value	171
2.3.6.18	pConnectionSites	172
2.3.6.19	pConnectionSites_complex	172
2.3.6.20	pConnectionSitesDir	173
2.3.6.21	pConnectionSitesDir_complex	173
2.3.6.22	xLimo	174
2.3.6.23	yLimo	175
2.3.6.24	pAdjustHandles	177
2.3.6.25	pAdjustHandles_complex	177
2.3.6.26	pGuides	177
2.3.6.27	pGuides_complex	178
2.3.6.28	pInscribe	178
2.3.6.29	pInscribe_complex	179
2.3.6.30	cxk	180
2.3.6.31	Geometry Boolean Properties	180
2.3.7	Fill Style	182
2.3.7.1	fillType	182
2.3.7.2	fillColor	182
2.3.7.3	fillOpacity	183
2.3.7.4	fillBackColor	184
2.3.7.5	fillBackOpacity	184
2.3.7.6	fillCrMod	185
2.3.7.7	fillBlip	185
2.3.7.8	fillBlip_complex	186
2.3.7.9	fillBlipName	186
2.3.7.10	fillBlipName_complex	187
2.3.7.11	fillBlipFlags	187
2.3.7.12	fillWidth	188
2.3.7.13	fillHeight	188
2.3.7.14	fillAngle	189
2.3.7.15	fillFocus	189
2.3.7.16	fillToLeft	190
2.3.7.17	fillToTop	192

2.3.7.18	fillToRight.....	192
2.3.7.19	fillToBottom.....	193
2.3.7.20	fillRectLeft.....	193
2.3.7.21	fillRectTop.....	194
2.3.7.22	fillRectRight.....	194
2.3.7.23	fillRectBottom.....	195
2.3.7.24	fillDztype.....	195
2.3.7.25	fillShadePreset.....	196
2.3.7.26	fillShadeColors.....	196
2.3.7.27	fillShadeColors_complex.....	197
2.3.7.28	fillOriginX.....	197
2.3.7.29	fillOriginY.....	198
2.3.7.30	fillShapeOriginX.....	198
2.3.7.31	fillShapeOriginY.....	199
2.3.7.32	fillShadeType.....	199
2.3.7.33	fillColorExt.....	200
2.3.7.34	reserved415.....	200
2.3.7.35	fillColorExtMod.....	201
2.3.7.36	reserved417.....	201
2.3.7.37	fillBackColorExt.....	202
2.3.7.38	reserved419.....	202
2.3.7.39	fillBackColorExtMod.....	202
2.3.7.40	reserved421.....	203
2.3.7.41	reserved422.....	203
2.3.7.42	reserved423.....	204
2.3.7.43	Fill Style Boolean Properties.....	204
2.3.8	Line Style.....	206
2.3.8.1	lineColor.....	206
2.3.8.2	lineOpacity.....	207
2.3.8.3	lineBackColor.....	207
2.3.8.4	lineCrMod.....	208
2.3.8.5	lineType.....	208
2.3.8.6	lineFillBlip.....	209
2.3.8.7	lineFillBlip_complex.....	209
2.3.8.8	lineFillBlipName.....	210
2.3.8.9	lineFillBlipName_complex.....	210
2.3.8.10	lineFillBlipFlags.....	211
2.3.8.11	lineFillWidth.....	211
2.3.8.12	lineFillHeight.....	212
2.3.8.13	lineFillDztype.....	212
2.3.8.14	lineWidth.....	213
2.3.8.15	lineMiterLimit.....	213

2.3.8.16	lineStyle	214
2.3.8.17	lineDashing	215
2.3.8.18	lineDashStyle	215
2.3.8.19	lineDashStyle_complex	216
2.3.8.20	lineStartArrowhead	216
2.3.8.21	lineEndArrowhead	216
2.3.8.22	lineStartArrowWidth.....	217
2.3.8.23	lineStartArrowLength	217
2.3.8.24	lineEndArrowWidth.....	218
2.3.8.25	lineEndArrowLength	218
2.3.8.26	lineJoinStyle.....	219
2.3.8.27	lineEndCapStyle.....	219
2.3.8.28	lineColorExt.....	220
2.3.8.29	reserved474	220
2.3.8.30	lineColorExtMod	221
2.3.8.31	reserved476	221
2.3.8.32	lineBackColorExt.....	222
2.3.8.33	reserved478	222
2.3.8.34	lineBackColorExtMod	223
2.3.8.35	reserved480	223
2.3.8.36	reserved481	224
2.3.8.37	reserved482	224
2.3.8.38	Line Style Boolean Properties	225
2.3.9	Left Line Style	227
2.3.9.1	lineLeftColor.....	227
2.3.9.2	lineLeftOpacity	228
2.3.9.3	lineLeftBackColor.....	228
2.3.9.4	lineLeftCrMod	229
2.3.9.5	lineLeftType.....	229
2.3.9.6	lineLeftFillBlip.....	230
2.3.9.7	lineLeftFillBlip_complex.....	230
2.3.9.8	lineLeftFillBlipName	231
2.3.9.9	lineLeftFillBlipName_complex	231
2.3.9.10	lineLeftFillBlipFlags	232
2.3.9.11	lineLeftFillWidth	232
2.3.9.12	lineLeftFillHeight.....	233
2.3.9.13	lineLeftFillDztype	233
2.3.9.14	lineLeftWidth.....	234
2.3.9.15	lineLeftMiterLimit	234
2.3.9.16	lineLeftStyle.....	235
2.3.9.17	lineLeftDashing.....	236
2.3.9.18	lineLeftDashStyle.....	236

2.3.9.19	lineLeftDashStyle_complex.....	237
2.3.9.20	lineLeftStartArrowhead	237
2.3.9.21	lineLeftEndArrowhead.....	237
2.3.9.22	lineLeftStartArrowWidth.....	238
2.3.9.23	lineLeftStartArrowLength.....	238
2.3.9.24	lineLeftEndArrowWidth	239
2.3.9.25	lineLeftEndArrowLength.....	239
2.3.9.26	lineLeftJoinStyle	240
2.3.9.27	lineLeftEndCapStyle	240
2.3.9.28	lineLeftColorExt	241
2.3.9.29	reserved1370	241
2.3.9.30	lineLeftColorExtMod.....	242
2.3.9.31	reserved1372	242
2.3.9.32	lineLeftBackColorExt	243
2.3.9.33	reserved1374	243
2.3.9.34	lineLeftBackColorExtMod.....	244
2.3.9.35	reserved1376	244
2.3.9.36	reserved1377	245
2.3.9.37	reserved1378	245
2.3.9.38	Left Line Style Boolean Properties	246
2.3.10	Top Line Style.....	249
2.3.10.1	lineTopColor	249
2.3.10.2	lineTopOpacity.....	249
2.3.10.3	lineTopBackColor	250
2.3.10.4	lineTopCrMod.....	250
2.3.10.5	lineTopType	251
2.3.10.6	lineTopFillBlip.....	251
2.3.10.7	lineTopFillBlip_complex.....	252
2.3.10.8	lineTopFillBlipName	252
2.3.10.9	lineTopFillBlipName_complex	253
2.3.10.10	lineTopFillBlipFlags	253
2.3.10.11	lineTopFillWidth.....	253
2.3.10.12	lineTopFillHeight.....	254
2.3.10.13	lineTopFillDztype	255
2.3.10.14	lineTopWidth	255
2.3.10.15	lineTopMiterLimit	256
2.3.10.16	lineTopStyle	257
2.3.10.17	lineTopDashing.....	257
2.3.10.18	lineTopDashStyle.....	258
2.3.10.19	lineTopDashStyle_complex.....	258
2.3.10.20	lineTopStartArrowhead.....	259
2.3.10.21	lineTopEndArrowhead.....	259

2.3.10.22	lineTopStartArrowWidth	260
2.3.10.23	lineTopStartArrowLength	260
2.3.10.24	lineTopEndArrowWidth	261
2.3.10.25	lineTopEndArrowLength	261
2.3.10.26	lineTopJoinStyle	262
2.3.10.27	lineTopEndCapStyle	262
2.3.10.28	lineTopColorExt	263
2.3.10.29	reserved1434	263
2.3.10.30	lineTopColorExtMod	263
2.3.10.31	reserved1436	264
2.3.10.32	lineTopBackColorExt	264
2.3.10.33	reserved1438	265
2.3.10.34	lineTopBackColorExtMod	265
2.3.10.35	reserved1440	266
2.3.10.36	reserved1441	266
2.3.10.37	reserved1442	267
2.3.10.38	Top Line Style Boolean Properties	267
2.3.11	Right Line Style	270
2.3.11.1	lineRightColor	270
2.3.11.2	lineRightOpacity	271
2.3.11.3	lineRightBackColor	271
2.3.11.4	lineRightCrMod	272
2.3.11.5	lineRightType	272
2.3.11.6	lineRightFillBlip	273
2.3.11.7	lineRightFillBlip_complex	273
2.3.11.8	lineRightFillBlipName	274
2.3.11.9	lineRightFillBlipName_complex	274
2.3.11.10	lineRightFillBlipFlags	274
2.3.11.11	lineRightFillWidth	275
2.3.11.12	lineRightFillHeight	275
2.3.11.13	lineRightFillDztype	276
2.3.11.14	lineRightWidth	276
2.3.11.15	lineRightMiterLimit	277
2.3.11.16	lineRightStyle	278
2.3.11.17	lineRightDashing	279
2.3.11.18	lineRightDashStyle	279
2.3.11.19	lineRightDashStyle_complex	280
2.3.11.20	lineRightStartArrowhead	280
2.3.11.21	lineRightEndArrowhead	280
2.3.11.22	lineRightStartArrowWidth	281
2.3.11.23	lineRightStartArrowLength	281
2.3.11.24	lineRightEndArrowWidth	282

2.3.11.25	lineRightEndArrowLength.....	282
2.3.11.26	lineRightJoinStyle.....	283
2.3.11.27	lineRightEndCapStyle.....	283
2.3.11.28	lineRightColorExt.....	284
2.3.11.29	reserved1498.....	284
2.3.11.30	lineRightColorExtMod.....	285
2.3.11.31	reserved1500.....	285
2.3.11.32	lineRightBackColorExt.....	286
2.3.11.33	reserved1502.....	286
2.3.11.34	lineRightBackColorExtMod.....	287
2.3.11.35	reserved1504.....	287
2.3.11.36	reserved1505.....	288
2.3.11.37	reserved1506.....	288
2.3.11.38	Right Line Style Boolean Properties.....	289
2.3.12	Bottom Line Style.....	292
2.3.12.1	lineBottomColor.....	292
2.3.12.2	lineBottomOpacity.....	292
2.3.12.3	lineBottomBackColor.....	293
2.3.12.4	lineBottomCrMod.....	293
2.3.12.5	lineBottomType.....	294
2.3.12.6	lineBottomFillBlip.....	294
2.3.12.7	lineBottomFillBlip_complex.....	295
2.3.12.8	lineBottomFillBlipName.....	295
2.3.12.9	lineBottomFillBlipName_complex.....	296
2.3.12.10	lineBottomFillBlipFlags.....	296
2.3.12.11	lineBottomFillWidth.....	296
2.3.12.12	lineBottomFillHeight.....	297
2.3.12.13	lineBottomFillDztype.....	298
2.3.12.14	lineBottomWidth.....	298
2.3.12.15	lineBottomMiterLimit.....	299
2.3.12.16	lineBottomStyle.....	300
2.3.12.17	lineBottomDashing.....	300
2.3.12.18	lineBottomDashStyle.....	301
2.3.12.19	lineBottomDashStyle_complex.....	301
2.3.12.20	lineBottomStartArrowhead.....	302
2.3.12.21	lineBottomEndArrowhead.....	302
2.3.12.22	lineBottomStartArrowWidth.....	303
2.3.12.23	lineBottomStartArrowLength.....	303
2.3.12.24	lineBottomEndArrowWidth.....	304
2.3.12.25	lineBottomEndArrowLength.....	304
2.3.12.26	lineBottomJoinStyle.....	305
2.3.12.27	lineBottomEndCapStyle.....	305

2.3.12.28	lineBottomColorExt	306
2.3.12.29	reserved1562	306
2.3.12.30	lineBottomColorExtMod	306
2.3.12.31	reserved1564	307
2.3.12.32	lineBottomBackColorExt	307
2.3.12.33	reserved1566	308
2.3.12.34	lineBottomBackColorExtMod	308
2.3.12.35	reserved1568	309
2.3.12.36	reserved1569	309
2.3.12.37	reserved1570	310
2.3.12.38	Bottom Line Style Boolean Properties	310
2.3.13	Shadow Style	313
2.3.13.1	shadowType	313
2.3.13.2	shadowColor	314
2.3.13.3	shadowHighlight	314
2.3.13.4	shadowCrMod	315
2.3.13.5	shadowOpacity	315
2.3.13.6	shadowOffsetX	316
2.3.13.7	shadowOffsetY	316
2.3.13.8	shadowSecondOffsetX	317
2.3.13.9	shadowSecondOffsetY	318
2.3.13.10	shadowOriginX	318
2.3.13.11	shadowOriginY	319
2.3.13.12	shadowColorExt	319
2.3.13.13	reserved531	320
2.3.13.14	shadowColorExtMod	320
2.3.13.15	reserved533	321
2.3.13.16	shadowHighlightExt	321
2.3.13.17	reserved535	322
2.3.13.18	shadowHighlightExtMod	322
2.3.13.19	reserved537	322
2.3.13.20	reserved538	323
2.3.13.21	reserved539	323
2.3.13.22	Shadow Style Boolean Properties	324
2.3.14	Perspective Style	325
2.3.14.1	perspectiveType	325
2.3.14.2	perspectiveOffsetX	326
2.3.14.3	perspectiveOffsetY	326
2.3.14.4	perspectiveScaleXToX	327
2.3.14.5	perspectiveScaleYToX	328
2.3.14.6	perspectiveScaleXToY	328
2.3.14.7	perspectiveScaleYToY	329

2.3.14.8	perspectivePerspectiveX	329
2.3.14.9	perspectivePerspectiveY	330
2.3.14.10	perspectiveWeight.....	330
2.3.14.11	perspectiveOriginX	331
2.3.14.12	perspectiveOriginY	331
2.3.14.13	Perspective Style Boolean Properties	332
2.3.15	3D Object	332
2.3.15.1	c3DSpecularAmt.....	332
2.3.15.2	c3DDiffuseAmt.....	333
2.3.15.3	c3DShininess.....	333
2.3.15.4	c3DEdgeThickness.....	334
2.3.15.5	c3DExtrudeForward.....	334
2.3.15.6	c3DExtrudeBackward	335
2.3.15.7	reserved646	335
2.3.15.8	c3DExtrusionColor	336
2.3.15.9	c3DCrMod	336
2.3.15.10	c3DExtrusionColorExt.....	337
2.3.15.11	reserved650	337
2.3.15.12	c3DExtrusionColorExtMod	338
2.3.15.13	reserved652	338
2.3.15.14	reserved653	339
2.3.15.15	3D-Object Boolean Properties	339
2.3.16	3D Style.....	340
2.3.16.1	c3DYRotationAngle.....	341
2.3.16.2	c3DXRotationAngle.....	341
2.3.16.3	c3DRotationAxisX.....	342
2.3.16.4	c3DRotationAxisY.....	342
2.3.16.5	c3DRotationAxisZ	343
2.3.16.6	c3DRotationAngle	343
2.3.16.7	c3DRotationCenterX.....	344
2.3.16.8	c3DRotationCenterY.....	344
2.3.16.9	c3DRotationCenterZ	345
2.3.16.10	c3DRenderMode	345
2.3.16.11	c3DTolerance	346
2.3.16.12	c3DXViewpoint	347
2.3.16.13	c3DYViewpoint	347
2.3.16.14	c3DZViewpoint.....	348
2.3.16.15	c3DOriginX.....	348
2.3.16.16	c3DOriginY.....	349
2.3.16.17	c3DSkewAngle	349
2.3.16.18	c3DSkewAmount.....	350
2.3.16.19	c3DAmbientIntensity.....	350

2.3.16.20	c3DKeyX	351
2.3.16.21	c3DKeyY	351
2.3.16.22	c3DKeyZ	352
2.3.16.23	c3DKeyIntensity	352
2.3.16.24	c3DFillX	353
2.3.16.25	c3DFillY	353
2.3.16.26	c3DFillZ	354
2.3.16.27	c3DFillIntensity	354
2.3.16.28	3D-Style Boolean Properties	355
2.3.17	Diagram	356
2.3.17.1	dgmt	357
2.3.17.2	dgmStyle	357
2.3.17.3	pRelationTbl	371
2.3.17.4	pRelationTbl_complex	371
2.3.17.5	dgmScaleX	372
2.3.17.6	dgmScaleY	372
2.3.17.7	dgmDefaultFontSize	373
2.3.17.8	dgmConstrainBounds	373
2.3.17.9	dgmConstrainBounds_complex	374
2.3.17.10	dgmBaseTextScale	374
2.3.17.11	Diagram Boolean Properties	375
2.3.18	Transform	376
2.3.18.1	left	376
2.3.18.2	top	376
2.3.18.3	right	377
2.3.18.4	bottom	377
2.3.18.5	rotation	378
2.3.18.6	gvPage	378
2.3.18.7	Transform Boolean Properties	379
2.3.19	Relative Transform	380
2.3.19.1	relLeft	380
2.3.19.2	relTop	380
2.3.19.3	relRight	381
2.3.19.4	relBottom	381
2.3.19.5	relRotation	382
2.3.19.6	gvRelPage	383
2.3.19.7	Relative Transform Boolean Properties	383
2.3.20	Protection	384
2.3.20.1	Protection Boolean Properties	384
2.3.21	Text	386
2.3.21.1	lTxicl	386
2.3.21.2	dxTextLeft	387

2.3.21.3	dyTextTop	387
2.3.21.4	dxTextRight	388
2.3.21.5	dyTextBottom	388
2.3.21.6	WrapText	389
2.3.21.7	unused134	389
2.3.21.8	anchorText	390
2.3.21.9	txflTextFlow	390
2.3.21.10	cdirFont	391
2.3.21.11	hspNext	391
2.3.21.12	txdir	392
2.3.21.13	unused140	392
2.3.21.14	unused141	393
2.3.21.15	Text Boolean Properties	393
2.3.22	Geometry Text	394
2.3.22.1	gtextUNICODE	394
2.3.22.2	gtextUNICODE_complex	395
2.3.22.3	gtextAlign	395
2.3.22.4	gtextSize	397
2.3.22.5	gtextSpacing	397
2.3.22.6	gtextFont	398
2.3.22.7	gtextFont_complex	399
2.3.22.8	gtextCSSFont	399
2.3.22.9	gtextCSSFont_complex	399
2.3.22.10	Geometry Text Boolean Properties	400
2.3.23	Blip	404
2.3.23.1	cropFromTop	405
2.3.23.2	cropFromBottom	405
2.3.23.3	cropFromLeft	406
2.3.23.4	cropFromRight	406
2.3.23.5	pib	407
2.3.23.6	pib_complex	407
2.3.23.7	pibName	408
2.3.23.8	pibName_complex	408
2.3.23.9	pibFlags	408
2.3.23.10	pictureTransparent	409
2.3.23.11	pictureContrast	409
2.3.23.12	pictureBrightness	410
2.3.23.13	pictureId	411
2.3.23.14	pictureDbICrMod	411
2.3.23.15	pictureFillCrMod	412
2.3.23.16	pictureLineCrMod	412
2.3.23.17	pibPrint	413

2.3.23.18	pibPrint_complex.....	413
2.3.23.19	pibPrintName	414
2.3.23.20	pibPrintName_complex	414
2.3.23.21	pibPrintFlags	414
2.3.23.22	movie.....	415
2.3.23.23	movie_complex.....	415
2.3.23.24	pictureTransparentExt.....	415
2.3.23.25	reserved278	416
2.3.23.26	pictureTransparentExtMod	416
2.3.23.27	reserved280	417
2.3.23.28	reserved281	417
2.3.23.29	pictureRecolor	418
2.3.23.30	pictureRecolorExt	418
2.3.23.31	reserved284	419
2.3.23.32	pictureRecolorExtMod.....	419
2.3.23.33	reserved286	420
2.3.23.34	reserved287	420
2.3.23.35	Blip Boolean Properties	421
2.3.24	Unknown HTML.....	423
2.3.24.1	wzLineId	423
2.3.24.2	wzLineId_complex.....	423
2.3.24.3	wzFillId	424
2.3.24.4	wzFillId_complex	424
2.3.24.5	wzPictureId	424
2.3.24.6	wzPictureId_complex.....	425
2.3.24.7	wzPathId.....	425
2.3.24.8	wzPathId_complex.....	426
2.3.24.9	wzShadowId.....	426
2.3.24.10	wzShadowId_complex.....	426
2.3.24.11	wzPerspectiveId	427
2.3.24.12	wzPerspectiveId_complex	427
2.3.24.13	wzGtextId.....	428
2.3.24.14	wzGtextId_complex.....	428
2.3.24.15	wzFormulaId	428
2.3.24.16	wzFormulaId_complex.....	429
2.3.24.17	wzHandlesId.....	429
2.3.24.18	wzHandlesId_complex.....	430
2.3.24.19	wzCalloutId	430
2.3.24.20	wzCalloutId_complex	430
2.3.24.21	wzLockId	431
2.3.24.22	wzLockId_complex.....	431
2.3.24.23	wzTextId	432

2.3.24.24	wzTextId_complex.....	432
2.3.24.25	wzThreeDId	432
2.3.24.26	wzThreeDId_complex.....	433
2.3.24.27	Unknown HTML Boolean Properties	433
2.3.25	Web Component	434
2.3.25.1	webComponentWzHtml.....	434
2.3.25.2	webComponentWzHtml_complex.....	435
2.3.25.3	webComponentWzName	435
2.3.25.4	webComponentWzName_complex	435
2.3.25.5	webComponentWzUrl	436
2.3.25.6	webComponentWzUrl_complex.....	436
2.3.25.7	Web Component Boolean Properties	437
2.3.26	Ink	437
2.3.26.1	pInkData.....	437
2.3.26.2	pInkData_complex.....	438
2.3.26.3	Ink Boolean Properties.....	438
2.3.27	Signature Line	439
2.3.27.1	wzSigSetupId	439
2.3.27.2	wzSigSetupId_complex	440
2.3.27.3	wzSigSetupProvId.....	440
2.3.27.4	wzSigSetupProvId_complex.....	441
2.3.27.5	wzSigSetupSuggSigner	441
2.3.27.6	wzSigSetupSuggSigner_complex	442
2.3.27.7	wzSigSetupSuggSigner2	442
2.3.27.8	wzSigSetupSuggSigner2_complex	442
2.3.27.9	wzSigSetupSuggSignerEmail	443
2.3.27.10	wzSigSetupSuggSignerEmail_complex	443
2.3.27.11	wzSigSetupSignInst	444
2.3.27.12	wzSigSetupSignInst_complex	444
2.3.27.13	wzSigSetupAddlXml	444
2.3.27.14	wzSigSetupAddlXml_complex.....	445
2.3.27.15	wzSigSetupProvUrl.....	445
2.3.27.16	wzSigSetupProvUrl_complex.....	446
2.3.27.17	Signature Line Boolean Properties	446
2.4	Enumerations	447
2.4.1	MSOBLIPTYPE	447
2.4.2	MSODGCID	448
2.4.3	MSOWRAPMODE.....	465
2.4.4	MSOANCHOR.....	465
2.4.5	MSOTXFL.....	467
2.4.6	MSOCDIR	469
2.4.7	MSOTXDIR.....	469

2.4.8	MSOBLIPFLAGS	469
2.4.9	MSOSHAPEPATH	470
2.4.10	MSOCXK	470
2.4.11	MSOFILLTYPE	470
2.4.12	MSODZTYPE	472
2.4.13	MSOLINETYPE	473
2.4.14	MSOLINESTYLE	473
2.4.15	MSOLINEDASHING	474
2.4.16	MSOLINEEND	475
2.4.17	MSOLINEENDWIDTH	475
2.4.18	MSOLINEENDLENGTH	476
2.4.19	MSOLINEJOIN	476
2.4.20	MSOLINECAP	476
2.4.21	MSOSHADOWTYPE	477
2.4.22	MSOXFORMTYPE	478
2.4.23	MSO3DRENDERMODE	478
2.4.24	MSOSPT	479
2.4.25	MSOCXSTYLE	508
2.4.26	MSOBWMODE	508
2.4.27	MSODGMT	508
2.4.28	MSODGSLK	510
2.4.29	MSODGMLO	510
2.4.30	MSOPATHTYPE	512
2.4.31	MSOPATHESCAPE	512
2.5	Algorithms	515
2.5.1	Information Data for VtHyperlink	515
3	Structure Examples.....	516
3.1	Introduction	516
3.2	Diagram Example	516
3.2.1	DrawingContainer	517
3.2.2	OfficeArtFDG	517
3.2.3	OfficeArtSpgrContainer	518
3.2.4	OfficeArtSpContainer	547
3.2.5	OfficeArtSolverContainer	549
3.3	Shape Properties Example	551
3.3.1	Shape Type Properties	551
3.3.2	Shape Primary Options	553
3.3.3	Shape Text Properties	557
4	Security Considerations.....	559
5	Appendix A: Product Behavior.....	560
6	Index.....	566

1 Introduction

The Office Drawing Binary File Format Structure Specification specifies the Microsoft® Office Drawing, or OfficeArt, binary file format. The OfficeArt format exists as part of various Microsoft Office application binary file formats from Microsoft® Office 97 to the 2007 Microsoft® Office system. The OfficeArt data represents the [drawing](#) elements and all their associated formatting in those Office applications. Typically these elements are represented as [shapes](#) contained within drawings or [diagrams](#), but may include form controls or tables.

While the storage of the OfficeArt data is determined by the host application, the OfficeArt data is stored as a series of records, many containing additional records or atoms. Stored as part of the OfficeArt records, there are some records defined and saved by the host application that provide details needed to position the drawing elements in the host document or to render any associated text.

Each record has a common header that specifies the record type and additional data to allow the OfficeArt records to be parsed without intimate knowledge of each record type.

1.1 Glossary

The following terms are defined in [\[MS-GLOS\]](#):

little-endian

Unicode

XML (Extensible Markup Language)

The following terms are defined in [\[MS-OFCGLOS\]](#):

Active Server Pages (ASP)

anchor

atom

binary large image or picture (BLIP)

BLIP

bounding rectangle

callout

child

color scheme

comment

content management system

crop

device-independent bitmap (DIB)

diagram

dialog sheet
digital signature
dither
drawing
drawing object
editor
EMF
English Metric Unit (EMU)
gamma correction
gradient vector
group
horizontal rule
HTML (HyperText Markup Language)
hyperlink
ink
inside margin
Joint Photographic Experts Group (JPEG)
labeling policy
left-to-right
Macintosh PICT
master unit
OLE (object linking and embedding)
OLE object
outside margin
placeholder
point
Portable Network Graphics (PNG)
RGB (red-green-blue)
right-to-left
rule
scheme color
shape

sigma transfer function

signature line

slide

text run

TIFF

ToolTip

URL (Uniform Resource Locator)

Vector Markup Language (VML)

VML

WMF

wrap polygon

z-order

The following terms are specific to this document:

absolute space: An area of a drawing that occupies an entire document or page. The value for absolute space is typically expressed in English Metric Units (EMUs), but it can be defined by the host application.

adjust handle: A user interface control that is located on an object frame and is used to increase or decrease the size of that object.

background shape: A graphical drawing object that is covered or obstructed by other shapes in the foreground.

connection point: A point on a shape where another drawing object can be connected.

connection site: A location on a shape where a connector is attached.

connector: A line that is used to connect two or more shapes and that remains connected to those shapes.

drawing plane: A geometric plane in a three-dimensional space.

drawing space: An area of the absolute space that is being drawn, after all the rotation and scaling is complete. For example, a shadow is typically drawn relative to a shape, and is therefore in the drawing space of that shape. The value for drawing space is expressed in English Metric Units (EMUs). See also absolute space.

edit points: A set of movable points in a shape, line, or curve that define the path of that geometry.

geometry space: An arbitrarily defined coordinate system for shape geometry. Any coordinate references to a shape use this coordinate system. All connection sites, adjust handles, and vertices of a shape are defined in geometry space.

geometry text: A type of text that follows the geometry of the shape, rather than being contained within the bounding rectangle of the shape.

group shape: A shape that contains a group of shapes.

ink shape: A shape that contains strokes of ink.

internal resource tag: A number associated with an internal resource.

join style: A style that specifies how the ends of connected lines are joined.

line end decoration: An arrowhead, square, circle, or other small shape that is attached to the end of a line in a drawing.

master: A slide view, page, or shape on which formatting for all slides, pages, or shapes in the presentation are defined. Each presentation has a master for each key component: slides, title slides, speaker notes, and audience handouts.

master shape: A shape definition that specifies the default properties for all instances of the shape within the document.

page element: Any basic element that exists on a page, such as the page itself, the margin, the text block, or an individual character.

perspective transform: A transform that is applied to an image or diagram so that it shows the same objects from a different point of view.

picture bullet: A list bullet that displays a picture instead of a standard character bullet.

regroup identifier: A unique index that is used to determine which shapes were previously grouped together.

script anchor: The visual representation of a script on a Web page that is open in a Microsoft® Office application. Script anchors are not displayed by default. Different script anchors represent scripts written in different scripting languages.

Web component: Any component, such as a bitmap, image, Java applet, or ActiveX control, that can be inserted into a Web page.

MAY, SHOULD, MUST, SHOULD NOT, MUST NOT: These terms (in all caps) are used as described in [\[RFC2119\]](#). All statements of optional behavior use either MAY, SHOULD, or SHOULD NOT.

1.2 References

1.2.1 Normative References

We conduct frequent surveys of the normative references to assure their continued availability. If you have any issue with finding a normative reference, please contact dochelp@microsoft.com. We will assist you in finding the relevant information. Please check the archive site, <http://msdn.microsoft.com/en-us/library/cc136647.aspx>, as an additional source.

[CSS-LEVEL2] Bos, B., Celik, T., Hickson, I., and Lie, H., "Cascading Style Sheets Level 2 Revision 1 (CSS2.1) Specification: W3C Candidate Recommendation", July 2007, <http://www.w3.org/TR/2007/CR-CSS21-20070719/>.

[ECMA-376] Ecma International, "Standard ECMA-376 Office Open XML File Formats", December 2006, <http://www.ecma-international.org/publications/standards/Ecma-376.htm>.

[MC-ISF] Microsoft Corporation, "Ink Serialized Format (ISF) Specification", 2007, [http://download.microsoft.com/download/0/B/E/0BE8BDD7-E5E8-422A-ABFD-4342ED7AD886/InkSerializedFormat\(ISF\)Specification.pdf](http://download.microsoft.com/download/0/B/E/0BE8BDD7-E5E8-422A-ABFD-4342ED7AD886/InkSerializedFormat(ISF)Specification.pdf).

[MS-DOC] Microsoft Corporation, "[Word Binary File Format \(.doc\) Structure Specification](#)", June 2008.

[MS-GLOS] Microsoft Corporation, "[Windows Protocols Master Glossary](#)", June 2008.

[MS-OFCGLOS] Microsoft Corporation, "[Microsoft Office Client Master Glossary](#)", June 2008.

[MS-OGRAPH] Microsoft Corporation, "[Office Graph Binary File Format Structure Specification](#)", June 2008.

[MS-OSHARED] Microsoft Corporation, "[Office Common Data Types and Objects Structure Specification](#)", June 2008.

[MS-PPT] Microsoft Corporation, "[PowerPoint Binary File Format \(.ppt\) Structure Specification](#)", June 2008.

[MS-XLS] Microsoft Corporation, "[Excel Binary File Format \(.xls\) Structure Specification](#)", June 2008.

[RFC1320] Rivest, R., "The MD4 Message-Digest Algorithm", RFC 1320, April 1992, <http://www.ietf.org/rfc/rfc1320.txt>.

[RFC1950] Deutsch, P. and Gailly, J-L., "ZLIB Compressed Data Format Specification version 3.3", RFC 1950, May 1996, <http://www.ietf.org/rfc/rfc1950.txt>.

[RFC2119] Bradner, S., "Key Words for Use in RFCs to Indicate Requirement Levels", BCP 14, RFC 2119, March 1997, <http://www.ietf.org/rfc/rfc2119.txt>.

1.2.2 Informative References

[MSDN-GetSysColor] Microsoft Corporation, "GetSysColor Function", [http://msdn.microsoft.com/en-us/library/ms724371\(VS.85\).aspx](http://msdn.microsoft.com/en-us/library/ms724371(VS.85).aspx).

[MSDN-UATOS] Microsoft Corporation, "Tablet PC Development Notes: Using a Timestamp on Strokes", June 2003, <http://msdn.microsoft.com/en-us/library/ms812508.aspx>.

[MSDN-WebComp] Microsoft Corporation, "Web Components", [http://msdn.microsoft.com/en-us/library/aa235992\(office.10\).aspx](http://msdn.microsoft.com/en-us/library/aa235992(office.10).aspx).

1.3 Structure Overview (Synopsis)

The common Microsoft Office Drawing File Format, or OfficeArt, has an object container hierarchy similar to other drawing programs. At the root of the hierarchy is a drawing **group** object. There is one drawing group per client document. Drawing groups contain drawings. Drawings contain shapes that are the objects that populate a page. Adjacent to the drawings in a drawing group is a collection that contains the **BLIPs** used by the drawings. OfficeArt stores pictures in a separate collection to be able to incrementally load and save them, as well as to reduce duplication of picture data.

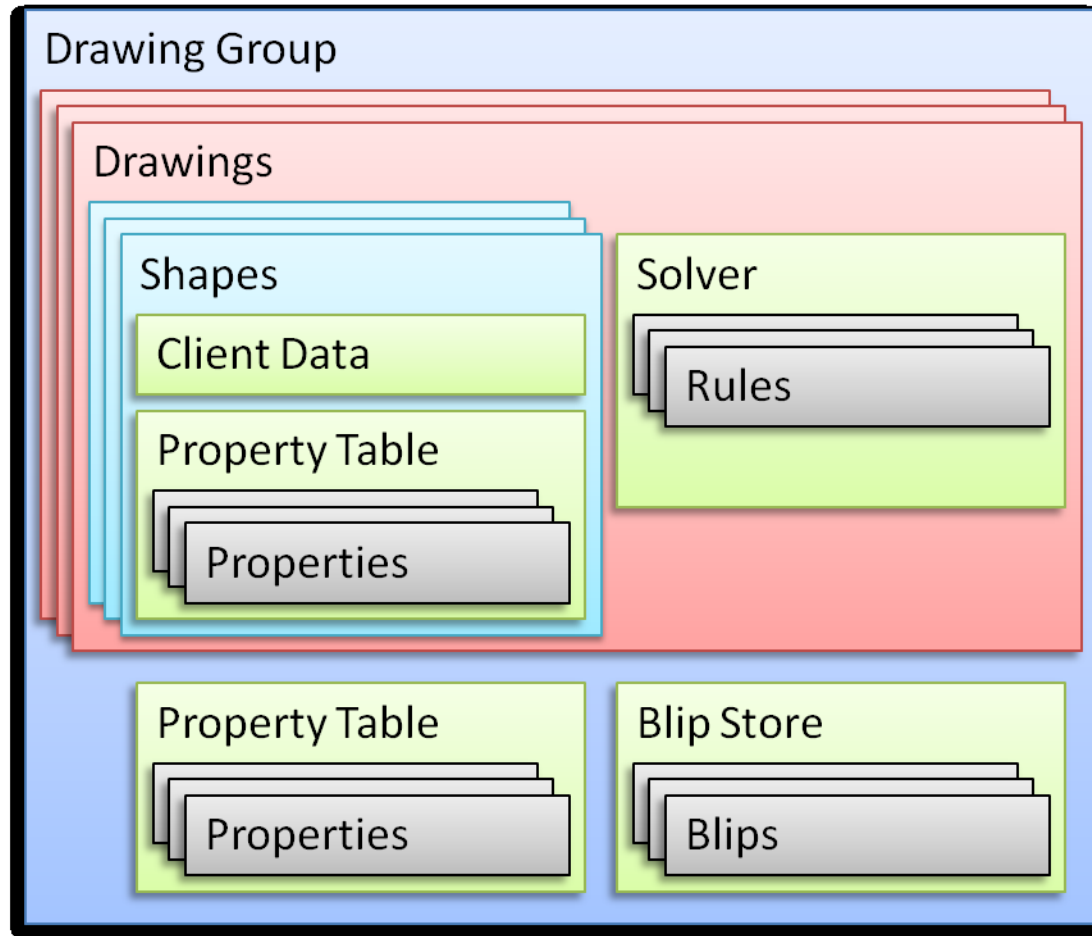


Figure 1: Containership hierarchy

Associated with each shape is a piece of client data that stores the shape's [anchor](#), text and [OLE](#) data, as well as host specific properties. The format of this structure is specified by the host application.

Shapes store their properties in a separate structure called a property table. The property table is a list of property identifier–value pairs.

Each drawing group has a shape property table that stores the defaults for new shapes.

Each drawing has a collection of [rules](#) that govern the shapes in the drawing.

Drawings are not saved inside drawing groups, but in separate top-level containers. In this scheme, hosts can save drawing group information with per-document information, and save drawing information with per-sheet, per-slide, or per-page information.

1.3.1 Records

The OfficeArt file stream is a series of records that share a common header structure. Records can be categorized into two groups, atoms and containers.

Atoms are records that contain information about an OfficeArt object and are kept inside containers.

Containers are records that contain atoms and other containers in a logical and organized way.

Each record, whether it is an atom or a container, has a common header. Container records are just the common header, while the atom records are the common header followed by some record-specific data. OfficeArt uses the structure of container records containing atom records and other container records throughout its stream.

There is a group of records that end in "FileBlock" that are an abstract form of concrete records that may be in a collection. The containing record stores an array of FileBlock records that are instances of different record types, as determined by the **recType** of the record header within the FileBlock record. For example, [OfficeArtSolverContainer](#) records contain an array of [OfficeArtSolverContainerFileBlock](#) records. These FileBlocks are instances of [OfficeArtFConnectorRule](#), [OfficeArtFArcRule](#) and [OfficeArtFCalloutRule](#) records that can be determined by the **recType** of that specific [OfficeArtSolverContainerFileBlock](#)'s [OfficeArtRecordHeader](#).

1.3.2 Record Headers

Each record shares a common header that describes the record data. This header contains the record type, the record length, and if it is an atom type, a version identifier. While all record types have an instance property, not all record types use this field. When used, it specifies the count of objects in the container record or a specific identifier used by the record.

The common header specifies the length of each record. Consequently, it is possible to parse the OfficeArt record stream without knowledge of the actual contents of each record. Parsers of the Office Drawing Binary File Format should skip over record types unknown to the reader. In addition, parsers should not expect a record to come in a certain order in a container. They can, however, expect that the containership hierarchy will not change. For example, there is no need to handle the case of a shape record containing a drawing record.

When the data is written to a client file, client-specific records are stored in the OfficeArt stream to preserve the client features and behaviors. See Relationship to Protocols and Other Structures ([section 1.4](#)) for more information about this feature.

1.3.3 Containers

Container records have a record header followed by the contained records. Containers are required to precede all atoms as they specify how the contained atoms are to be applied to the drawing data. For example, a shape container and a drawing group container both contain a collection of properties. The container designates that the properties are individual shape properties or document default properties.

1.3.4 Properties

The Office Drawing Binary File Format contains drawing data and as such, it is heavily populated with properties that are specific to shapes. These shape properties are contained in a set of sparsely populated arrays. These arrays each contain a specific block of properties and only contain properties that differ from the defaults for each property. If a property is specified to be ignored, or is omitted from the file, it is assumed to have the default value for that property. Three property blocks, [OfficeArtFOPT](#), [OfficeArtSecondaryFOPT](#) and [OfficeArtTertiaryFOPT](#) are associated with each shape instance. Each of these is contained in the [OfficeArtSpContainer](#) record. The property blocks, [OfficeArtFOPT](#) and [OfficeArtTertiaryFOPT](#) are saved with the drawing group [OfficeArtDggContainer](#) and establish new defaults for any shape in the file. For example, if the drawing group fill color is set to red, any shape in any diagram persisted in the file without its own fill color specified is red. If there is no fill color with the document properties or the shape then it would be the default fill color.

Properties whose **fComplex** flag is 0x1 have more data than will fit in the four bytes associated with the simple property types. In this case the **op** field contains the number of bytes following the [OfficeArtRGFOPT](#) that contain the property data.

If any property appears in a property block more than once, the last occurrence is assumed to be the correct property, and the value in the last occurrence will override any previous value set.

If a property has an unrecognized **opid.opid** field, a vendor can ignore the property.

1.3.5 Bit Format

Records are tightly packed, without alignment. OfficeArt data is stored in [little-endian](#) format.

1.3.6 Extended Colors

The **color** properties specified in the following table have a set of optional extended color properties. The **color** property specifies the main color. The **colorExt** and **colorExtMod** properties specify the extended colors and are used to define the main color more precisely.

color	colorExt	colorExtMod
fillColor	fillColorExt	fillColorExtMod
fillBackColor	fillBackColorExt	fillBackColorExtMod
lineColor	lineColorExt	lineColorExtMod
lineBackColor	lineBackColorExt	lineBackColorExtMod
lineLeftColor	lineLeftColorExt	lineLeftColorExtMod
lineLeftBackColor	lineLeftBackColorExt	lineLeftBackColorExtMod
lineRightColor	lineRightColorExt	lineRightColorExtMod
lineRightBackColor	lineRightBackColorExt	lineRightBackColorExtMod
lineTopColor	lineTopColorExt	lineTopColorExtMod
lineTopBackColor	lineTopBackColorExt	lineTopBackColorExtMod
lineBottomColor	lineBottomColorExt	lineBottomColorExtMod
lineBottomBackColor	lineBottomBackColorExt	lineBottomBackColorExtMod
shadowColor	shadowColorExt	shadowColorExtMod
shadowHighlight	shadowHighlightExt	shadowHighlightExtMod
c3DExtrusionColor	c3DExtrusionColorExt	c3DExtrusionColorExtMod
pictureRecolor	pictureRecolorExt	pictureRecolorExtMod
pictureTransparent	pictureTransparentExt	pictureTransparentExtMod

The **color** property specifies the main color property for this extended color. If none of the extended color properties are set, then it contains the full color definition. The format of this property is specified in [OfficeArtCOLORREF](#) (section 2.2.2). If the other extended color properties are set, this property contains the flattened **RGB** color that is computed by applying the **colorExtMod** color modification to the **colorExt** color. When the main and extended color values for a given color are inconsistent, a vendor can respect the **color** value and discard the **colorExt** and **colorExtMod** values.

The **colorExt** property specifies the base color of the extended color properties. The **colorExtMod** is a tint or shade color modification that is applied to the **colorExt** property.

1.4 Relationship to Protocols and Other Structures

The Microsoft Office Drawing Binary File Format is dependent on the structures defined for the Microsoft Office PowerPoint [\[MS-PPT\]](#), Microsoft Office Word [\[MS-DOC\]](#) and Microsoft Office Excel [\[MS-XLS\]](#) file formats. These file formats determine how the data is saved to disk and where the structures defined within this document reside. Additionally, images are stored within the file in standard raster

formats. [OfficeArtBStoreContainerFileBlock](#) ([Section 2.2.22](#)) specifies which image types are supported within the BLIP store.

There is a group of records within the OfficeArt stream that are defined by the host applications as client records. These records hold information that the host applications require to position the diagram in the host document (OfficeArtClientAnchor) or contain the host text (OfficeArtClientTextBox). OfficeArt text is provided by the host application to provide the same functionality as the application's native text. In some applications, the host may also apply rules to the shapes or diagrams to assist in positioning of those diagrams (OfficeArtClientRule) or store additional data for other host specific needs (OfficeArtClientData). Microsoft® Word 97, Microsoft® Word 2000, Microsoft® Word 2002, and Microsoft® Office Word 2003, as described in [\[MS-DOC\]](#), Microsoft® Excel® 97, Microsoft® Excel® 2000, Microsoft® Excel® 2002, and Microsoft® Office Excel® 2003, as described in [\[MS-XLS\]](#), Office 97, Microsoft® Office 2000, Microsoft® Office XP, and Microsoft® Office 2003, as described in [\[MS-OGGRAPH\]](#), and Microsoft® PowerPoint® 97, Microsoft® PowerPoint® 2000, Microsoft® PowerPoint® 2002, and Microsoft® Office PowerPoint® 2003, as described in [\[MS-PPT\]](#), support the OfficeArtClientTextBox, OfficeArtClientAnchor, and OfficeArtClientData record types.

1.5 Applicability Statement

This document specifies a persistence format for drawings. These drawings typically contain geometric primitives, also known as shapes, which may contain formatting such as fills, line styles, pictures and 3D transformations. These shapes also support text as specified by the host.

This persistence format provides interoperability with applications that create or read documents conforming to this structure, including Word 97, Word 2000, Word 2002, Office Word 2003, Excel 97, Excel 2000, Excel 2002, Office Excel 2003, PowerPoint 97, PowerPoint 2000, PowerPoint 2002, and Office PowerPoint 2003. This persistence format can also be used for interoperability with Microsoft® Office Word 2007, Microsoft® Office Excel® 2007, or Microsoft® Office PowerPoint® 2007 when compatibility with the listed products is a primary concern.

1.6 Versioning and Localization

This document covers versioning issues in the following areas:

Structure Versions: The structures defined in this document apply to versions of Office 97 through the 2007 Office system. All structures in Custom OfficeArt Types ([section 2.1](#)) and OfficeArt Record Types ([section 2.2](#)) are supported by all versions of the OfficeArt file structure and all host applications. The structures specified in Properties ([section 2.3](#)) are supported at the file level for all versions of the Office applications, but each application does not write all properties to the binary file. Any application that does not support a property can load and save that property unchanged, as is the case for properties introduced in later versions that are then opened in an earlier version of the same application. There are scenarios where a later version of an application supports a deprecated property by instead converting it to another property or value and removing the deprecated property or value.

Listed here are the various properties that were introduced after Office 97 and are therefore not supported by earlier versions:

Office 2000

[GeometryText:qtextCSSFont](#)

[Blip:movie](#)

[Blip:fRewind](#)

[Blip:fLooping](#)

[Shape:idDiscussAnchor](#)

[GroupShape:wzTooltip](#)
[GroupShape:wzScript](#)
[GroupShape:posh](#)
[GroupShape:posrelh](#)
[GroupShape:posv](#)
[GroupShape:posrelv](#)
[GroupShape:pctHR](#)
[GroupShape:alignHR](#)
[GroupShape:dxHeightHR](#)
[GroupShape:dxWidthHR](#)
[GroupShape:wzScriptExtAttr](#)
[GroupShape:scriptLang](#)
[GroupShape:wzScriptLangAttr](#)
[GroupShape:borderTopColor](#)
[GroupShape:borderLeftColor](#)
[GroupShape:borderBottomColor](#)
[GroupShape:borderRightColor](#)
[GroupShape:tableProperties](#)
[GroupShape:tableRowProperties](#)
[GroupShape:fLayoutInCell](#)
[GroupShape:fIsBullet](#)
[GroupShape:fStandardHR](#)
[GroupShape:fNoShadeHR](#)
[GroupShape:fHorizRule](#)
[GroupShape:fUserDrawn](#)
[GroupShape:fAllowOverlap](#)
[GroupShape:fReallyHidden](#)
[GroupShape:fScriptAnchor](#)

All properties of [UnknownHTML](#).

Office XP

[Line Style:fLineOpaqueBackColor](#)

Office 2003

[Shape:fFlipHOverride](#)

[Shape:fFlipVOverride](#)

[Diagram:dgmBaseTextScale](#)

[Ink:pInkData](#)

[Ink:fInkAnnotation](#)

[Ink:fHitTestInk](#)

[Ink:fRenderShape](#)

[Ink:fRenderInk](#)

the 2007 Office system

[Shape:equationXML](#)

[Shape:fPolicyLabel](#)

[Shape:fPolicyBarcode](#)

[GroupShape:metroBlob](#)

[GroupShape:dhgt](#)

[SignatureLine:wzSigSetupId](#)

[SignatureLine:wzSigSetupProvId](#)

[SignatureLine:wzSigSetupSuggSigner](#)

[SignatureLine:wzSigSetupSuggSigner2](#)

[SignatureLine:wzSigSetupSuggSignerEmail](#)

[SignatureLine:wzSigSetupSignInst](#)

[SignatureLine:wzSigSetupAddlXml](#)

[SignatureLine:wzSigSetupProvUrl](#)

[SignatureLine:fSigSetupShowSignDate](#)

[SignatureLine:fSigSetupAllowComments](#)

[SignatureLine:fSigSetupSignInstSet](#)

[SignatureLine:fIsSignatureLine](#)

[GroupShape2:pctHoriz](#)

[GroupShape2:pctVert](#)

[GroupShape2:pctHorizPos](#)

MS-ODRAW – 1.0

MS-ODRAW: Office Drawing Binary File Format Structure Specification

Copyright © 2008 Microsoft Corporation

Release: June 27, 2008

[GroupShape2:pctVertPos](#)

[GroupShape2:sizereLh](#)

[GroupShape2:sizereLv](#)

Localization: As OfficeArtClientTextbox is specified by [\[MS-DOC\] section 2.9.68](#), [\[MS-XLS\] section 2.5.108](#), [\[MS-OGRAFH\] section 2.5.25](#), or [\[MS-PPT\] section 2.9.76](#), this document has no localized user text strings. Several properties are used to represent text orientation or flow as needed to represent various languages. These properties are [Text:txflTextFlow](#), [Text:cdirFont](#) and [Text:txdir](#). Additionally a vendor may choose to infer the text orientation or direction either from the character context, by inspecting the characters and determining the correct orientation from the [Unicode](#) character set, or the system locale settings. All units of measure described in this document are either application defined, explicitly specified or consistent across all locales. The OfficeArt binary format does not define any time formats, calendar formats, or monetary units.

1.7 Vendor-Extensible Fields

A vendor or third-party can add data to the OfficeArt format by defining a new record with a record header whose **recType** is outside the range of 0xF000 to 0xFFFF. When a record header is encountered outside this range it MAY be skipped. In order for the record to be skipped, the **recLen** field also needs to represent the size of the record so the reader can determine how far ahead to jump to continue parsing the file. Any vendor-defined record MUST have a valid record header as specified in [OfficeArtRecordHeader \(section 2.2.1\)](#) in order for the record to be skipped as an unknown record type. In the same way, if a vendor or third-party needs to add additional properties, a new record type has to be defined to contain these properties. It is not recommended to add new properties to one of the existing OPT tables ([OfficeArtFOPT](#), [OfficeArtSecondaryFOPT](#), and [OfficeArtTertiaryFOPT](#)) with a previously unused OPID. There is a possibility that these may be claimed by a later version of OfficeArt and would then cause collisions with the vendor data.

A vendor cannot acquire a record identifier that is guaranteed to be uniquely their own. Therefore, there is a risk of these records causing conflicts with records defined by other third-parties or vendors.

2 Structures

2.1 Custom OfficeArt Types

2.1.1 MSODGID

Referenced by: [OfficeArtIDCL](#)

An MSODGID is an unsigned integer that specifies the identifier of a drawing.

2.1.2 MSOSPID

Referenced by: [hspMaster](#), [hspNext](#), [OfficeArtFArcRule](#), [OfficeArtFCalloutRule](#), [OfficeArtFConnectorRule](#), [OfficeArtFDG](#), [OfficeArtFDGG](#), [OfficeArtFDGSL](#), [OfficeArtFSP](#)

An MSOSPID is an unsigned integer that specifies the identifier of a shape.

2.1.3 FRID

Referenced by: [OfficeArtFRIT](#)

A FRID is an unsigned integer that specifies the identifier of a [group shape](#) that has been ungrouped.

2.1.4 MSOFO

Referenced by: [OfficeArtFBSE](#)

An MSOFO is an unsigned integer that specifies an offset into a file.

2.2 OfficeArt Record Types

2.2.1 OfficeArtRecordHeader

Referenced by: [OfficeArtBlipDIB](#), [OfficeArtBlipEMF](#), [OfficeArtBlipJPEG](#), [OfficeArtBlipPICT](#), [OfficeArtBlipPNG](#), [OfficeArtBlipTIFF](#), [OfficeArtBlipWMF](#), [OfficeArtBStoreContainer](#), [OfficeArtChildAnchor](#), [OfficeArtColorMRUContainer](#), [OfficeArtDgContainer](#), [OfficeArtDggContainer](#), [OfficeArtFArcRule](#), [OfficeArtFBSE](#), [OfficeArtFCalloutRule](#), [OfficeArtFConnectorRule](#), [OfficeArtFDG](#), [OfficeArtFDGGBlock](#), [OfficeArtFDGSL](#), [OfficeArtFOPT](#), [OfficeArtFPSPL](#), [OfficeArtFRITContainer](#), [OfficeArtFSP](#), [OfficeArtFSPGR](#), [OfficeArtSecondaryFOPT](#), [OfficeArtSolverContainer](#), [OfficeArtSpContainer](#), [OfficeArtSpgrContainer](#), [OfficeArtSplitMenuColorContainer](#), [OfficeArtTertiaryFOPT](#)

This record specifies the common record header for all OfficeArt records.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
recVer				recInstance												recType															

The following table specifies the meaning of the values for this field.

Table 1: fSystemRGB Values

Value	Meaning
0x0	The RGB color MAY use half-tone dithering to display.
0x1	The color MUST be a solid color.

D - fSchemeIndex (1 bit): A bit that specifies whether the current application defined [color scheme](#) will be used to determine the color. A value of 0x1 specifies that **red** is an index into the current scheme color table. If this value is 0x1, **green** and **blue** MUST be 0x00.

E - fSysIndex (1 bit): A bit that specifies whether the system color scheme will be used to determine the color. A value of 0x1 specifies that **green** and **red** are treated as an unsigned 16-bit index into the system color table. Values less than 0x00F0 map directly to Microsoft Windows System Colors. For more information about Windows System Colors, see [\[MSDN-GetSysColor\]](#).

The following values have special meaning:

Value	Meaning
0x00F0	Use the shape fill color.
0x00F1	Use the shape line color only if the shape contains a line, otherwise use the fill color.
0x00F2	Use the shape line color.
0x00F3	Use the shape shadow color.
0x00F4	Use the current or last used color.
0x00F5	Use the shape fill background color.
0x00F6	Use the shape line background color.
0x00F7	Use the shape fill color if the shape contains a fill, otherwise use the line color.

The following values have special procedural properties used to modify the color components of another color. These values are combined with the preceding table or with a user specified color. The first six values are mutually exclusive.

Value	Meaning
0x0100	Darken the color by the value specified in the blue field. A blue value of 0xFF specifies that the color is to be left unchanged, while a blue value of 0x00 specifies that the color should be completely darkened.
0x0200	Lighten the color by the value specified in the blue field. A blue value of 0xFF specifies that the color is to be left unchanged, while a blue value of 0x00 specifies that the color should be completely lightened.
0x0300	Add grey level RGB. The blue field contains the grey level to add. <code>NewColor = SourceColor + grey</code>
0x0400	Subtract grey level RGB. The blue field contains the grey level to subtract.

	$\text{NewColor} = \text{SourceColor} - \text{grey}$
0x0500	Reverse subtract grey level RGB. The blue field contains the grey level to subtract from. $\text{NewColor} = \text{grey} - \text{SourceColor}$
0x0600	The blue field contains an additional parameter. If the color component being modified is less than the parameter, set it to minimum intensity. If the color component being modified is greater than or equal to the parameter, set it to maximum intensity.
0x2000	Invert color after other modifications.
0x4000	Invert color by toggling just the high bit of each color channel after other modifications.
0x8000	Convert color to grayscale before other modifications.

F - unused1 (1 bit): Undefined and MUST be ignored.

G - unused2 (1 bit): Undefined and MUST be ignored.

H - unused3 (1 bit): Undefined and MUST be ignored.

2.2.3 MSOSHADE

Referenced by: [MSOTINTSHADE](#)

This record specifies a shade color modification that can be used to darken a color.

0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1
reserved1																amount								reserved2							

reserved1 (16 bits): MUST be 0x01F4, and MUST be ignored.

amount (8 bits): An unsigned integer that specifies the amount to darken the color. A value of 0xFF specifies the color is not darkened. A value of 0x00 specifies the color is fully darkened.

reserved2 (8 bits): MUST be 0x10, and MUST be ignored.

2.2.4 MSOTINT

Referenced by: [MSOTINTSHADE](#)

This record specifies a tint color modification that can be used to lighten a color.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
reserved1																amount								reserved2							

reserved1 (16 bits): MUST be 0x02F4, and MUST be ignored.

amount (8 bits): An unsigned integer that specifies the amount to lighten the color. A value of 0xFF specifies the color is not lightened. A value of 0x00 specifies the color is fully lightened.

reserved2 (8 bits): MUST be 0x10, and MUST be ignored.

2.2.5 MSOCOLORMODUNDEFINED

Referenced by: [MSOTINTSHADE](#)

This record MUST be ignored.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
reserved1																															

reserved1 (4 bytes): MUST be 0x20000000, and MUST be ignored.

2.2.6 MSOTINTSHADE

Referenced by: [c3DExtrusionColorExtMod](#), [fillBackColorExtMod](#), [fillColorExtMod](#), [lineBackColorExtMod](#), [lineBottomBackColorExtMod](#), [lineBottomColorExtMod](#), [lineColorExtMod](#), [lineLeftBackColorExtMod](#), [lineLeftColorExtMod](#), [lineRightBackColorExtMod](#), [lineRightColorExtMod](#), [lineTopBackColorExtMod](#), [lineTopColorExtMod](#), [pictureRecolorExtMod](#), [pictureTransparentExtMod](#), [shadowColorExtMod](#), [shadowHighlightExtMod](#)

This record specifies an [MSOCOLORMODUNDEFINED](#), an [MSOSHADE](#), or an [MSOTINT](#). The type and meaning is dictated by the value of the following code snippet:

```
( ( ( DWORD ) MSOTINTSHADE ) & 0x00000300 ) >> 8
```

Valid values are specified by the following table:

Value	Type
0x00000000	MSOCOLORMODUNDEFINED
0x00000001	MSOSHADE
0x00000002	MSOTINT

2.2.7 OfficeArtFOFTE

This record specifies an entry in a property table. An entry consists of an identifier and a value. Some property values, such as Unicode strings, do not fit in 32 bits. For these properties, the **fComplex** bit is set, and the size of the data is saved in the **op** field. The data of the complex properties follows the array of property table entries in the property table.

0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1
opid																op															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) that specifies the header information for this property.

op (4 bytes): A signed integer that specifies the value for this property.

2.2.8 OfficeArtFOPTEOPID

Referenced by: [3D-Object Boolean Properties](#), [3D-Style Boolean Properties](#), [adjust2Value](#), [adjust3Value](#), [adjust4Value](#), [adjust5Value](#), [adjust6Value](#), [adjust7Value](#), [adjust8Value](#), [adjustValue](#), [alignHR](#), [anchorText](#), [Blip Boolean Properties](#), [borderBottomColor](#), [borderLeftColor](#), [borderRightColor](#), [borderTopColor](#), [bottom](#), [Bottom Line Style Boolean Properties](#), [bWMode](#), [bWModeBW](#), [bWModePureBW](#), [c3DAmbientIntensity](#), [c3DCrMod](#), [c3DDiffuseAmt](#), [c3DEdgeThickness](#), [c3DExtrudeBackward](#), [c3DExtrudeForward](#), [c3DExtrusionColor](#), [c3DExtrusionColorExt](#), [c3DExtrusionColorExtMod](#), [c3DFillIntensity](#), [c3DFillX](#), [c3DFillY](#), [c3DFillZ](#), [c3DKeyIntensity](#), [c3DKeyX](#), [c3DKeyY](#), [c3DKeyZ](#), [c3DOriginX](#), [c3DOriginY](#), [c3DRenderMode](#), [c3DRotationAngle](#), [c3DRotationAxisX](#), [c3DRotationAxisY](#), [c3DRotationAxisZ](#), [c3DRotationCenterX](#), [c3DRotationCenterY](#), [c3DRotationCenterZ](#), [c3DShininess](#), [c3DSkewAmount](#), [c3DSkewAngle](#), [c3DSpecularAmt](#), [c3DTolerance](#), [c3DXRotationAngle](#), [c3DXViewpoint](#), [c3DYRotationAngle](#), [c3DYViewpoint](#), [c3DZViewpoint](#), [Callout Boolean Properties](#), [cdirFont](#), [cropFromBottom](#), [cropFromLeft](#), [cropFromRight](#), [cropFromTop](#), [cxk](#), [cxstyle](#), [dgmBaseTextScale](#), [dgmConstrainBounds](#), [dgmDefaultFontSize](#), [dgmLayout](#), [dgmLayoutMRU](#), [dgmNodeKind](#), [dgmScaleX](#), [dgmScaleY](#), [dgmStyle](#), [dgmt](#), [dhgt](#), [Diagram Boolean Properties](#), [dxHeightHR](#), [dxTextLeft](#), [dxTextRight](#), [dxWidthHR](#), [dxWrapDistLeft](#), [dxWrapDistRight](#), [dxyCalloutDropSpecified](#), [dxyCalloutGap](#), [dxyCalloutLengthSpecified](#), [dyTextBottom](#), [dyTextTop](#), [dyWrapDistBottom](#), [dyWrapDistTop](#), [equationXML](#), [Fill Style Boolean Properties](#), [fillAngle](#), [fillBackColor](#), [fillBackColorExt](#), [fillBackColorExtMod](#), [fillBackOpacity](#), [fillBlip](#), [fillBlipFlags](#), [fillBlipName](#), [fillColor](#), [fillColorExt](#), [fillColorExtMod](#), [fillCrMod](#), [fillDztype](#), [fillFocus](#), [fillHeight](#), [fillOpacity](#), [fillOriginX](#), [fillOriginY](#), [fillRectBottom](#), [fillRectLeft](#), [fillRectRight](#), [fillRectTop](#), [fillShadeColors](#), [fillShadePreset](#), [fillShadeType](#), [fillShapeOriginX](#), [fillShapeOriginY](#), [fillToBottom](#), [fillToLeft](#), [fillToRight](#), [fillToTop](#), [fillType](#), [fillWidth](#), [geoBottom](#), [geoLeft](#), [Geometry Boolean Properties](#), [Geometry Text Boolean Properties](#), [geoRight](#), [geoTop](#), [Group Shape Boolean Properties](#), [gtextAlign](#), [gtextCSSFont](#), [gtextFont](#), [gtextSize](#), [gtextSpacing](#), [gtextUNICODE](#), [gvPage](#), [gvRelPage](#), [hspMaster](#), [hspNext](#), [idDiscussAnchor](#), [Ink Boolean Properties](#), [left](#), [Left Line Style Boolean Properties](#), [lidRegroup](#), [Line Style Boolean Properties](#), [lineBackColor](#), [lineBackColorExt](#), [lineBackColorExtMod](#), [lineBottomBackColor](#), [lineBottomBackColorExt](#), [lineBottomBackColorExtMod](#), [lineBottomColor](#), [lineBottomColorExt](#), [lineBottomColorExtMod](#), [lineBottomCrMod](#), [lineBottomDashing](#), [lineBottomDashStyle](#), [lineBottomEndArrowhead](#), [lineBottomEndArrowLength](#), [lineBottomEndArrowWidth](#), [lineBottomEndCapStyle](#), [lineBottomFillBlip](#), [lineBottomFillBlipFlags](#), [lineBottomFillBlipName](#), [lineBottomFillDztype](#), [lineBottomFillHeight](#), [lineBottomFillWidth](#), [lineBottomJoinStyle](#), [lineBottomMiterLimit](#), [lineBottomOpacity](#), [lineBottomStartArrowhead](#), [lineBottomStartArrowLength](#), [lineBottomStartArrowWidth](#), [lineBottomStyle](#), [lineBottomType](#), [lineBottomWidth](#), [lineColor](#), [lineColorExt](#), [lineColorExtMod](#), [lineCrMod](#), [lineDashing](#), [lineDashStyle](#), [lineEndArrowhead](#), [lineEndArrowLength](#), [lineEndArrowWidth](#), [lineEndCapStyle](#), [lineFillBlip](#), [lineFillBlipFlags](#), [lineFillBlipName](#), [lineFillDztype](#), [lineFillHeight](#), [lineFillWidth](#), [lineJoinStyle](#), [lineLeftBackColor](#), [lineLeftBackColorExt](#), [lineLeftBackColorExtMod](#), [lineLeftColor](#), [lineLeftColorExt](#), [lineLeftColorExtMod](#), [lineLeftCrMod](#), [lineLeftDashing](#), [lineLeftDashStyle](#), [lineLeftEndArrowhead](#), [lineLeftEndArrowLength](#), [lineLeftEndArrowWidth](#), [lineLeftEndCapStyle](#), [lineLeftFillBlip](#), [lineLeftFillBlipFlags](#), [lineLeftFillBlipName](#), [lineLeftFillDztype](#), [lineLeftFillHeight](#), [lineLeftFillWidth](#), [lineLeftJoinStyle](#), [lineLeftMiterLimit](#), [lineLeftOpacity](#), [lineLeftStartArrowhead](#), [lineLeftStartArrowLength](#), [lineLeftStartArrowWidth](#), [lineLeftStyle](#), [lineLeftType](#), [lineLeftWidth](#), [lineMiterLimit](#), [lineOpacity](#), [lineRightBackColor](#), [lineRightBackColorExt](#), [lineRightBackColorExtMod](#), [lineRightColor](#),

This record specifies the header for an entry in a property table.

opid (14 bits): An unsigned integer that specifies the identifier of the property in this entry.

- A - fBid (1 bit):** A bit that specifies whether the value in the **op** field is a BLIP identifier. If this value is 0x1, the value in the **op** field specifies the BLIP identifier in the [OfficeArtBStoreContainer](#) record. This bit MUST be ignored if **fComplex** is 0x1.
- B - fComplex (1 bit):** A bit that specifies whether this property is a complex property. If this value is 0x1, then the **op** field specifies the size of the data for this property, not the property data itself.

2.2.9 OfficeArtFOPT

Referenced by: [OfficeArtDggContainer](#), [OfficeArtSpContainer](#)

This record specifies a table of [OfficeArtRGFOPT](#) properties.

The following properties SHOULD be specified in this table:

[Shape:hspMaster](#)

[Shape:cxstyle](#)

[Shape:bWMode](#)

[Shape:bWModePureBW](#)

[Shape:bWModeBW](#)

[Shape:Shape Boolean Properties](#)

[Callout:dxyCalloutGap](#)

[Callout:spcoa](#)

[Callout:spcod](#)

[Callout:dxyCalloutDropSpecified](#)

[Callout:dxyCalloutLengthSpecified](#)

[Callout:Callout Boolean Properties](#)

[GroupShape:wzName](#)

[GroupShape:wzDescription](#)

[GroupShape:pihlShape](#)

[GroupShape:pWrapPolygonVertices](#)

[GroupShape:dxWrapDistLeft](#)

[GroupShape:dyWrapDistTop](#)

[GroupShape:dxWrapDistRight](#)

[GroupShape:dyWrapDistBottom](#)

[GroupShape:lidRegroup](#)

[GroupShape:Group Shape Boolean Properties](#)

[Geometry:geoLeft](#)

[Geometry:geoTop](#)
[Geometry:geoRight](#)
[Geometry:geoBottom](#)
[Geometry:shapePath](#)
[Geometry:pVertices](#)
[Geometry:pSegmentInfo](#)
[Geometry:adjustValue](#)
[Geometry:adjust2Value](#)
[Geometry:adjust3Value](#)
[Geometry:adjust4Value](#)
[Geometry:adjust5Value](#)
[Geometry:adjust6Value](#)
[Geometry:adjust7Value](#)
[Geometry:adjust8Value](#)
[Geometry:pConnectionSites](#)
[Geometry:pConnectionSitesDir](#)
[Geometry:xLimo](#)
[Geometry:yLimo](#)
[Geometry:pAdjustHandles](#)
[Geometry:pGuides](#)
[Geometry:pInscribe](#)
[Geometry:cxk](#)
[Geometry:Geometry Boolean Properties](#)
[FillStyle:fillType](#)
[FillStyle:fillColor](#)
[FillStyle:fillOpacity](#)
[FillStyle:fillBackColor](#)
[FillStyle:fillBackOpacity](#)
[FillStyle:fillCrMod](#)
[FillStyle:fillBlip](#)
[FillStyle:fillBlipName](#)
[FillStyle:fillBlipFlags](#)

[FillStyle:fillWidth](#)
[FillStyle:fillHeight](#)
[FillStyle:fillAngle](#)
[FillStyle:fillFocus](#)
[FillStyle:fillToLeft](#)
[FillStyle:fillToTop](#)
[FillStyle:fillToRight](#)
[FillStyle:fillToBottom](#)
[FillStyle:fillRectLeft](#)
[FillStyle:fillRectTop](#)
[FillStyle:fillRectRight](#)
[FillStyle:fillRectBottom](#)
[FillStyle:fillDztype](#)
[FillStyle:fillShadePreset](#)
[FillStyle:fillShadeColors](#)
[FillStyle:fillOriginX](#)
[FillStyle:fillOriginY](#)
[FillStyle:fillShapeOriginX](#)
[FillStyle:fillShapeOriginY](#)
[FillStyle:fillShadeType](#)
[FillStyle:Fill Style Boolean Properties](#)
[LineStyle:lineColor](#)
[LineStyle:lineOpacity](#)
[LineStyle:lineBackColor](#)
[LineStyle:lineCrMod](#)
[LineStyle:lineType](#)
[LineStyle:lineFillBlip](#)
[LineStyle:lineFillBlipName](#)
[LineStyle:lineFillBlipFlags](#)
[LineStyle:lineFillWidth](#)
[LineStyle:lineFillHeight](#)
[LineStyle:lineFillDztype](#)

[LineStyle:lineWidth](#)
[LineStyle:lineMiterLimit](#)
[LineStyle:lineStyle](#)
[LineStyle:lineDashing](#)
[LineStyle:lineDashStyle](#)
[LineStyle:lineStartArrowhead](#)
[LineStyle:lineEndArrowhead](#)
[LineStyle:lineStartArrowWidth](#)
[LineStyle:lineStartArrowLength](#)
[LineStyle:lineEndArrowWidth](#)
[LineStyle:lineEndArrowLength](#)
[LineStyle:lineJoinStyle](#)
[LineStyle:lineEndCapStyle](#)
[LineStyle:Line Style Boolean Properties](#)
[ShadowStyle:shadowType](#)
[ShadowStyle:shadowColor](#)
[ShadowStyle:shadowHighlight](#)
[ShadowStyle:shadowCrMod](#)
[ShadowStyle:shadowOpacity](#)
[ShadowStyle:shadowOffsetX](#)
[ShadowStyle:shadowOffsetY](#)
[ShadowStyle:shadowSecondOffsetX](#)
[ShadowStyle:shadowSecondOffsetY](#)
[ShadowStyle:shadowOriginX](#)
[ShadowStyle:shadowOriginY](#)
[ShadowStyle:Shadow Style Boolean Properties](#)
[PerspectiveStyle:perspectiveType](#)
[PerspectiveStyle:perspectiveOffsetX](#)
[PerspectiveStyle:perspectiveOffsetY](#)
[PerspectiveStyle:perspectiveScaleXToX](#)
[PerspectiveStyle:perspectiveScaleYToX](#)
[PerspectiveStyle:perspectiveScaleXToY](#)

[PerspectiveStyle:perspectiveScaleYToY](#)
[PerspectiveStyle:perspectivePerspectiveX](#)
[PerspectiveStyle:perspectivePerspectiveY](#)
[PerspectiveStyle:perspectiveWeight](#)
[PerspectiveStyle:perspectiveOriginX](#)
[PerspectiveStyle:perspectiveOriginY](#)
[PerspectiveStyle:Perspective Style Boolean Properties](#)
[3DObject:c3DSpecularAmt](#)
[3DObject:c3DDiffuseAmt](#)
[3DObject:c3DShininess](#)
[3DObject:c3DEdgeThickness](#)
[3DObject:c3DExtrudeForward](#)
[3DObject:c3DExtrudeBackward](#)
[3DObject:c3DExtrusionColor](#)
[3DObject:c3DCrMod](#)
[3DObject:3D-Object Boolean Properties](#)
[3DStyle:c3DYRotationAngle](#)
[3DStyle:c3DXRotationAngle](#)
[3DStyle:c3DRotationAxisX](#)
[3DStyle:c3DRotationAxisY](#)
[3DStyle:c3DRotationAxisZ](#)
[3DStyle:c3DRotationAngle](#)
[3DStyle:c3DRotationCenterX](#)
[3DStyle:c3DRotationCenterY](#)
[3DStyle:c3DRotationCenterZ](#)
[3DStyle:c3DRenderMode](#)
[3DStyle:c3DTolerance](#)
[3DStyle:c3DXViewpoint](#)
[3DStyle:c3DYViewpoint](#)
[3DStyle:c3DZViewpoint](#)
[3DStyle:c3DOriginX](#)
[3DStyle:c3DOriginY](#)

[3DStyle:c3DSkewAngle](#)
[3DStyle:c3DSkewAmount](#)
[3DStyle:c3DAmbientIntensity](#)
[3DStyle:c3DKeyX](#)
[3DStyle:c3DKeyY](#)
[3DStyle:c3DKeyZ](#)
[3DStyle:c3DKeyIntensity](#)
[3DStyle:c3DFillX](#)
[3DStyle:c3DFillY](#)
[3DStyle:c3DFillZ](#)
[3DStyle:c3DFillIntensity](#)
[3DStyle:3D-Style Boolean Properties](#)
[Xfrm:left](#)
[Xfrm:top](#)
[Xfrm:right](#)
[Xfrm:bottom](#)
[Xfrm:rotation](#)
[Xfrm:gvPage](#)
[Xfrm:Transform Boolean Properties](#)
[RelXfrm:relLeft](#)
[RelXfrm:relTop](#)
[RelXfrm:relRight](#)
[RelXfrm:relBottom](#)
[RelXfrm:relRotation](#)
[RelXfrm:gvRelPage](#)
[RelXfrm:Relative Transform Boolean Properties](#)
[Text:ITxid](#)
[Text:dxTextLeft](#)
[Text:dyTextTop](#)
[Text:dxTextRight](#)
[Text:dyTextBottom](#)
[Text:WrapText](#)

[Text:anchorText](#)

[Text:txflTextFlow](#)

[Text:cdirFont](#)

[Text:hspNext](#)

[Text:txdir](#)

[Text:Text Boolean Properties](#)

[GeoText:gtextUNICODE](#)

[GeoText:gtextAlign](#)

[GeoText:gtextSize](#)

[GeoText:gtextSpacing](#)

[GeoText:gtextFont](#)

[GeoText:Geometry Text Boolean Properties](#)

[Blip:cropFromTop](#)

[Blip:cropFromBottom](#)

[Blip:cropFromLeft](#)

[Blip:cropFromRight](#)

[Blip:pib](#)

[Blip:pibName](#)

[Blip:pibFlags](#)

[Blip:pictureTransparent](#)

[Blip:pictureContrast](#)

[Blip:pictureBrightness](#)

[Blip:pictureId](#)

[Blip:pictureDbICrMod](#)

[Blip:pictureFillCrMod](#)

[Blip:pictureLineCrMod](#)

[Blip:pibPrint](#)

[Blip:pibPrintName](#)

[Blip:pibPrintFlags](#)

[Blip:Blip Boolean Properties](#)

[Protection:Protection Boolean Properties](#)

0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1
rh																															
...																															
fopt (variable)																															
...																															

rh (8 bytes): An [OfficeArtRecordHeader](#) that specifies the header for this record. Sub-fields are further specified in the following table:

Field	Meaning
rh.recVer	MUST be 0x3.
rh.recInstance	An unsigned integer that specifies the number of properties in the table.
rh.recType	MUST be 0xF00B.
rh.recLen	An unsigned integer that specifies the number of bytes following the header that contain property records. This is the count of properties multiplied by the size of the OfficeArtFOFTE type, plus the size of the complex property data.

fopt (variable): The [OfficeArtRGFOFTE](#) property table that specifies property data.

2.2.10 OfficeArtSecondaryFOPT

Referenced by: [OfficeArtSpContainer](#)

This record specifies a table of [OfficeArtRGFOFTE](#) properties.

The following property can be specified in this table:

[Blip:movie](#)

0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1
rh																															
...																															
fopt (variable)																															
...																															

rh (8 bytes): An [OfficeArtRecordHeader](#) that specifies the header for this record. Sub-fields are further specified in the following table:

Field	Meaning
rh.recVer	MUST be 0x3.
rh.recInstance	An unsigned integer that specifies the number of properties in the table.
rh.recType	MUST be 0xF121.
rh.recLen	An unsigned integer that specifies the number of bytes following the header that contain property records. This is the count of properties multiplied by the size of the OfficeArtFOFTE type, plus the size of the complex property data.

fopt (variable): The [OfficeArtRGFOFTE](#) property table that specifies property data.

2.2.11 OfficeArtTertiaryFOPT

Referenced by: [OfficeArtDggContainer](#), [OfficeArtSpContainer](#)

This record specifies a table of [OfficeArtRGFOFTE](#) properties.

The following properties SHOULD be specified in this table:

[Shape:idDiscussAnchor](#)

[Shape:dgmLayout](#)

[Shape:dgmNodeKind](#)

[Shape:dgmLayoutMRU](#)

[Shape:equationXML](#)

[Shape:Shape Boolean Properties](#)

[GroupShape:wzTooltip](#)

[GroupShape:wzScript](#)

[GroupShape:posh](#)

[GroupShape:posrelh](#)

[GroupShape:posv](#)

[GroupShape:posrelv](#)

[GroupShape:pctHR](#)

[GroupShape:alignHR](#)

[GroupShape:dxHeightHR](#)

[GroupShape:dxWidthHR](#)

[GroupShape:wzScriptExtAttr](#)

[GroupShape:scriptLang](#)

[GroupShape:wzScriptLangAttr](#)

[GroupShape: borderTopColor](#)
[GroupShape: borderLeftColor](#)
[GroupShape: borderBottomColor](#)
[GroupShape: borderRightColor](#)
[GroupShape: tableProperties](#)
[GroupShape: tableRowProperties](#)
[GroupShape:wzWebBot](#)
[GroupShape: metroBlob](#)
[GroupShape: dhgt](#)
[GroupShape:Group Shape Boolean Properties](#)
[GroupShape2:pctHoriz](#)
[GroupShape2:pctVert](#)
[GroupShape2:pctHorizPos](#)
[GroupShape2:pctVertPos](#)
[GroupShape2:sizerelh](#)
[GroupShape2:sizerelv](#)
[FillStyle:fillColorExt](#)
[FillStyle:fillColorExtMod](#)
[FillStyle:fillBackColorExt](#)
[FillStyle:fillBackColorExtMod](#)
[FillStyle:Fill Style Boolean Properties](#)
[LineStyle:lineColorExt](#)
[LineStyle:lineColorExtMod](#)
[LineStyle:lineBackColorExt](#)
[LineStyle:lineBackColorExtMod](#)
[LineStyle:Line Style Boolean Properties](#)
[LineLeftStyle:lineLeftColor](#)
[LineLeftStyle:lineLeftOpacity](#)
[LineLeftStyle:lineLeftBackColor](#)
[LineLeftStyle:lineLeftCrMod](#)
[LineLeftStyle:lineLeftType](#)
[LineLeftStyle:lineLeftFillBlip](#)

[LineLeftStyle:lineLeftFillBlipName](#)
[LineLeftStyle:lineLeftFillBlipFlags](#)
[LineLeftStyle:lineLeftFillWidth](#)
[LineLeftStyle:lineLeftFillHeight](#)
[LineLeftStyle:lineLeftFillDztype](#)
[LineLeftStyle:lineLeftWidth](#)
[LineLeftStyle:lineLeftMiterLimit](#)
[LineLeftStyle:lineLeftStyle](#)
[LineLeftStyle:lineLeftDashing](#)
[LineLeftStyle:lineLeftDashStyle](#)
[LineLeftStyle:lineLeftStartArrowhead](#)
[LineLeftStyle:lineLeftEndArrowhead](#)
[LineLeftStyle:lineLeftStartArrowWidth](#)
[LineLeftStyle:lineLeftStartArrowLength](#)
[LineLeftStyle:lineLeftEndArrowWidth](#)
[LineLeftStyle:lineLeftEndArrowLength](#)
[LineLeftStyle:lineLeftJoinStyle](#)
[LineLeftStyle:lineLeftEndCapStyle](#)
[LineLeftStyle:lineLeftColorExt](#)
[LineLeftStyle:lineLeftColorExtMod](#)
[LineLeftStyle:lineLeftBackColorExt](#)
[LineLeftStyle:lineLeftBackColorExtMod](#)
[LineLeftStyle:Left Line Style Boolean Properties](#)
[LineTopStyle:lineTopColor](#)
[LineTopStyle:lineTopOpacity](#)
[LineTopStyle:lineTopBackColor](#)
[LineTopStyle:lineTopCrMod](#)
[LineTopStyle:lineTopType](#)
[LineTopStyle:lineTopFillBlip](#)
[LineTopStyle:lineTopFillBlipName](#)
[LineTopStyle:lineTopFillBlipFlags](#)
[LineTopStyle:lineTopFillWidth](#)

[LineTopStyle:lineTopFillHeight](#)
[LineTopStyle:lineTopFillDztype](#)
[LineTopStyle:lineTopWidth](#)
[LineTopStyle:lineTopMiterLimit](#)
[LineTopStyle:lineTopStyle](#)
[LineTopStyle:lineTopDashing](#)
[LineTopStyle:lineTopDashStyle](#)
[LineTopStyle:lineTopStartArrowhead](#)
[LineTopStyle:lineTopEndArrowhead](#)
[LineTopStyle:lineTopStartArrowWidth](#)
[LineTopStyle:lineTopStartArrowLength](#)
[LineTopStyle:lineTopEndArrowWidth](#)
[LineTopStyle:lineTopEndArrowLength](#)
[LineTopStyle:lineTopJoinStyle](#)
[LineTopStyle:lineTopEndCapStyle](#)
[LineTopStyle:lineTopColorExt](#)
[LineTopStyle:lineTopColorExtMod](#)
[LineTopStyle:lineTopBackColorExt](#)
[LineTopStyle:lineTopBackColorExtMod](#)
[LineTopStyle:Top Line Style Boolean Properties](#)
[LineRightStyle:lineRightColor](#)
[LineRightStyle:lineRightOpacity](#)
[LineRightStyle:lineRightBackColor](#)
[LineRightStyle:lineRightCrMod](#)
[LineRightStyle:lineRightType](#)
[LineRightStyle:lineRightFillBlip](#)
[LineRightStyle:lineRightFillBlipName](#)
[LineRightStyle:lineRightFillBlipFlags](#)
[LineRightStyle:lineRightFillWidth](#)
[LineRightStyle:lineRightFillHeight](#)
[LineRightStyle:lineRightFillDztype](#)
[LineRightStyle:lineRightWidth](#)

[LineRightStyle:lineRightMiterLimit](#)
[LineRightStyle:lineRightStyle](#)
[LineRightStyle:lineRightDashing](#)
[LineRightStyle:lineRightDashStyle](#)
[LineRightStyle:lineRightStartArrowhead](#)
[LineRightStyle:lineRightEndArrowhead](#)
[LineRightStyle:lineRightStartArrowWidth](#)
[LineRightStyle:lineRightStartArrowLength](#)
[LineRightStyle:lineRightEndArrowWidth](#)
[LineRightStyle:lineRightEndArrowLength](#)
[LineRightStyle:lineRightJoinStyle](#)
[LineRightStyle:lineRightEndCapStyle](#)
[LineRightStyle:lineRightColorExt](#)
[LineRightStyle:lineRightColorExtMod](#)
[LineRightStyle:lineRightBackColorExt](#)
[LineRightStyle:lineRightBackColorExtMod](#)
[LineRightStyle:Right Line Style Boolean Properties](#)
[LineBottomStyle:lineBottomColor](#)
[LineBottomStyle:lineBottomOpacity](#)
[LineBottomStyle:lineBottomBackColor](#)
[LineBottomStyle:lineBottomCrMod](#)
[LineBottomStyle:lineBottomType](#)
[LineBottomStyle:lineBottomFillBlip](#)
[LineBottomStyle:lineBottomFillBlipName](#)
[LineBottomStyle:lineBottomFillBlipFlags](#)
[LineBottomStyle:lineBottomFillWidth](#)
[LineBottomStyle:lineBottomFillHeight](#)
[LineBottomStyle:lineBottomFillDztype](#)
[LineBottomStyle:lineBottomWidth](#)
[LineBottomStyle:lineBottomMiterLimit](#)
[LineBottomStyle:lineBottomStyle](#)
[LineBottomStyle:lineBottomDashing](#)

[LineBottomStyle:lineBottomDashStyle](#)
[LineBottomStyle:lineBottomStartArrowhead](#)
[LineBottomStyle:lineBottomEndArrowhead](#)
[LineBottomStyle:lineBottomStartArrowWidth](#)
[LineBottomStyle:lineBottomStartArrowLength](#)
[LineBottomStyle:lineBottomEndArrowWidth](#)
[LineBottomStyle:lineBottomEndArrowLength](#)
[LineBottomStyle:lineBottomJoinStyle](#)
[LineBottomStyle:lineBottomEndCapStyle](#)
[LineBottomStyle:lineBottomColorExt](#)
[LineBottomStyle:lineBottomColorExtMod](#)
[LineBottomStyle:lineBottomBackColorExt](#)
[LineBottomStyle:lineBottomBackColorExtMod](#)
[LineBottomStyle:Bottom Line Style Boolean Properties](#)
[ShadowStyle:shadowColorExt](#)
[ShadowStyle:shadowColorExtMod](#)
[ShadowStyle:shadowHighlightExt](#)
[ShadowStyle:shadowHighlightExtMod](#)
[3DObject:c3DExtrusionColorExt](#)
[3DObject:c3DExtrusionColorExtMod](#)
[Diagram:dgmt](#)
[Diagram:dgmStyle](#)
[Diagram:pRelationTbl](#)
[Diagram:dgmScaleX](#)
[Diagram:dgmScaleY](#)
[Diagram:dgmDefaultFontSize](#)
[Diagram:dgmConstrainBounds](#)
[Diagram:dgmBaseTextScale](#)
[Diagram:Diagram Boolean Properties](#)
[GeoText:gtextCSSFont](#)
[Blip:pictureTransparentExt](#)
[Blip:pictureTransparentExtMod](#)

[Blip:pictureRecolor](#)
[Blip:pictureRecolorExt](#)
[Blip:pictureRecolorExtMod](#)
[Blip:Blip Boolean Properties](#)
[UnknownHTML:wzLineId](#)
[UnknownHTML:wzFillId](#)
[UnknownHTML:wzPictureId](#)
[UnknownHTML:wzPathId](#)
[UnknownHTML:wzShadowId](#)
[UnknownHTML:wzPerspectiveId](#)
[UnknownHTML:wzGtextId](#)
[UnknownHTML:wzFormulaeId](#)
[UnknownHTML:wzHandlesId](#)
[UnknownHTML:wzCalloutId](#)
[UnknownHTML:wzLockId](#)
[UnknownHTML:wzTextId](#)
[UnknownHTML:wzThreeDId](#)
[UnknownHTML:Unknown HTML Boolean Properties](#)
[WebComponent:webComponentWzHtml](#)
[WebComponent:webComponentWzName](#)
[WebComponent:webComponentWzUrl](#)
[WebComponent:Web Component Boolean Properties](#)
[Ink:pInkData](#)
[Ink:Ink Boolean Properties](#)
[SignatureLine:wzSigSetupId](#)
[SignatureLine:wzSigSetupProvId](#)
[SignatureLine:wzSigSetupSuggSigner](#)
[SignatureLine:wzSigSetupSuggSigner2](#)
[SignatureLine:wzSigSetupSuggSignerEmail](#)
[SignatureLine:wzSigSetupSignInst](#)
[SignatureLine:wzSigSetupAddIXml](#)
[SignatureLine:wzSigSetupProvUrl](#)

SignatureLine:Signature Line Boolean Properties

Protection:Protection Boolean Properties

Geometry:Geometry Boolean Properties

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
rh																															
...																															
fopt (variable)																															
...																															

rh (8 bytes): An [OfficeArtRecordHeader](#) that specifies the header for this record. Sub-fields are further specified in the following table:

Field	Meaning
rh.recVer	MUST be 0x3.
rh.recInstance	An unsigned integer that specifies the number of properties in the table.
rh.recType	MUST be 0xF122.
rh.recLen	An unsigned integer that specifies the number of bytes following the header that contain property records. This is the count of properties multiplied by the size of the OfficeArtFOFTE type, plus the size of the complex property data.

fopt (variable): The [OfficeArtRGFOFTE](#) property table that specifies property data.

2.2.12 OfficeArtDggContainer

This record specifies the container for all OfficeArt file records containing document-wide data.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
rh																															
...																															
drawingGroup (variable)																															
...																															

blipStore (variable)
...
drawingPrimaryOptions (variable)
...
drawingTertiaryOptions (variable)
...
colorMRU (variable)
...
splitColors (variable)
...

rh (8 bytes): An [OfficeArtRecordHeader](#) that specifies the header for this record. Sub-fields are further specified in the following table:

Field	Meaning
rh.recVer	MUST be 0xF.
rh.recInstance	MUST be 0x000.
rh.recType	MUST be 0xF000.
rh.recLen	An unsigned integer that specifies the number of bytes following the header which contains document-wide file records.

drawingGroup (variable): An [OfficeArtFDGGBlock](#) record that specifies document-wide information about all the drawings saved in the file.

blipStore (variable): An [OfficeArtBStoreContainer](#) record that specifies the container for all **BLIPs** used in all drawings in the parent document.

drawingPrimaryOptions (variable): An [OfficeArtFOPT](#) record that specifies default properties for all **drawing objects** contained in all drawings in the parent document.

drawingTertiaryOptions (variable): An [OfficeArtTertiaryFOPT](#) record that specifies default properties for all drawing objects contained in all drawings in the parent document.

colorMRU (variable): An [OfficeArtColorMRUContainer](#) record that specifies the most recently used custom colors.

splitColors (variable): An [OfficeArtSplitMenuColorContainer](#) record that specifies a container for the colors most recently used to format shapes.

2.2.13 OfficeArtDgContainer

This record specifies the container for all of the file records for objects in a drawing.

0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1
rh																															
...																															
drawingData (16 bytes, optional)																															
...																															
regroupItems (variable)																															
...																															
groupShape (variable)																															
...																															
shape (variable)																															
...																															
deletedShapes (variable)																															
...																															
solvers (variable)																															
...																															

rh (8 bytes): An [OfficeArtRecordHeader](#) that specifies the header for this record. Sub-fields are further specified in the following table:

Field	Meaning
rh.recVer	MUST be 0xF.
rh.recInstance	MUST be 0x000.
rh.recType	MUST be 0xF002.
rh.recLen	An unsigned integer that specifies the number of bytes following the header which contain drawing-wide file records.

drawingData (16 bytes): An [OfficeArtFDG](#) record that specifies the shape count, drawing identifier, and shape identifier of the last shape in this drawing.

regroupItems (variable): An [OfficeArtFRITContainer](#) record that specifies a container for the table of group identifiers for regrouping ungrouped shapes.

groupShape (variable): An [OfficeArtSpgrContainer](#) record that specifies a container for groups of shapes.

shape (variable): An [OfficeArtSpContainer](#) record that specifies a container for shapes not contained in a group.

deletedShapes (variable): An array of [OfficeArtSpgrContainerFileBlock](#) records that specifies deleted shapes. For further information regarding deleted shapes, reference the [OfficeArtFPSPL](#) record. The array continues while the rh.recType field of the [OfficeArtSpgrContainerFileBlock](#) record is equal to 0xF003 or 0xF004. This array MAY [<2>](#) exist.

solvers (variable): An [OfficeArtSolverContainer](#) record that specifies a container for rules applicable to shapes contained in this drawing.

2.2.14 OfficeArtSpContainer

Referenced by: [OfficeArtDgContainer](#), [OfficeArtInlineSpContainer](#), [OfficeArtSpgrContainerFileBlock](#)

This record specifies a container for shapes.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
rh																															
...																															
shapeGroup (24 bytes, optional)																															
...																															
shapeProp (16 bytes)																															
...																															
deletedShape (optional)																															
...																															
...																															

shapePrimaryOptions (variable)
...
shapeSecondaryOptions1 (variable)
...
shapeTertiaryOptions1 (variable)
...
childAnchor (24 bytes, optional)
...
clientAnchor (variable)
...
clientData (variable)
...
clientTextbox (variable)
...
shapeSecondaryOptions2 (variable)
...
shapeTertiaryOptions2 (variable)
...

rh (8 bytes): An [OfficeArtRecordHeader](#) that specifies the header for this record. Sub-fields are further specified in the following table:

Field	Meaning
rh.recVer	MUST be 0xF.
rh.recInstance	MUST be 0x000.
rh.recType	MUST be 0xF004.
rh.recLen	An unsigned integer that specifies the number of bytes following the header

	which contain shape records. MUST be the size of rgfb in bytes.
--	--

- shapeGroup (24 bytes):** An [OfficeArtFSPGR](#) record that specifies the coordinate system of the group shape, which the anchors of the child shape are expressed in.
- shapeProp (16 bytes):** An [OfficeArtFSP](#) record that specifies an instance of a shape.
- deletedShape (12 bytes):** An [OfficeArtFPSPL](#) record that specifies the former hierarchical position of the containing object.
- shapePrimaryOptions (variable):** An [OfficeArtFOPT](#) record that specifies non-default properties of this shape.
- shapeSecondaryOptions1 (variable):** An [OfficeArtSecondaryFOPT](#) record that specifies non-default properties of this shape.
- shapeTertiaryOptions1 (variable):** An [OfficeArtTertiaryFOPT](#) record that specifies non-default properties of this shape.
- childAnchor (24 bytes):** An [OfficeArtChildAnchor](#) record that specifies the anchor for this shape.
- clientAnchor (variable):** An OfficeArtClientAnchor record as specified by the host application
- clientData (variable):** An OfficeArtClientData record as specified by the host application
- clientTextbox (variable):** An OfficeArtClientTextbox record as specified by the host application
- shapeSecondaryOptions2 (variable):** An [OfficeArtSecondaryFOPT](#) record that specifies non-default properties of this shape. This field MUST NOT exist if **shapeSecondaryOptions1** exists.
- shapeTertiaryOptions2 (variable):** An [OfficeArtTertiaryFOPT](#) record that specifies non-default properties of this shape. This field MUST NOT exist if **shapeTertiaryOptions1** exists.

2.2.15 OfficeArtInlineSpContainer

This record specifies a container for inline shapes. This record MAY [<3>](#) be ignored.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
shape (variable)																															
...																															
rgfb (variable)																															
...																															

- shape (variable):** An [OfficeArtSpContainer](#) record that specifies an instance of a shape.
- rgfb (variable):** An array of [OfficeArtBStoreContainerFileBlock](#) records that specifies BLIP data. The array continues while the **rh.recType** field of the [OfficeArtBStoreContainerFileBlock](#) record is equal to 0xF007 or between 0xF018 and 0xF117, inclusive.

2.2.16 OfficeArtSpgrContainer

Referenced by: [OfficeArtDgContainer](#), [OfficeArtSpgrContainerFileBlock](#)

This record specifies a container for groups of shapes. The group container contains a variable number of shape containers and other group containers. Each group is a shape. The first container MUST be an [OfficeArtSpContainer](#) record, which MUST contain shape information for the group.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
rh																															
...																															
rgfb (variable)																															
...																															

rh (8 bytes): An [OfficeArtRecordHeader](#) that specifies the header for this record. Sub-fields are further specified in the following table:

Field	Meaning
rh.recVer	MUST be 0xF.
rh.recInstance	MUST be 0x000.
rh.recType	MUST be 0xF003.
rh.recLen	An unsigned integer that specifies the number of bytes following the header which contain group or shape container records. MUST be the size of rgfb in bytes.

rgfb (variable): An array of [OfficeArtSpgrContainerFileBlock](#) records that specifies groups or shapes contained within this group.

2.2.17 OfficeArtSpgrContainerFileBlock

Referenced by: [OfficeArtDgContainer](#), [OfficeArtSpgrContainer](#)

This record specifies a file block that contains a record that specifies group or shape data. The contained record's [OfficeArtRecordHeader](#) specifies the type of record. The following table contains the possible record types.

Value	Meaning
0xF004	OfficeArtSpContainer
0xF003	OfficeArtSpgrContainer

2.2.18 OfficeArtSolverContainer

Referenced by: [OfficeArtDgContainer](#)

This record specifies a container for rules applicable to shapes contained in an [OfficeArtDgContainer](#) record.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
rh																															
...																															
rgfb (variable)																															
...																															

rh (8 bytes): An [OfficeArtRecordHeader](#) that specifies the header for this record. Sub-fields are further specified in the following table:

Field	Meaning
rh.recVer	MUST be 0xF.
rh.recInstance	An unsigned integer that specifies the number of contained OfficeArtSolverContainerFileBlock records.
rh.recType	MUST be 0xF005.
rh.recLen	An unsigned integer that specifies the number of bytes following the header which contain OfficeArtSolverContainerFileBlock records. MUST be the size of rgfb in bytes.

rgfb (variable): An array of [OfficeArtSolverContainerFileBlock](#) records that specifies a collection of rules applicable to shapes contained in an [OfficeArtDgContainer](#) record.

2.2.19 OfficeArtSolverContainerFileBlock

Referenced by: [OfficeArtSolverContainer](#)

This record specifies a file block that contains a record that specifies rule data. The contained record's [OfficeArtRecordHeader](#) specifies the type of record. The following table contains the possible record types.

Value	Meaning
0xF012	OfficeArtFConnectorRule record
0xF014	OfficeArtFArcRule record
0xF017	OfficeArtFCalloutRule record

2.2.20 OfficeArtBStoreContainer

Referenced by: [OfficeArtDggContainer](#)

This record specifies the container for all BLIPs used in all drawings associated with the parent [OfficeArtDggContainer](#) record.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
rh																															
...																															
rgfb (variable)																															
...																															

rh (8 bytes): An [OfficeArtRecordHeader](#) that specifies the header for this record. Sub-fields are further specified in the following table:

Field	Meaning
rh.recVer	MUST be 0xF.
rh.recInstance	An unsigned integer that specifies the number of contained OfficeArtBStoreContainerFileBlock records.
rh.recType	MUST be 0xF007.
rh.recLen	An unsigned integer that specifies the number of bytes following the header which contain OfficeArtBStoreContainerFileBlock records. MUST be the size of rgfb in bytes.

rgfb (variable): An array of [OfficeArtBStoreContainerFileBlock](#) records that specifies the BLIP data.

2.2.21 OfficeArtBStoreDelay

This record specifies the delay loaded container of BLIPs in the host application. There is no [OfficeArtRecordHeader](#) for this container.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
rgfb (variable)																															
...																															

rgfb (variable): An array of [OfficeArtBStoreContainerFileBlock](#) records that specifies BLIP data. The array continues while the **rh.recType** field of the [OfficeArtBStoreContainerFileBlock](#) record is equal to 0xF007 or between 0xF018 and 0xF117, inclusive.

2.2.22 OfficeArtBStoreContainerFileBlock

Referenced by: [OfficeArtBStoreContainer](#), [OfficeArtBStoreDelay](#), [OfficeArtInlineSpContainer](#)

This record specifies a file block containing a record that specifies BLIP data. The contained record's [OfficeArtRecordHeader](#) specifies the type of record. The following table contains the possible record types.

Value	Meaning
0xF007	OfficeArtFBSE record
0xF018 – 0xF117	OfficeArtBlip record

2.2.23 OfficeArtBlip

Referenced by: [fillBlip_complex](#), [lineBottomFillBlip_complex](#), [lineFillBlip_complex](#), [lineLeftFillBlip_complex](#), [lineRightFillBlip_complex](#), [lineTopFillBlip_complex](#), [OfficeArtBStoreContainerFileBlock](#), [pib_complex](#), [pibPrint_complex](#)

This record specifies the BLIP file data. The record's [OfficeArtRecordHeader](#) specifies the type of BLIP file record contained. The following table contains the possible record types.

Value	Meaning
0xF01A	OfficeArtBlipEMF record
0xF01B	OfficeArtBlipWMF record
0xF01C	OfficeArtBlipPICT record
0xF01D	OfficeArtBlipJPEG record
0xF01E	OfficeArtBlipPNG record
0xF01F	OfficeArtBlipDIB record
0xF029	OfficeArtBlipTIFF record
0xF02A	OfficeArtBlipJPEG record

2.2.24 OfficeArtBlipEMF

Referenced by: [OfficeArtBlip](#)

This record specifies the BLIP file data for the [EMF](#) format.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
rh																															
...																															
rgbUid1 (16 bytes)																															
...																															
rgbUid2 (16 bytes, optional)																															

...	
metafileHeader (34 bytes)	
...	
...	BLIPFileData (variable)
...	

rh (8 bytes): An [OfficeArtRecordHeader](#) that specifies the header for this record. Sub-fields are further specified in the following table:

Field	Meaning
rh.recVer	MUST be 0x0.
rh.recInstance	A value of 0x3D4 specifies one UID. A value of 0x3D5 specifies two UIDs.
rh.recType	MUST be 0xF01A.
rh.recLen	An unsigned integer that specifies the number of bytes following the header. MUST be the size of BLIPFileData plus 50 bytes if recInstance is 0x3D4 or the size of BLIPFileData plus 66 bytes if recInstance is 0x3D5.

rgbUid1 (16 bytes): An MD4 digest, as specified in [\[RFC1320\]](#), that specifies the unique identifier of the uncompressed **BLIPFileData**.

rgbUid2 (16 bytes): An MD4 digest, as specified in [\[RFC1320\]](#), that specifies the unique identifier of the uncompressed **BLIPFileData**. If this value exists, then **rgbUid1** MUST be ignored.

metafileHeader (34 bytes): An [OfficeArtMetafileHeader](#) record that specifies how to process the metafile in **BLIPFileData**.

BLIPFileData (variable): Variable-length field that specifies EMF data.

2.2.25 OfficeArtBlipWMF

Referenced by: [OfficeArtBlip](#)

This record specifies the BLIP file data for the **WMF** format.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
rh																															
...																															
rgbUid1 (16 bytes)																															
...																															
rgbUid2 (16 bytes, optional)																															
...																															
metafileHeader (34 bytes)																															
...																															
...																BLIPFileData (variable)															
...																															

rh (8 bytes): An [OfficeArtRecordHeader](#) that specifies the header for this record. Sub-fields are further specified in the following table:

Field	Meaning
rh.recVer	MUST be 0x0.
rh.recInstance	A value of 0x216 specifies one UID. A value of 0x217 specifies two UIDs.
rh.recType	MUST be 0xF01B.
rh.recLen	An unsigned integer that specifies the number of bytes following the header. MUST be the size of BLIPFileData plus 50 bytes if recInstance is 0x216 or the size of BLIPFileData plus 66 bytes if recInstance is 0x217.

rgbUid1 (16 bytes): An MD4 digest, as specified in [\[RFC1320\]](#), that specifies the unique identifier of the uncompressed **BLIPFileData**.

rgbUid2 (16 bytes): An MD4 digest, as specified in [\[RFC1320\]](#), that specifies the unique identifier of the uncompressed **BLIPFileData**. If this value exists, then **rgbUid1** MUST be ignored.

metafileHeader (34 bytes): An [OfficeArtMetafileHeader](#) that specifies how to process the metafile in **BLIPFileData**.

BLIPFileData (variable): Variable-length field that specifies WMF data.

2.2.26 OfficeArtBlipPICT

Referenced by: [OfficeArtBlip](#)

This record specifies the BLIP file data for the [Macintosh PICT](#) format.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
rh																															
...																															
rgbUid1 (16 bytes)																															
...																															
rgbUid2 (16 bytes, optional)																															
...																															
metafileHeader (34 bytes)																															
...																															
...																BLIPFileData (variable)															

...

rh (8 bytes): An [OfficeArtRecordHeader](#) that specifies the header for this record. Sub-fields are further specified in the following table:

Field	Meaning
rh.recVer	MUST be 0x0.
rh.recInstance	A value of 0x542 specifies one UID. A value of 0x543 specifies two UIDs.
rh.recType	MUST be 0xF01C.
rh.recLen	An unsigned integer that specifies the number of bytes following the header. MUST be the size of BLIPFileData plus 50 bytes if recInstance is 0x542 or the size of BLIPFileData plus 66 bytes if recInstance is 0x543.

rgbUid1 (16 bytes): An MD4 digest, as specified in [\[RFC1320\]](#), that specifies the unique identifier of the uncompressed **BLIPFileData**.

rgbUid2 (16 bytes): An MD4 digest, as specified in [\[RFC1320\]](#), that specifies the unique identifier of the uncompressed **BLIPFileData**. If this value exists, then **rgbUid1** MUST be ignored.

metafileHeader (34 bytes): An [OfficeArtMetafileHeader](#) record that specifies how to process the metafile in **BLIPFileData**.

BLIPFileData (variable): Variable-length field that specifies Macintosh PICT data.

2.2.27 OfficeArtBlipJPEG

Referenced by: [OfficeArtBlip](#)

This record specifies the BLIP file data for the [JPEG](#) format.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
rh																															
...																															
rgbUid1 (16 bytes)																															
...																															
rgbUid2 (16 bytes, optional)																															

...	
tag	BLIPFileData (variable)
...	

rh (8 bytes): An [OfficeArtRecordHeader](#) that specifies the header for this record. Sub-fields are further specified in the following table:

Field	Meaning
rh.recVer	MUST be 0x0.
rh.recInstance	Specified in the following table.
rh.recType	MUST be 0xF01D.
rh.recLen	An unsigned integer that specifies the number of bytes following the header. MUST be the size of BLIPFileData plus 17 bytes if recInstance is 0x46A or 0x6E2 or the size of BLIPFileData plus 33 bytes if recInstance is 0x46B or 0x6E3.

Value	Meaning	Number of unique identifiers
0x46A	JPEG in RGB color space	1
0x46B	JPEG in RGB color space	2
0x6E2	JPEG in CMYK color space	1
0x6E3	JPEG in CMYK color space	2

rgbUid1 (16 bytes): An MD4 digest, as specified in [\[RFC1320\]](#), that specifies the unique identifier of the uncompressed **BLIPFileData**.

rgbUid2 (16 bytes): An MD4 digest, as specified in [\[RFC1320\]](#), that specifies the unique identifier of the uncompressed **BLIPFileData**. If this value is specified, then **rgbUid1** MUST be ignored.

tag (1 byte): An unsigned integer that specifies an application defined [internal resource tag](#). This value MUST be 0xFF for external files.

BLIPFileData (variable): Variable-length field that specifies JPEG data.

2.2.28 OfficeArtBlipPNG

Referenced by: [OfficeArtBlip](#)

This record specifies the BLIP file data for the [PNG](#) format.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
rh																																
...																																
rgbUid1 (16 bytes)																																
...																																
rgbUid2 (16 bytes, optional)																																
...																																
tag										BLIPFileData (variable)																						
...																																

rh (8 bytes): An [OfficeArtRecordHeader](#) that specifies the header for this record. Sub-fields are further specified in the following table:

Field	Meaning
rh.recVer	MUST be 0x0.
rh.recInstance	A value of 0x6E0 specifies one UID. A value of 0x6E1 specifies two UIDs.
rh.recType	MUST be 0xF01E.
rh.recLen	An unsigned integer that specifies the number of bytes following the header. MUST be the size of BLIPFileData plus 17 bytes if recInstance is 0x6E0 or the size of BLIPFileData plus 33 bytes if recInstance is 0x6E1.

rgbUid1 (16 bytes): An MD4 digest, as specified in [\[RFC1320\]](#), that specifies the unique identifier of the uncompressed **BLIPFileData**.

rgbUid2 (16 bytes): An MD4 digest, as specified in [\[RFC1320\]](#), that specifies the unique identifier of the uncompressed **BLIPFileData**. If this value exists, then **rgbUid1** MUST be ignored.

tag (1 byte): An unsigned integer that specifies an application defined internal resource tag. This value MUST be 0xFF for external files.

BLIPFileData (variable): Variable-length field that specifies PNG data.

2.2.29 OfficeArtBlipDIB

Referenced by: [OfficeArtBlip](#)

This record specifies the BLIP file data for the **DIB** format.

0	1	2	3	4	5	6	7	8	9	10	1	2	3	4	5	6	7	8	9	20	1	2	3	4	5	6	7	8	9	30	1
rh																															
...																															
rgbUid1 (16 bytes)																															
...																															
rgbUid2 (16 bytes, optional)																															
...																															
tag										BLIPFileData (variable)																					
...																															

rh (8 bytes): An [OfficeArtRecordHeader](#) that specifies the header for this record. Sub-fields are further specified in the following table:

Field	Meaning
rh.recVer	MUST be 0x0.
rh.recInstance	A value of 0x7A8 specifies one UID. A value of 0x7A9 specifies two UIDs.
rh.recType	MUST be 0xF01F.
rh.recLen	An unsigned integer that specifies the number of bytes following the header. MUST be the size of BLIPFileData plus 17 bytes if recInstance is 0x7A8 or the size of BLIPFileData plus 33 bytes if recInstance is 0x7A9.

rgbUid1 (16 bytes): An MD4 digest, as specified in [\[RFC1320\]](#), that specifies the unique identifier of the uncompressed **BLIPFileData**.

rgbUid2 (16 bytes): An MD4 digest, as specified in [\[RFC1320\]](#), that specifies the unique identifier of the uncompressed **BLIPFileData**. If this value exists, then **rgbUid1** MUST be ignored.

tag (1 byte): An unsigned integer that specifies an application defined internal resource tag. This value MUST be 0xFF for external files.

BLIPFileData (variable): Variable-length field that specifies DIB data.

2.2.30 OfficeArtBlipTIFF

Referenced by: [OfficeArtBlip](#)

This record specifies the BLIP file data for the **TIFF** format.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	1	2	3	4	5	6	7	8	9	21	22	23	24	25	26	27	28	29	30	31
rh																																								
...																																								
rgbUid1 (16 bytes)																																								
...																																								
rgbUid2 (16 bytes, optional)																																								
...																																								
tag										BLIPFileData (variable)																														
...																																								

rh (8 bytes): An [OfficeArtRecordHeader](#) that specifies the header for this record. Sub-fields are further specified in the following table:

Field	Meaning
rh.recVer	MUST be 0x0.
rh.recInstance	A value of 0x6E4 specifies one UID. A value of 0x6E5 specifies two UIDs.
rh.recType	MUST be 0xF020.

rh.recLen	An unsigned integer that specifies the number of bytes following the header. MUST be the size of BLIPFileData plus 17 bytes if recInstance is 0x6E4 or the size of BLIPFileData plus 33 bytes if recInstance is 0x6E5.
------------------	--

rgbUid1 (16 bytes): An MD4 digest, as specified in [RFC1320](#), that specifies the unique identifier of the uncompressed **BLIPFileData**.

rgbUid2 (16 bytes): An MD4 digest, as specified in [RFC1320](#), that specifies the unique identifier of the uncompressed **BLIPFileData**. If this value exists, then **rgbUid1** MUST be ignored.

tag (1 byte): An unsigned integer that specifies an application defined internal resource tag. This value MUST be 0xFF for external files.

BLIPFileData (variable): Variable-length field that specifies TIFF data.

2.2.31 OfficeArtMetafileHeader

Referenced by: [OfficeArtBlipEMF](#), [OfficeArtBlipPCT](#), [OfficeArtBlipWMF](#)

This record specifies how to process a metafile.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
cbSize																															
rcBounds (16 bytes)																															
...																															
ptSize																															
...																															
cbSave																															
compression								filter																							

cbSize (4 bytes): An unsigned integer that specifies the uncompressed size of the metafile in bytes.

rcBounds (16 bytes): A [RECT](#) structure that specifies the clipping region of the metafile.

ptSize (8 bytes): A [POINT](#) structure that specifies the size to render the metafile in [EMUs](#).

cbSave (4 bytes): An unsigned integer that specifies the compressed size of the metafile in bytes.

compression (1 byte): An unsigned integer that specifies the compression method used. A value of 0x00 specifies the DEFLATE algorithm, as specified in [\[RFC1950\]](#). A value of 0xFE specifies no compression.

filter (1 byte): An unsigned integer that MUST be 0xFE.

2.2.32 OfficeArtFBSE

Referenced by: [OfficeArtBStoreContainerFileBlock](#)

This record specifies a File BLIP Store Entry (FBSE) that contains information about the BLIP.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31										
rh																																									
...																																									
btWin32										btMacOS										rgbUid (16 bytes)																					
...																																									
...																tag																									
size																																									
cRef																																									
foDelay																																									
unused1										cbName										unused2										unused3											
nameData (variable)																																									
...																																									

rh (8 bytes): An [OfficeArtRecordHeader](#) that specifies the header for this record. Sub-fields are further specified in the following table:

Field	Meaning
rh.recVer	MUST be 0x2.
rh.recInstance	MUST be the BLIP type.
rh.recType	MUST be 0xF007.
rh.recLen	An unsigned integer that specifies the number of bytes following the header. MUST be the size of nameData in bytes

	plus 36.
--	----------

btWin32 (1 byte): An [MSOBLIPTYPE](#) enumeration value that specifies the BLIP type.

btMacOS (1 byte): An [MSOBLIPTYPE](#) enumeration value that specifies the BLIP type used on Macintosh platforms. This SHOULD [<4>](#) be the same as **btWin32**.

rgbUid (16 bytes): An MD4 digest, as specified in [\[RFC1320\]](#), that specifies the unique identifier of the pixel data in the BLIP.

tag (2 bytes): An unsigned integer that specifies an application defined internal resource tag. This value MUST be 0xFF for external files.

size (4 bytes): An unsigned integer that specifies the size of the BLIP in bytes in the stream.

cRef (4 bytes): An unsigned integer that specifies the number of references to the BLIP. A value of 0x00000000 specifies an empty slot in the [OfficeArtBStoreContainer](#).

foDelay (4 bytes): An [MSOFO](#) data type that specifies the file offset into the delay stream. A value of 0xFFFFFFFF specifies that the file is not in the delay stream and **cRef** MUST be 0x00000000.

unused1 (1 byte): Undefined and MUST be ignored.

cbName (1 byte): An unsigned integer that specifies the length of the **nameData** field in bytes including null terminator. This value MUST be even and less than or equal to 0xFE. If the value is 0x00, then **nameData** is not written.

unused2 (1 byte): Undefined and MUST be ignored.

unused3 (1 byte): Undefined and MUST be ignored.

nameData (variable): A Unicode null-terminated string that specifies the name of the BLIP.

2.2.33 OfficeArtFDGSL

This record specifies the selected shapes and the shape in focus contained in the drawing. This record SHOULD [<5>](#) be ignored.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
rh																															
...																															
csp																															
dgs																															
spidFocus																															
shapeList (variable)																															
...																															

rh (8 bytes): An [OfficeArtRecordHeader](#) that specifies the header for this record. Sub-fields are further specified in the following table:

Field	Meaning
rh.recVer	MUST be 0x0.
rh.recInstance	MUST be 0x000.
rh.recType	MUST be 0xF119.
rh.recLen	Undefined and MUST be ignored.

cpSP (4 bytes): Undefined and MUST be ignored.

dgsLk (4 bytes): An [MSODGSLK](#) enumeration value that specifies the selection mode.

spidFocus (4 bytes): An [MSOSPID](#) data type that specifies the identifier of the shape in focus.

shapeList (variable): An array of [MSOSPID](#) data type that specifies the identifiers of the selected shapes. The number of elements is specified by the following formula: (the size of the record data, as specified in [\[MS-XLS\] section 2.1.4](#), - 20) / 4.

2.2.34 OfficeArtFCalloutRule

Referenced by: [OfficeArtSolverContainerFileBlock](#)

This record specifies a callout rule. One callout rule MUST exist per callout shape.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
rh																															
...																															
ruid																															
spid																															

rh (8 bytes): An [OfficeArtRecordHeader](#) that specifies the header for this record. Sub-fields are further specified in the following table:

Field	Meaning
rh.recVer	MUST be 0x0.
rh.recInstance	MUST be 0x000.
rh.recType	MUST be 0xF017.
rh.recLen	MUST be 0x00000008.

ruid (4 bytes): An unsigned integer that specifies the identifier of this callout rule.

spid (4 bytes): An [MSOSPID](#) that specifies the identifier of the callout shape.

2.2.35 OfficeArtFArcRule

Referenced by: [OfficeArtSolverContainerFileBlock](#)

This record specifies an arc rule. Each arc shape MUST correspond to a unique arc rule. This record MAY [<6>](#) be ignored.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
rh																															
...																															
ruid																															
spid																															

rh (8 bytes): An [OfficeArtRecordHeader](#) that specifies the header for this record. Sub-fields are further specified in the following table:

Field	Meaning
rh.recVer	MUST be 0x0.
rh.recInstance	MUST be 0x000.
rh.recType	MUST be 0xF014.
rh.recLen	MUST be 0x00000008.

ruid (4 bytes): An unsigned integer that specifies the identifier of this arc rule.

spid (4 bytes): An [MSOSPID](#) that specifies the identifier of the arc shape.

2.2.36 OfficeArtFConnectorRule

Referenced by: [OfficeArtSolverContainerFileBlock](#)

This record specifies the connection between two shapes via a [connector](#) shape. This record MAY [<7>](#) be ignored.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
rh																															
...																															
ruid																															
spidA																															
spidB																															
spidC																															
cptiA																															

cptiB

rh (8 bytes): An [OfficeArtRecordHeader](#) that specifies the header for this record. Sub-fields are further specified in the following table:

Field	Meaning
rh.recVer	MUST be 0x1.
rh.recInstance	MUST be 0x000.
rh.recType	MUST be 0xF012.
rh.recLen	MUST be 0x00000018.

ruid (4 bytes): An unsigned integer that specifies the identifier of this rule.

spidA (4 bytes): An [MSOSPID](#) that specifies the identifier of the shape where the connector shape starts.

spidB (4 bytes): An [MSOSPID](#) that specifies the identifier of the shape where the connector shape ends.

spidC (4 bytes): An [MSOSPID](#) that specifies the identifier of the connector shape.

cptiA (4 bytes): An unsigned integer that specifies the [connection site](#) index of the shape where the connector shape starts. If the shape is available, the value MUST be within its range of valid connection site indexes. Otherwise, this value is ignored.

cptiB (4 bytes): An unsigned integer that specifies the connection site index of the shape where the connector shape ends. If the shape is available, the value MUST be within its range of valid connection site indexes. Otherwise, this value is ignored.

2.2.37 OfficeArtFP SPL

Referenced by: [OfficeArtSpContainer](#)

This record specifies the former hierarchical position of the containing object that is either a shape or a group of shapes. This record MUST only be present if the containing [OfficeArtSpContainer's OfficeArtFSP](#) has a value of 0x1 for **fDeleted** and a value of 0x0 for **fChild**. This record's containing object was formerly subsequent or antecedent to the object referenced by **spid**, as a member of the container directly containing that object. This record MAY [<8>](#) be used in some documents. If **spid** is zero or specifies the containing shape, this record MUST be ignored.

											1											2												3	
0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	0	1
rh																																			
...																																			
spid																												A	B						

rh (8 bytes): An [OfficeArtRecordHeader](#) that specifies the header for this record. Sub-fields are further specified in the following table:

Field	Meaning
rh.recVer	MUST be 0x0.
rh.recInstance	MUST be 0x000.
rh.recType	MUST be 0xF11D.
rh.recLen	MUST be 0x00000004.

spid (30 bits): An [MSOSPID](#) that specifies another shape or a group of shapes contained in the same [OfficeArtDgContainer](#). This other object contains an [OfficeArtFSP](#) with an equivalently valued **spid** field.

A - reserved1 (1 bit): MUST be zero, and MUST be ignored.

B - fLast (1 bit): A bit that specifies the ordering of this record's containing object and the object specified by **spid**.

Value	Meaning
0	This record's containing object was formerly antecedent to the object referenced by spid , in the container directly containing that object.
1	This record's containing object was formerly subsequent to the object referenced by spid , in the container directly containing that object.

2.2.38 OfficeArtFSPGR

Referenced by: [OfficeArtSpContainer](#)

This record specifies the coordinate system of the group shape, which the anchors of the child shape are expressed in. This record is only present in group shapes.

0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1
rh																															
...																															
xLeft																															
yTop																															
xRight																															
yBottom																															

rh (8 bytes): An [OfficeArtRecordHeader](#) that specifies the header for this record. Sub-fields are further specified in the following table:

Field	Meaning
rh.recVer	MUST be 0x1.
rh.recInstance	MUST be 0x000.

rh.recType	MUST be 0xF009.
rh.recLen	MUST be 0x00000010.

xLeft (4 bytes): A signed integer that specifies the left boundary of the group's coordinate system.

yTop (4 bytes): A signed integer that specifies the top boundary of the group's coordinate system.

xRight (4 bytes): A signed integer that specifies the right boundary of the group's coordinate system.

yBottom (4 bytes): A signed integer that specifies the bottom boundary of the group's coordinate system.

2.2.39 OfficeArtChildAnchor

Referenced by: [OfficeArtSpContainer](#)

This record specifies four signed integers that specify the anchor for the shape that contains this record. For this record to exist, the containing shape MUST be a member of a group of shapes. These values specify the offset from the origin of the coordinate system specified by the [OfficeArtFSPGR](#) contained in the same [OfficeArtSpgrContainer](#) that contains this record. These values are in units of the coordinate system specified by the same [OfficeArtFSPGR](#).

0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1
rh																															
...																															
xLeft																															
yTop																															
xRight																															
yBottom																															

rh (8 bytes): An [OfficeArtRecordHeader](#) that specifies the header for this record. Sub-fields are further specified in the following table:

Field	Meaning
rh.recVer	MUST be 0x0.
rh.recInstance	MUST be 0x000.
rh.recType	MUST be 0xF00F.
rh.recLen	MUST be 0x00000010.

xLeft (4 bytes): A signed integer that specifies the left offset for the shape that contains this record.

yTop (4 bytes): A signed integer that specifies the top offset for the shape that contains this record.

xRight (4 bytes): A signed integer that specifies the right offset for the shape that contains this record.

yBottom (4 bytes): A signed integer that specifies the bottom offset for the shape that contains this record.

2.2.40 OfficeArtFSP

Referenced by: [OfficeArtSpContainer](#)

This record specifies an instance of a shape. The record header contains the shape type, and the record itself contains the shape identifier and a set of bits that further define the shape.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
rh																															
...																															
spid																															
A	B	C	D	E	F	G	H	I	J	K	L	unused1																			

rh (8 bytes): An [OfficeArtRecordHeader](#) that specifies the header for this record. Sub-fields are further specified in the following table:

Field	Meaning
rh.recVer	MUST be 0x2.
rh.recInstance	A signed value that specifies the shape type. MUST be an enumeration value of type MSOSPT .
rh.recType	MUST be 0xF00A.
rh.recLen	MUST be 0x00000008.

spid (4 bytes): An [MSOSPID](#) that specifies the identifier of this shape.

A - fGroup (1 bit): A bit that specifies whether this shape is a group shape.

B - fChild (1 bit): A bit that specifies whether this shape is a child shape.

C - fPatriarch (1 bit): A bit that specifies whether this shape is the topmost group shape. Each drawing contains one topmost group shape.

D - fDeleted (1 bit): A bit that specifies whether this shape has been deleted.

E - fOleShape (1 bit): A bit that specifies whether this shape is an [OLE object](#).

F - fHaveMaster (1 bit): A bit that specifies whether this shape has a valid [master](#) in the [hspMaster](#) property.

G - fFlipH (1 bit): A bit that specifies whether this shape is flipped horizontally.

H - fFlipV (1 bit): A bit that specifies whether this shape is flipped vertically.

I - fConnector (1 bit): A bit that specifies whether this shape is a connector shape.

J - fHaveAnchor (1 bit): A bit that specifies whether this shape has an anchor.

K - fBackground (1 bit): A bit that specifies whether this shape is a [background shape](#).

L - fHaveSpt (1 bit): A bit that specifies whether this shape has a shape type property.

unused1 (20 bits): Undefined and MUST be ignored.

2.2.41 OfficeArtFRITContainer

Referenced by: [OfficeArtDgContainer](#)

This record specifies a container for the table of group identifiers for regrouping ungrouped shapes.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
rh																															
...																															
rgfrit (variable)																															
...																															

rh (8 bytes): An [OfficeArtRecordHeader](#) that specifies the header for this record. Sub-fields are further specified in the following table:

Field	Meaning
rh.recVer	MUST be 0x0.
rh.recInstance	An unsigned integer that specifies the number of contained OfficeArtFRIT records.
rh.recType	MUST be 0xF118.
rh.recLen	An unsigned integer that specifies the number of bytes following the header which contain OfficeArtFRIT records. MUST be the size of rgfrit in bytes.

rgfrit (variable): An array of [OfficeArtFRIT](#) records that specifies the table of group identifiers. The size of the array MUST be equal to the value of **rh.recInstance**.

2.2.42 OfficeArtFRIT

Referenced by: [OfficeArtFRITContainer](#)

This record specifies the last two group identifiers to facilitate regrouping ungrouped shapes.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
fridNew																fridOld															

fridNew (2 bytes): An [FRID](#) data type that specifies the last group identifier before ungrouping. The value of **fridNew** MUST be greater than the value of **fridOld**.

fridOld (2 bytes): An [FRID](#) data type that specifies the second to last group identifier before ungrouping. This value MUST be 0x0000 if the second to last group does not exist.

2.2.43 OfficeArtColorMRUContainer

Referenced by: [OfficeArtDggContainer](#)

This record specifies the most recently used custom colors.

0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1
rh																															
...																															
rgmsocr (variable)																															
...																															

rh (8 bytes): An [OfficeArtRecordHeader](#) that specifies the header for this record. Sub-fields are further specified in the following table:

Field	Meaning
rh.recVer	MUST be 0x0.
rh.recInstance	An unsigned integer that specifies the number of contained MSOCR records.
rh.recType	MUST be 0xF11A.
rh.recLen	An unsigned integer that specifies the number of bytes following the header which contain MSOCR records. MUST be the size of rgmsocr in bytes.

rgmsocr (variable): An array of [MSOCR](#) that specifies the most recently used custom colors.

2.2.44 MSOCR

Referenced by: [OfficeArtColorMRUContainer](#), [OfficeArtSplitMenuColorContainer](#)

This record specifies the RGB color or the [scheme color](#) index.

										1										2															3	
0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1					
red								green								blue								A		B	unused2									

red (1 byte): An unsigned byte that specifies the intensity of the red color channel. A value of 0x00 has no red color. A value of 0xFF has full red intensity.

green (1 byte): An unsigned byte that specifies the intensity of the green color channel. A value of 0x00 has no green color. A value of 0xFF has full green intensity.

blue (1 byte): An unsigned byte that specifies the intensity of the blue color channel. A value of 0x00 has no blue color. A value of 0xFF has full blue intensity.

A - unused1 (3 bits): Undefined and MUST be ignored.

B - fSchemeIndex (1 bit): A bit that specifies whether the current color scheme will be used to determine the color. A value of 0x1 specifies that **red** is an index into the current scheme color table. If this value is 0x1, **green** and **blue** MUST be 0x00.

unused2 (4 bits): Undefined and MUST be ignored.

2.2.45 OfficeArtSplitMenuColorContainer

Referenced by: [OfficeArtDggContainer](#)

This record specifies a container for the colors most recently used to format shapes.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
rh																															
...																															
smca (variable)																															
...																															

rh (8 bytes): An [OfficeArtRecordHeader](#) that specifies the header for this record. Sub-fields are further specified in the following table:

Field	Meaning
rh.recVer	MUST be 0x0.
rh.recInstance	MUST be 0x004.
rh.recType	MUST be 0xF11E.
rh.recLen	MUST be 0x00000010.

smca (variable): An array of [MSOCR](#) records that specifies the most recently used colors to format shapes. The number of elements in the array MUST be 4. The elements in order are: fill color, line color, shadow color and 3D color.

2.2.46 OfficeArtIDCL

Referenced by: [OfficeArtFDGGBlock](#)

This record specifies a file identifier cluster. A file identifier cluster is used to group shape identifiers within a drawing.

0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1
dgid																															
cspidCur																															

dgid (4 bytes): An [MSODGID](#) value that specifies the drawing identifier which owns this identifier cluster.

cspidCur (4 bytes): An unsigned integer. If the value is less than 0x00000400, **cspidCur** specifies the largest shape identifier currently assigned in this cluster; otherwise **cspidCur** specifies no shapes can be added to the drawing.

2.2.47 OfficeArtFDGG

Referenced by: [OfficeArtFDGGBlock](#)

This record specifies document-wide information about all the drawings saved in the file.

0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1
spidMax																															
cidcl																															
cspSaved																															
cdgSaved																															

spidMax (4 bytes): An [MSOSPID](#) that specifies the current maximum shape identifier used in any drawing. This value MUST be less than 0x03FFD7FF.

cidcl (4 bytes): An unsigned integer that specifies the number of [OfficeArtIDCLs](#). This value MUST be less than 0x0FFFFFFF.

cspSaved (4 bytes): An unsigned integer that specifies the total number of shapes saved in all drawings.

cdgSaved (4 bytes): An unsigned integer that specifies the total number of drawings saved in the file.

2.2.48 OfficeArtFDGGBlock

Referenced by: [OfficeArtDggContainer](#)

This record specifies document-wide information about all the drawings saved in the file.

0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1
rh																															
...																															
head (16 bytes)																															
...																															
Rgidcl (variable)																															
...																															

rh (8 bytes): An [OfficeArtRecordHeader](#) that specifies the header for this record. Sub-fields are further specified in the following table:

Field	Meaning
rh.recVer	MUST be 0x0.
rh.recInstance	MUST be 0x000.
rh.recType	MUST be 0xF006.
rh.recLen	MUST be $0x00000010 + ((\text{head.cidcl} - 1) * 0x00000008)$

head (16 bytes): An [OfficeArtFDGG](#) that specifies document-wide information.

Rgidcl (variable): An array of [OfficeArtIDCL](#) that specifies file identifier clusters used in the drawing. The number of elements in the array is specified by **head.cidcl**.

2.2.49 OfficeArtFDG

Referenced by: [OfficeArtDgContainer](#)

This record specifies the shape count, drawing identifier, and shape identifier of the last shape in a drawing.

0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1
rh																															
...																															
csp																															

spidCur

rh (8 bytes): An [OfficeArtRecordHeader](#) that specifies the header for this record. Sub-fields are further specified in the following table:

Field	Meaning
rh.recVer	MUST be 0x0.
rh.recInstance	Specifies the identifier of this drawing. MUST be less than or equal to 0xFFE.
rh.recType	MUST be 0xF008.
rh.recLen	MUST be 0x00000008.

csp (4 bytes): An unsigned integer that specifies the number of shapes in this drawing.

spidCur (4 bytes): An [MSOSPID](#) that specifies the shape identifier of the last shape in this drawing.

2.2.50 MSOSHADETYPE

Referenced by: [fillShadeType](#)

This record specifies the interpolation of colors between the color/position values stated for the fill. Values can be combined to produce compounded effects.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
A	B	C	D	E	unused1																										

A - msoshadeNone (1 bit): A bit that specifies whether no color correction will be done after interpolation.

B - msoshadeGamma (1 bit): A bit that specifies whether [gamma correction](#) will be applied after interpolation.

C - msoshadeSigma (1 bit): A bit that specifies whether [sigma transfer function](#) will be applied after interpolation.

D - msoshadeBand (1 bit): A bit that specifies whether a flat band will be added at the start of the interpolation.

E - msoshadeOneColor (1 bit): A bit that specifies whether only one color will be used for the fill color.

unused1 (27 bits): Undefined and MUST be ignored.

2.2.51 IMsoArray

Referenced by: [dgmConstrainBounds_complex](#), [fillShadeColors_complex](#), [lineBottomDashStyle_complex](#), [lineDashStyle_complex](#), [lineLeftDashStyle_complex](#), [lineRightDashStyle_complex](#), [lineTopDashStyle_complex](#), [pAdjustHandles_complex](#), [pConnectionSites_complex](#), [pConnectionSitesDir_complex](#), [pInscribe_complex](#), [pRelationTbl_complex](#), [pSegmentInfo_complex](#), [pVertices_complex](#), [pWrapPolygonVertices_complex](#), [tableRowProperties_complex](#)

This record specifies an array that contains elements of a specific size.

											1									2												3	
0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1		
nElems																nElemsAlloc																	
cbElem																data (variable)																	
...																																	

nElems (2 bytes): An unsigned integer that specifies the number of elements contained in this record.

nElemsAlloc (2 bytes): An unsigned integer that specifies the maximum number of elements this record can contain. This value **MUST** be greater than or equal to **nElems**.

cbElem (2 bytes): An unsigned integer that specifies the size in bytes of each element in **data**. If this value is 0xFFFF then this record is an array of truncated 8 byte elements. Only the 4 low-order bytes are recorded. Each element's 4 high-order bytes equal 0x00000000 and each element's 4 low-order bytes are contained in **data**.

data (variable): An array that contains **nElems** elements, each of which is **cbElem** bytes in size. The total size of **data** is (**cbElem** * **nElems**) bytes. If **cbElem** is 0xFFFF then each element is 4 bytes in size. The total size of **data** is (4 * **nElems**) bytes.

2.2.52 IMsoInkData

Referenced by: [pInkData_complex](#)

This record specifies the **ink** data for a shape.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
CLSID_InkDisp (16 bytes)																															
...																															
cbBlob																															
data (variable)																															
...																															

CLSID_InkDisp (16 bytes): MUST be {937C1A34-151D-4610-9CA6-A8CC9BDB5D83}.

cbBlob (4 bytes): An unsigned integer that specifies the number of bytes contained in **data**.

data (variable): Variable-length field that specifies serialized ink data, as specified in [\[MC-ISF\]](#).

2.2.53 MSOPATHINFO

This record specifies how a series of [POINT](#) values are to be interpreted to construct a path.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
type			segments																												

type (3 bits): An [MSOPATHTYPE](#) enumeration value that specifies how the path is to be drawn. If this field contains an escape value this record is treated as an [MSOPATHESCAPEINFO](#) record.

segments (13 bits): An unsigned integer that specifies the number of segments to process.

2.2.54 MSOPATHESCAPEINFO

This record specifies how a path is constructed. This record is used in conjunction with [MSOPATHINFO](#) and an array of [POINT](#) data to build a path.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
type			escape					segments																							

type (3 bits): An [MSOPATHTYPE](#) enumeration value that specifies how the path is to be drawn. If this field does not contain an escape value this record is treated as an [MSOPATHINFO](#) record.

escape (5 bits): An [MSOPATHESCAPE](#) enumeration value that specifies how path information is interpreted and segments are joined.

segments (8 bits): An unsigned integer that specifies the number of segments to process.

2.2.55 POINT

Referenced by: [OfficeArtMetafileHeader](#)

This record specifies a two dimensional point.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
x																															
y																															

x (4 bytes): A signed integer that specifies the x coordinate of this point. The coordinate system used for this value is dependent on the scenario in which it is used.

y (4 bytes): A signed integer that specifies the y coordinate of this point. The coordinate system used for this value is dependent on the scenario in which it is used.

2.2.56 RECT

Referenced by: [OfficeArtMetafileHeader](#)

This record specifies a two dimensional rectangle.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
left																															
top																															
right																															
bottom																															

left (4 bytes): A signed integer that specifies the x coordinate of the top left point of this rectangle. The coordinate system used for this value is dependent on the scenario in which it is used.

top (4 bytes): A signed integer that specifies the y coordinate of the top left point of this rectangle. The coordinate system used for this value is dependent on the scenario in which it is used.

right (4 bytes): A signed integer that specifies the x coordinate of the bottom right point of this rectangle. The coordinate system used for this value is dependent on the scenario in which it is used.

bottom (4 bytes): A signed integer that specifies the y coordinate of the bottom right point of this rectangle. The coordinate system used for this value is dependent on the scenario in which it is used.

2.2.57 ADJH

This record specifies a single [adjust handle](#) that a user can use to manipulate the geometry of a shape.

											1									2													3	
0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1			
A	B	C	D	E	F	G	H	I	J	K	L	M	N	unused1																				
apX																																		
apY																																		
xRange																																		
yRange																																		
xMin																																		
xMax																																		

yMin
yMax

A - fahInverseX (1 bit): A bit that specifies whether this adjust handle's x coordinate is inverted according to the following formula:

$$x_{\text{new}} = \text{right} - x_{\text{old}}$$

All values are specified in [geometry space](#) and "right" means the right value of the bounding rectangle of the geometry space as specified by this shape's [geoRight](#) property.

B - fahInverseY (1 bit): A bit that specifies whether this adjust handle's y coordinate is inverted according to the following formula:

$$y_{\text{new}} = \text{bottom} - y_{\text{old}}$$

All values are specified in geometry space and "bottom" means the bottom value of the bounding rectangle of the geometry space as specified by this shape's [geoBottom](#) property.

C - fahSwitchPosition (1 bit): A bit that specifies whether this adjust handle's x and y coordinates are swapped if the shape is taller than it is wide.

D - fahPolar (1 bit): A bit that specifies whether this adjust handle's coordinates are polar coordinate values rather than Cartesian coordinate values.

Value	Meaning
0x0	The adjust handle's coordinates are Cartesian coordinate values.
0x1	The adjust handle's x coordinate specifies the radius in geometry space units; its y coordinate specifies the angle in degrees as a FixedPoint, as specified in [MS-OSHARED] section 2.2.1.6 ; and (xRange,yRange) specifies the origin of the polar coordinate system in geometry space. fahMap MUST NOT be 0x1.

E - fahMap (1 bit): A bit that specifies whether the position of the adjust handle is mapped from the entire range of the geometry space of this shape to the range specified by this record's **xRange** and **yRange**. If this value is 0x1, then **fahPolar** MUST NOT be 0x1.

F - fahPin (1 bit): A bit that specifies whether the position of this adjust handle is constrained to within the rectangle specified by this record's **xMin**, **xMax**, **yMin**, and **yMax**.

G - fahUnused (1 bit): Undefined and MUST be ignored.

H - fahxMin (1 bit): A bit that specifies whether this record's **xMin** is interpreted as an index into this shape's [pGuides_complex](#) property rather than a constant value.

I - fahxMax (1 bit): A bit that specifies whether this record's **xMax** is interpreted as an index into this shape's [pGuides_complex](#) property rather than a constant value.

J - fahyMin (1 bit): A bit that specifies whether this record's **yMin** is interpreted as an index into this shape's [pGuides_complex](#) property rather than a constant value.

K - fahyMax (1 bit): A bit that specifies whether this record's **yMax** is interpreted as an index into this shape's [pGuides_complex](#) property rather than a constant value.

L - fahxRange (1 bit): A bit that specifies whether this record's **xRange** is interpreted as an index into this shape's [pGuides_complex](#) property rather than a constant value.

M - fahyRange (1 bit): A bit that specifies whether this record's **yRange** is interpreted as an index into this shape's [pGuides_complex](#) property rather than a constant value.

N - fahPolarPin (1 bit): A bit that specifies whether the x coordinate of this adjust handle is constrained to within the range specified by this record's **xMin** and **xMax** inclusive.

unused1 (18 bits): Undefined and **MUST** be ignored.

apX (4 bytes): An unsigned integer that specifies the positioning of the x coordinate of this adjust handle. The allowed values are specified in the following table:

Value(s)	Positioning
0x00000000	Position the x coordinate of this adjust handle on the left perimeter of this shape.
0x00000001	Position the x coordinate of this adjust handle on the right perimeter of this shape.
0x00000002	Position the x coordinate of this adjust handle in the horizontal center of this shape.
[0x00000003, 0x00000082]	Position the x coordinate of this adjust handle according to an entry in this shape's pGuides_complex array. The zero-based index into the pGuides_complex array is derived by subtracting 0x00000003 from the value.
0x00000100	Position the x coordinate of this adjust handle according to the value of this shape's adjustValue property.
0x00000101	Position the x coordinate of this adjust handle according to the value of this shape's adjust2Value property.
0x00000102	Position the x coordinate of this adjust handle according to the value of this shape's adjust3Value property.
0x00000103	Position the x coordinate of this adjust handle according to the value of this shape's adjust4Value property.
0x00000104	Position the x coordinate of this adjust handle according to the value of this shape's adjust5Value property.
0x00000105	Position the x coordinate of this adjust handle according to the value of this shape's adjust6Value property.
0x00000106	Position the x coordinate of this adjust handle according to the value of this shape's adjust7Value property.
0x00000107	Position the x coordinate of this adjust handle according to the value of this shape's adjust8Value property.

apY (4 bytes): An unsigned integer that specifies the positioning of the y coordinate of this adjust handle. The allowed values are specified in the following table:

Value(s)	Positioning
0x00000000	Position the y coordinate of this adjust handle on the top perimeter of this shape.
0x00000001	Position the y coordinate of this adjust handle on the bottom perimeter of this shape.
0x00000002	Position the y coordinate of this adjust handle in the vertical center of this shape.
[0x00000003, 0x00000082]	Position the y coordinate of this adjust handle according to an entry

	in this shape's pGuides_complex array. The zero-based index into the pGuides_complex array is derived by subtracting 0x00000003 from the value.
0x00000100	Position the y coordinate of this adjust handle according to the value of this shape's adjustValue property.
0x00000101	Position the y coordinate of this adjust handle according to the value of this shape's adjust2Value property.
0x00000102	Position the y coordinate of this adjust handle according to the value of this shape's adjust3Value property.
0x00000103	Position the y coordinate of this adjust handle according to the value of this shape's adjust4Value property.
0x00000104	Position the y coordinate of this adjust handle according to the value of this shape's adjust5Value property.
0x00000105	Position the y coordinate of this adjust handle according to the value of this shape's adjust6Value property.
0x00000106	Position the y coordinate of this adjust handle according to the value of this shape's adjust7Value property.
0x00000107	Position the y coordinate of this adjust handle according to the value of this shape's adjust8Value property.

xRange (4 bytes): A signed integer that specifies the x coordinate of a value used to control the position of this adjust handle. If **fahxRange** is 0x0 then the value is used directly. If **fahxRange** is 0x1 then 0x00000003 is subtracted from this value and then it is used as a zero-based index into this shape's [pGuides_complex](#) property to calculate the actual value.

yRange (4 bytes): A signed integer that specifies the y coordinate of a value used to control the position of this adjust handle. If **fahyRange** is 0x0 then the value is used directly. If **fahyRange** is 0x1 then 0x00000003 is subtracted from this value and then that is used as a zero-based index into this shape's [pGuides_complex](#) property to calculate the actual value.

xMin (4 bytes): A signed integer that specifies the x coordinate of a value used to control the position of this adjust handle. If **fahxMin** is 0x0 then the value is used directly. If **fahxMin** is 0x1 then 0x00000003 is subtracted from this value and then that is used as a zero-based index into this shape's [pGuides_complex](#) property to calculate the actual value.

xMax (4 bytes): A signed integer that specifies the x coordinate of a value used to control the position of this adjust handle. If **fahxMax** is 0x0 then the value is used directly. If **fahxMax** is 0x1 then 0x00000003 is subtracted from this value and then that is used as a zero-based index into this shape's [pGuides_complex](#) property to calculate the actual value.

yMin (4 bytes): A signed integer that specifies the y coordinate of a value used to control the position of this adjust handle. If **fahyMin** is 0x0 then the value is used directly. If **fahyMin** is 0x1 then 0x00000003 is subtracted from this value and then that is used as a zero-based index into this shape's [pGuides_complex](#) property to calculate the actual value.

yMax (4 bytes): A signed integer that specifies the y coordinate of a value used to control the position of this adjust handle. If **fahyMax** is 0x0 then the value is used directly. If **fahyMax** is 0x1 then 0x00000003 is subtracted from this value and then that is used as a zero-based index into this shape's [pGuides_complex](#) property to calculate the actual value.

2.2.58 SG

Referenced by: [pGuides_complex](#)

This record specifies a formula used to calculate a value for use in this shape's [pGuides_complex](#) property. Formulas are used to calculate values involved in the geometry of this shape so that a user may adjust some of those values and the entire shape's geometry can adjust appropriately as a result.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
sgf													A	B	C	param1															
param2															param3																

sgf (13 bits): These bits specify the type of formula to use to calculate the value for this guide. The formulas specify a combination of **param1**, **param2**, and **param3**, though not all formulas use all of the parameters.

Formula Name	Value	Calculation
sgfSum	0x0000	Addition and subtraction. param1 + param2 - param3
sgfProduct	0x0001	Multiplication and division. (param1*param2)/param3
sgfMid	0x0002	Simple average. (param1+param2)/2
sgfAbsolute	0x0003	Absolute value. abs(param1)
sgfMin	0x0004	The lesser of two values. min(param1, param2)
sgfMax	0x0005	The greater of two values. max(param1, param2)
sgfIf	0x0006	Conditional selection. param1 > 0 ? param2 : param3
sgfMod	0x0007	Modulus. sqrt(param1^2 + param2^2 + param3^2)
sgfATan2	0x0008	Trigonometric arc tangent of a quotient. Result is a FixedPoint, as specified in [MS-OSHARED] section 2.2.1.6 , of the angles in degrees. atan2(param2,param1)
sgfSin	0x0009	Sine. param2 is a FixedPoint, as specified in [MS-OSHARED] section 2.2.1.6 , of angles in degrees. param1*sin(param2)
sgfCos	0x000A	Cosine. param2 is a FixedPoint, as specified in [MS-OSHARED] section 2.2.1.6 , of angles in degrees.

		param1*cos(param2)
sgfCosATan2	0x000B	Cosine and atan2 in one formula. param1*cos(atan2(param3,param2))
sgfSinATan2	0x000C	Sine and atan2 in one formula. param1*sin(atan2(param3,param2))
sgfSqrt	0x000D	Square root. sqrt(param1)
sgfSumAngle	0x000E	Add an angle in degrees as a FixedPoint, as specified in [MS-OSHARED] section 2.2.1.6 , to two other angles specified in degrees. param2 and param3 are scaled by 2 ¹⁶ . param1 + param2*2¹⁶ + param3*2¹⁶
sgfEllipse	0x000F	The eccentricity formula for an ellipse, where param1 is the length of the semiminor axis and param2 is the length of the semimajor axis. param3*sqrt(1-(param1/param2)^2)
sgfTan	0x0010	Tangent. param2 is a FixedPoint, as specified in [MS-OSHARED] section 2.2.1.6 , of angles in degrees. param1*tan(param2)

A - fCalculatedParam1 (1 bit): A bit that specifies whether this record's **param1** value is a constant or is calculated from another property or formula.

Value	Meaning
0	param1 is a constant.
1	param1 is calculated from another property.

B - fCalculatedParam2 (1 bit): A bit that specifies whether this record's **param2** value is a constant or is calculated from another property or formula.

Value	Meaning
0	param2 is a constant.
1	param2 is calculated from another property.

C - fCalculatedParam3 (1 bit): A bit that specifies whether this record's **param3** value is a constant or is calculated from another property or formula.

Value	Meaning
0	param3 is a constant.
1	param3 is calculated from another property.

param1 (16 bits): A value used in calculating the result of this formula. If this record's **fCalculatedParam1** is 0x0, then the value is an unsigned integer constant. If

fCalculatedParam1 is 0x1, then the value specifies a property or formula to use when calculating its value. The allowed values are specified as follows:

Value(s)	Calculation
0x0140	X coordinate of the center of the geometry space of this shape.
0x0141	Y coordinate of the center of the geometry space of this shape.
0x0142	Width of the geometry space of this shape.
0x0143	Height of the geometry space of this shape.
0x0147	The value of this shape's adjustValue property.
0x0148	The value of this shape's adjust2Value property.
0x0149	The value of this shape's adjust3Value property.
0x014A	The value of this shape's adjust4Value property.
0x014B	The value of this shape's adjust5Value property.
0x014C	The value of this shape's adjust6Value property.
0x014D	The value of this shape's adjust7Value property.
0x014E	The value of this shape's adjust8Value property.
0x0153	The value of this shape's xLimo property.
0x0154	The value of this shape's yLimo property.
0x01FC	The value of the fLine bit from this shape's Line Style Boolean Properties .
[0x0400, 0x047F]	The value calculated from another SG entry in this shape's pGuides_complex array. The index of the guide is specified by taking the value and subtracting 0x0400. The index MUST be less than the size of the pGuides_complex array, and it MUST be less than the index of this record in that same array.
0x04F7	The width of a line in this shape in pixels.
0x04F8	The width of this shape in pixels.
0x04F9	The height of this shape in pixels.
0x04FC	The width of this shape in English Metric Units.
0x04FD	The height of this shape in English Metric Units.
0x04FE	The width of this shape in English Metric Units divided by 2.
0x04FF	The height of this shape in English Metric Units divided by 2.

param2 (16 bits): A value used in calculating the result of this formula. If this record's **fCalculatedParam2** is 0, then the value is an unsigned integer constant. If **fCalculatedParam2** is 1, then the value specifies a property or formula according to the table documented previously in **param1**.

param3 (16 bits): A value used in calculating the result of this formula. If this record's **fCalculatedParam3** is 0, then the value is an unsigned integer constant. If **fCalculatedParam3** is 1, then the value specifies a property or formula according to the table documented previously in **param1**.

2.2.59 TABLEFLAGS

This record specifies a collection of bits for a group of shapes that specifies a table.

0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1
A	B	C	unused1																												

A - fIsTable (1 bit): A bit that specifies whether this group of shapes specifies a table.

B - fIsTablePlaceholder (1 bit): A bit that specifies whether this table is a [placeholder](#). This bit SHOULD be ignored if the **fIsTable** bit is 0x0.

C - fIsTableRTL (1 bit): A bit that specifies whether the text in this table is [right-to-left](#) text. This bit SHOULD be ignored if the **fIsTable** bit is 0x0.

unused1 (29 bits): Undefined and MUST be ignored.

2.2.60 IHlink

Referenced by: [pihShape_complex](#)

This record specifies a [hyperlink](#).

0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1
CLSID_StdHlink (16 bytes)																															
...																															
hyperlink (variable)																															
...																															

CLSID_StdHlink (16 bytes): MUST be {79eac9d0-baf9-11ce-8c82-00aa004ba90b}.

hyperlink (variable): Variable-length field that specifies a serialized hyperlink object, as specified in [\[MS-OSHARED\] section 2.3.7.1](#).

2.3 Properties

2.3.1 OfficeArtRGFOPT

Referenced by: [OfficeArtFOPT](#), [OfficeArtSecondaryFOPT](#), [OfficeArtTertiaryFOPT](#)

This record specifies a table of properties that contains an array of fixed size property table entries followed by a variable-length field of complex data.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
rgfoppte (variable)																															
...																															
complexData (variable)																															
...																															

rgfoppte (variable): An array of [OfficeArtFOPTE](#) records that specifies property table entries.

complexData (variable): Complex data for properties with the [fComplex](#) bit set to 0x1. The complex data is stored immediately following **rgfoppte**.

2.3.2 Shape

This property set specifies attributes which apply to a shape but not a group of shapes.

2.3.2.1 hspMaster

This property specifies the [master shape](#) for a shape.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																hspMaster															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0301.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

hspMaster (4 bytes): An [MSOSPID](#) record that specifies the identifier of the master shape for the shape.

The default value for this property is 0x00000000.

2.3.2.2 cxstyle

This property specifies the connector style.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																cxstyle															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0303.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

cxstyle (4 bytes): An [MSOXCSTYLE](#) enumeration value that specifies the connector style for this shape. This property SHOULD be ignored if the **fConnector** bit of the [OfficeArtFSP](#) record of this shape is 0x0.

The default value for this property is msocxstyleNone.

2.3.2.3 bWMode

This property specifies how a shape will render in black-and-white display mode.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																bWMode															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0304.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

bWMode (4 bytes): An [MSOBWMODE](#) enumeration value that specifies how the shape will render in black-and-white display mode. If the value is msobwAutomatic the [bWModePureBW](#) property SHOULD be used when rendering in pure black-and-white display mode, and the [bWModeBW](#) property SHOULD be used when rendering in normal black-and-white display mode.

The default value for this property is msobwAutomatic.

2.3.2.4 bWModePureBW

This property specifies how a shape will render in pure black-and-white display mode.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																bW ModePureBW															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0305.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

bWModePureBW (4 bytes): An [MSOBWMODE](#) enumeration value that specifies how the shape will render in pure black-and-white display mode. If the value of the [bWMode](#) property is not msobwAutomatic this property SHOULD be ignored.

The default value for this property is msobwAutomatic.

2.3.2.5 bWModeBW

This property specifies how a shape will render in normal black-and-white display mode.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																bW ModeBW															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0306.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

bWModeBW (4 bytes): An [MSOBWMODE](#) enumeration value that specifies how the shape will render in normal black-and-white display mode. If the value of the [bWMode](#) property is not msobwAutomatic this property SHOULD be ignored.

The default value for this property is msobwAutomatic.

2.3.2.6 idDiscussAnchor

This property specifies whether a shape is an anchor for discussion [comments](#).

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																idDiscussAnchor															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0307.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

idDiscussAnchor (4 bytes): An integer value which MAY [<9>](#) be used to specify that this shape is an anchor for discussion comments. If the value is 0x00000001, the object is a discussion comment anchor. If it is any other value, it SHOULD be ignored.

The default value for this property is 0x00000000.

2.3.2.7 dgmLayout

This property specifies the diagram node layout for a shape.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																dgmLayout															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0309.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

dgmLayout (4 bytes): An [MSODGMLO](#) enumeration value that specifies the diagram layout for the shape. This property SHOULD be ignored if this shape is not a node in a diagram.

The default value for this property is 0x000000FF.

2.3.2.8 dgmNodeKind

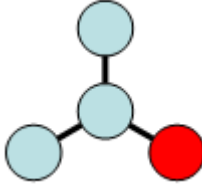
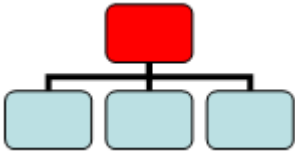
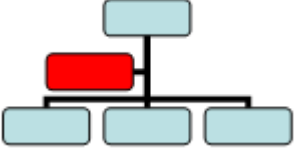
This property specifies a diagram node type.

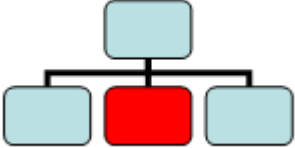
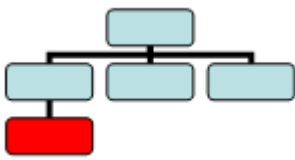
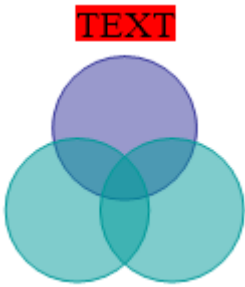
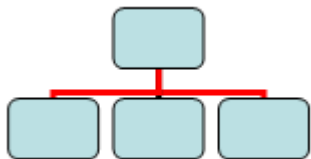
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																dgmNodeKind															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x030A.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

dgmNodeKind (4 bytes): An integer value that specifies the type of node the shape represents in a diagram. This property SHOULD be ignored if the shape is not a node in a diagram.

Name	Value	Description
dgmnkNode	0x00000000	A regular diagram node of no particular type. 
dgmnkRoot	0x00000001	The root node in an organization chart. 
dgmnkAssistant	0x00000002	An assistant in an organization chart. 
dgmnkCoWorker	0x00000003	A co-worker in an organization chart.

		
dgmnkSubordinate	0x00000004	<p>A subordinate in an organization chart.</p> 
dgmnkAuxNode	0x00000005	<p>An auxiliary node which displays text associated with another diagram node.</p> 
dgmnkNil	0x0000FFFF	<p>A connector node that connects other diagram nodes.</p> 

The default value for this property is 0xFFFFFFFF.

2.3.2.9 dgmLayoutMRU

This property specifies the most recently used diagram layout for the child shapes of a shape.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																dgmLayoutMRU															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x030B.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

dgmLayoutMRU (4 bytes): An [MSODGMLO](#) enumeration value that specifies the most recently used diagram layout for child shapes of the shape. This property SHOULD be ignored if the shape is not a node in a diagram.

The default value for this property is 0x000000FF.

2.3.2.10 equationXML

This property specifies alternate mathematical content for an image.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																equationXML															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x030C.
opid.fBid	Undefined and MUST be ignored.
opid.fComplex	If 0x1 then the equationXML_complex property MUST exist.

equationXML (4 bytes): The number of bytes of data in the [equationXML_complex](#) property. This value MUST be 0x00000000 if **opid.fComplex** is 0x0.

The default value for this property is 0x00000000.

2.3.2.11 equationXML_complex

This property specifies additional data for the [equationXML](#) proeprty. This property MUST exist if the **opid.fComplex** bit of the [equationXML](#) property is 0x1.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
equationXML_complex (variable)																															
...																															

equationXML_complex (variable): A UTF-8 encoded [XML](#) string in the Office Open XML Math format, as specified in [\[ECMA-376\]](#), which MAY [≤10>](#) be used as alternate content for an image.

2.3.2.12 Shape Boolean Properties

This property specifies a 32-bit field of boolean properties for a shape.

										1									2										3				
0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1		
opid																A	B	C	D	E	F	G	H	I	J	unused1							
K	L	M	N	O	P	Q	R	S	T	unused3																							

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x033F.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

A - fBackground (1 bit): A bit that specifies whether this shape is the background shape of a drawing. This value MUST be ignored if **fUsefBackground** is 0x0.

The default value for this property is 0x0.

B - reserved1 (1 bit): Undefined and MUST be ignored.

C - fInitiator (1 bit): A bit that specifies whether this shape SHOULD be processed by a rules engine. This value MUST be ignored if **fUsefInitiator** is 0x0.

The default value for this property is 0x0.

D - fLockShapeType (1 bit): A bit that specifies whether the shape type is locked. This value MUST be ignored if **fUsefLockShapeType** is 0x0.

The default value for this property is 0x0.

E - fPreferRelativeResize (1 bit): A bit that specifies whether the application's user interface for resizing this shape SHOULD express its size relative to the original size rather than the current size. This value MUST be ignored if **fUsefPreferRelativeResize** is 0x0.

The default value for this property is 0x0.

F - fOleIcon (1 bit): A bit that specifies whether this OLE object will be displayed as an icon. This bit MUST be ignored if the **fOleShape** bit in the containing [OfficeArtSpContainer](#)'s [OfficeArtFSP](#) is 0x0. This value MUST be ignored if **fUsefOleIcon** is 0x0.

The default value for this property is 0x0.

G - fFlipVOverride (1 bit): A bit that acts as an override for the **fFlipV** bit of the [Transform Boolean Properties](#) in the containing [OfficeArtSpContainer](#)'s [OfficeArtFSP](#). When this value is 0x1, it SHOULD [≤11>](#) be used instead of **fFlipV**. This value MUST be ignored if **fUsefFlipVOverride** is 0x0.

The default value for this property is 0x0.

H - fFlipHOverride (1 bit): A bit that acts as an override for the **fFlipH** bit of the [Transform Boolean Properties](#) in the containing [OfficeArtSpContainer](#)'s [OfficeArtFSP](#). When this value is 0x1, it SHOULD [<12>](#) be used instead of **fFlipH**. This value MUST be ignored if **fUsefFlipHOverride** is 0x0.

The default value for this property is 0x0.

I - fPolicyBarcode (1 bit): A bit that specifies whether this object is a barcode image that MAY [<13>](#) be used to identify the containing document as part of a [content management system](#). This value MUST be ignored if **fUsefPolicyBarcode** is 0x0.

The default value for this property is 0x0.

J - fPolicyLabel (1 bit): A bit that specifies whether this object is an image of a label that MAY [<14>](#) be used to identify the containing document as part of a [labeling policy](#) in a content management system. This value MUST be ignored if **fUsefPolicyLabel** is 0x0.

The default value for this property is 0x0.

unused1 (6 bits): Undefined and MUST be ignored.

K - fUsefBackground (1 bit): This bit specifies whether the **fBackground** bit is set. A value of 0x0 specifies that the **fBackground** bit MUST be ignored and the default value be used instead.

The default value of this property is 0x0.

L - unused2 (1 bit): Undefined and MUST be ignored.

M - fUsefInitiator (1 bit): This bit specifies whether the **fInitiator** bit is set. A value of 0x0 specifies that the **fInitiator** bit MUST be ignored and the default value be used instead.

The default value of this property is 0x0.

N - fUsefLockShapeType (1 bit): This bit specifies whether the **fLockShapeType** bit is set. A value of 0x0 specifies that the **fLockShapeType** bit MUST be ignored and the default value be used instead.

The default value of this property is 0x0.

O - fUsefPreferRelativeResize (1 bit): This bit specifies whether the **fPreferRelativeResize** bit is set. A value of 0x0 specifies that the **fPreferRelativeResize** bit MUST be ignored and the default value be used instead.

The default value of this property is 0x0.

P - fUsefOleIcon (1 bit): This bit specifies whether the **fOleIcon** bit is set. A value of 0x0 specifies that the **fOleIcon** bit MUST be ignored and the default value be used instead.

The default value of this property is 0x0.

Q - fUsefFlipVOverride (1 bit): This bit specifies whether the **fFlipVOverride** bit is set. A value of 0x0 specifies that the **fFlipVOverride** bit MUST be ignored and the default value be used instead.

The default value of this property is 0x0.

R - fUsefFlipHOverride (1 bit): This bit specifies whether the **fFlipHOverride** bit is set. A value of 0x0 specifies that the **fFlipHOverride** bit MUST be ignored and the default value be used instead.

The default value of this property is 0x0.

S - fUsefPolicyBarcode (1 bit): This bit specifies whether the **fPolicyBarcode** bit is set. A value of 0x0 specifies that the **fPolicyBarcode** bit MUST be ignored and the default value be used instead.

The default value of this property is 0x0.

T - fUsefPolicyLabel (1 bit): This bit specifies whether the **fPolicyLabel** bit is set. A value of 0x0 specifies that the **fPolicyLabel** bit MUST be ignored and the default value be used instead.

The default value of this property is 0x0.

unused3 (6 bits): Undefined and MUST be ignored.

2.3.3 Callout

This property set specifies the visual attributes of a [callout](#) shape.

2.3.3.1 unused832

This property is undefined, and MUST be ignored.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																unused832															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0340.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

unused832 (4 bytes): Undefined and MUST be ignored.

2.3.3.2 dxyCalloutGap

This property specifies the distance from this callout's box to its first point.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																dxyCalloutGap															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0341.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

dxyCalloutGap (4 bytes): A signed integer that specifies the distance in English Metric Units from the callout box to the callout's first vertex, as shown in Figure 2. This value SHOULD be in the range from 0x00000000 to 0x0132F53F.

The default value for this property is 0x00001DB0.

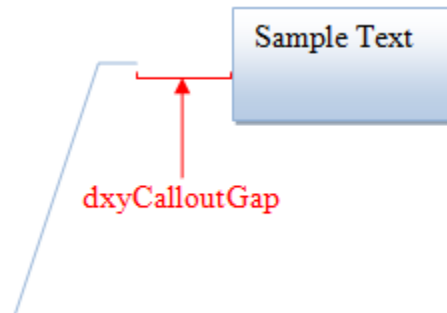


Figure 2: Gap between callout box and callout's first vertex

2.3.3.3 spcoa

This property specifies the connection angle of this callout.

0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1
opid																spcoa															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0342.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

spcoa (4 bytes): An enumeration value that specifies the connection angle of this callout according to the following table. If the **rh.recInstance** of this callout shape's [OfficeArtFSP](#) record is set to [msosptCallout90](#), [msosptAccentCallout90](#), [msosptBorderCallout90](#), or [msosptAccentBorderCallout90](#), then this value MUST equal msospcoaAny.

Name	Value	Description
msospcoaAny	0x00000000	The callout is drawn according to its list of vertices.

msospcoa30	0x00000001	The callout is drawn at a 30 degree angle.
msospcoa45	0x00000002	The callout is drawn at a 45 degree angle.
msospcoa60	0x00000003	The callout is drawn at a 60 degree angle.
msospcoa90	0x00000004	The callout is drawn vertically.
msospcoa0	0x00000005	The callout is drawn horizontally.

The default value for this property is msospcoaAny.

2.3.3.4 spcod

This property specifies the place where this callout connects to the callout box.

0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1
opid																spcod															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0343.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

spcod (4 bytes): An enumeration value that specifies the connection position according to the following table.

Name	Value	Description
msospcodTop	0x00000000	This callout connects to the top of the callout box.
msospcodCenter	0x00000001	This callout connects to the callout box at the midpoint of its top and bottom coordinates.
msospcodBottom	0x00000002	This callout connects to the bottom of the callout box.
msospcodSpecified	0x00000003	This callout connects to the callout box as defined by the dxyCalloutDropSpecified property.

If the **rh.recInstance** of this callout shape's [OfficeArtFSP](#) record is set to [msosptCallout90](#), [msosptAccentCallout90](#), [msosptBorderCallout90](#), or [msosptAccentBorderCallout90](#), then the top and bottom of the callout box are defined along the same dimensions as the callout's line segment. The bottom of the callout is the end with a variable position, as shown in Figure 3.

The default value for this property is msospcodSpecified.

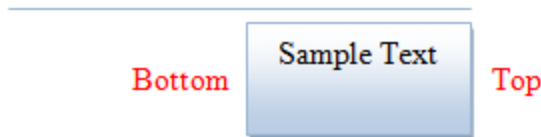


Figure 3: Bottom and top of callout

2.3.3.5 dxyCalloutDropSpecified

This property specifies the place where this callout connects to the callout box.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																dxyCalloutDropSpecified															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0344.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

dxyCalloutDropSpecified (4 bytes): A signed integer that specifies the distance away from the top of the callout box in English Metric Units. This value SHOULD be in the range from 0x00000000 to 0x0132F53F and MUST be ignored unless the [spcod](#) property equals msospcodSpecified.

The default value for this property is 0x0001BE7C.

2.3.3.6 dxyCalloutLengthSpecified

This property specifies the length of this callout.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																dxyCalloutLengthSpecified															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0345.

opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

dxycalloutLengthSpecified (4 bytes): A signed integer that specifies the length of the first callout segment in English Metric Units, as shown in Figure 4. This value SHOULD be in the range from 0x00000000 to 0x0132F53F and MUST be ignored unless the **fCalloutLengthSpecified** bit of [Callout Boolean Properties](#) equals 0x1.

The default value for this property is 0x00000000.

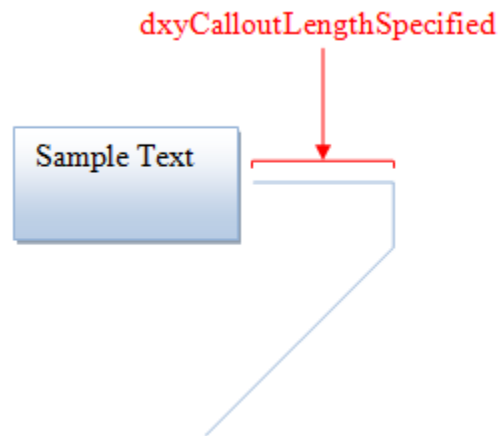


Figure 4: First callout segment

2.3.3.7 Callout Boolean Properties

This property specifies a 32-bit field of boolean properties for a callout shape.

0	1	2	3	4	5	6	7	8	9	10	1	2	3	4	5	6	7	8	9	20	1	2	3	4	5	6	7	8	9	30	1	
opid																A	B	C	D	E	F	G	unused1									
H	I	J	K	L	M	N	unused2																									

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x037F.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

A - fCalloutLengthSpecified (1 bit): A bit that specifies whether the [dxycalloutLengthSpecified](#) property SHOULD be used. This value MUST be ignored if **fUsefCalloutLengthSpecified** is 0x0.

The default value for this property is 0x0.

B - fCalloutDropAuto (1 bit): A bit that specifies whether the location of the callout shape is calculated based on the end point of the object being called out. If this value is 0x1, the callout SHOULD be the [dxycalloutGap](#) property value distance above or below the shape. This value MUST be ignored if **fUsefCalloutDropAuto** is 0x0.

The default value for this property is 0x0.

C - fCalloutMinusY (1 bit): A bit that specifies whether the callout shape is flipped on the Y axis. This value MUST be ignored if **fUsefCalloutMinusY** is 0x0.

The default value for this property is 0x0.

D - fCalloutMinusX (1 bit): A bit that specifies whether the callout shape is flipped on the X axis. This value MUST be ignored if **fUsefCalloutMinusX** is 0x0.

The default value for this property is 0x0.

E - fCalloutTextBorder (1 bit): A bit that specifies whether the callout shape has a text border. This value MUST be ignored if **fUsefCalloutTextBorder** is 0x0.

The default value for this property is 0x1.

F - fCalloutAccentBar (1 bit): A bit that specifies whether the callout shape has an accent bar. This value MUST be ignored if **fUsefCalloutAccentBar** is 0x0.

The default value for this property is 0x0.

G - fCallout (1 bit): A bit that specifies whether the shape is a callout shape. This value MUST be ignored if **fUsefCallout** is 0x0.

The default value for this property is 0x0.

unused1 (9 bits): Undefined and MUST be ignored.

H - fUsefCalloutLengthSpecified (1 bit): A bit that specifies whether the **fCalloutLengthSpecified** bit is set. A value of 0x0 specifies that the **fCalloutLengthSpecified** bit MUST be ignored and the default value be used instead.

The default value for this property is 0x0.

I - fUsefCalloutDropAuto (1 bit): A bit that specifies whether the **fCalloutDropAuto** bit is set. A value of 0x0 specifies that the **fCalloutDropAuto** bit MUST be ignored and the default value be used instead.

The default value for this property is 0x0.

J - fUsefCalloutMinusY (1 bit): A bit that specifies whether the **fCalloutMinusY** bit is set. A value of 0x0 specifies that the **fCalloutMinusY** bit MUST be ignored and the default value be used instead.

The default value for this property is 0x0.

K - fUsefCalloutMinusX (1 bit): A bit that specifies whether the **fCalloutMinusX** bit is set. A value of 0x0 specifies that the **fCalloutMinusX** bit MUST be ignored and the default value be used instead.

The default value for this property is 0x0.

L - fUsefCalloutTextBorder (1 bit): A bit that specifies whether the **fCalloutTextBorder** bit is set. A value of 0x0 specifies that the **fCalloutTextBorder** bit MUST be ignored and the default value be used instead.

The default value for this property is 0x0.

M - fUsefCalloutAccentBar (1 bit): A bit that specifies whether the **fCalloutAccentBar** bit is set. A value of 0x0 specifies that the **fCalloutAccentBar** bit MUST be ignored and the default value be used instead.

The default value for this property is 0x0.

N - fUsefCallout (1 bit): A bit that specifies whether the **fCallout** bit is set. A value of 0x0 specifies that the **fCallout** bit MUST be ignored and the default value be used instead.

The default value for this property is 0x0.

unused2 (9 bits): Undefined and MUST be ignored.

2.3.4 Group Shape

This property set specifies properties applicable to a group or a shape.

2.3.4.1 wzName

This property specifies the name of a shape.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																wzName															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0380.
opid.fBid	Undefined and MUST be ignored.
opid.fComplex	If 0x1 then the wzName_complex property MUST exist.

wzName (4 bytes): The number of bytes of data in the [wzName_complex](#) property. This MUST be 0x00000000 if **opid.fComplex** is 0x0.

The default value for this property is 0x00000000.

2.3.4.2 wzName_complex

This property specifies additional data for the [wzName](#) property. This property MUST exist if the **opid.fComplex** bit of the [wzName](#) property is 0x1.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
wzName_complex (variable)																															

...

wzName_complex (variable): A Unicode null-terminated string that specifies the name for this shape.

2.3.4.3 wzDescription

This property specifies a textual description for a shape.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																wzDescription															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0381.
opid.fBid	Undefined and MUST be ignored.
opid.fComplex	If 0x1 then the wzDescription_complex property MUST exist.

wzDescription (4 bytes): The number of bytes of data in the [wzDescription_complex](#) property. This MUST be 0x00000000 if **opid.fComplex** is 0x0.

The default value for this property is 0x00000000.

2.3.4.4 wzDescription_complex

This property specifies additional data for the [wzDescription](#) property. This property MUST exist if the **opid.fComplex** bit of the [wzDescription](#) property is 0x1.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
wzDescription_complex (variable)																															
...																															

wzDescription_complex (variable): A Unicode null-terminated string that specifies the description for this shape.

2.3.4.5 pihlShape

This property specifies a hyperlink for a shape.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																pihlShape															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0382.
opid.fBid	Undefined and MUST be ignored.
opid.fComplex	If 0x1 then the pihlShape_complex property MUST exist.

pihlShape (4 bytes): The number of bytes of data in the [pihlShape_complex](#) property. This MUST be 0x00000000 if **opid.fComplex** is 0x0.

The default value for this property is 0x00000000.

2.3.4.6 pihlShape_complex

This property specifies additional data for the [pihlShape](#) property. This property MUST exist if the **opid.fComplex** bit of the [pihlShape](#) property is 0x1.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
pihlShape_complex (variable)																															
...																															

pihlShape_complex (variable): An [IHlink](#) record that specifies the hyperlink for this shape.

2.3.4.7 pWrapPolygonVertices

This property specifies a list of points used to define a [wrap polygon](#) for a shape.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																pWrapPolygonVertices															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0383.
opid.fBid	Undefined and MUST be ignored.
opid.fComplex	If 0x1 then the pWrapPolygonVertices_complex property MUST exist.

pWrapPolygonVertices (4 bytes): The number of bytes of data in the [pWrapPolygonVertices_complex](#) property. This MUST be 0x00000000 if **opid.fComplex** is 0x0.

The default value for this property is 0x00000000.

2.3.4.8 pWrapPolygonVertices_complex

This property specifies additional data for the [pWrapPolygonVertices](#) property. This property MUST exist if the the [pWrapPolygonVertices:fComplex](#) property bit is 0x1.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
pWrapPolygonVertices_complex (variable)																															
...																															

pWrapPolygonVertices_complex (variable): An [IMsoArray](#) record of POINTs that define the wrap polygon. The POINTs are in the same coordinate space as the shape. The coordinate space is specified by the [geoLeft](#), [geoRight](#), [geoTop](#) and [geoBottom](#) properties.

2.3.4.9 dxWrapDistLeft

This property specifies how close another piece of document content may come to this shape's left edge.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																dxWrapDistLeft															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0384.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

dxWrapDistLeft (4 bytes): A signed integer which specifies the minimum distance, in application defined units, an object may be placed next to the shape's left edge.

The default value for this property is 0x0001BE7C.

2.3.4.10 dyWrapDistTop

This property specifies how close another piece of document content may come to this shape's top edge.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																dyWrapDistTop															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0385.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

dyWrapDistTop (4 bytes): A signed integer which specifies the minimum distance, in application defined units, an object may be placed next to the shape's top edge.

The default value for this property is 0x00000000.

2.3.4.11 dxWrapDistRight

This property specifies how close another piece of document content may come to this shape's right edge.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																dxWrapDistRight															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0386.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

dxWrapDistRight (4 bytes): A signed integer which specifies the minimum distance, in application defined units, an object may be placed next to the shape's right edge.

The default value for this property is 0x0001BE7C.

2.3.4.12 dyWrapDistBottom

This property specifies how close another piece of document content may come to this shape's bottom edge.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																dyWrapDistBottom															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0387.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

dyWrapDistBottom (4 bytes): A signed integer which specifies the minimum distance, in application defined units, an object may be placed next to the shape's bottom edge.

The default value for this property is 0x00000000.

2.3.4.13 lidRegroup

This property specifies the [regroup identifier](#) for this shape.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																lidRegroup															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0388.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

lidRegroup (4 bytes): A signed integer that specifies the [FRID](#) data type of this shape.

The default value for this property is 0x00000000.

2.3.4.14 unused906

This property is undefined, and MUST be ignored.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																unused906															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x038A.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

unused906 (4 bytes): Undefined and MUST be ignored.

2.3.4.15 wzTooltip

This property specifies a [ToolTip](#) for a hyperlink on a shape.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																wzTooltip															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x038D.
opid.fBid	Undefined and MUST be ignored.
opid.fComplex	If 0x1 then the wzTooltip_complex property MUST exist.

wzTooltip (4 bytes): The number of bytes of data in the [wzTooltip_complex](#) property. This MUST be 0x00000000 if **opid.fComplex** is 0x0.

The default value for this property is 0x00000000.

2.3.4.16 wzTooltip_complex

This property specifies additional data for the [wzTooltip](#) property. This property MUST exist if the **opid.fComplex** bit of the [wzTooltip](#) property is 0x1.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
wzTooltip_complex (variable)																															
...																															

wzTooltip_complex (variable): A Unicode null-terminated string that specifies the Tooltip's text.

2.3.4.17 wzScript

This property specifies script attached to a shape.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																wzScript															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x038E.
opid.fBid	Undefined and MUST be ignored.
opid.fComplex	If 0x1 then the wzScript_complex property MUST exist.

wzScript (4 bytes): The number of bytes of data in the [wzScript_complex](#) property. This MUST be 0x00000000 if **opid.fComplex** is 0x0.

The default value for this property is 0x00000000.

2.3.4.18 wzScript_complex

This property specifies additional data for the [wzScript](#) property. This property MUST exist if the **opid.fComplex** bit of the [wzScript](#) property is 0x1.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
wzScript_complex (variable)																															
...																															

wzScript_complex (variable): A Unicode null-terminated string that specifies script for a shape.

2.3.4.19 posh

This property specifies the type of horizontal positioning to use for a shape.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																posh															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x038F.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

posh (4 bytes): An enumeration value which MAY [≤15](#) be used to determine how a shape is horizontally positioned, relative to the [page element](#) specified in the [posrelh](#) property. It MUST be one of the following values:

Name	Value	Description
msophAbs	0x00000001	The shape is horizontally offset an absolute distance from the page element.
msophLeft	0x00000002	The shape is horizontally positioned at the left side of the page element.
msophCenter	0x00000003	The shape is horizontally positioned at the center of the page element.
msophRight	0x00000004	The shape is horizontally positioned at the right side of the page element.
msophInside	0x00000005	The shape is horizontally positioned similar to msophLeft on odd-numbered pages, and similar to msophRight on even-numbered pages.
msophOutside	0x00000006	The shape is horizontally positioned similar to msophRight on odd-numbered pages, and similar to msophLeft on even-numbered pages.

The default value for this property is msophAbs.

2.3.4.20 posrelh

This property specifies a page element relative to which a shape is horizontally positioned.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																posrelh															

...	
-----	--

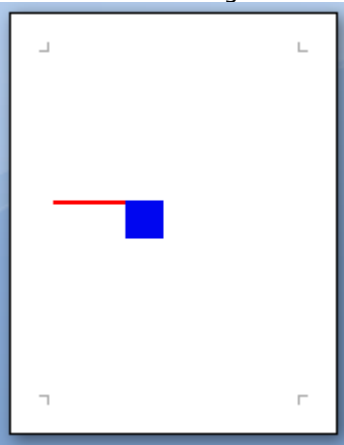
opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

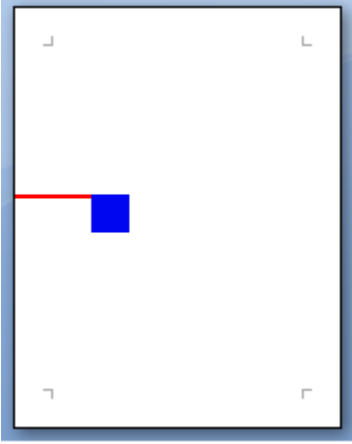

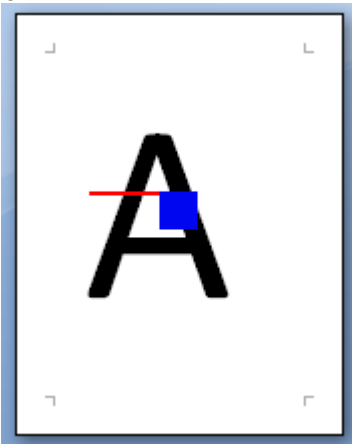
Field	Meaning
opid.opid	MUST be 0x0390.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

posrelh (4 bytes): An enumeration value which MAY [<16>](#) be used to determine the page element to which a shape's horizontal position is relative. It MUST be one of the values listed in the following tables.

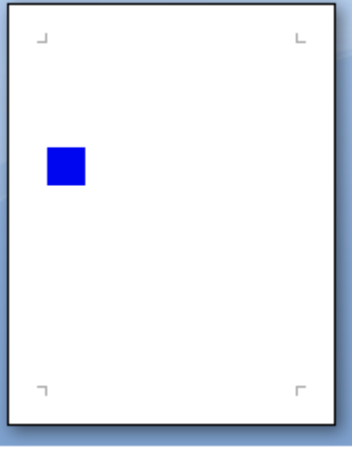
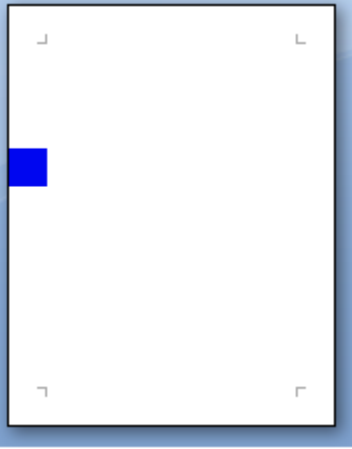
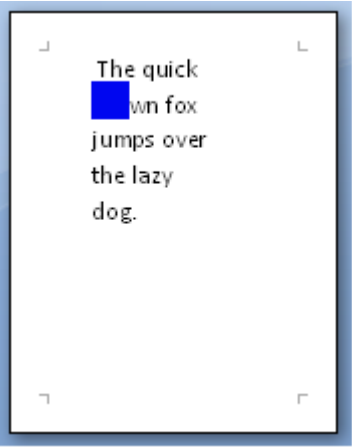
The default value for this property is msoprhText.

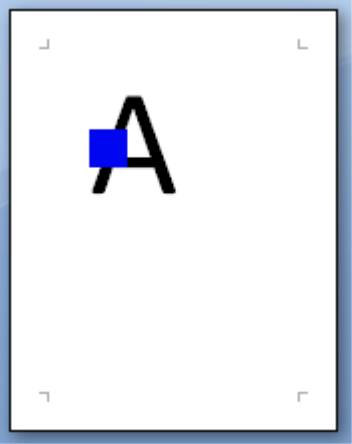
If the value of the [posh](#) property is equal to msophAbs, then the possible values for this property position the shape as shown in the following table:

Name	Value	Meaning
msoprhMargin	0x00000001	The shape is horizontally positioned relative to the margins of the page. 
msoprhPage	0x00000002	The shape is horizontally positioned relative to the edges of the page.

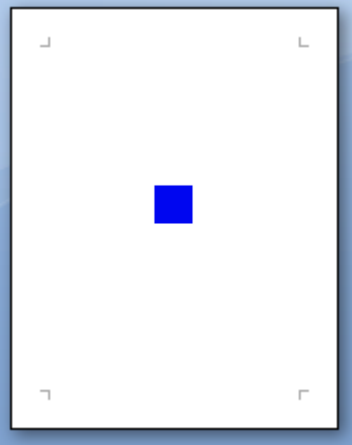
		
msophText	0x00000003	<p>The shape is horizontally positioned relative to the column of text underneath it.</p> 
msophChar	0x00000004	<p>The shape is horizontally positioned relative to the character of text underneath it.</p> 

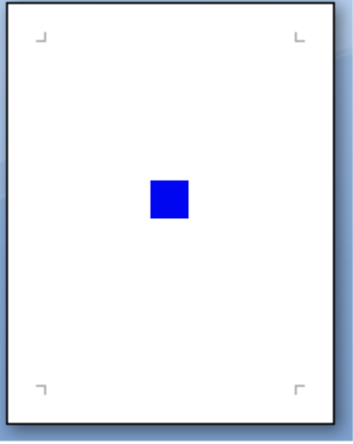
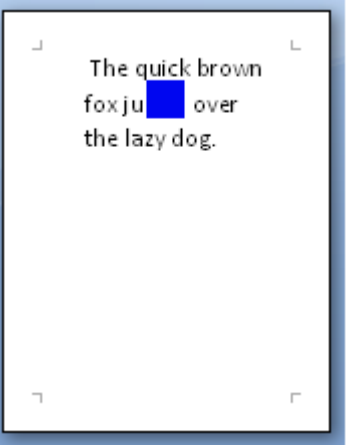
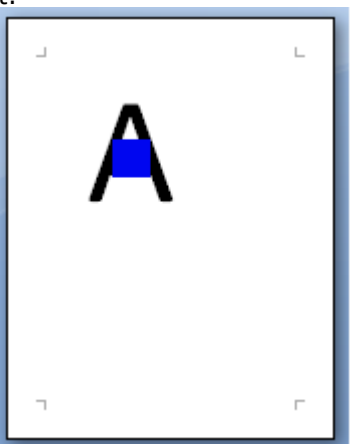
If the value of the [posh](#) property is equal to msophLeft, then the possible values for this property position the shape as shown in the following table:

Name	Value	Meaning
msoprhMargin	0x00000001	The shape is horizontally positioned relative to the margins of the page. 
msoprhPage	0x00000002	The shape is horizontally positioned relative to the edges of the page. 
msoprhText	0x00000003	The shape is horizontally positioned relative to the column of text underneath it. 
msoprhChar	0x00000004	The shape is horizontally positioned

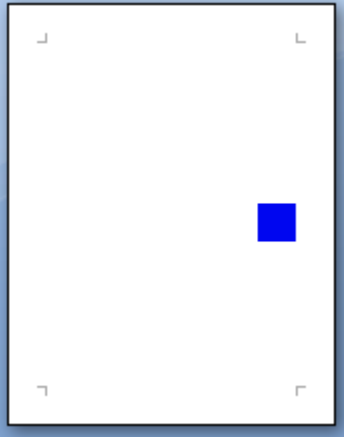
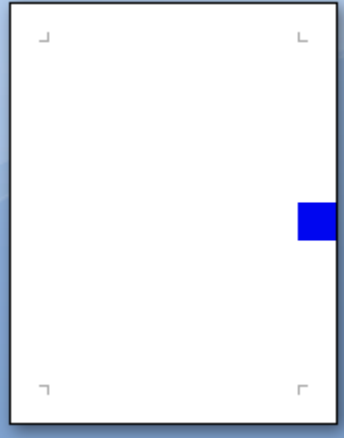
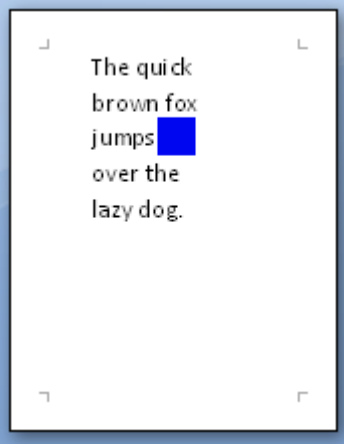
		<p>relative to the character of text underneath it.</p> 
--	--	--

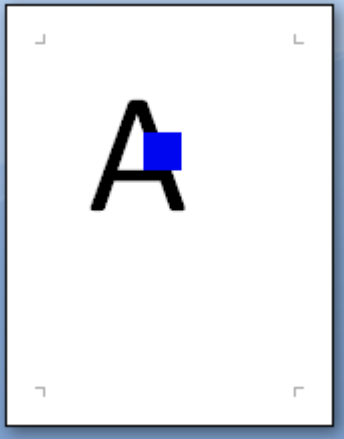
If the value of the [posh](#) property is equal to msophCenter, then the possible values for this property position the shape as shown in the following table:

Name	Value	Meaning
msophMargin	0x00000001	<p>The shape is horizontally positioned relative to the margins of the page.</p> 
msophPage	0x00000002	<p>The shape is horizontally positioned relative to the edges of the page.</p>

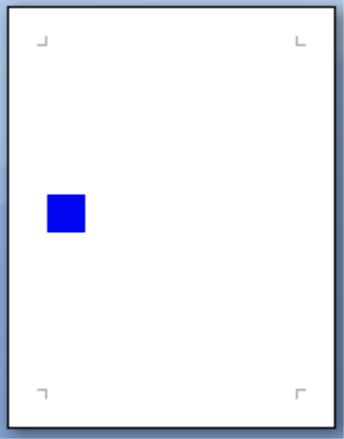
		
msoprhText	0x00000003	<p>The shape is horizontally positioned relative to the column of text underneath it.</p> 
msoprhChar	0x00000004	<p>The shape is horizontally positioned relative to the character of text underneath it.</p> 

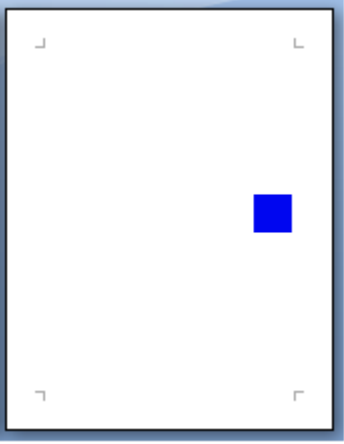
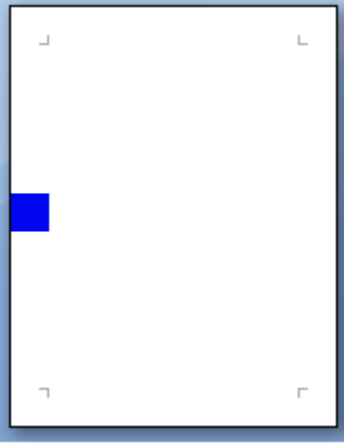
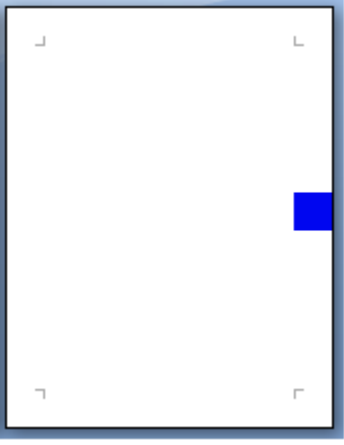
If the value of the [posh](#) property is equal to msoprhRight, then the possible values for this property position the shape as shown in the following table:

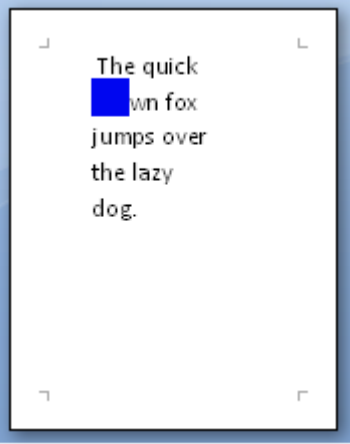
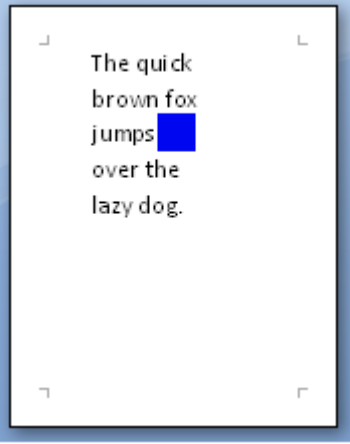
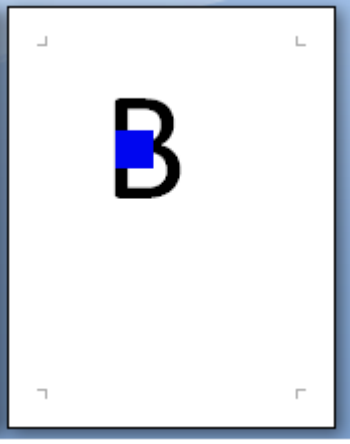
Name	Value	Meaning
msoprhMargin	0x00000001	The shape is horizontally positioned relative to the margins of the page. 
msoprhPage	0x00000002	The shape is horizontally positioned relative to the edges of the page. 
msoprhText	0x00000003	The shape is horizontally positioned relative to the column of text underneath it. 
msoprhChar	0x00000004	The shape is horizontally positioned

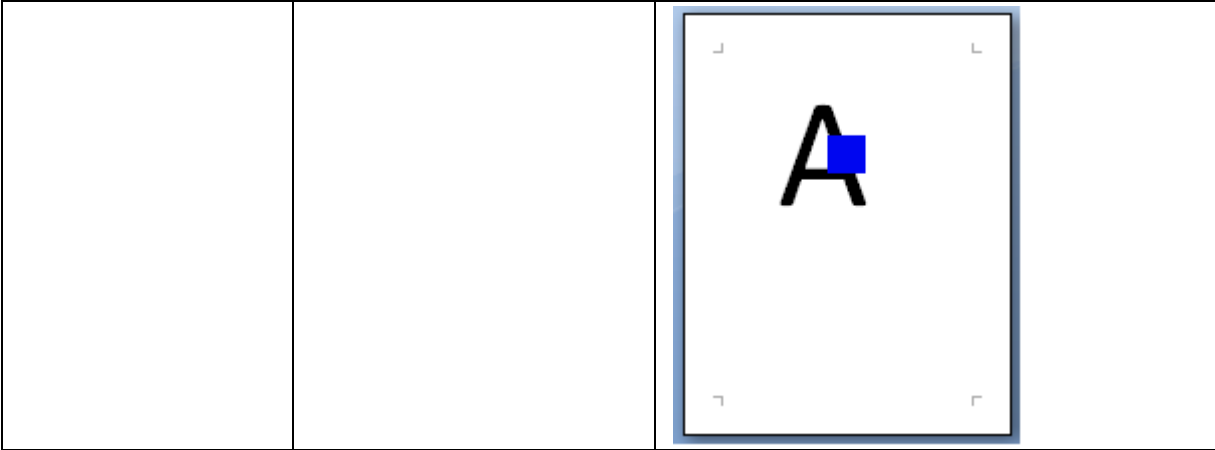
		<p>relative to the character of text underneath it.</p> 
--	--	--

If the value of the [posh](#) property is equal to msophInside, then the possible values for this property position the shape as shown in the following table:

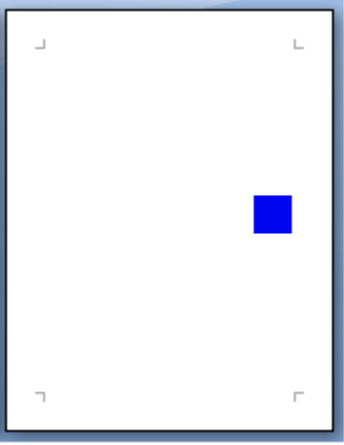
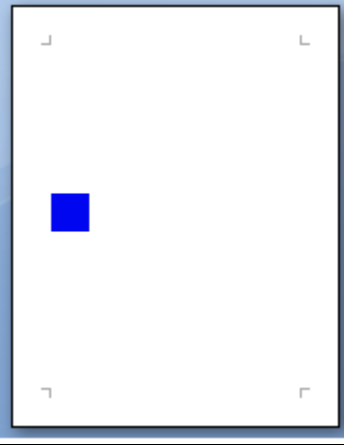
Name	Value	Meaning
msophMargin	0x00000001	<p>The shape is horizontally positioned relative to the margins of the page.</p> <p>Odd-numbered pages</p>  <p>Even-numbered pages</p>

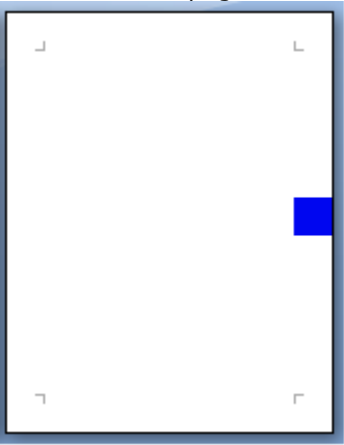
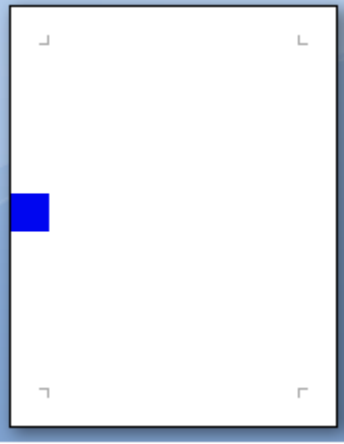
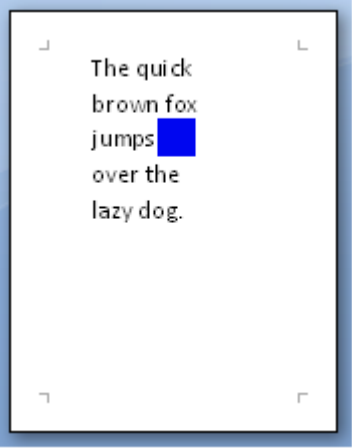
		
msophPage	0x00000002	<p>The shape is horizontally positioned relative to the edges of the page.</p> <p>Odd-numbered pages</p>  <p>Even-numbered pages</p> 
msophText	0x00000003	<p>The shape is horizontally positioned relative to the column of text underneath it.</p>

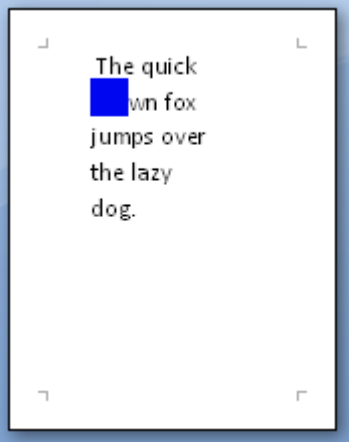
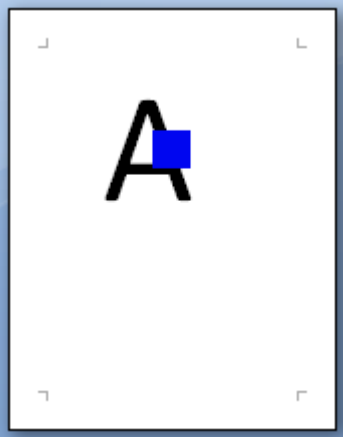
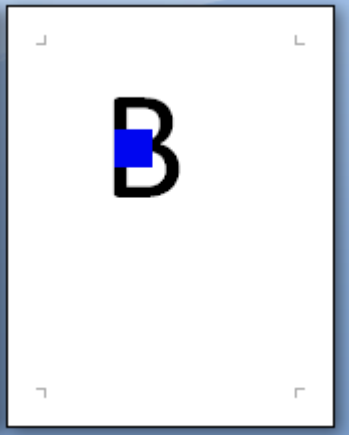
		<p>Odd-numbered pages</p>  <p>Even-numbered pages</p> 
msoprhChar	0x00000004	<p>The shape is horizontally positioned relative to the character of text underneath it.</p> <p>Odd-numbered pages</p>  <p>Even-numbered pages</p>



If the value of the [posh](#) property is equal to msophOutside, then the possible values for this property position the shape as shown in the following table:

Name	Value	Meaning
msophMargin	0x00000001	<p>The shape is horizontally positioned relative to the margins of the page.</p> <p>Odd-numbered pages</p>  <p>Even-numbered pages</p> 

msoprhPage	0x00000002	<p>The shape is horizontally positioned relative to the edges of the page.</p> <p>Odd-numbered pages</p>  <p>Even-numbered pages</p> 
msoprhText	0x00000003	<p>The shape is horizontally positioned relative to the column of text underneath it.</p> <p>Odd-numbered pages</p> 

		<p>Even-numbered pages</p> 
msoprhChar	0x00000004	<p>The shape is horizontally positioned relative to the character of text underneath it.</p> <p>Odd-numbered pages</p>  <p>Even-numbered pages</p> 

2.3.4.21 posv

This property specifies the type of vertical positioning to use for a shape.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																posv															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0391.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

posv (4 bytes): An enumeration value which MAY [≤17>](#) be used to determine how a shape is vertically positioned relative to the page element specified in the [posrelv](#) property. It MUST be one of the following values:

Name	Value	Description
msopvAbs	0x00000001	The shape is vertically offset an absolute distance from the page element.
msopvTop	0x00000002	The shape is vertically positioned at the top of the page element.
msopvCenter	0x00000003	The shape is vertically positioned in the center of the page element.
msopvBottom	0x00000004	The shape is vertically positioned at the bottom of the page element.
msopvInside	0x00000005	The shape is vertically positioned similar to msopvTop on odd-numbered pages, and similar to msopvBottom on even-numbered pages.
msopvOutside	0x00000006	The shape is vertically positioned similar to msopvBottom on odd-numbered pages, and similar to msopvTop on even-numbered pages.

The default value for this property is msopvAbs.

2.3.4.22 posrelv

This property specifies a page element relative to which a shape is vertically positioned.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																posrelv															

...	
-----	--

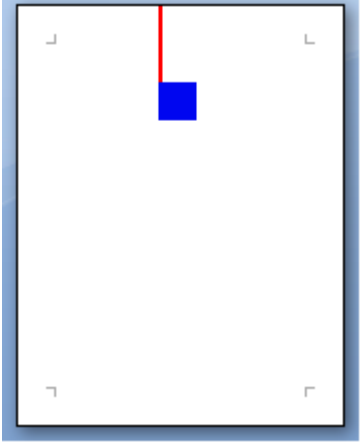
opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

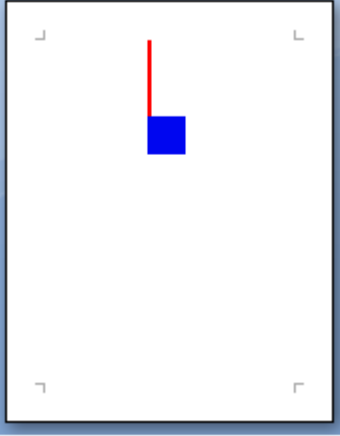
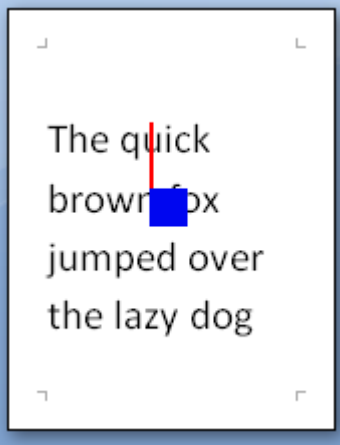
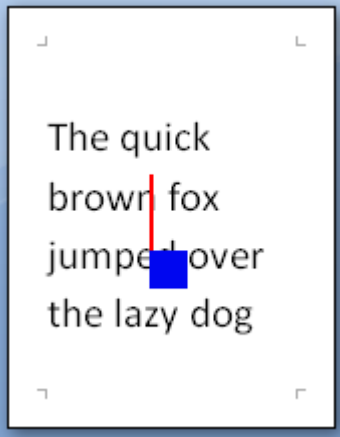
Field	Meaning
opid.opid	MUST be 0x0392.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

posrelv (4 bytes): An enumeration value which MAY [<18>](#) be used to determine the page element to which a shape's horizontal position is relative. It MUST be one of the values listed in the following tables.

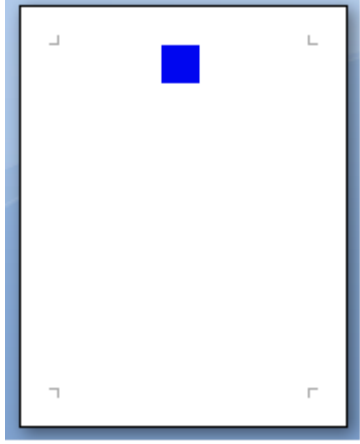

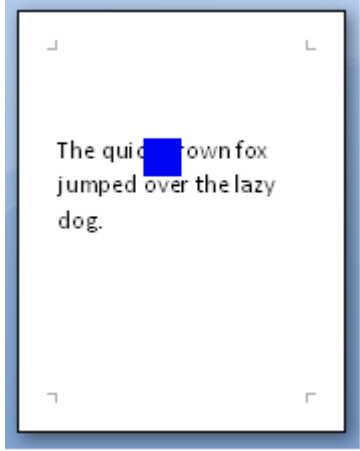
The default value for this property is msoprvtText.

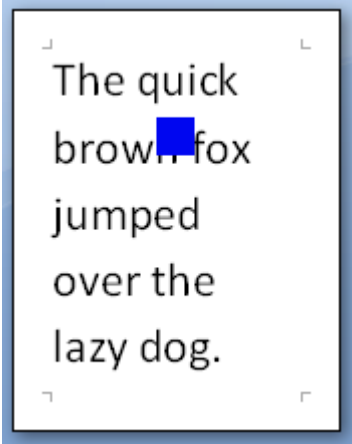
If the value of the [posv](#) property is equal to msopvAbs, then the possible values for this property position the shape as shown in the following table:

Name	Value	Meaning
msoprvmargin	0x00000001	The shape is vertically positioned relative to the margins of the page. 
msoprvpPage	0x00000002	The shape is vertically positioned relative to the edges of the page.

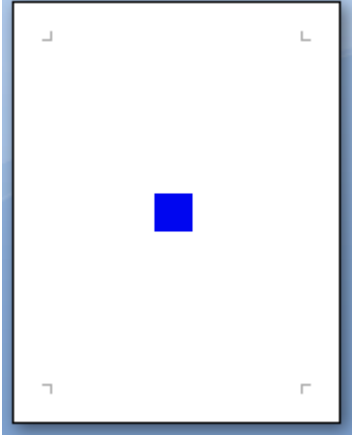
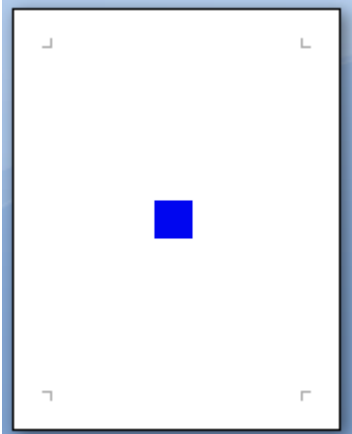
		
msoprvtText	0x00000003	<p>The shape is vertically positioned relative to the paragraph of text underneath it.</p> 
msoprvtLine	0x00000004	<p>The shape is vertically positioned relative to the line of text underneath it.</p> 

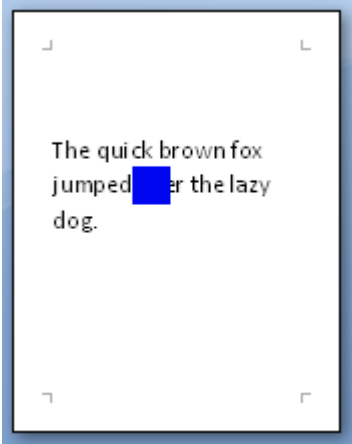
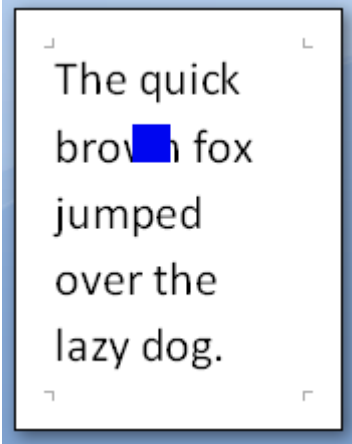
If the value of the [posv](#) property is equal to msoprvtTop, then the possible values for this property position the shape as shown in the following table:

Name	Value	Meaning
msoprMargin	0x00000001	The shape is vertically positioned relative to the margins of the page. 
msoprPage	0x00000002	The shape is vertically positioned relative to the edges of the page. 
msoprText	0x00000003	The shape is vertically positioned relative to the paragraph of text underneath it. 
msoprLine	0x00000004	The shape is vertically positioned relative to the line of text underneath

		<p>it.</p> 
--	--	---

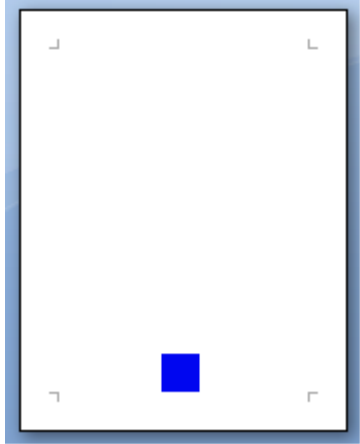
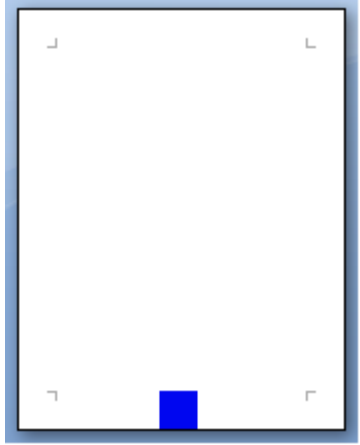
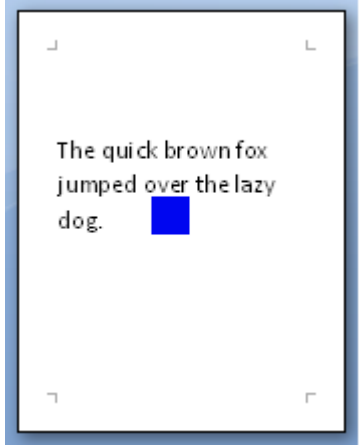
If the value of the [posv](#) property is equal to msopvCenter, then the possible values for this property position the shape as shown in the following table:

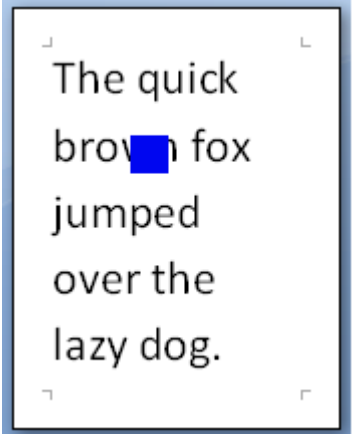
Name	Value	Meaning
msoprMargin	0x00000001	<p>The shape is vertically positioned relative to the margins of the page.</p> 
msoprPage	0x00000002	<p>The shape is vertically positioned relative to the edges of the page.</p> 

msoprvtText	0x00000003	<p>The shape is vertically positioned relative to the paragraph of text underneath it.</p> 
msoprvtLine	0x00000004	<p>The shape is vertically positioned relative to the line of text underneath it.</p> 

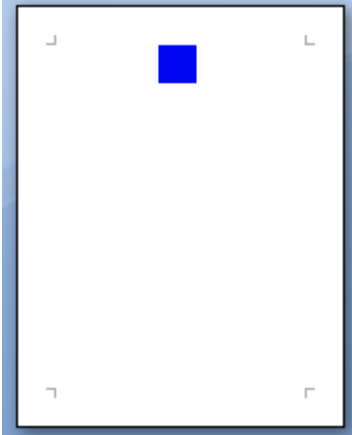
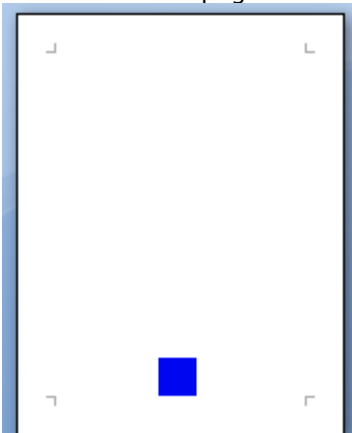
If the value of the [posv](#) property is equal to msopvBottom, then the possible values for this property position the shape as shown in the following table:

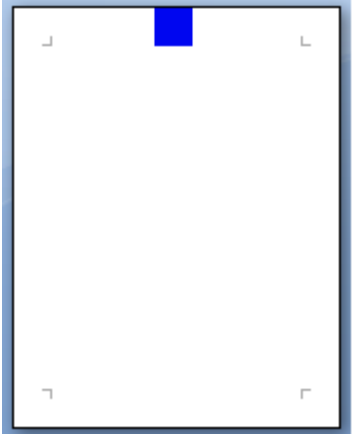
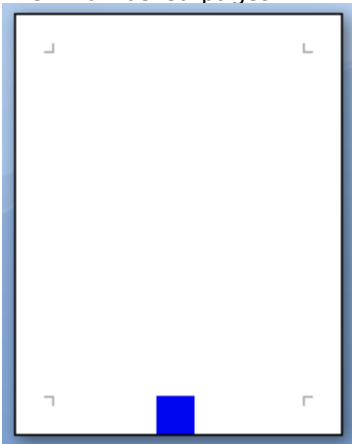
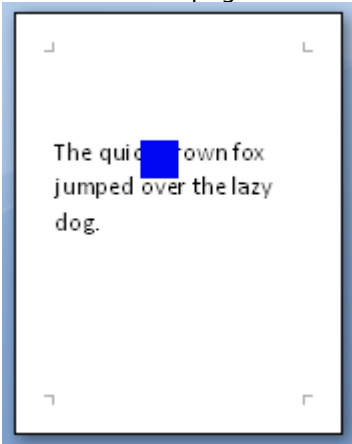
Name	Value	Meaning
msoprvtMargin	0x00000001	The shape is vertically positioned relative to the margins of the page.

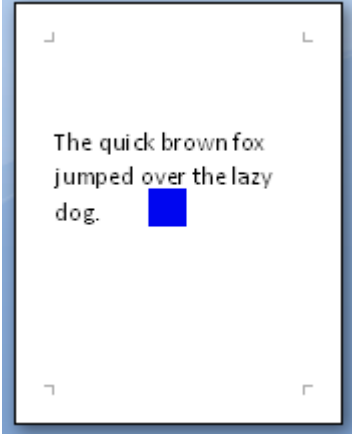
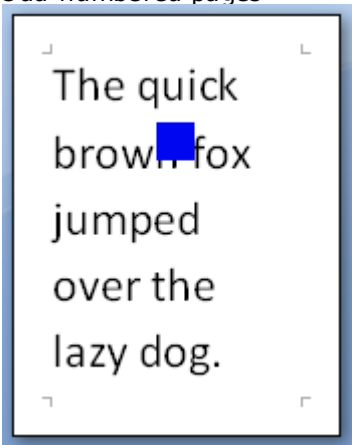
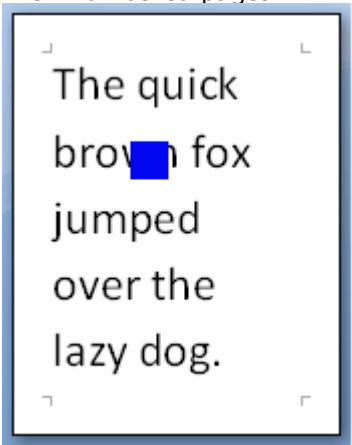
		
msoprPage	0x00000002	<p>The shape is vertically positioned relative to the edges of the page.</p> 
msoprText	0x00000003	<p>The shape is vertically positioned relative to the paragraph of text underneath it.</p> 
msoprLine	0x00000004	<p>The shape is vertically positioned relative to the line of text underneath it.</p>

		
--	--	--

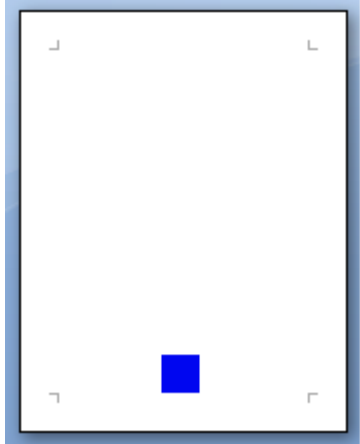
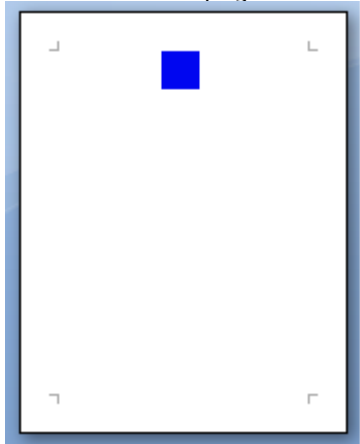
If the value of the [posv](#) property is equal to msopvInside, then the possible values for this property position the shape as shown in the following table:

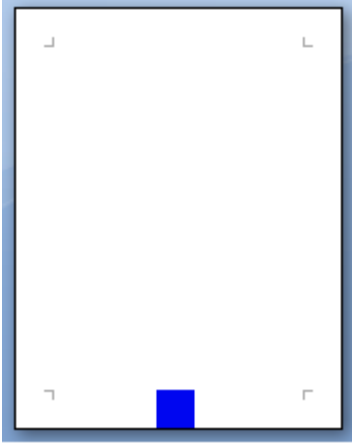
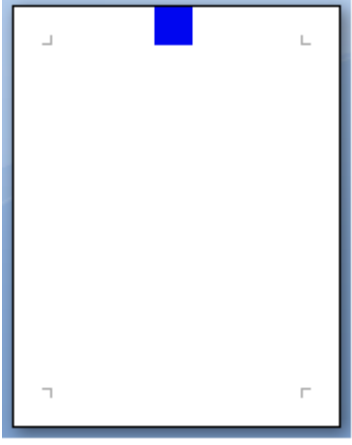

Name	Value	Meaning
msoprMargin	0x00000001	<p>The shape is vertically positioned relative to the margins of the page.</p> <p>Odd-numbered pages</p>  <p>Even-numbered pages</p> 

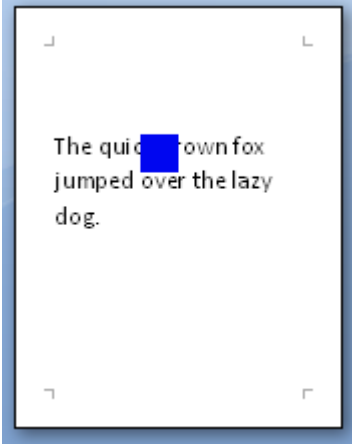
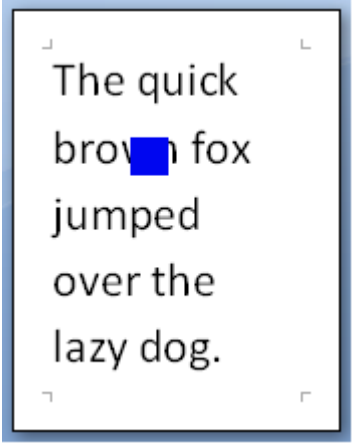
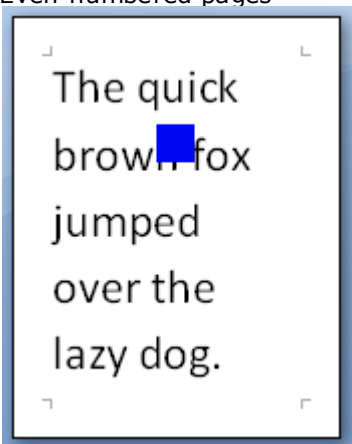
msoprPage	0x00000002	<p>The shape is vertically positioned relative to the edges of the page.</p> <p>Odd-numbered pages</p>  <p>Even-numbered pages</p> 
msoprText	0x00000003	<p>The shape is vertically positioned relative to the paragraph of text underneath it.</p> <p>Odd-numbered pages</p> 

		<p>Even-numbered pages</p> 
msoprVLine	0x00000004	<p>The shape is vertically positioned relative to the line of text underneath it.</p> <p>Odd-numbered pages</p>  <p>Even-numbered pages</p> 

If the value of the [posv](#) property is equal to msopvOutside, then the possible values for this property position the shape as shown in the following table:

Name	Value	Meaning
msoprMargin	0x00000001	<p>The shape is vertically positioned relative to the margins of the page.</p> <p>Odd-numbered pages</p>  <p>Even-numbered pages</p> 
msoprPage	0x00000002	<p>The shape is vertically positioned relative to the edges of the page.</p> <p>Odd-numbered pages</p>

		 <p>Even-numbered pages</p> 
msoprvtText	0x00000003	<p>The shape is vertically positioned relative to the paragraph of text underneath it.</p> <p>Odd-numbered pages</p>  <p>Even-numbered pages</p>

		
msoprLine	0x00000004	<p>The shape is vertically positioned relative to the line of text underneath it.</p> <p>Odd-numbered pages</p>  <p>Even-numbered pages</p> 

2.3.4.23 pctHR

This property specifies the width of a [horizontal rule](#), as a percentage of the page width. This property MAY [<19>](#) be ignored.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																pctHR															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0393.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

pctHR (4 bytes): An unsigned integer that specifies a horizontal rule's width as a percentage of the page's width, in units of 0.1%. The value MUST be greater than or equal to 0x00000000 and less than or equal to 0x000003E8. This property is only used if the **fHorizRule** bit of the [Group Shape Boolean Properties](#) is set.

The default value for this property is 0x000003E8.

2.3.4.24 alignHR

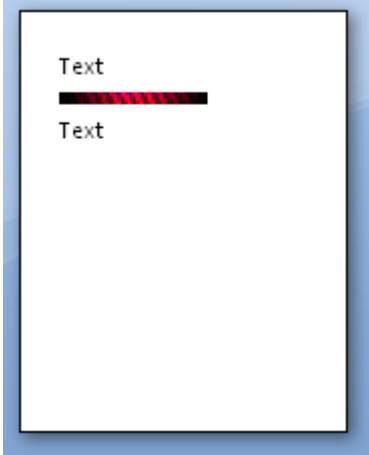
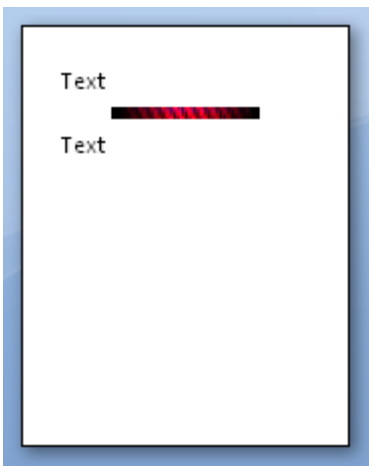
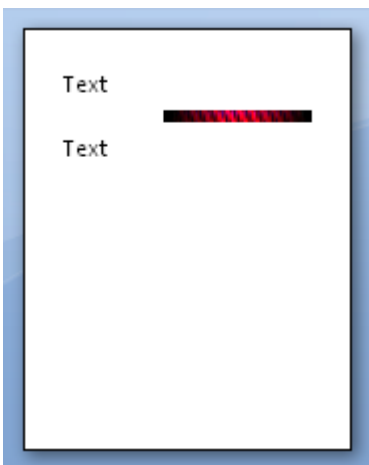
This property specifies the alignment of a horizontal rule. This property MAY [<20>](#) be ignored.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																alignHR															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0394.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

alignHR (4 bytes): An enumeration value which specifies the alignment of a horizontal rule. This property is only used if the **fHorizRule** bit of the [Group Shape Boolean Properties](#) is set. It MUST be one of the following values:

Value	Description
0x00000000	<p>The horizontal rule is left aligned.</p>  <p>The diagram shows a rectangular box with a blue border. Inside, the word 'Text' appears on two separate lines. A thick, red-and-black striped horizontal line is positioned between the two lines of text, starting at the left margin and extending to the right.</p>
0x00000001	<p>The horizontal rule is centered.</p>  <p>The diagram shows a rectangular box with a blue border. Inside, the word 'Text' appears on two separate lines. A thick, red-and-black striped horizontal line is positioned between the two lines of text, centered horizontally relative to the text.</p>
0x00000002	<p>The horizontal rule is right aligned.</p>  <p>The diagram shows a rectangular box with a blue border. Inside, the word 'Text' appears on two separate lines. A thick, red-and-black striped horizontal line is positioned between the two lines of text, aligned to the right margin.</p>

The default value for this property is 0x00000000.

2.3.4.25 dxHeightHR

This property specifies the height of a horizontal rule. This property MAY [<21>](#) be ignored.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																dxHeightHR															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0395.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

dxHeightHR (4 bytes): A signed integer that specifies a horizontal rule's height, in 1440ths of an inch. The value MUST be greater than or equal to 0x00000000. This property is only used if the **fHorizRule** bit of the [Group Shape Boolean Properties](#) is set.

The default value for this property is 0x00000000.

2.3.4.26 dxWidthHR

This property specifies the width of a horizontal rule. This property MAY [<22>](#) be ignored.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																dxWidthHR															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0396.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

dxWidthHR (4 bytes): A signed integer that specifies a horizontal rule's width, in 1440ths of an inch. The value MUST be greater than or equal to 0x00000000. If the [pctHR](#) property is also set, it should be used instead and this property SHOULD be ignored. This property is only used if the **fHorizRule** bit of the [Group Shape Boolean Properties](#) is set.

The default value for this property is 0x00000000.

2.3.4.27 wzScriptExtAttr

This property specifies an extra HTML attribute associated with a script block for a shape if this document is saved as HTML.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																wzScriptExtAttr															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0397.
opid.fBid	Undefined and MUST be ignored.
opid.fComplex	If 0x1 then the wzScriptExtAttr_complex property MUST exist.

wzScriptExtAttr (4 bytes): The number of bytes of data in the [wzScriptExtAttr_complex](#) property. This MUST be 0x00000000 if **opid.fComplex** is 0x0.

The default value for this property is 0x00000000.

2.3.4.28 wzScriptExtAttr_complex

This property specifies additional data for the [wzScriptExtAttr](#) property. This property MUST exist if the **opid.fComplex** bit of the [wzScriptExtAttr](#) property is 0x1.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
wzScriptExtAttr_complex (variable)																															
...																															

wzScriptExtAttr_complex (variable): A Unicode null-terminated string that specifies the extra attribute.

2.3.4.29 scriptLang

This property specifies the language of the script on a shape.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																scriptLang															

...	
-----	--

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0398.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

scriptLang (4 bytes): A signed integer that specifies the scripting language. The value MUST be one of the following values:

0x00000001	JavaScript
0x00000002	VBScript
0x00000003	Active Server Pages (ASP)
0x00000004	Other. Language MUST be specified in the wzScriptLangAttr_complex property.

The default value for this property is 0x00000001.

2.3.4.30 wzScriptLangAttr

This property specifies the scripting language on a shape. This MUST be ignored if the [scriptLang](#) property is any value other than 0x00000004.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																wzScriptLangAttr															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x039A.
opid.fBid	Undefined and MUST be ignored.
opid.fComplex	If 0x1 then the wzScriptLangAttr_complex property MUST exist.

wzScriptLangAttr (4 bytes): The number of bytes of data in the [wzScriptLangAttr_complex](#) property. This MUST be 0x00000000 if **opid.fComplex** is 0x0.

The default value for this property is 0x00000000.

2.3.4.31 wzScriptLangAttr_complex

This property specifies additional data for the [wzScriptLangAttr](#) property. This property MUST exist if the **opid.fComplex** bit of the [wzScriptLangAttr](#) property is 0x1.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
wzScriptLangAttr_complex (variable)																															
...																															

wzScriptLangAttr_complex (variable): A Unicode null-terminated string name of the scripting language used for the script on a shape.

2.3.4.32 borderTopColor

This property specifies the color for the top border for a picture shape.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																borderTopColor															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x039B.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

borderTopColor (4 bytes): An [OfficeArtCOLORREF](#) record that specifies the color.

The default value for this property is 0xFFFFFFFF.

2.3.4.33 borderLeftColor

This property specifies the color for the left border for a picture shape.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																borderLeftColor															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x039C.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

borderLeftColor (4 bytes): An [OfficeArtCOLORREF](#) record that specifies the color.

The default value for this property is 0xFFFFFFFF.

2.3.4.34 borderBottomColor

This property specifies the color for the bottom border for a picture shape.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																borderBottomColor															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x039D.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

borderBottomColor (4 bytes): An [OfficeArtCOLORREF](#) record that specifies the color.

The default value for this property is 0xFFFFFFFF.

2.3.4.35 borderRightColor

This property specifies the color for the right border for a picture shape.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																borderRightColor															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x039E.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

borderRightColor (4 bytes): An [OfficeArtCOLORREF](#) record that specifies the color.

The default value for this property is 0xFFFFFFFF.

2.3.4.36 tableProperties

This property specifies flags for a group which represents a table. This property MAY [<23>](#) be ignored.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																tableProperties															
...																															

opid (2 bytes): An [EscherFOPTEOPID](#) that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x039F.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

tableProperties (4 bytes): A [TABLEFLAGS](#) record that specifies the table-related flags for the group.

The default value for this property is 0x00000000.

2.3.4.37 tableRowProperties

This property specifies the minimum sizes of the rows in a table. This property MAY [<24>](#) be ignored.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																tableRowProperties															
...																															

opid (2 bytes): An [EscherFOPTEOPID](#) that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x03A0.

opid.fBid	Undefined and MUST be ignored.
opid.fComplex	If 0x1 then the tableRowProperties_complex property MUST exist.

tableRowProperties (4 bytes): The number of bytes of data in the [tableRowProperties_complex](#) property. This MUST be 0x00000000 if **opid.fComplex** is 0x0.

The default value for this property is 0x00000000.

2.3.4.38 **tableRowProperties_complex**

This property specifies additional data for the [tableRowProperties](#) property. This property MUST exist if the **opid.fComplex** bit of the [tableRowProperties](#) property is 0x1.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
tableRowProperties_complex (variable)																															
...																															

tableRowProperties_complex (variable): An [IMsoArray](#) record of 32-bit signed integers which specify the minimum heights of the rows in a table, in [master units](#). The minimum heights are used if the rows do not contain wrapped text that would otherwise cause the rows to be taller. The array MUST contain the same number of elements as there are rows in the table. This property SHOULD be ignored if the **fIsTable** bit in the [tableProperties](#) property is 0x00000000.

2.3.4.39 **wzWebBot**

This property specifies content for a FrontPage [Web component](#), as specified in [\[MSDN-WebComp\]](#), associated with a shape if this document is saved as HTML.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																wzWebBot															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x03A5.
opid.fBid	Undefined and MUST be ignored.
opid.fComplex	If 0x1 then wzWebBot_complex MUST exist.

wzWebBot (4 bytes): The number of bytes of data in the [wzWebBot_complex](#) property. This MUST be 0x00000000 if **opid.fComplex** is 0x0.

The default value for this property is 0x00000000.

2.3.4.40 wzWebBot_complex

This property specifies additional data for the [wzWebBot](#) property. This property MUST exist if the **opid.fComplex** bit of the [wzWebBot](#) property is 0x1.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
wzWebBot_complex (variable)																															
...																															

wzWebBot_complex (variable): A Unicode null-terminated string that specifies the contents for the FrontPage Web component.

2.3.4.41 metroBlob

This property specifies alternate XML content for a shape which MAY [ECMA-376 Part 2](#) be ignored. The property specifies a binary serialization of an Open Packaging Conventions container, as specified in [ECMA-376 Part 2](#). The package contains an Office Open XML DrawingML document, as specified in [ECMA-376 Part 4, Section 5](#).

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																metroBlob															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x03A9.
opid.fBid	Undefined and MUST be ignored.
opid.fComplex	If 0x1 then the metroBlob_complex property MUST exist.

metroBlob (4 bytes): The number of bytes of data in the [metroBlob_complex](#) property. This MUST be 0x00000000 if **opid.fComplex** is 0x0.

The default value for this property is 0x00000000.

2.3.4.42 metroBlob_complex

This property specifies additional data for the [metroBlob](#) property. This property MUST exist if the **opid.fComplex** bit of the [metroBlob](#) property is 0x1.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
metroBlob_complex (variable)																															
...																															

2.3.4.43 dhgt

This property specifies the relative [z-order](#) of a shape. This property MAY [<26>](#) be ignored.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																dhgt															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x03AA.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

dhgt (4 bytes): An unsigned integer that specifies the z-order of a shape, relative to the corresponding values for other shapes. Higher z-order values specify that the shape is in front of shapes with lower values. A value of zero means that the z-order is not specified. Only shapes with the same value in the **fBehindDocument** bit of [Group Shape Boolean Properties](#) are compared to each other. All of the shapes behind the document are beneath the other shapes.

The default value for this property is 0x00000000.

2.3.4.44 Group Shape Boolean Properties

This property specifies a 32-bit field of Boolean properties for a shape or a group.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
Q	R	S	T	U	V	W	X	Y	Z	a	b	c	d	e	f																

opid (2 bytes): An [EscherFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x03BF.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

A - fPrint (1 bit): A bit that specifies whether or not this shape will be rendered if the document is printed. This value MUST be ignored if **fUsefPrint** is 0x0.

The default value for this property is 0x1.

B - fHidden (1 bit): A bit that specifies whether this shape will be displayed or not. This value MUST be ignored if **fUsefHidden** is 0x0.

The default value for this property is 0x0.

C - fOneD (1 bit): A bit that is unused and MUST be set to 0x0. This value MUST be ignored if **fUsefOneD** is 0x0.

The default value for this property is 0x0.

D - fIsButton (1 bit): A bit that specifies whether this shape is treated as a button containing navigation information. This value MUST be ignored if **fUsefIsButton** is 0x0.

The default value for this property is 0x0.

E - fOnDbfClickNotify (1 bit): A bit that specifies whether the host application is to be notified when a double-click mouse event occurs for the shape. This value MUST be ignored if **fUsefOnDbfClickNotify** is 0x0.

The default value for this property is 0x0.

F - fBehindDocument (1 bit): A bit that specifies whether this shape is set to display behind other document content. This value MUST be ignored if **fUsefBehindDocument** is 0x0.

The default value for this property is 0x0.

G - fEditedWrap (1 bit): A bit that specifies whether the wrap polygon for this shape has been edited by the user. This value MUST be ignored if **fUsefEditedWrap** is 0x0.

The default value for this property is 0x0.

H - fScriptAnchor (1 bit): A bit that specifies whether this shape is a [script anchor](#). This value MUST be ignored if **fUsefScriptAnchor** is 0x0.

The default value for this property is 0x0.

I - fReallyHidden (1 bit): A bit that specifies whether this shape will be displayed or not. This property only applies to script anchors. The **fScriptAnchor** property MUST be set to 0x1 in order for the value of this property to be used. This value MUST be ignored if **fUsefReallyHidden** is 0x0.

The default value for this property is 0x0.

J - fAllowOverlap (1 bit): A bit that specifies whether this shape is allowed to overlap another shape. This value MUST be ignored if **fUsefAllowOverlap** is 0x0.

The default value for this property is 0x1.

K - fUserDrawn (1 bit): A bit that specifies whether this shape has been added to a document master by the user. This value MUST be ignored if **fUsefUserDrawn** is 0x0.

The default value for this property is 0x0.

L - fHorizRule (1 bit): A bit that specifies whether this shape is a horizontal rule. This value MUST be ignored if **fUsefHorizRule** is 0x0.

The default value for this property is 0x0.

M - fNoshadeHR (1 bit): A bit that specifies whether this horizontal rule uses a solid color fill without shading. This value MUST be ignored if **fUsefNoshadeHR** is 0x0.

The default value for this property is 0x0.

N - fStandardHR (1 bit): A bit that specifies whether this horizontal rule does not contain a picture. This value MUST be ignored if **fUsefStandardHR** is 0x0.

The default value for this property is 0x0.

O - fIsBullet (1 bit): A bit that specifies whether this shape is being used as a [picture bullet](#). This value MUST be ignored if **fUsefIsBullet** is 0x0.

The default value for this property is 0x0.

P - fLayoutInCell (1 bit): A bit that specifies whether this shape is displayed inside a table cell. This value MUST be ignored if **fUsefLayoutInCell** is 0x0.

The default value for this property is 0x1.

Q - fUsefPrint (1 bit): A bit that specifies whether the **fPrint** bit is set. A value of 0x0 specifies that the **fPrint** bit MUST be ignored and the default value be used instead.

The default value for this property is 0x0.

R - fUsefHidden (1 bit): A bit that specifies whether the **fHidden** bit is set. A value of 0x0 specifies that the **fHidden** bit MUST be ignored and the default value be used instead.

The default value for this property is 0x0.

S - fUsefOneD (1 bit): A bit that specifies whether the **fOneD** bit is set. A value of 0x0 specifies that the **fOneD** bit MUST be ignored and the default value be used instead.

The default value for this property is 0x0.

T - fUsefIsButton (1 bit): A bit that specifies whether the **fIsButton** bit is set. A value of 0x0 specifies that the **fIsButton** bit MUST be ignored and the default value be used instead.

The default value for this property is 0x0.

U - fUsefOnDbIClickNotify (1 bit): A bit that specifies whether the **fOnDbIClickNotify** bit is set. A value of 0x0 specifies that the **fOnDbIClickNotify** bit MUST be ignored and the default value be used instead.

The default value for this property is 0x0.

V - fUsefBehindDocument (1 bit): A bit that specifies whether the **fBehindDocument** bit is set. A value of 0x0 specifies that the **fBehindDocument** bit MUST be ignored and the default value be used instead.

The default value for this property is 0x0.

W - fUsefEditedWrap (1 bit): A bit that specifies whether the **fEditedWrap** bit is set. A value of 0x0 specifies that the **fEditedWrap** bit MUST be ignored and the default value be used instead.

The default value for this property is 0x0.

X - fUsefScriptAnchor (1 bit): A bit that specifies whether the **fScriptAnchor** bit is set. A value of 0x0 specifies that the **fScriptAnchor** bit MUST be ignored and the default value be used instead.

The default value for this property is 0x0.

Y - fUsefReallyHidden (1 bit): A bit that specifies whether the **fReallyHidden** bit is set. A value of 0x0 specifies that the **fReallyHidden** bit MUST be ignored and the default value be used instead.

The default value for this property is 0x0.

Z - fUsefAllowOverlap (1 bit): A bit that specifies whether the **fAllowOverlap** bit is set. A value of 0x0 specifies that the **fAllowOverlap** bit MUST be ignored and the default value be used instead.

The default value for this property is 0x0.

a - fUsefUserDrawn (1 bit): A bit that specifies whether the **fUserDrawn** bit is set. A value of 0x0 specifies that the **fUserDrawn** bit MUST be ignored and the default value be used instead.

The default value for this property is 0x0.

b - fUsefHorizRule (1 bit): A bit that specifies whether the **fHorizRule** bit is set. A value of 0x0 specifies that the **fHorizRule** bit MUST be ignored and the default value be used instead.

The default value for this property is 0x0.

c - fUsefNoshadeHR (1 bit): A bit that specifies whether the **fNoshadeHR** bit is set. A value of 0x0 specifies that the **fNoshadeHR** bit MUST be ignored and the default value be used instead.

The default value for this property is 0x0.

d - fUsefStandardHR (1 bit): A bit that specifies whether the **fStandardHR** bit is set. A value of 0x0 specifies that the **fStandardHR** bit MUST be ignored and the default value be used instead.

The default value for this property is 0x0.

e - fUsefIsBullet (1 bit): A bit that specifies whether the **fIsBullet** bit is set. A value of 0x0 specifies that the **fIsBullet** bit MUST be ignored and the default value be used instead.

The default value for this property is 0x0.

f - fUsefLayoutInCell (1 bit): A bit that specifies whether the **fLayoutInCell** bit is set. A value of 0x0 specifies that the **fLayoutInCell** bit MUST be ignored and the default value be used instead.

The default value for this property is 0x0.

2.3.5 Group Shape 2

This property set specifies the relative position and size attributes of the shape.

2.3.5.1 pctHoriz

This property specifies the width of a shape specified as a percentage relative to the width of a page element. This property MAY [<27>](#) be ignored.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																pctHoriz															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x07C0.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

pctHoriz (4 bytes): An unsigned integer that specifies a shape's width as a percentage relative to the width of a page element. The page element is specified by the [sizerelh](#) property. Units are specified in increments of 0.1%. This value MUST be greater than or equal to 0x00000000 and less than or equal to 0x00002710.

The default value for this property is 0x00000000.

2.3.5.2 pctVert

This property specifies the height of a shape specified as a percentage relative to the height of a page element. This property MAY [<28>](#) be ignored.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																pctVert															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x07C1.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

pctVert (4 bytes): An unsigned integer that specifies a shape's height as a percentage relative to the height of a page element. The page element is specified by **sizerelv**. Units are specified in units of 0.1%. This value MUST be greater than or equal to 0x00000000 and less than or equal to 0x00002710.

The default value for this property is 0x00000000.

2.3.5.3 pctHorizPos

This property specifies the horizontal position of a shape specified as a percentage offset relative to the layout of a page element. The page element is specified by the [Group Shape:posrelh](#) property. This property MAY [<29>](#) be ignored.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																pctHorizPos															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x07C2.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

pctHorizPos (4 bytes): A signed integer that specifies a shape's horizontal position as a percentage offset relative to the horizontal position of a page element. Units are specified in increments of 0.1%. This value MUST be greater than or equal to 0xFFFFD8EF and less than or equal to 0x00002710. A value of 0x00000000 specifies that the horizontal position is equal to the page element's left edge; a value of 0x00002710 specifies that the horizontal position is equal to the page element's right edge. A value of 0xFFFFD8EF specifies that the shape's horizontal position is not a relative percentage offset and is not specified by this field.

The default value for this property is 0xFFFFD8EF.

2.3.5.4 pctVertPos

This property specifies the vertical position of a shape specified as a percentage offset relative to the layout of a page element. The page element is specified by the [Group Shape:posrelv](#) property. This property MAY [<30>](#) be ignored.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																pctVertPos															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x07C3.
opid.fBid	MUST be 0x0.

opid.fComplex	MUST be 0x0.
----------------------	--------------

pctVertPos (4 bytes): A signed integer that specifies a shape's vertical position as a percentage offset relative to the vertical position of a page element. Units are specified in increments of 0.1%. This value MUST be greater than or equal to 0xFFFFD8EF and less than or equal to 0x00002710. A value of 0x00000000 specifies that the vertical position is equal to the page element's top edge; a value of 0x00002710 specifies that the vertical position is equal to the page element's bottom edge. A value of 0xFFFFD8EF specifies that the shape's vertical position is not a relative percentage offset and is not specified by this field.

The default value for this property is 0xFFFFD8EF.

2.3.5.5 sizereh

This property specifies the page element that has a width equal to 100% for **pctHoriz**. The element is either the page or a part of the page on which the shape is located. This property MAY [<31>](#) be ignored.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																sizereh															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x07C4.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

sizereh (4 bytes): An unsigned integer that specifies the page element whose width is equal to 100% for **pctHoriz**. The element is either the page or a part of the page on which the shape is located. This value MUST be one of the following values.

Name	Value	Description
msosrhMargin	0x00000000	Page excluding margins.
msosrhPage	0x00000001	Page.
msosrhLeftMargin	0x00000002	Left margin.
msosrhRightMargin	0x00000003	Right margin.
msosrhInsideMargin	0x00000004	Inside margin .
msosrhOutsideMargin	0x00000005	Outside margin .

The default value for this property is msosrhPage.

2.3.5.6 sizereh

This property specifies the page element that has a height equal to 100% for **pctVert**. This property MAY [<32>](#) be ignored.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																sizerv															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x07C5.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

sizerv (4 bytes): An unsigned integer that specifies the page element whose height is equal to 100% for **pctVert**. The element is either the page or a part of the page on which the shape is located. This value MUST be one of the following values.

Name	Value	Description
msosrvMargin	0x00000000	Page excluding margins.
msosrvPage	0x00000001	Page.
msosrvTopMargin	0x00000002	Top margin.
msosrvBottomMargin	0x00000003	Bottom margin.
msosrvInsideMargin	0x00000004	Inside margin.
msosrvOutsideMargin	0x00000005	Outside margin.

The default value for this property is msosrvPage.

2.3.6 Geometry

This property set specifies the structure of a shape, including its points and how those points are connected. These properties also specify how the shape scales in size and how the user may manipulate that scaling.

2.3.6.1 geoLeft

This property specifies the left coordinate of the geometry space for this shape.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																geoLeft															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0140.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

geoLeft (4 bytes): A signed integer specifying the left coordinate of the geometry space coordinate system for this shape. The **geoLeft**, [geoTop](#), [geoRight](#), and [geoBottom](#) properties combine to define a rectangle that specifies an arbitrary coordinate system, called geometry space, that geometry coordinates are specified in. When a shape is rendered, any points specified in geometry space are translated into the coordinate system of the shape by matching the geometry space rectangle with the bounding rectangle of the shape and scaling appropriately.

The default value for this property is 0x00000000.

2.3.6.2 geoTop

This property specifies the top coordinate of the geometry space for this shape.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																geoTop															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0141.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

geoTop (4 bytes): A signed integer specifying the top coordinate of the geometry space coordinate system for this shape. The [geoLeft](#), **geoTop**, [geoRight](#), and [geoBottom](#) properties combine to define a rectangle that specifies an arbitrary coordinate system, called geometry space, that geometry coordinates are specified in. When a shape is rendered, any points specified in geometry space are translated into the coordinate system of the shape by matching the geometry space rectangle with the bounding rectangle of the shape and scaling appropriately.

The default value for this property is 0x00000000.

2.3.6.3 geoRight

This property specifies the right coordinate of the geometry space for this shape.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																geoRight															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0142.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

geoRight (4 bytes): A signed integer specifying the bottom coordinate of the geometry space coordinate system for this shape. The [geoLeft](#), [geoTop](#), **geoRight**, and [geoBottom](#) properties combine to define a rectangle that specifies an arbitrary coordinate system, called geometry space, that geometry coordinates are specified in. When a shape is rendered, any points specified in geometry space are translated into the coordinate system of the shape by matching the geometry space rectangle with the bounding rectangle of the shape and scaling appropriately.

The default value for this property is 0x00005460.

2.3.6.4 geoBottom

This property specifies the bottom coordinate of the geometry space for this shape.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																geoBottom															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0143.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

geoBottom (4 bytes): A signed integer specifying the bottom coordinate of the geometry space coordinate system for this shape. The [geoLeft](#), [geoTop](#), [geoRight](#), and **geoBottom** properties combine to define a rectangle that specifies an arbitrary coordinate system, called geometry space, that geometry coordinates are specified in. When a shape is rendered, any points specified in geometry space are translated into the coordinate system of the shape by matching the geometry space rectangle with the bounding rectangle of the shape and scaling appropriately.

The default value for this property is 0x00005460.

2.3.6.5 shapePath

This property specifies the way that lines in this shape are to be drawn.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																shapePath															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0144.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

shapePath (4 bytes): An [MSOSHAPEPATH](#) enumeration value that specifies how vertices in this shape, as specified in the [pVertices complex](#) property, are connected. If the value is msoshapeComplex, then the [pSegmentInfo complex](#) property MUST exist and contain the more detailed instructions on how to connect vertices in this shape. If the [pSegmentInfo complex](#) property is not NULL and not empty, then this property MUST be ignored and the connections between vertices are specified by the [pSegmentInfo complex](#) property.

The default value for this property is msoshapeLinesClosed.

2.3.6.6 pVertices

This property specifies the set of points that make up this shape.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																pVertices															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0145.
opid.fBid	Undefined and MUST be ignored.
opid.fComplex	If 0x1 then the pVertices complex property MUST exist.

pVertices (4 bytes): The number of bytes of data in the [pVertices_complex](#) property. This value MUST be 0x00000000 if **opid.fComplex** is 0x0.

The default value for this property is 0x00000000.

2.3.6.7 pVertices_complex

This property specifies additional data for the [pVertices](#) property. This property MUST exist if the **opid.fComplex** bit of the [pVertices](#) property is 0x1.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
pVertices_complex (variable)																															
...																															

pVertices_complex (variable): An [IMsoArray](#) record of [POINT](#) records used to represent the points that make up this shape's geometry. The point coordinates are specified in geometry space units unless the coordinate is in the range from 0x80000000 to 0x8000007F. In that case, the value is not used directly; instead, the value used is calculated by subtracting 0x80000000 and then using that value as a zero-based index into the [pGuides_complex](#) property array to specify what value is used to control the position of that coordinate. The way that the points are connected is specified by a combination of the [shapePath](#) and [pSegmentInfo_complex](#) properties.

2.3.6.8 pSegmentInfo

This property specifies how the vertices specified by this shape's [pVertices_complex](#) property are connected.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																pSegmentInfo															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0146.
opid.fBid	Undefined and MUST be ignored.
opid.fComplex	If 0x1 then the pSegmentInfo_complex property MUST exist.

pSegmentInfo (4 bytes): The number of bytes of data in the [pSegmentInfo_complex](#) property. This value MUST be 0x00000000 if **opid.fComplex** is 0x0.

The default value for this property is 0x00000000.

2.3.6.9 pSegmentInfo_complex

This property specifies additional data for the [pSegmentInfo](#) property. This property MUST exist if the **opid.fComplex** bit of the [pSegmentInfo](#) property is 0x1.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
pSegmentInfo_complex (variable)																															
...																															

pSegmentInfo_complex (variable): An [IMsoArray](#) record of [MSOPATHINFO](#) records that specify how this shape's vertices, specified in the [pVertices_complex](#) property, are connected.

2.3.6.10 adjustValue

This property specifies a value that a user can change to adjust the shape's geometry. This is accomplished by the interaction of several properties of this shape. An adjust handle specified in the [pAdjustHandles_complex](#) property controls how the user's input is translated into a value in geometry space to store in this property. That value is used as a parameter in the formulas of the [pGuides_complex](#) property array. The output from the [pGuides_complex](#) property array is a set of values that can be used to control the geometry of the shape, but those values cannot be edited by the user. The [pVertices_complex](#) property array refers to the values output from the [pGuides_complex](#) property array to specify where its vertices lie in geometry space. Because of these interactions, the meaning of this value is dependent on the individual shape type and the formulas specified for that shape type.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																adjustValue															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0147.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

adjustValue (4 bytes): A signed integer value used to adjust this shape's geometry.

The default value for this property is 0x00000000.

2.3.6.11 adjust2Value

This property specifies a value that a user can change to adjust the shape's geometry. This is accomplished by the interaction of several properties of this shape. An adjust handle specified in the

0	1	2	3	4	5	6	7	8	9	0 ¹	1	2	3	4	5	6	7	8	9	0 ²	1	2	3	4	5	6	7	8	9	0 ³	1
opid																adjust2Value															
...																															

Field	Meaning
opid.opid	MUST be 0x0148.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

The default value for this property is 0x00000000.

This property specifies a value that a user can change to adjust the shape's geometry. This is accomplished by the interaction of several properties of this shape. An adjust handle specified in the [pAdjustHandles_complex](#) property controls how the user's input is translated into a value in geometry space to store in this property. That value is used as a parameter in the formulas of the [pGuides_complex](#) property array. The output from the [pGuides_complex](#) property array is a set of values that can be used to control the geometry of the shape, but those values cannot be edited by the user. The [pVertices_complex](#) property array refers to the values output from the [pGuides_complex](#) property array to specify where its vertices lie in geometry space. Because of these interactions, the meaning of this value is dependent on the individual shape type and the formulas specified for that shape type.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																adjust3Value															
...																															

MS-ODRAW – 1.0
MS-ODRAW: Office Drawing Binary File Format Structure Specification
Copyright © 2008 Microsoft Corporation
Release: June 27, 2008

Field	Meaning
opid.opid	MUST be 0x0149.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

adjust3Value (4 bytes): A signed integer value used to adjust this shape's geometry.

The default value for this property is 0x00000000.

2.3.6.13 adjust4Value

This property specifies a value that a user can change to adjust the shape's geometry. This is accomplished by the interaction of several properties of this shape. An adjust handle specified in the [pAdjustHandles_complex](#) property controls how the user's input is translated into a value in geometry space to store in this property. That value is used as a parameter in the formulas of the [pGuides_complex](#) property array. The output from the [pGuides_complex](#) property array is a set of values that can be used to control the geometry of the shape, but those values cannot be edited by the user. The [pVertices_complex](#) property array refers to the values output from the [pGuides_complex](#) property array to specify where its vertices lie in geometry space. Because of these interactions, the meaning of this value is dependent on the individual shape type and the formulas specified for that shape type.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																adjust4Value															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x014A.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

adjust4Value (4 bytes): A signed integer value used to adjust this shape's geometry.

The default value for this property is 0x00000000.

2.3.6.14 adjust5Value

This property specifies a value that a user can change to adjust the shape's geometry. This is accomplished by the interaction of several properties of this shape. An adjust handle specified in the [pAdjustHandles_complex](#) property controls how the user's input is translated into a value in geometry space to store in this property. That value is used as a parameter in the formulas of the [pGuides_complex](#) property array. The output from the [pGuides_complex](#) property array is a set of values that can be used to control the geometry of the shape, but those values cannot be edited by the user. The [pVertices_complex](#) property array refers to the values output from the [pGuides_complex](#) property array to specify where its vertices lie in geometry space. Because of these interactions, the

meaning of this value is dependent on the individual shape type and the formulas specified for that shape type.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																adjust5Value															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x014B.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

adjust5Value (4 bytes): A signed integer value used to adjust this shape's geometry.

The default value for this property is 0x00000000.

2.3.6.15 adjust6Value

This property specifies a value that a user can change to adjust the shape's geometry. This is accomplished by the interaction of several properties of this shape. An adjust handle specified in the [pAdjustHandles complex](#) property controls how the user's input is translated into a value in geometry space to store in this property. That value is used as a parameter in the formulas of the [pGuides complex](#) property array. The output from the [pGuides complex](#) property array is a set of values that can be used to control the geometry of the shape, but those values cannot be edited by the user. The [pVertices complex](#) property array refers to the values output from the [pGuides complex](#) property array to specify where its vertices lie in geometry space. Because of these interactions, the meaning of this value is dependent on the individual shape type and the formulas specified for that shape type.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																adjust6Value															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x014C.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

adjust6Value (4 bytes): A signed integer value used to adjust this shape's geometry.

The default value for this property is 0x00000000.

2.3.6.16 adjust7Value

This property specifies a value that a user can change to adjust the shape's geometry. This is accomplished by the interaction of several properties of this shape. An adjust handle specified in the [pAdjustHandles_complex](#) property controls how the user's input is translated into a value in geometry space to store in this property. That value is used as a parameter in the formulas of the [pGuides_complex](#) property array. The output from the [pGuides_complex](#) property array is a set of values that can be used to control the geometry of the shape, but those values cannot be edited by the user. The [pVertices_complex](#) property array refers to the values output from the [pGuides_complex](#) property array to specify where its vertices lie in geometry space. Because of these interactions, the meaning of this value is dependent on the individual shape type and the formulas specified for that shape type.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																adjust7Value															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x014D.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

adjust7Value (4 bytes): A signed integer value used to adjust this shape's geometry.

The default value for this property is 0x00000000.

2.3.6.17 adjust8Value

This property specifies a value that a user can change to adjust the shape's geometry. This is accomplished by the interaction of several properties of this shape. An adjust handle specified in the [pAdjustHandles_complex](#) property controls how the user's input is translated into a value in geometry space to store in this property. That value is used as a parameter in the formulas of the [pGuides_complex](#) property array. The output from the [pGuides_complex](#) property array is a set of values that can be used to control the geometry of the shape, but those values cannot be edited by the user. The [pVertices_complex](#) property array refers to the values output from the [pGuides_complex](#) property array to specify where its vertices lie in geometry space. Because of these interactions, the meaning of this value is dependent on the individual shape type and the formulas specified for that shape type.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																adjust8Value															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x014E.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

adjust8Value (4 bytes): A signed integer value used to adjust this shape's geometry.

The default value for this property is 0x00000000.

2.3.6.18 pConnectionSites

This property specifies an array of connection sites that a user can use to make a link between shapes.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																pConnectionSites															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0151.
opid.fBid	Undefined and MUST be ignored.
opid.fComplex	If 0x1 then the pConnectionSites_complex property MUST exist.

pConnectionSites (4 bytes): The number of bytes of data in the [pConnectionSites_complex](#) property. This value MUST be 0x00000000 if **opid.fComplex** is 0x0.

The default value for this property is 0x00000000.

2.3.6.19 pConnectionSites_complex

This property specifies additional data for the [pConnectionSites](#) property. This property MUST exist if the **opid.fComplex** bit of the [pConnectionSites:fComplex](#) property is 0x1.

0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1
pConnectionSites_complex (variable)																															
...																															

pConnectionSites_complex (variable): An [IMsoArray](#) record of [POINT](#) records specifying where connection sites are located on this shape. If the [cxk](#) property is not msocxkCustom, then this property MUST be ignored. The point coordinates are specified in geometry space units unless the coordinate is in the range from 0x80000000 to 0x8000007F. In that case, the value is not used directly; instead, the value used is calculated by subtracting 0x80000000 and then using that value as a zero-based index into the [pGuides_complex](#) property array to specify what value is used to control the position of that coordinate.

2.3.6.20 pConnectionSitesDir

This property specifies an array of angles corresponding to the connection sites in the [pConnectionSites_complex](#) property that are used to determine the direction that a connector links to the corresponding connection site.

0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1
opid																pConnectionSitesDir															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0152.
opid.fBid	Undefined and MUST be ignored.
opid.fComplex	If 0x1 then the pConnectionSitesDir_complex property MUST exist.

pConnectionSitesDir (4 bytes): The number of bytes of data in the [pConnectionSitesDir_complex](#) property. This value MUST be 0x00000000 if **opid.fComplex** is 0x0.

The default value for this property is 0x00000000.

2.3.6.21 pConnectionSitesDir_complex

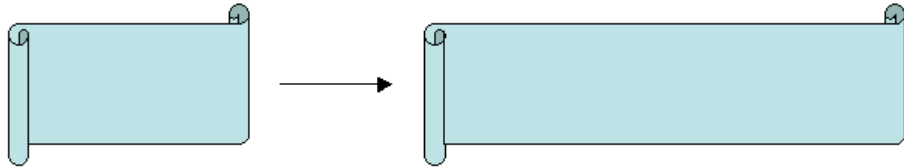
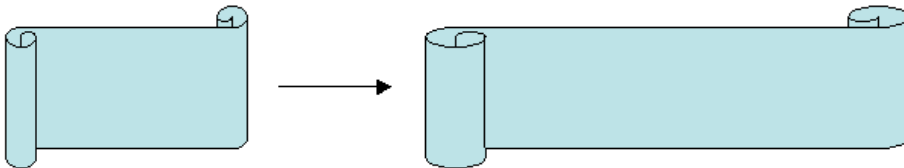
This property specifies additional data for the [pConnectionSitesDir](#) property. This property MUST exist if the **opid.fComplex** bit of the [pConnectionSitesDir](#) property is 0x1.

0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1
pConnectionSitesDir_complex (variable)																															
...																															

pConnectionSitesDir_complex (variable): An [IMsoArray](#) record of FixedPoints, as specified in [\[MS-OSHARED\] section 2.2.1.6](#), representing the angles in degrees at which a connector SHOULD connect to the corresponding connection site in the [pConnectionSites_complex](#) property. If this property is specified, then it MUST contain the same number of elements as the [pConnectionSites_complex](#) property.

2.3.6.22 xLimo

This property specifies an x coordinate above which limousine scaling is used in the horizontal direction. This means that points whose x coordinate is greater than **xLimo** have their x coordinates incremented rather than linearly scaled. The net effect is that area is added to the shape's interior without modifying the geometry on the sides.

xLimo specified	Meaning
Yes	 <p>Resizing the shape in the horizontal direction causes points whose x coordinates are greater than xLimo to be incremented rather than scaled.</p>
No	 <p>Resizing the shape in the horizontal direction causes all points' x coordinates to be linearly scaled.</p>

0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1
opid																xLimo															
...																															
0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1
opid																xLimo															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

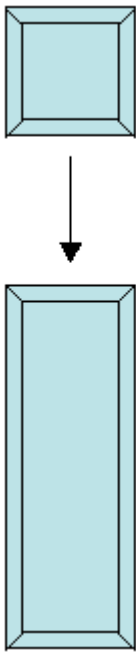
Field	Meaning
opid.opid	MUST be 0x0153.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

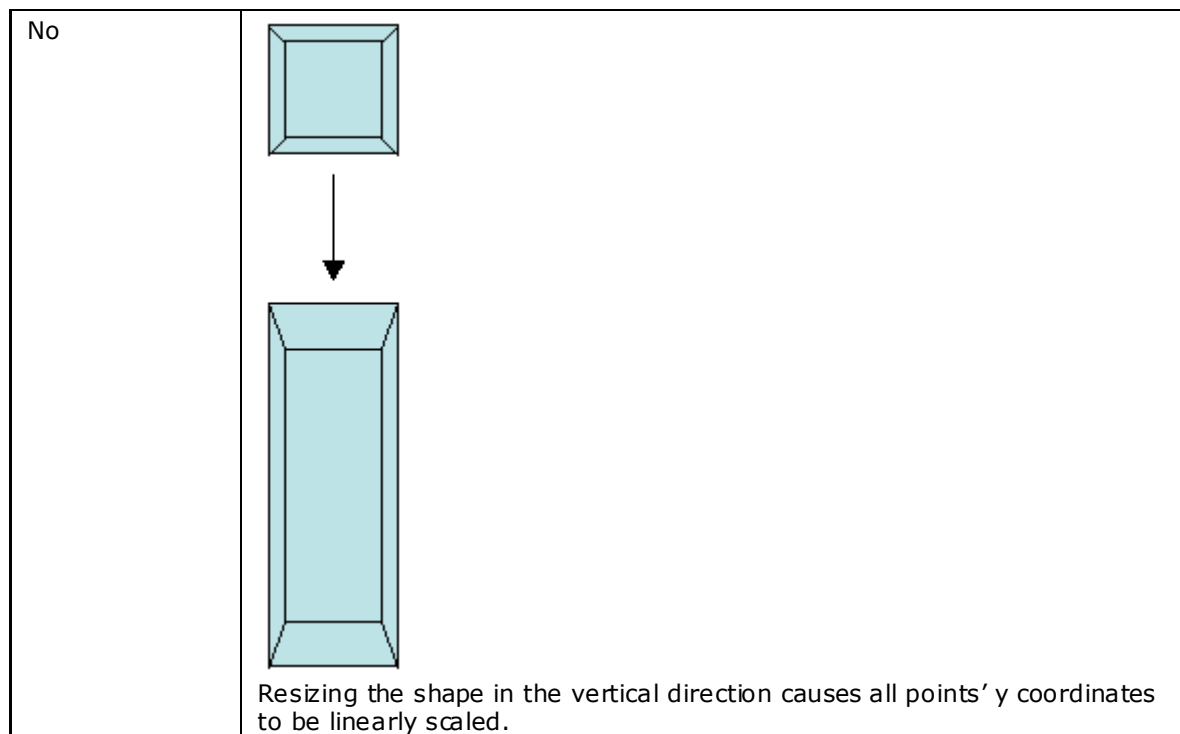
xLimo (4 bytes): A signed integer x coordinate in geometry space that specifies a value above which limousine scaling is used.

The default value for this property is 0x80000000.

2.3.6.23 yLimo

This property specifies an x coordinate above which limousine scaling is used in the vertical direction. This means that points whose y coordinate is greater than **yLimo** have their y coordinates incremented rather than linearly scaled. The net effect is that area is added to the shape's interior without modifying the geometry on the sides.

yLimo specified	Meaning
Yes	 <p>Resizing the shape in the vertical direction causes points whose y coordinates are greater than yLimo to be incremented rather than scaled.</p>



0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																yLimo															
...																															
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																yLimo															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0154.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

yLimo (4 bytes): A signed integer y coordinate in geometry space that specifies a value above which limousine scaling is used.

The default value for this property is 0x80000000.

2.3.6.24 pAdjustHandles

This property specifies an array of adjust handles which allow a user to manipulate the geometry of this shape.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																pAdjustHandles															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0155.
opid.fBid	Undefined and MUST be ignored.
opid.fComplex	If 0x1 then pAdjustHandles_complex MUST exist.

pAdjustHandles (4 bytes): The number of bytes of data in the [pAdjustHandles_complex](#) property. This value MUST be 0x00000000 if **opid.fComplex** is 0x0.

The default value for this property is 0x00000000.

2.3.6.25 pAdjustHandles_complex

This property specifies additional data for the [pAdjustHandles](#) property. This property MUST exist if the **opid.fComplex** bit of the [pAdjustHandles](#) property bit is 0x1.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
pAdjustHandles_complex (variable)																															
...																															

pAdjustHandles_complex (variable): An [IMsoArray](#) record of [ADJH](#) records specifying a set of adjust handles which SHOULD [<33>](#) be used to allow a user to manipulate the geometry of this shape.

2.3.6.26 pGuides

This property specifies a set of formulas used to calculate values for use in defining the geometry of this shape.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																pGuides															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0156.
opid.fBid	Undefined and MUST be ignored.
opid.fComplex	If 0x1 then the pGuides_complex property MUST exist.

pGuides (4 bytes): The number of bytes of data in the [pGuides_complex](#) property. This value MUST be 0x00000000 if **opid.fComplex** is 0x0.

The default value for this property is 0x00000000.

2.3.6.27 pGuides_complex

This property specifies additional data for the [pGuides](#) property. This property MUST exist if the **opid.fComplex** bit of the [pGuides](#) property is 0x1.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
pGuides_complex (variable)																															
...																															

pGuides_complex (variable): An [IMsoArray](#) record of [SG](#) records that specifies a set of values that are used to define the geometry of this shape. This array MUST NOT have more than 128 elements.

2.3.6.28 pInscribe

This property specifies an array of rectangles specifying how text should be inscribed within this shape.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																pInscribe															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0157.
opid.fBid	Undefined and MUST be ignored.
opid.fComplex	If 0x1 then the pInscribe_complex property MUST exist.

pInscribe (4 bytes): The number of bytes of data in the [pInscribe_complex](#) property. This value MUST be 0x00000000 if **opid.fComplex** is 0x0.

The default value for this property is 0x00000000.

2.3.6.29 pInscribe_complex

This property specifies additional data for the [pInscribe](#) property. This property MUST exist if the **opid.fComplex** bit of the [pInscribe](#) property is 0x1.

0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1
pInscribe_complex (variable)																															
...																															

pInscribe_complex (variable): An [IMsoArray](#) record of [RECT](#) records specifying the rectangle in which text is inscribed within this shape. The values of the coordinates in the [RECT](#) record are specified in geometry space, unless they are in the range from 0x80000000 to 0x8000007F. In that case, the value is not used directly; instead, the value used is calculated by subtracting 0x80000000 and then using that value as an index into the [pGuides_complex](#) property array to specify what value is used.

The algorithm for calculating the inscribed rectangle varies based on the number of rectangles provided, and whether the text is in a horizontal or vertical layout. Text is laid out vertically if this shape's [txflTextFlow](#) property is msotxfITtoBA, msotxfIBtoT, msotxfITtoBN, or msotxfIVertN; otherwise, it is laid out horizontally. The number of rectangles provided MUST be 0, 1, 2, 3 or 6.

Number of Rectangles	Meaning
0	Text is inscribed in the shape's rectangle.
1	Text is inscribed in the single rectangle provided.
2	If the text is in a horizontal layout, then it is inscribed in the first rectangle provided. If the text is in a vertical layout, then it is inscribed in the second rectangle provided.
3	The three rectangles specify min, mid, and max rectangles to use for both vertical and horizontal layouts. If the pAdjustHandles_complex property is not specified or empty, then the min rectangle is used. Otherwise, the adjustValue property and the first ADJH record in the pAdjustHandles_complex property are used to determine how to interpolate between the three rectangles. If the pAdjustHandles_complex property's first ADJH record's apX value is controlling the adjustValue property because it's equal to 0x00000100, then the adjustValue property is compared against the xMin and xMax . Otherwise, it's compared against yMin and yMax . If the adjustValue property is less than the midway point between these values, then the inscribed

	rectangle is calculated by a linear interpolation between the min and mid rectangles. If the adjustValue property is greater than the midway point between these values, then the inscribed rectangle is calculated by a linear interpolation between the mid and max rectangles.
6	The first three rectangles specify min, mid, and max rectangles to use if the text is in a horizontal layout. The last three rectangles specify the min, mid, and max rectangles to use if the text is in a vertical layout. Then, the same algorithm from the 3 rectangles case is used.

2.3.6.30 cxx

This property specifies where [connection points](#) are on the shape.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																cxx															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0158.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

cxx (4 bytes): An [MSOCXX](#) enumeration value specifying where connection points are on the shape. If the value is msocxxCustom, then the [pConnectionSites_complex](#) property specifies where the custom connection points are located.

The default value for this property is msocxxSegments.

2.3.6.31 Geometry Boolean Properties

This property specifies a 32-bit field of Boolean properties for the geometry properties of the shape.

											1										2												3	
0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1			
opid																A	B	C	D	E	F	G	unused2											
H	I	J	K	L	M	N	unused4																											

opid (2 bytes): An [EscherFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x017F.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

A - fFillOK (1 bit): A bit that specifies whether to display the fill of this shape. This value MUST be ignored if **fUsefFillOK** is 0x0.

The default value for this property is 0x1.

B - fFillShadeShapeOK (1 bit): A bit that specifies whether the fill is aligned to the shape. A value of 0x0 specifies that the fill is aligned to the [bounding rectangle](#) of the shape. A value of 0x1 specifies that the fill is aligned to the shape itself. This value MUST be ignored if **fUsefFillShadeShapeOK** is 0x0.

The default value for this property is 0x0.

C - fGtextOK (1 bit): A bit that specifies whether to display the text aligned to this shape. This value MUST be ignored if **fUsefGtextOK** is 0x0.

The default value for this property is 0x0.

D - fLineOK (1 bit): A bit that specifies whether to display the line of this shape. This value MUST be ignored if **fUsefLineOK** is 0x0.

The default value for this property is 0x1.

E - f3DOK (1 bit): A bit that specifies whether to display the extrusion effect of this shape. This value MUST be ignored if **fUsef3DOK** is 0x0.

The default value for this property is 0x1.

F - fShadowOK (1 bit): A bit that specifies whether to display the shadow of this shape. The value SHOULD [<34>](#) be ignored. This value MUST be ignored if **fUsefShadowOK** is 0x0.

The default value for this property is 0x1.

G - unused1 (1 bit): Undefined and MUST be ignored.

unused2 (9 bits): Undefined and MUST be ignored.

H - fUsefFillOK (1 bit): A bit that specifies whether the **fFillOK** bit is set. A value of 0x0 specifies that the **fFillOK** bit MUST be ignored and the default value be used instead.

The default value for this property is 0x0.

I - fUsefFillShadeShapeOK (1 bit): A bit that specifies whether the **fFillShadeShapeOK** bit is set. A value of 0 specifies that the **fFillShadeShapeOK** bit MUST be ignored and the default value be used instead.

The default value for this property is 0x0.

J - fUsefGtextOK (1 bit): A bit that specifies whether the **fGtextOK** bit is set. A value of 0x0 specifies that the **fGtextOK** bit MUST be ignored and the default value be used instead.

The default value for this property is 0x0.

K - fUsefLineOK (1 bit): A bit that specifies whether the **fLineOK** bit is set. A value of 0x0 specifies that the **fLineOK** bit MUST be ignored and the default value be used instead.

The default value for this property is 0x0.

L - fUsef3DOK (1 bit): A bit that specifies whether the **f3DOK** bit is set. A value of 0x0 specifies that the **f3DOK** bit MUST be ignored and the default value be used instead.

The default value for this property is 0x0

M - fUsefShadowOK (1 bit): A bit that specifies whether the **fShadowOK** bit is set. A value of 0x0 specifies that the **fShadowOK** bit MUST be ignored and the default value be used instead.

The default value for this property is 0x0.

N - unused3 (1 bit): Undefined and MUST be ignored.

unused4 (9 bits): Undefined and MUST be ignored.

2.3.7 Fill Style

This property set specifies the fill attributes of the shape or the background of the [slide](#).

2.3.7.1 fillType

This property specifies the type of the fill to display with the shape or the background of the slide.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																fillType															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0180.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

fillType (4 bytes): An [MSOFILLTYPE](#) enumeration value that specifies the type of the fill.

The default value for this property is msosolid.

2.3.7.2 fillColor

This property specifies the foreground color of the fill.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																fillColor															

...	
-----	--

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0181.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

fillColor (4 bytes): An [OfficeArtCOLORREF](#) record that specifies the foreground color of the fill. The [fillColor](#) and [fillBackColor](#) properties are interpreted by the value of the [fillType](#) property:

fillType	fillColor	fillBackColor
msofillSolid	Foreground color.	Unused.
msofillPattern	Foreground color of the pattern.	Background color of the pattern.
msofillTexture	Unused.	Unused.
msofillPicture	Unused.	Unused.
msofillShade	The first color of the shade if the fillShadeColors_complex property is used.	The last color of the shade if the fillShadeColors_complex property is used.
msofillShadeCenter	The first color of the shade if the fillShadeColors_complex property is used.	The last color of the shade if the fillShadeColors_complex property is used.
msofillShadeShape	The first color of the shade if the fillShadeColors_complex property is used.	The last color of the shade if the fillShadeColors_complex property is used.
msofillShadeScale	The first color of the shade if the fillShadeColors_complex property is used.	The last color of the shade if the fillShadeColors_complex property is used.
msofillShadeTitle	The first color of the shade if the fillShadeColors_complex property is used.	The last color of the shade if the fillShadeColors_complex property is used.
msofillBackground	Unused.	Unused.

The default value for this property is 0x00FFFFFF.

2.3.7.3 fillOpacity

This property specifies the foreground opacity level of the fill.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																fillOpacity															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0182.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

fillOpacity (4 bytes): A FixedPoint, as specified in [\[MS-OSHARED\] section 2.2.1.6](#), that specifies the foreground opacity level of the fill. The value MUST be between 0.0 to 1.0 inclusive. A value of 0.0 is completely transparent. A value of 1.0 is completely opaque.

The default value for this property is 0x00010000.

2.3.7.4 fillBackColor

This property specifies the background color of the fill.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																fillBackColor															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0183.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

fillBackColor (4 bytes): An [OfficeArtCOLORREF](#) record that specifies the background color of the fill. See [fillColor](#) for information about how this value is interpreted.

The default value for this property is 0x00FFFFFF.

2.3.7.5 fillBackOpacity

This property specifies the background opacity level of the fill.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																fillBackOpacity															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0184.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

fillBackOpacity (4 bytes): A FixedPoint, as specified in [\[MS-OSHARED\] section 2.2.1.6](#), that specifies the background opacity level of the fill. The value MUST be between 0.0 to 1.0 inclusive. A value of 0.0 is completely transparent. A value of 1.0 is completely opaque.

The default value for this property is 0x00010000.

2.3.7.6 fillCrMod

This property specifies the foreground color of the fill for black-and-white display mode.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																fillCrMod															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0185.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

fillCrMod (4 bytes): An [OfficeArtCOLORREF](#) record that specifies the foreground color of the fill for black-and-white display mode.

The default value for this property is 0x20000000.

2.3.7.7 fillBlip

This property specifies the BLIP used for pattern, texture, or picture fills.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																fillBlip															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0186.
opid.fBid	MUST be ignored if fComplex is 0x1.
opid.fComplex	If 0x1 then the fillBlip_complex property MUST exist.

fillBlip (4 bytes): An unsigned integer that specifies the BLIP used for pattern, texture, or picture fills.

The meaning of this field is determined by the value of **opid.fComplex** as specified in the following table.

Value	Meaning
0x0	Specifies a one-based index into the rgfb array of the OfficeArtBStoreContainer record. A value of 0x00000000 MUST be ignored.
0x1	Specifies the number of bytes of data in the fillBlip_complex property.

The default value for this property is 0x00000000.

2.3.7.8 fillBlip_complex

This property specifies additional data for [fillBlip](#) record. This property MUST exist if the **opid.fComplex** bit of the [fillBlip](#) property is 0x1. This property MAY [<35>](#) be ignored.

0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1
fillBlip_complex (variable)																															
...																															

fillBlip_complex (variable): An [OfficeArtBlip](#) record that specifies the BLIP used for pattern, texture, or picture fills.

2.3.7.9 fillBlipName

This property specifies the comment, the file name or the full [URL](#) of the BLIP used as fill.

0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1
opid																fillBlipName															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0187.
opid.fBid	Undefined and MUST be ignored.
opid.fComplex	If 0x1 then the fillBlipName_complex property MUST exist.

fillBlipName (4 bytes): The number of bytes of data in the [fillBlipName_complex](#) property. This MUST be 0x00000000 if **opid.fComplex** is 0x0.

The default value for this property is 0x00000000.

2.3.7.10 fillBlipName_complex

This property specifies additional data for the [fillBlipName](#) property. This property MUST exist if the **opid.fComplex** bit of the [fillBlipName](#) property is 0x1.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
fillBlipName_complex (variable)																															
...																															

fillBlipName_complex (variable): A Unicode null-terminated string that specifies the comment, the file name or the full URL of the BLIP as specified by [fillBlipFlags](#) property.

2.3.7.11 fillBlipFlags

This property specifies how to interpret the [fillBlipName_complex](#) property and other properties of the BLIP used as fill.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																fillBlipFlags															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0188.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

fillBlipFlags (4 bytes): An enumeration value of [MSOBLIPFLAGS](#) that specifies how to interpret the [fillBlipName_complex](#) property and other properties of the BLIP used as fill.

The default value for this property is msoblipflagComment.

2.3.7.12 fillWidth

This property specifies the width of the fill. It only applies to texture, picture or pattern fill.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																fillWidth															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0189.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

fillWidth (4 bytes): A signed integer that specifies the width of the fill in units specified by the [fillDztype](#) property. This value MUST be ignored if the [fillDztype](#) property is msodztypeDefault.

The default value for this property is 0x00000000.

2.3.7.13 fillHeight

This property specifies the height of the fill. It only applies to texture, picture or pattern fill.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																fillHeight															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x018A.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

fillHeight (4 bytes): A signed integer that specifies the height of the fill in units specified by the [fillDztype](#) property. This value MUST be ignored if the [fillDztype](#) property is msodztypeDefault.

The default value for this property is 0x00000000.

2.3.7.14 fillAngle

This property specifies the angle of shaded fill that rotates the [gradient vector](#) in a counter-clockwise direction.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																fillAngle															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x018B.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

fillAngle (4 bytes): A FixedPoint, as specified in [\[MS-OSHARED\] section 2.2.1.6](#), that specifies the angle of the gradient fill. Zero degrees is a vertical vector from bottom to top.

The default value for this property is 0x00000000.

2.3.7.15 fillFocus

This property specifies the relative position of the last color in the shaded fill.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																fillFocus															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x018C.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

fillFocus (4 bytes): A signed integer value that specifies the relative position of the last color in the shaded fill. This value MUST be between 0xFFFFF9C to 0x00000064 inclusive.

The default value for this property is 0x00000000.

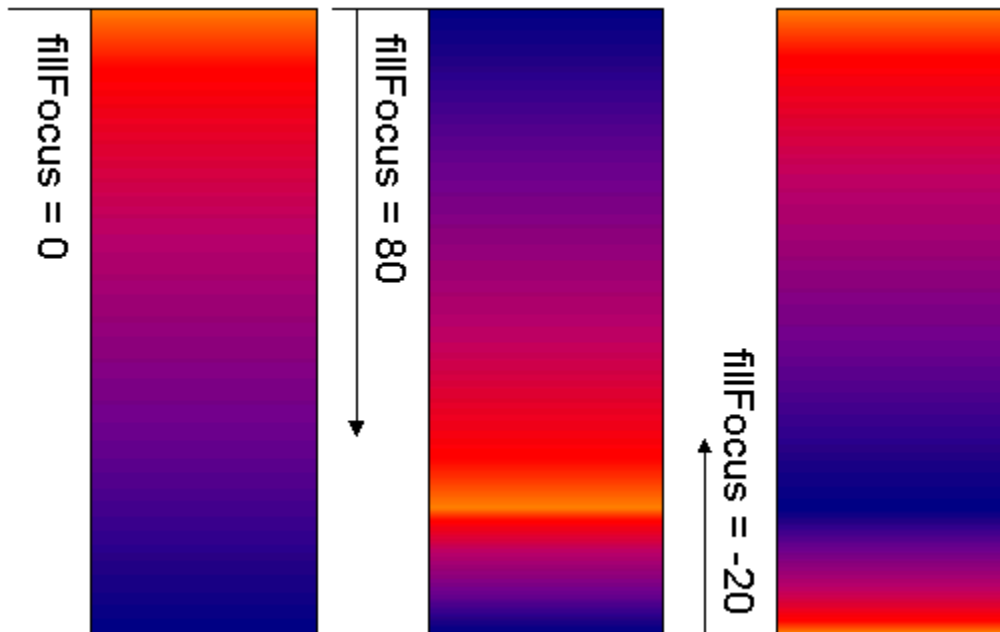


Figure 5: Comparison of fillFocus effects

Figure 5 demonstrates how **fillFocus** affects shaded fill. The first color of the shaded fill is blue, the last color is red. If **fillFocus** is less than 0, the relative position of the last color is outside the shape and the relative position of the first color is within the shape.

The default value for this property is 0x00000000.

2.3.7.16 fillToLeft

This property specifies the relative positions of the left boundary of the center rectangle in a concentric shaded fill as illustrated in Figure 6.

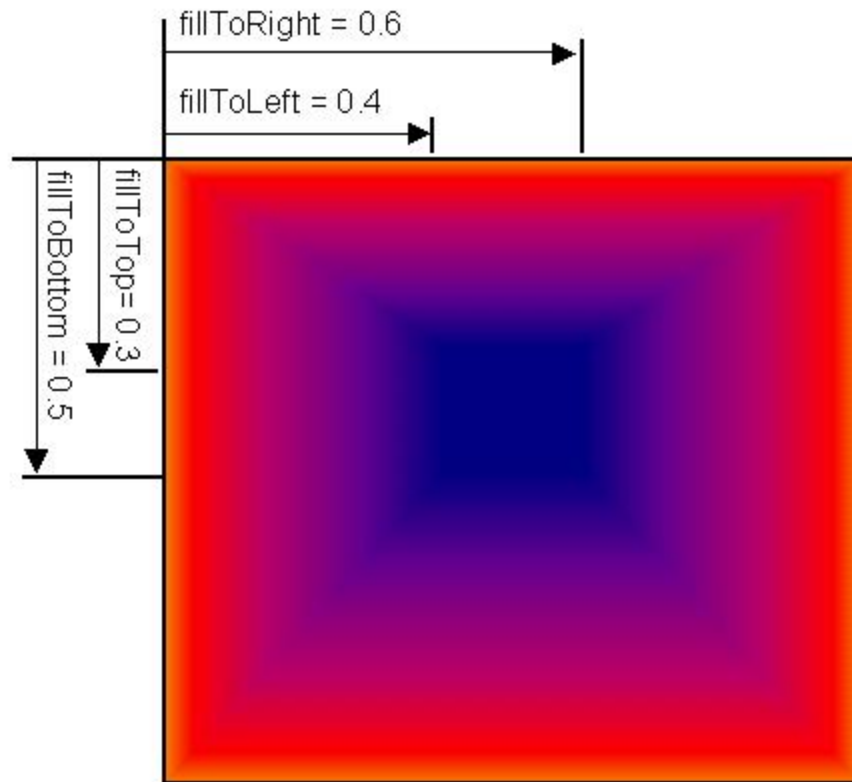


Figure 6: fillToLeft, fillToTop, fillToRight and fillToBottom in the shaded fill

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																fillToLeft															
...																															

opid (2 bytes): An [EscherFOPTEOPID](#) that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x018D.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

fillToLeft (4 bytes): A FixedPoint, as specified in [\[MS-OSHARED\] section 2.2.1.6](#), that specifies the left boundary of the center rectangle relative to the origin of the shape's bounding rectangle in horizontal.

The default value for this property is 0x00000000.

2.3.7.17 fillToTop

This property specifies the relative positions of the top boundary of the center rectangle in a concentric shaded fill illustrated as Figure 6.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																fillToTop															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x018E.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

fillToTop (4 bytes): A FixedPoint, as specified in [\[MS-OSHARED\] section 2.2.1.6](#), that specifies the top boundary of the center rectangle relative to the origin of the shape's bounding rectangle in vertical.

The default value for this property is 0x00000000.

2.3.7.18 fillToRight

This property specifies the relative positions of the right boundary of the center rectangle in a concentric shaded fill illustrated as Figure 6.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																fillToRight															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x018F.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

fillToRight (4 bytes): A FixedPoint, as specified in [\[MS-OSHARED\] section 2.2.1.6](#), that specifies the right boundary of the center rectangle relative to the origin of the shape's bounding rectangle in horizontal.

The default value for this property is 0x00000000.

2.3.7.19 fillToBottom

This property specifies the relative positions of the bottom boundary of the center rectangle in a concentric shaded fill illustrated as Figure 6.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																fillToBottom															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0190.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

fillToBottom (4 bytes): A FixedPoint, as specified in [\[MS-OSHARED\] section 2.2.1.6](#), that specifies the bottom boundary of center rectangle relative to the origin of the shape's bounding rectangle in vertical.

The default value for this property is 0x00000000.

2.3.7.20 fillRectLeft

This property specifies the left boundary of the bounding rectangle of the shaded fill in English Metric Units.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																fillRectLeft															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0191.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

fillRectLeft (4 bytes): A signed integer that specifies the left boundary of the bounding rectangle of the shaded fill in English Metric Units. This value MUST be ignored if [fillUseRect](#) is 0x0.

The default value for this property is 0x00000000.

2.3.7.21 fillRectTop

This property specifies the top boundary of the bounding rectangle of the shaded fill in English Metric Units.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																fillRectTop															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0192.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

fillRectTop (4 bytes): A signed integer that specifies the top boundary of the bounding rectangle of the shaded fill in English Metric Units. This value MUST be ignored if [fillUseRect](#) is 0x0.

The default value for this property is 0x00000000.

2.3.7.22 fillRectRight

This property specifies the right boundary of the bounding rectangle of the shaded fill in English Metric Units.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																fillRectRight															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0193.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

fillRectRight (4 bytes): A signed integer that specifies the right boundary of the bounding rectangle of the shaded fill in English Metric Units. This value MUST be ignored if [fillUseRect](#) is 0x0.

The default value for this property is 0x00000000.

2.3.7.23 fillRectBottom

This property specifies the bottom boundary of the bounding rectangle of the shaded fill in English Metric Units.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																fillRectBottom															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0194.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

fillRectBottom (4 bytes): A signed integer that specifies the bottom boundary of the bounding rectangle of the shaded fill in English Metric Units. This value MUST be ignored if [fillUseRect](#) is 0x0.

The default value for this property is 0x00000000.

2.3.7.24 fillDztype

This property specifies how the [fillWidth](#) and [fillHeight](#) properties are interpreted.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																fillDztype															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0195.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

fillDztype (4 bytes): An [MSODZTYPE](#) enumeration value that specifies how the [fillWidth](#) and [fillHeight](#) properties are interpreted.

The default value for this property is msodztypeDefault.

2.3.7.25 fillShadePreset

This property specifies the preset colors of the gradient fill.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																fillShadePreset															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0196.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

fillShadePreset (4 bytes): A signed integer that specifies the preset colors of the gradient fill. This value MUST be between 0x00000088 to 0x0000009F inclusive. This value MUST be ignored if the [fillShadeColors complex](#) property is present.

The default value for this property is 0x00000000.

2.3.7.26 fillShadeColors

This property specifies the colors and relative positions along the shade of the fill.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																fillShadeColors															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0197.
opid.fBid	Undefined and MUST be ignored.
opid.fComplex	If 0x1 then the fillShadeColors complex property MUST exist.

fillShadeColors (4 bytes): The number of bytes of data in the [fillShadeColors_complex](#) property. This MUST be 0x00000000 if **opid.fComplex** is 0x0.

The default value for this property is 0x00000000.

2.3.7.27 fillShadeColors_complex

This property specifies additional data for the [fillShadeColors](#) property. This property MUST exist if the **opid.fComplex** bit of the [fillShadeColors](#) property is 0x1.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
fillShadeColors_complex (variable)																															
...																															

fillShadeColors_complex (variable): An [IMsoArray](#) record that specifies colors and their relative positions. Each element of the array contains an [OfficeArtCOLORREF](#) record color and a FixedPoint, as specified in [\[MS-OSHARED\] section 2.2.1.6](#), that specifies its relative position along the gradient vector.

2.3.7.28 fillOriginX

This property specifies the position of the origin of the picture fill relative to the center of the picture itself in horizontal.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																fillOriginX															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0198.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

fillOriginX (4 bytes): A FixedPoint, as specified in [\[MS-OSHARED\] section 2.2.1.6](#), that specifies position of the origin of the picture fill relative to the center of the picture itself in horizontal. The value MUST be between -1.5 to 0.5 inclusive for the picture fill to be visible, but values outside the range are also acceptable.

The default value for this property is 0x00000000.

2.3.7.29 fillOriginY

This property specifies the position of the origin of the picture fill relative to the center of the picture itself in vertical.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																fillOriginY															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0199.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

fillOriginY (4 bytes): A FixedPoint, as specified in [\[MS-OSHARED\] section 2.2.1.6](#), that specifies the position of the origin of the picture fill relative to the center of the picture itself in vertical. The value MUST be between -1.5 to 0.5 inclusive for the picture fill to be visible, but values outside the range are also acceptable.

The default value for this property is 0x00000000.

2.3.7.30 fillShapeOriginX

This property specifies the position of the origin of the picture fill relative to the center of the bounding rectangle of the shape in horizontal.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																fillShapeOriginX															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x019A.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

fillShapeOriginX (4 bytes): A FixedPoint, as specified in [\[MS-OSHARED\] section 2.2.1.6](#), that specifies the position of the origin of the picture fill relative to the center of the bounding rectangle

of the shape in horizontal. The value MUST be between -0.5 to 0.5 inclusive for the picture fill to be visible, but values outside the range are also acceptable.

The default value for this property is 0x00000000.

2.3.7.31 fillShapeOriginY

This property specifies the position of the origin of the picture fill relative to the center of the bounding rectangle of the shape in vertical.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																fillShapeOriginY															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x019B.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

fillShapeOriginY (4 bytes): A FixedPoint, as specified in [\[MS-OSHARED\] section 2.2.1.6](#), that specifies the position of the origin of the picture fill relative to the center of the bounding rectangle of the shape in vertical. The value MUST be between -0.5 to 0.5 inclusive for the picture fill to be visible, but values outside the range are also acceptable.

The default value for this property is 0x00000000.

2.3.7.32 fillShadeType

This property specifies how the shaded fill SHOULD be computed.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																fillShadeType															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x019C.
opid.fBid	MUST be 0x0.

opid.fComplex	MUST be 0x0.
----------------------	--------------

fillShadeType (4 bytes): An [MSOSHADETYPE](#) record that specifies how the shaded fill SHOULD be computed.

The default value for this property is msoshadeDefault.

2.3.7.33 fillColorExt

This property specifies the [extended](#) foreground color.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																fillColorExt															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x019E.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

fillColorExt (4 bytes): An [OfficeArtCOLORREF](#) record that specifies the [extended](#) foreground color.

The default value for this property is 0xFFFFFFFF.

2.3.7.34 reserved415

MUST be 0xFFFFFFFF, and MUST be ignored.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																reserved415															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x019F.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

reserved415 (4 bytes): MUST be 0xFFFFFFFF, and MUST be ignored.

The default value for this property is 0xFFFFFFFF.

2.3.7.35 fillColorExtMod

This property specifies the color modification of the [extended](#) foreground color.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																fillColorExtMod															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x01A0.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

fillColorExtMod (4 bytes): An [MSOTINTSHADE](#) record that specifies the [extended](#) foreground color modification.

The default value for this property is 0x20000000.

2.3.7.36 reserved417

MUST be zero, and MUST be ignored.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																reserved417															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x01A1.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

reserved417 (4 bytes): MUST be zero, and MUST be ignored.

The default value for this property is 0x00000000.

2.3.7.37 fillBackColorExt

This property specifies the [extended](#) background color.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																fillBackColorExt															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x01A2.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

fillBackColorExt (4 bytes): An [OfficeArtCOLORREF](#) record that specifies the [extended](#) background color.

The default value for this property is 0xFFFFFFFF.

2.3.7.38 reserved419

MUST be 0xFFFFFFFF, and MUST be ignored.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																reserved419															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x01A3.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

reserved419 (4 bytes): MUST be 0xFFFFFFFF, and MUST be ignored.

The default value for this property is 0xFFFFFFFF.

2.3.7.39 fillBackColorExtMod

This property specifies the color modification of the [extended](#) background color.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																fillBackColorExtMod															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x01A4.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

fillBackColorExtMod (4 bytes): An [MSOTINTSHADE](#) record that specifies the [extended](#) background color modification.

The default value for this property is 0x20000000.

2.3.7.40 reserved421

MUST be zero, and MUST be ignored.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																reserved421															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x01A5.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

reserved421 (4 bytes): MUST be zero, and MUST be ignored.

The default value for this property is 0x00000000.

2.3.7.41 reserved422

MUST be 0xFFFFFFFF, and MUST be ignored.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																reserved422															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x01A6.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

reserved422 (4 bytes): MUST be 0xFFFFFFFF, and MUST be ignored.

The default value for this property is 0xFFFFFFFF.

2.3.7.42 reserved423

MUST be 0xFFFFFFFF, and MUST be ignored.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																reserved423															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x01A7.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

reserved423 (4 bytes): MUST be 0xFFFFFFFF, and MUST be ignored.

The default value for this property is 0xFFFFFFFF.

2.3.7.43 Fill Style Boolean Properties

This property specifies a 32-bit field of Boolean properties for the fill style.

											1																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		</
--	--	--	--	--	--	--	--	--	--	--	---	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	----

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x01BF.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

A - fNoFillHitTest (1 bit): A bit that specifies whether this shape is hit tested as though it is filled. This value MUST be ignored if **fUsefNoFillHitTest** is 0x0.

The default value for this property is 0x0.

B - fillUseRect (1 bit): A bit that specifies whether to use the rectangle specified by the [fillRectLeft](#), [fillRectRight](#), [fillRectTop](#) or [fillRectBottom](#) properties rather than the bounding rectangle of the shape as the filled area. This value MUST be ignored if **fUsefillUseRect** is 0x0.

The default value for this property is 0x0.

C - fillShape (1 bit): A bit that specifies how the fill is aligned. If this bit is set to 0x1, the fill is aligned relative to the shape so that it moves with the shape. If this bit is set to 0x0, the fill is aligned with the origin of the view. This value MUST be ignored if **fUsefillShape** is 0x0.

The default value for this property is 0x1.

D - fHitTestFill (1 bit): A bit that specifies whether this fill is hit tested. This value MUST be ignored if **fUsefHitTestFill** is 0x0.

The default value for this property is 0x1.

E - fFilled (1 bit): A bit that specifies whether the fill is rendered when dealing with a 2D shape. If this bit is set to 0x1, then the fill of the shape is rendered based on the properties of the [fill style](#) property set. If this bit is set to 0x0, then the fill of this shape is not rendered. This value MUST be ignored if **fUsefFilled** is 0x0.

The default value for this property is 0x1.

F - fUseShapeAnchor (1 bit): A bit that specifies whether the fill is rotated with the shape. This value MUST be ignored if **fUsefUseShapeAnchor** is 0x0.

The default value for this property is 0x0.

G - fRecolorFillAsPicture (1 bit): A bit that specifies how to recolor a picture fill. If this bit is set to 0x1, then the [pictureFillCrMod](#) property of the picture fill is used for recoloring. If this bit is set to 0x0, then the [fillCrMod](#) property is used for recoloring. This value MUST be ignored if **fUsefRecolorFillAsPicture** is 0x0.

The default value for this property is 0x0.

unused1 (9 bits): Undefined and MUST be ignored.

H - fUsefNoFillHitTest (1 bit): A bit that specifies whether the **fNoFillHitTest** bit is set. A value of 0x0 specifies the **fNoFillHitTest** MUST be ignored.

The default value for this property is 0x0.

I - fUsefillUseRect (1 bit): A bit that specifies whether the **fillUseRect** bit is set. A value of 0x0 specifies the **fillUseRect** MUST be ignored.

The default value for this property is 0x0.

J - fUsefillShape (1 bit): A bit that specifies whether the **fillShape** bit is set. A value of 0x0 specifies the **fillShape** MUST be ignored.

The default value for this property is 0x0.

K - fUsefHitTestFill (1 bit): A bit that specifies whether the **fHitTestFill** bit is set. A value of 0x0 specifies the **fHitTestFill** MUST be ignored.

The default value for this property is 0x0.

L - fUsefFilled (1 bit): A bit that specifies whether the **fFilled** bit is set. A value of 0x0 specifies the **fFilled** MUST be ignored.

The default value for this property is 0x0.

M - fUsefUseShapeAnchor (1 bit): A bit that specifies whether the **fUseShapeAnchor** bit is set. A value of 0x0 specifies the **fUseShapeAnchor** MUST be ignored.

The default value for this property is 0x0.

N - fUsefRecolorFillAsPicture (1 bit): A bit that specifies whether the **fRecolorFillAsPicture** bit is set. A value of 0x0 specifies the **fRecolorFillAsPicture** MUST be ignored.

The default value for this property is 0x0.

unused2 (9 bits): Undefined and MUST be ignored.

2.3.8 Line Style

This property set specifies the line attributes of the shape.

2.3.8.1 lineColor

This property specifies the foreground color of the line.

0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1
opid																lineColor															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x01C0.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

lineColor (4 bytes): An [OfficeArtCOLORREF](#) record that specifies the foreground color of the line.

The default value for this property is 0x00000000.

2.3.8.2 lineOpacity

This property specifies the opacity level of the foreground color.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																lineOpacity															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x01C1.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

lineOpacity (4 bytes): A signed integer that specifies the opacity level of the foreground color. This property MUST be between 0x00000000 and 0x00010000 inclusive. A value of 0x00000000 is completely transparent. A value of 0x00010000 is completely opaque.

The default value for this property is 0x00010000.

2.3.8.3 lineBackColor

This property specifies the background color of the line.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																lineBackColor															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x01C2.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

lineBackColor (4 bytes): An [OfficeArtCOLORREF](#) record that specifies the background color of the line.

The default value for this property is 0x00FFFFFF.

2.3.8.4 lineCrMod

This property specifies the foreground color of the line for black-and-white display mode.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																lineCrMod															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x01C3.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

lineCrMod (4 bytes): An [OfficeArtCOLORREF](#) record that specifies the foreground color of the line for black-and-white display mode.

The default value for this property is 0x20000000.

2.3.8.5 lineType

This property specifies the type of line.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																lineType															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x01C4.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

lineType (4 bytes): An [MSOLINETYPE](#) enumeration value that specifies the type of line.

The default value for this property is msolineSolid.

2.3.8.6 lineFillBlip

This property specifies the BLIP used to fill this line.

0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1
opid																lineFillBlip															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x01C5.
opid.fBid	MUST be ignored if fComplex is 0x1.
opid.fComplex	If 0x1 then the lineFillBlip_complex property MUST exist.

lineFillBlip (4 bytes): An unsigned integer that specifies the BLIP used to fill this line when the [lineType](#) property is set to msolinePattern or msolineTexture.

The meaning of this field is determined by the value of **opid.fComplex** as specified in the following table.

Value	Meaning
0x0	Specifies a one-based index into the rgfb array of the OfficeArtBStoreContainer record. A value of 0x00000000 MUST be ignored.
0x1	Specifies the number of bytes of data in the lineFillBlip_complex property.

The default value for this property is 0x00000000.

2.3.8.7 lineFillBlip_complex

This property specifies additional data for the [lineFillBlip](#) property. This property MUST exist if the **opid.fComplex** bit of the [lineFillBlip](#) property is 0x1.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
lineFillBlip_complex (variable)																															
...																															

lineFillBlip_complex (variable): An [OfficeArtBlip](#) record that specifies the BLIP used to fill this line when the [lineType](#) property is set to msolinePattern or msolineTexture.

2.3.8.8 lineFillBlipName

This property specifies a comment about the [lineFillBlip](#) property.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																lineFillBlipName															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x01C6.
opid.fBid	Undefined and MUST be ignored.
opid.fComplex	If 0x1 then the lineFillBlipName_complex property MUST exist.

lineFillBlipName (4 bytes): The number of bytes of data in the [lineFillBlipName_complex](#) property. This value MUST be 0x00000000 if **opid.fComplex** is 0x0.

The default value for this property is 0x00000000.

2.3.8.9 lineFillBlipName_complex

This property specifies additional data for the [lineFillBlipName](#) property. This property MUST exist if the **opid.fComplex** bit of the [lineFillBlipName](#) property is 0x1.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
lineFillBlipName_complex (variable)																															
...																															

lineFillBlipName_complex (variable): A Unicode null-terminated string that specifies a comment about the [lineFillBlip](#) property as specified by the [lineFillBlipFlags](#) property.

2.3.8.10 lineFillBlipFlags

This property specifies how to interpret the [lineFillBlipName_complex](#) property.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																lineFillBlipFlags															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x01C7.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

lineFillBlipFlags (4 bytes): An [MSOBLIPFLAGS](#) enumeration value that specifies how to interpret the [lineFillBlipName_complex](#) property. This value MUST be msoblipflagComment.

The default value for this property is msoblipflagComment.

2.3.8.11 lineFillWidth

This property specifies the width of a pattern or texture used to fill this line. The [lineFillDztype](#) property specifies how to interpret this value.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																lineFillWidth															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x01C8.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

lineFillWidth (4 bytes): A signed integer that specifies the width of a pattern or texture used to fill this line. If the value is 0x00000000, then the pattern or texture SHOULD NOT be expanded or contracted in pixel terms, so the fill is device dependent.

The default value for this property is 0x00000000.

2.3.8.12 lineFillHeight

This property specifies the height of a pattern or texture used to fill this line. The [lineFillDztype](#) property specifies how to interpret this value.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																lineFillHeight															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x01C9.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

lineFillHeight (4 bytes): A signed integer that specifies the height of a pattern or texture used to fill this line. If the value is 0x00000000, then the pattern or texture SHOULD NOT be expanded or contracted in pixel terms, so the fill is device dependent.

The default value for this property is 0x00000000.

2.3.8.13 lineFillDztype

This property specifies how the [lineFillWidth](#) and [lineFillHeight](#) properties MUST be interpreted.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																lineFillDztype															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x01CA.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

lineFillDztype (4 bytes): An [MSODZTYPE](#) enumeration value that specifies how the [lineFillWidth](#) and [lineFillHeight](#) properties MUST be interpreted.

The default value for this property is msodztypeDefault.

2.3.8.14 lineWidth

This property specifies the width of the line.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																lineWidth															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x01CB.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

lineWidth (4 bytes): A signed integer that specifies the width of the line in English Metric Units. This value MUST be between 0x00000000 and 0x0132F540 inclusive.

The default value for this property is 0x00002535.

2.3.8.15 lineMiterLimit

This property specifies the maximum allowed ratio of the miter length to the line width. The miter length is the distance from the intersection of the line walls on the inside of the join to the intersection of the line walls on the outside of the join.

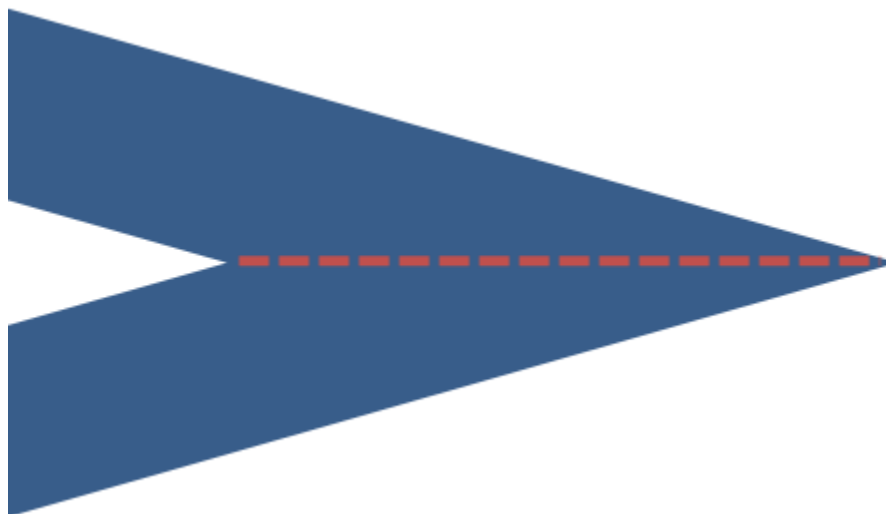


Figure 7: The dashed line represents the miter length

If the line miter length extends beyond the line miter limit, the line SHOULD be clipped.



Figure 8: A line whose miter length extended beyond the line miter limit and was clipped

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																lineMiterLimit															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x01CC.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

lineMiterLimit (4 bytes): A FixedPoint, as specified in [\[MS-OSHARED\] section 2.2.1.6](#), that specifies the maximum allowed ratio of the miter length to the line width.

The default value for this property is 0x00080000.

2.3.8.16 lineStyle

This property specifies the style of the line.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																lineStyle															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x01CD.
opid.fBid	MUST be 0x0.

opid.fComplex	MUST be 0x0.
----------------------	--------------

lineStyle (4 bytes): An [MSOLINESTYLE](#) enumeration value that specifies the style of the line.

The default value for this property is mslineSimple.

2.3.8.17 lineDashing

This property specifies the dash style of the line.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																lineDashing															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x01CE.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

lineDashing (4 bytes): An [MSOLINEDASHING](#) enumeration value that specifies the dash style of the line.

The default value for this property is mslineSolid.

2.3.8.18 lineDashStyle

This property specifies the custom dash style of the line.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																lineDashStyle															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x01CF.
opid.fBid	Undefined and MUST be ignored.
opid.fComplex	If 0x1 then the lineDashStyle_complex property MUST exist.

lineDashStyle (4 bytes): The number of bytes of data in the [lineDashStyle_complex](#) property. This MUST be 0x00000000 if **opid.fComplex** is 0x0.

The default value for this property is 0x00000000.

2.3.8.19 lineDashStyle_complex

This property specifies additional data for the [lineDashStyle](#) property. This property MUST exist if the **opid.fComplex** bit of the [lineDashStyle](#) property is 0x1.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
lineDashStyle_complex (variable)																															
...																															

lineDashStyle_complex (variable): An [IMsoArray](#) record of 32-bit unsigned integers that specifies a custom dash style for the line. The first element specifies the length of a dash, the second element specifies the length of a space, the third element specifies the length of a dash, and so on, alternating between spaces and dashes. The length of each dash and space in the dash style is the product of the element value and the line width. This value SHOULD only be used if the [lineDashing](#) property is not present or is equal to mslineSolid.

2.3.8.20 lineStartArrowhead

This property specifies the [line end decoration](#) used at the start of the line.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																lineStartArrow head															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x01D0.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

lineStartArrowhead (4 bytes): An [MSOLINEEND](#) enumeration value that specifies the line end decoration used at the start of the line.

The default value for this property is mslineNoEnd.

2.3.8.21 lineEndArrowhead

This property specifies the line end decoration used at the end of the line.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																lineEndArrowhead															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x01D1.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

lineEndArrowhead (4 bytes): An [MSOLINEEND](#) enumeration value that specifies the line end decoration used at the end of the line.

The default value for this property is msolineNoEnd.

2.3.8.22 lineStartArrowWidth

This property specifies the width of the line end decoration used at the start of the line.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																lineStartArrowWidth															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x01D2.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

lineStartArrowWidth (4 bytes): An [MSOLINEENDWIDTH](#) enumeration value that specifies the width of the line end decoration used at the start of the line.

The default value for this property is msolineMediumWidthArrow.

2.3.8.23 lineStartArrowLength

This property specifies the length of the line end decoration used at the start of the line.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																lineStartArrowLength															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x01D3.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

lineStartArrowLength (4 bytes): An [MSOLINEENDLENGTH](#) enumeration value that specifies the length of the line end decoration used at the start of the line.

The default value for this property is msolineMediumLenArrow.

2.3.8.24 lineEndArrowWidth

This property specifies the width of the line end decoration used at the end of the line.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																lineEndArrowWidth															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x01D4.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

lineEndArrowWidth (4 bytes): An [MSOLINEENDWIDTH](#) enumeration value that specifies the width of the line end decoration used at the end of the line.

The default value for this property is msolineMediumWidthArrow.

2.3.8.25 lineEndArrowLength

This property specifies the length of the line end decoration used at the end of the line.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																lineEndArrowLength															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x01D5.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

lineEndArrowLength (4 bytes): An [MSOLINEENDLENGTH](#) enumeration value that specifies the length of the line end decoration used at the end of the line.

The default value for this property is msolineMediumLenArrow.

2.3.8.26 lineJoinStyle

This property specifies the style of the line joins.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																lineJoinStyle															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x01D6.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

lineJoinStyle (4 bytes): An [MSOLINEJOIN](#) enumeration value that specifies the style of the line joins.

The default value for this property is msolineJoinRound.

2.3.8.27 lineEndCapStyle

This property specifies the style of the line end caps.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																lineEndCapStyle															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x01D7.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

lineEndCapStyle (4 bytes): An [MSOLINECAP](#) enumeration value that specifies the style of the line end caps.

The default value for this property is msolineEndCapFlat.

2.3.8.28 lineColorExt

This property specifies the [extended](#) foreground color.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																lineColorExt															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x01D9.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

lineColorExt (4 bytes): An [OfficeArtCOLORREF](#) record that specifies the [extended](#) foreground color.

The default value for this property is 0xFFFFFFFF.

2.3.8.29 reserved474

MUST be 0xFFFFFFFF, and MUST be ignored.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																reserved474															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x01DA.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

reserved474 (4 bytes): MUST be 0xFFFFFFFF, and MUST be ignored.

The default value for this property is 0xFFFFFFFF.

2.3.8.30 lineColorExtMod

This property specifies the color modification of the [extended](#) foreground color.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																lineColorExtMod															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x01DB.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

lineColorExtMod (4 bytes): An [MSOTINTSHADE](#) record that specifies the [extended](#) foreground color modification.

The default value for this property is 0x20000000.

2.3.8.31 reserved476

MUST be zero, and MUST be ignored.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																reserved476															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x01DC.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

reserved476 (4 bytes): MUST be zero, and MUST be ignored.

The default value for this property is 0x00000000.

2.3.8.32 lineBackColorExt

This property specifies the [extended](#) background color.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																lineBackColorExt															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x01DD.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

lineBackColorExt (4 bytes): An [OfficeArtCOLORREF](#) record that specifies the [extended](#) background color.

The default value for this property is 0xFFFFFFFF.

2.3.8.33 reserved478

MUST be 0xFFFFFFFF, and MUST be ignored.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																reserved478															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x01DE.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

reserved478 (4 bytes): MUST be 0xFFFFFFFF, and MUST be ignored.

The default value for this property is 0xFFFFFFFF.

2.3.8.34 lineBackColorExtMod

This property specifies the color modification of the [extended](#) background color.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																lineBackColorExtMod															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x01DF.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

lineBackColorExtMod (4 bytes): An [MSOTINTSHADE](#) record that specifies the [extended](#) background color modification.

The default value for this property is 0x20000000.

2.3.8.35 reserved480

MUST be zero, and MUST be ignored.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																reserved480															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x01E0.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

reserved480 (4 bytes): MUST be zero, and MUST be ignored.

The default value for this property is 0x00000000.

2.3.8.36 reserved481

MUST be 0xFFFFFFFF, and MUST be ignored.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																reserved481															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x01E1.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

reserved481 (4 bytes): MUST be 0xFFFFFFFF, and MUST be ignored.

The default value for this property is 0xFFFFFFFF.

2.3.8.37 reserved482

MUST be 0xFFFFFFFF, and MUST be ignored.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																reserved482															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x01E2.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

reserved482 (4 bytes): MUST be 0xFFFFFFFF, and MUST be ignored.

The default value for this property is 0xFFFFFFFF.

2.3.8.38 Line Style Boolean Properties

This property specifies a 32-bit field of Boolean properties for the line style.

										1										2										3	
0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1
opid																A	B	C	D	E	F	G	H	I	J	unused1					
K	L	M	N	O	P	Q	R	S	T	unused4																					

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x01FF.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

A - fNoLineDrawDash (1 bit): A bit that specifies whether a dashed line is drawn if the other properties specify there is no line. This value MUST be ignored if **fUsefNoLineDrawDash** is 0x0.

The default value for this property is 0x0.

B - fLineFillShape (1 bit): A bit that specifies how the fill is aligned. Values are further specified in the following table:

Value	Meaning
0x0	Specifies that the fill is aligned with the origin of the view.
0x1	Specifies that the fill is aligned relative to the shape so that it moves with the shape.

This value MUST be ignored if **fUsefLineFillShape** is 0x0.

The default value for this property is 0x1.

C - fHitTestLine (1 bit): A bit that specifies whether this line is hit tested. This value MUST be ignored if **fUsefHitTestLine** is 0x0.

The default value for this property is 0x1.

D - fLine (1 bit): A bit that specifies whether to display other line properties in this line style when dealing with a 2D shape. If **fLeftLine**, **fTopLine**, **fBottomLine**, or **fRightLine** are set to 0x1, the other properties in this property set MUST NOT be displayed. This value MUST be ignored if **fUsefLine** is 0x0.

The default value for this property is 0x1.

E - fArrowheadsOK (1 bit): A bit that specifies whether the line end decoration properties are editable. This value SHOULD NOT affect rendering of the line end decorations. [<36>](#36) This value MUST be ignored if **fUsefArrowheadsOK** is 0x0.

The default value for this property is 0x0.

F - fInsetPenOK (1 bit): A bit that specifies whether insetting the pen is allowed. This value MUST be ignored if **fUsefInsetPenOK** is 0x0.

The default value for this property is 0x1.

G - fInsetPen (1 bit): A bit that specifies whether to draw the line inside the shape. This bit MUST be ignored if **fInsetPenOK** is set to 0. This value MUST be ignored if **fUsefInsetPen** is 0x0.

The default value for this property is 0x0.

H - reserved1 (1 bit): MUST be zero, and MUST be ignored.

I - reserved2 (1 bit): MUST be zero, and MUST be ignored.

J - fLineOpaqueBackColor (1 bit): A bit that specifies that an extra line should be rendered underneath the line specified by this property set. The line MUST be equivalent to the line specified by the current property set, except the [lineColor](#) property MUST be set to the current property set's [lineBackColor](#) property, and the [lineDashing](#) property MUST be msolineSolid. This value MUST be ignored if **fUsefLineOpaqueBackColor** is 0x0.

The default value for this property is 0x0.

unused1 (6 bits): Undefined and MUST be ignored.

K - fUsefNoLineDrawDash (1 bit): A bit that specifies whether the **fNoLineDrawDash** bit is set. A value of 0x0 specifies that the **fNoLineDrawDash** bit MUST be ignored and the default value be used instead.

The default value of this property is 0x0.

L - fUsefLineFillShape (1 bit): A bit that specifies whether the **fLineFillShape** bit is set. A value of 0x0 specifies that the **fLineFillShape** bit MUST be ignored and the default value be used instead.

The default value of this property is 0x0.

M - fUsefHitTestLine (1 bit): A bit that specifies whether the **fHitTestLine** bit is set. A value of 0x0 specifies that the **fHitTestLine** bit MUST be ignored and the default value be used instead.

The default value of this property is 0x0.

N - fUsefLine (1 bit): A bit that specifies whether the **fLine** bit is set. A value of 0x0 specifies that the **fLine** bit MUST be ignored and the default value be used instead.

The default value of this property is 0x0.

O - fUsefArrowheadsOK (1 bit): A bit that specifies whether the **fArrowheadsOK** bit is set. A value of 0x0 specifies that the **fArrowheadsOK** bit MUST be ignored and the default value be used instead.

The default value of this property is 0x0.

P - fUsefInsetPenOK (1 bit): A bit that specifies whether the **fInsetPenOK** bit is set. A value of 0x0 specifies that the **fInsetPenOK** bit MUST be ignored and the default value be used instead.

The default value of this property is 0x0.

Q - fUsefInsetPen (1 bit): A bit that specifies whether the **fInsetPen** bit is set. A value of 0x0 specifies that the **fInsetPen** bit MUST be ignored and the default value be used instead.

The default value of this property is 0x0.

R - unused2 (1 bit): Undefined and MUST be ignored.

S - unused3 (1 bit): Undefined and MUST be ignored.

T - fUsefLineOpaqueBackColor (1 bit): A bit that specifies whether the **fLineOpaqueBackColor** bit is set. A value of 0x0 specifies that the **fLineOpaqueBackColor** bit MUST be ignored and the default value be used instead.

The default value of this property is 0x0.

unused4 (6 bits): Undefined and MUST be ignored.

2.3.9 Left Line Style

This property set specifies the line attributes applied to the left side of a rectangular shape.

2.3.9.1 lineLeftColor

This property specifies the foreground color of the line.

0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1
opid																lineLeftColor															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0540.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

lineLeftColor (4 bytes): An [OfficeArtCOLORREF](#) record that specifies the foreground color of the line.

The default value for this property is 0x00000000.

2.3.9.2 lineLeftOpacity

This property specifies the opacity level of the foreground color.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																lineLeftOpacity															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0541.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

lineLeftOpacity (4 bytes): A signed integer that specifies the opacity level of the foreground color. This property MUST be between 0x00000000 and 0x00010000 inclusive. A value of 0x00000000 is completely transparent. A value of 0x00010000 is completely opaque.

The default value for this property is 0x00010000.

2.3.9.3 lineLeftBackColor

This property specifies the background color of the line.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																lineLeftBackColor															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0542.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

lineLeftBackColor (4 bytes): An [OfficeArtCOLORREF](#) record that specifies the background color of the line.

The default value for this property is 0x00FFFFFF.

2.3.9.4 lineLeftCrMod

This property specifies the foreground color of the line for black-and-white display mode.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																lineLeftCrMod															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0543.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

lineLeftCrMod (4 bytes): An [OfficeArtCOLORREF](#) record that specifies the foreground color of the line for black-and-white display mode.

The default value for this property is 0x20000000.

2.3.9.5 lineLeftType

This property specifies the type of line.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																lineLeftType															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0544.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

lineLeftType (4 bytes): An [MSOLINETYPE](#) enumeration value that specifies the type of line.

The default value for this property is msolineSolid.

2.3.9.6 lineLeftFillBlip

This property specifies the BLIP used to fill this line.

0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1
opid																lineLeftFillBlip															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0545.
opid.fBid	MUST be ignored if fComplex is 0x1.
opid.fComplex	If 0x1 then the lineLeftFillBlip_complex property MUST exist.

lineLeftFillBlip (4 bytes): An unsigned integer that specifies the BLIP used to fill this line when the [lineLeftType](#) property is set to msolinePattern or msolineTexture.

The meaning of this field is determined by the value of **opid.fComplex** as specified in the following table.

Value	Meaning
0x0	Specifies a one-based index into the rgfb array of the OfficeArtBStoreContainer record. A value of 0x00000000 MUST be ignored.
0x1	Specifies the number of bytes of data in the lineLeftFillBlip_complex property.

The default value for this property is 0x00000000.

2.3.9.7 lineLeftFillBlip_complex

This property specifies additional data for the [lineLeftFillBlip](#) property. This property MUST exist if the **opid.fComplex** bit of the [lineLeftFillBlip](#) property is 0x1.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
lineLeftFillBlip_complex (variable)																															
...																															

lineLeftFillBlip_complex (variable): An [OfficeArtBlip](#) record that specifies the BLIP used to fill this line when the [lineLeftType](#) property is set to msolinePattern or msolineTexture.

2.3.9.8 lineLeftFillBlipName

This property specifies a comment about the [lineLeftFillBlip](#) property.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																lineLeftFillBlipName															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0546.
opid.fBid	Undefined and MUST be ignored.
opid.fComplex	If 0x1 then the lineLeftFillBlipName_complex property MUST exist.

lineLeftFillBlipName (4 bytes): The number of bytes of data in the [lineLeftFillBlipName_complex](#) property. This value MUST be 0x00000000 if **opid.fComplex** is 0x0.

The default value for this property is 0x00000000.

2.3.9.9 lineLeftFillBlipName_complex

This property specifies additional data for the [lineLeftFillBlipName](#) property. This property MUST exist if the **opid.fComplex** bit of the [lineLeftFillBlipName](#) property is 0x1.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
lineLeftFillBlipName_complex (variable)																															
...																															

lineLeftFillBlipName_complex (variable): A Unicode null-terminated string that specifies a comment about the [lineLeftFillBlip](#) property as specified by the [lineLeftFillBlipFlags](#) property.

2.3.9.10 lineLeftFillBlipFlags

This property specifies how to interpret the [lineLeftFillBlipName_complex](#) property.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																lineLeftFillBlipFlags															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0547.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

lineLeftFillBlipFlags (4 bytes): An [MSOBLIPFLAGS](#) enumeration value that specifies how to interpret the [lineLeftFillBlipName_complex](#) property. This value MUST be msoblipflagComment.

The default value for this property is msoblipflagComment.

2.3.9.11 lineLeftFillWidth

This property specifies the width of a pattern or texture used to fill this line. The [lineLeftFillDztype](#) property specifies how to interpret this value.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																lineLeftFillWidth															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0548.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

lineLeftFillWidth (4 bytes): A signed integer that specifies the width of a pattern or texture used to fill this line. If the value is 0x00000000, then the pattern or texture SHOULD NOT be expanded or contracted in pixel terms, so the fill is device dependent.

The default value for this property is 0x00000000.

2.3.9.12 lineLeftFillHeight

This property specifies the height of a pattern or texture used to fill this line. The [lineLeftFillDztype](#) property specifies how to interpret this value.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																lineLeftFillHeight															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0549.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

lineLeftFillHeight (4 bytes): A signed integer that specifies the height of a pattern or texture used to fill this line. If the value is 0x00000000, then the pattern or texture SHOULD NOT be expanded or contracted in pixel terms, so the fill is device dependent.

The default value for this property is 0x00000000.

2.3.9.13 lineLeftFillDztype

This property specifies how the [lineLeftFillWidth](#) and [lineLeftFillHeight](#) properties MUST be interpreted.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																lineLeftFillDztype															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x054A.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

lineLeftFillDztype (4 bytes): An [MSODZTYPE](#) enumeration value that specifies how the [lineLeftFillWidth](#) and [lineLeftFillHeight](#) properties MUST be interpreted.

The default value for this property is msodztypeDefault.

2.3.9.14 lineLeftWidth

This property specifies the width of the line.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																lineLeftWidth															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x054B.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

lineLeftWidth (4 bytes): A signed integer that specifies the width of the line in English Metric Units. This value MUST be between 0x00000000 and 0x0132F540 inclusive.

The default value for this property is 0x00002535.

2.3.9.15 lineLeftMiterLimit

This property specifies the maximum allowed ratio of the miter length to the line width. The miter length is the distance from the intersection of the line walls on the inside of the join to the intersection of the line walls on the outside of the join.

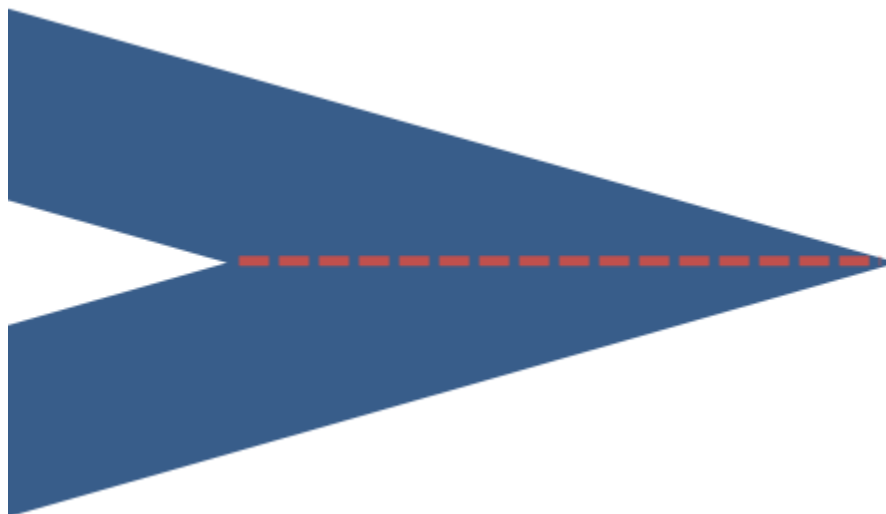


Figure 9: The dashed line represents the miter length

If the line miter length extends beyond the line miter limit, the line SHOULD be clipped.



Figure 10: A line whose miter length extended beyond the line miter limit and was clipped

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																lineLeftMiterLimit															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x054C.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

lineLeftMiterLimit (4 bytes): A FixedPoint, as specified in [\[MS-OSHARED\] section 2.2.1.6](#), that specifies the maximum allowed ratio of the miter length to the line width.

The default value for this property is 0x00080000.

2.3.9.16 lineLeftStyle

This property specifies the style of the line.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																lineLeftStyle															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x054D.
opid.fBid	MUST be 0x0.

opid.fComplex	MUST be 0x0.
----------------------	--------------

lineLeftStyle (4 bytes): An [MSOLINESTYLE](#) enumeration value that specifies the style of the line.

The default value for this property is mslineSimple.

2.3.9.17 lineLeftDashing

This property specifies the dash style of the line.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																lineLeftDashing															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x054E.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

lineLeftDashing (4 bytes): An [MSOLINEDASHING](#) enumeration value that specifies the dash style of the line.

The default value for this property is mslineSolid.

2.3.9.18 lineLeftDashStyle

This property specifies the custom dash style of the line.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																lineLeftDashStyle															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x054F.
opid.fBid	Undefined and MUST be ignored.
opid.fComplex	If 0x1 then the lineLeftDashStyle_complex property MUST exist.

lineLeftDashStyle (4 bytes): The number of bytes of data in the [lineLeftDashStyle_complex](#) property. This MUST be 0x00000000 if **opid.fComplex** is 0x0.

The default value for this property is 0x00000000.

2.3.9.19 lineLeftDashStyle_complex

This property specifies additional data for the [lineLeftDashStyle](#) property. This property MUST exist if the **opid.fComplex** bit of the [lineLeftDashStyle](#) property is 0x1.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
lineLeftDashStyle_complex (variable)																															
...																															

lineLeftDashStyle_complex (variable): An [IMsoArray](#) record of 32-bit unsigned integers that specifies a custom dash style for the line. The first element specifies the length of a dash, the second element specifies the length of a space, the third element specifies the length of a dash, and so on, alternating between spaces and dashes. The length of each dash and space in the dash style is the product of the element value and the line width. This value SHOULD only be used if the [lineLeftDashing](#) property is not present or is equal to mslineSolid.

2.3.9.20 lineLeftStartArrowhead

This property specifies the line end decoration used at the start of the line.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																lineLeftStartArrowhead															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0550.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

lineLeftStartArrowhead (4 bytes): An [MSOLINEEND](#) enumeration value that specifies the line end decoration used at the start of the line.

The default value for this property is mslineNoEnd.

2.3.9.21 lineLeftEndArrowhead

This property specifies the line end decoration used at the end of the line.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																lineLeftEndArrowhead															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0551.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

lineLeftEndArrowhead (4 bytes): An [MSOLINEEND](#) enumeration value that specifies the line end decoration used at the end of the line.

The default value for this property is msolineNoEnd.

2.3.9.22 lineLeftStartArrowWidth

This property specifies the width of the line end decoration used at the start of the line.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																lineLeftStartArrowWidth															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0552.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

lineLeftStartArrowWidth (4 bytes): An [MSOLINEENDWIDTH](#) enumeration value that specifies the width of the line end decoration used at the start of the line.

The default value for this property is msolineMediumWidthArrow.

2.3.9.23 lineLeftStartArrowLength

This property specifies the length of the line end decoration used at the start of the line.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																lineLeftStartArrowLength															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0553.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

lineLeftStartArrowLength (4 bytes): An [MSOLINEENDLENGTH](#) enumeration value that specifies the length of the line end decoration used at the start of the line.

The default value for this property is msolineMediumLenArrow.

2.3.9.24 lineLeftEndArrowWidth

This property specifies the width of the line end decoration used at the end of the line.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																lineLeftEndArrowWidth															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0554.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

lineLeftEndArrowWidth (4 bytes): An [MSOLINEENDWIDTH](#) enumeration value that specifies the width of the line end decoration used at the end of the line.

The default value for this property is msolineMediumWidthArrow.

2.3.9.25 lineLeftEndArrowLength

This property specifies the length of the line end decoration used at the end of the line.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																lineLeftEndArrowLength															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0555.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

lineLeftEndArrowLength (4 bytes): An [MSLINEENDLENGTH](#) enumeration value that specifies the length of the line end decoration used at the end of the line.

The default value for this property is mslineMediumLenArrow.

2.3.9.26 lineLeftJoinStyle

This property specifies the style of the line joins.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																lineLeftJoinStyle															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0556.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

lineLeftJoinStyle (4 bytes): An [MSLINEJOIN](#) enumeration value that specifies the style of the line joins.

The default value for this property is mslineJoinRound.

2.3.9.27 lineLeftEndCapStyle

This property specifies the style of the line end caps.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																lineLeftEndCapStyle															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0557.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

lineLeftEndCapStyle (4 bytes): An [MSOLINECAP](#) enumeration value that specifies the style of the line end caps.

The default value for this property is msolineEndCapFlat.

2.3.9.28 lineLeftColorExt

This property specifies the [extended](#) foreground color.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																lineLeftColorExt															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0559.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

lineLeftColorExt (4 bytes): An [OfficeArtCOLORREF](#) record that specifies the [extended](#) foreground color.

The default value for this property is 0xFFFFFFFF.

2.3.9.29 reserved1370

MUST be 0xFFFFFFFF, and MUST be ignored.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																reserved1370															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x055A.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

reserved1370 (4 bytes): MUST be 0xFFFFFFFF, and MUST be ignored.

The default value for this property is 0xFFFFFFFF.

2.3.9.30 lineLeftColorExtMod

This property specifies the color modification of the [extended](#) foreground color.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																lineLeftColorExtMod															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x055B.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

lineLeftColorExtMod (4 bytes): An [MSOTINTSHADE](#) record that specifies the [extended](#) foreground color modification.

The default value for this property is 0x20000000.

2.3.9.31 reserved1372

MUST be zero, and MUST be ignored.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																reserved1372															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x055C.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

reserved1372 (4 bytes): MUST be zero, and MUST be ignored.

The default value for this property is 0x00000000.

2.3.9.32 lineLeftBackColorExt

This property specifies the [extended](#) background color.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																lineLeftBackColorExt															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x055D.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

lineLeftBackColorExt (4 bytes): An [OfficeArtCOLORREF](#) record that specifies the [extended](#) background color.

The default value for this property is 0xFFFFFFFF.

2.3.9.33 reserved1374

MUST be 0xFFFFFFFF, and MUST be ignored.

0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1
opid																reserved1374															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x055E.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

reserved1374 (4 bytes): MUST be 0xFFFFFFFF, and MUST be ignored.

The default value for this property is 0xFFFFFFFF.

2.3.9.34 lineLeftBackColorExtMod

This property specifies the color modification of the [extended](#) background color.

0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1
opid																lineLeftBackColorExtMod															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x055F.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

lineLeftBackColorExtMod (4 bytes): An [MSOTINTSHADE](#) record that specifies the [extended](#) background color modification.

The default value for this property is 0x20000000.

2.3.9.35 reserved1376

MUST be zero, and MUST be ignored.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																reserved1376															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0560.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

reserved1376 (4 bytes): MUST be zero, and MUST be ignored.

The default value for this property is 0x00000000.

2.3.9.36 reserved1377

MUST be 0xFFFFFFFF, and MUST be ignored.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																reserved1377															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0561.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

reserved1377 (4 bytes): MUST be 0xFFFFFFFF, and MUST be ignored.

The default value for this property is 0xFFFFFFFF.

2.3.9.37 reserved1378

MUST be 0xFFFFFFFF, and MUST be ignored.

0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1
opid																reserved1378															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0562.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

reserved1378 (4 bytes): MUST be 0xFFFFFFFF, and MUST be ignored.

The default value for this property is 0xFFFFFFFF.

2.3.9.38 Left Line Style Boolean Properties

This property specifies a 32-bit field of Boolean properties for the left line style.

										1										2										3			
0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1		
opid																A	B	C	D	E	F	G	H	I	J	unused2							
K	L	M	N	O	P	Q	R	S	T	unused7																							

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x057F.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

A - fLeftNoLineDrawDash (1 bit): A bit that specifies whether a dashed line is drawn if the other properties specify there is no line. This value MUST be ignored if **fUsefLeftNoLineDrawDash** is 0x0.

The default value for this property is 0x0.

B - fLineLeftFillShape (1 bit): A bit that specifies how the fill is aligned. Values are further specified in the following table:

Value	Meaning
0x0	Specifies that the fill is aligned with the origin of the view.
0x1	Specifies that the fill is aligned relative to the shape so that it moves with the shape.

This value MUST be ignored if **fUsefLineLeftFillShape** is 0x0.

The default value for this property is 0x1.

C - fLeftHitTestLine (1 bit): A bit that specifies whether this line is hit tested. This value MUST be ignored if **fUsefLeftHitTestLine** is 0x0.

The default value for this property is 0x1.

D - fLeftLine (1 bit): A bit that specifies whether the other line properties in this line style are displayed when dealing with the left side of a rectangular 2D shape. If the **rh.recInstance** of the shape's [OfficeArtFSP](#) record is not set to a value in the following list, then the line properties in this line style MUST NOT be displayed:

- [msosptRectangle](#)
- [msosptTextBox](#)
- [msosptBevel](#)
- [msosptHostControl](#)
- [msosptPictureFrame](#)
- [msosptFlowChartProcess](#)
- [msosptFlowChartPredefinedProcess](#)
- [msosptFlowChartInternalStorage](#)
- [msosptActionButtonBlank](#)
- [msosptActionButtonHome](#)
- [msosptActionButtonHelp](#)
- [msosptActionButtonInformation](#)
- [msosptActionButtonForwardNext](#)
- [msosptActionButtonBackPrevious](#)
- [msosptActionButtonEnd](#)
- [msosptActionButtonBeginning](#)
- [msosptActionButtonReturn](#)
- [msosptActionButtonDocument](#)
- [msosptActionButtonSound](#)
- [msosptActionButtonMovie](#)

This value MUST be ignored if **fUsefLeftLine** is 0x0.

The default value for this property is 0x0.

E - reserved1 (1 bit): MUST be zero, and MUST be ignored.

F - fLeftInsetPenOK (1 bit): A bit that specifies whether inseting the pen is allowed. This value MUST be ignored if **fUsefLeftInsetPenOK** is 0x0.

The default value for this property is 0x1.

G - fLeftInsetPen (1 bit): A bit that specifies whether to draw the line inside the shape. This bit MUST be ignored if **fLeftInsetPenOK** is set to 0. This value MUST be ignored if **fUsefLeftInsetPen** is 0x0.

The default value for this property is 0x0.

H - reserved2 (1 bit): MUST be zero, and MUST be ignored.

I - reserved3 (1 bit): MUST be zero, and MUST be ignored.

J - unused1 (1 bit): Undefined and MUST be ignored.

unused2 (6 bits): Undefined and MUST be ignored.

K - fUsefLeftNoLineDrawDash (1 bit): A bit that specifies whether the **fLeftNoLineDrawDash** bit is set. A value of 0x0 specifies that the **fLeftNoLineDrawDash** bit MUST be ignored and the default value be used instead.

The default value for this property is 0x0.

L - fUsefLineLeftFillShape (1 bit): A bit that specifies whether the **fLineLeftFillShape** bit is set. A value of 0x0 specifies that the **fLineLeftFillShape** bit MUST be ignored and the default value be used instead.

The default value for this property is 0x0.

M - fUsefLeftHitTestLine (1 bit): A bit that specifies whether the **fLeftHitTestLine** bit is set. A value of 0x0 specifies that the **fLeftHitTestLine** bit MUST be ignored and the default value be used instead.

The default value for this property is 0x0.

N - fUsefLeftLine (1 bit): A bit that specifies whether the **fLeftLine** bit is set. A value of 0x0 specifies that the **fLeftLine** bit MUST be ignored and the default value be used instead.

The default value for this property is 0x0.

O - unused3 (1 bit): Undefined and MUST be ignored.

P - fUsefLeftInsetPenOK (1 bit): A bit that specifies whether the **fLeftInsetPenOK** bit is set. A value of 0x0 specifies that the **fLeftInsetPenOK** bit MUST be ignored and the default value be used instead.

The default value for this property is 0x0.

Q - fUsefLeftInsetPen (1 bit): A bit that specifies whether the **fLeftInsetPen** bit is set. A value of 0x0 specifies that the **fLeftInsetPen** bit MUST be ignored and the default value be used instead.

The default value for this property is 0x0.

R - unused4 (1 bit): Undefined and MUST be ignored.

S - unused5 (1 bit): Undefined and MUST be ignored.

T - unused6 (1 bit): Undefined and MUST be ignored.

unused7 (6 bits): Undefined and MUST be ignored.

2.3.10 Top Line Style

This property set specifies the line attributes applied to the top side of a rectangular shape.

2.3.10.1 lineTopColor

This property specifies the foreground color of the line.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																lineTopColor															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0580.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

lineTopColor (4 bytes): An [OfficeArtCOLORREF](#) that specifies the foreground color of the line.

The default value for this property is 0x00000000.

2.3.10.2 lineTopOpacity

This property specifies the opacity level of the foreground color.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																lineTopOpacity															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0581.

opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

lineTopOpacity (4 bytes): A signed integer that specifies the opacity level of the foreground color. This property MUST be between 0x00000000 and 0x00010000 inclusive. A value of 0x00000000 is completely transparent. A value of 0x00010000 is completely opaque.

The default value for this property is 0x00010000.

2.3.10.3 lineTopBackColor

This property specifies the background color of the line.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																lineTopBackColor															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0582.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

lineTopBackColor (4 bytes): An [OfficeArtCOLORREF](#) that specifies the background color of the line.

The default value for this property is 0x00FFFFFF.

2.3.10.4 lineTopCrMod

This property specifies the foreground color of the line for black-and-white display mode.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																lineTopCrMod															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0583.
opid.fBid	MUST be 0x0.

opid.fComplex	MUST be 0x0.
----------------------	--------------

lineTopCrMod (4 bytes): An [OfficeArtCOLORREF](#) that specifies the foreground color of the line for black-and-white display mode.

The default value for this property is 0x20000000.

2.3.10.5 lineTopType

This property specifies the type of line.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																lineTopType															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0584.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

lineTopType (4 bytes): An [MSOLINETYPE](#) enumeration value that specifies the type of line.

The default value for this property is mslineSolid.

2.3.10.6 lineTopFillBlip

This property specifies the BLIP used to fill this line.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																lineTopFillBlip															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0585.
opid.fBid	MUST be ignored if fComplex is 0x1.
opid.fComplex	If 0x1 then lineTopFillBlip_complex MUST exist.

lineTopFillBlip (4 bytes): An unsigned integer that specifies the BLIP used to fill this line when [lineTopType](#) is set to mslinePattern or mslineTexture.

The meaning of this field is determined by the value of **opid.fComplex** as specified in the following table.

Value	Meaning
0x0	Specifies a one-based index into the rgfb array of the OfficeArtBStoreContainer . A value of 0x00000000 MUST be ignored.
0x1	Specifies the number of bytes of data in lineTopFillBlip_complex .

The default value for this property is 0x00000000.

2.3.10.7 lineTopFillBlip_complex

This property specifies additional data for [lineTopFillBlip](#). This property MUST exist if the **opid.fComplex** bit of [lineTopFillBlip](#) is 0x1.

0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1
lineTopFillBlip_complex (variable)																															
...																															

lineTopFillBlip_complex (variable): An [OfficeArtBlip](#) that specifies the BLIP used to fill this line when [lineTopType](#) is set to mslinePattern or mslineTexture.

2.3.10.8 lineTopFillBlipName

This property specifies a comment about [lineTopFillBlip](#).

0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1
opid																lineTopFillBlipName															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0586.
opid.fBid	Undefined and MUST be ignored.
opid.fComplex	If 0x1 then lineTopFillBlipName_complex MUST exist.

lineTopFillBlipName (4 bytes): The number of bytes of data in [lineTopFillBlipName_complex](#). This value MUST be 0x00000000 if **opid.fComplex** is 0x0.

The default value for this property is 0x00000000.

2.3.10.9 lineTopFillBlipName_complex

This property specifies additional data for [lineTopFillBlipName](#). This property MUST exist if the **opid.fComplex** bit of [lineTopFillBlipName](#) is 0x1.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
lineTopFillBlipName_complex (variable)																															
...																															

lineTopFillBlipName_complex (variable): A Unicode null-terminated string that specifies a comment about [lineTopFillBlip](#) as specified by the [lineTopFillBlipFlags](#) property.

2.3.10.10 lineTopFillBlipFlags

This property specifies how to interpret the [lineTopFillBlipName_complex](#) property.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																lineTopFillBlipFlags															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0587.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

lineTopFillBlipFlags (4 bytes): An [MSOBLIPFLAGS](#) enumeration value that specifies how to interpret the [lineTopFillBlipName_complex](#) property. This value MUST be msoblipflagComment.

The default value for this property is msoblipflagComment.

2.3.10.11 lineTopFillWidth

This property specifies the width of a pattern or texture used to fill this line. The [lineTopFillDztype](#) property specifies how to interpret this value.

0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1
opid																lineTopFillWidth															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0588.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

lineTopFillWidth (4 bytes): A signed integer that specifies the width of a pattern or texture used to fill this line. If the value is 0x00000000, then the pattern or texture SHOULD NOT be expanded or contracted in pixel terms, so the fill is device dependent.

The default value for this property is 0x00000000.

2.3.10.12 lineTopFillHeight

This property specifies the height of a pattern or texture used to fill this line. The [lineTopFillDztype](#) property specifies how to interpret this value.

0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1
opid																lineTopFillHeight															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0589.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

lineTopFillHeight (4 bytes): A signed integer that specifies the height of a pattern or texture used to fill this line. If the value is 0x00000000, then the pattern or texture SHOULD NOT be expanded or contracted in pixel terms, so the fill is device dependent.

The default value for this property is 0x00000000.

2.3.10.13 lineTopFillDztype

This property specifies how the [lineTopFillWidth](#) and [lineTopFillHeight](#) properties MUST be interpreted.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																lineTopFillDztype															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x058A.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

lineTopFillDztype (4 bytes): An [MSODZTYPE](#) enumeration value that specifies how the [lineTopFillWidth](#) and [lineTopFillHeight](#) properties MUST be interpreted.

The default value for this property is msodztypeDefault.

2.3.10.14 lineTopWidth

This property specifies the width of the line.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																lineTopWidth															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x058B.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

lineTopWidth (4 bytes): A signed integer that specifies the width of the line in English Metric Units. This value MUST be between 0x00000000 and 0x0132F540 inclusive.

The default value for this property is 0x00002535.

2.3.10.15 lineTopMiterLimit

This property specifies the maximum allowed ratio of the miter length to the line width. The miter length is the distance from the intersection of the line walls on the inside of the join to the intersection of the line walls on the outside of the join.

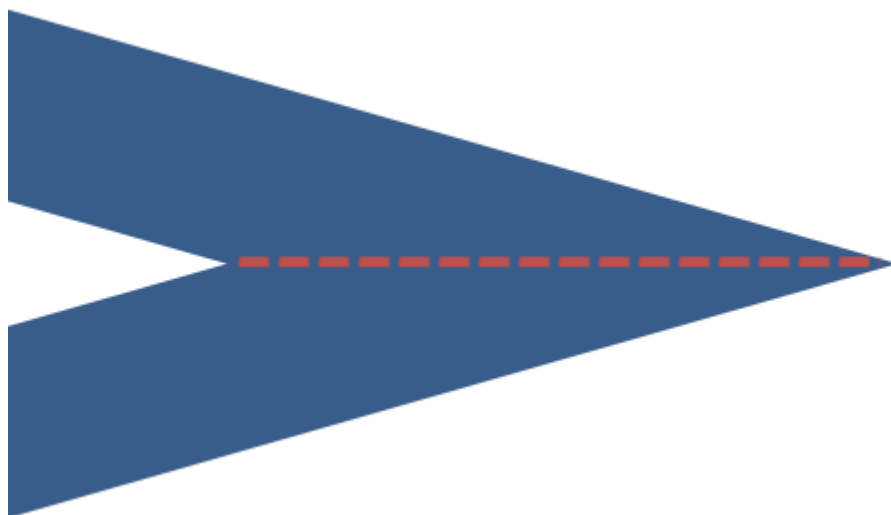


Figure 11: The dashed line represents the miter length

If the line miter length extends beyond the line miter limit, the line SHOULD be clipped.



Figure 12: A line whose miter length extended beyond the line miter limit and was clipped

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																lineTopMiterLimit															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x058C.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

lineTopMiterLimit (4 bytes): A FixedPoint, as specified in [\[MS-OSHARED\] section 2.2.1.6](#), that specifies the maximum allowed ratio of the miter length to the line width.

The default value for this property is 0x00080000.

2.3.10.16 lineTopStyle

This property specifies the style of the line.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																lineTopStyle															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x058D.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

lineTopStyle (4 bytes): An [MSOLINESTYLE](#) enumeration value that specifies the style of the line.

The default value for this property is mslineSimple.

2.3.10.17 lineTopDashing

This property specifies the dash style of the line.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																lineTopDashing															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x058E.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

lineTopDashing (4 bytes): An [MSOLINEDASHING](#) enumeration value that specifies the dash style of the line.

The default value for this property is msolineSolid.

2.3.10.18 lineTopDashStyle

This property specifies the custom dash style of the line.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																lineTopDashStyle															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x058F.
opid.fBid	Undefined and MUST be ignored.
opid.fComplex	If 0x1 then lineTopDashStyle_complex MUST exist.

lineTopDashStyle (4 bytes): The number of bytes of data in [lineTopDashStyle_complex](#). This MUST be 0x00000000 if **opid.fComplex** is 0x0.

The default value for this property is 0x00000000.

2.3.10.19 lineTopDashStyle_complex

This property specifies additional data for [lineTopDashStyle](#). This property MUST exist if the **opid.fComplex** bit of [lineTopDashStyle](#) is 0x1.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
lineTopDashStyle_complex (variable)																															
...																															

lineTopDashStyle_complex (variable): An [IMsoArray](#) of 32-bit unsigned integers that specifies a custom dash style for the line. The first element specifies the length of a dash, the second element specifies the length of a space, the third element specifies the length of a dash, and so

on, alternating between spaces and dashes. The length of each dash and space in the dash style is the product of the element value and the line width. This value SHOULD only be used if the [lineTopDashing](#) property is not present or is equal to mslineSolid.

2.3.10.20 lineTopStartArrowhead

This property specifies the line end decoration used at the start of the line.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																lineTopStartArrowhead															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0590.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

lineTopStartArrowhead (4 bytes): An [MSOLINEEND](#) enumeration value that specifies the line end decoration used at the start of the line.

The default value for this property is mslineNoEnd.

2.3.10.21 lineTopEndArrowhead

This property specifies the line end decoration used at the end of the line.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																lineTopEndArrowhead															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0591.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

lineTopEndArrowhead (4 bytes): An [MSOLINEEND](#) enumeration value that specifies the line end decoration used at the end of the line.

The default value for this property is mslineNoEnd.

2.3.10.22 lineTopStartArrowWidth

This property specifies the width of the line end decoration used at the start of the line.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																lineTopStartArrowWidth															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0592.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

lineTopStartArrowWidth (4 bytes): An [MSLINEENDWIDTH](#) enumeration value that specifies the width of the line end decoration used at the start of the line.

The default value for this property is mslineMediumWidthArrow.

2.3.10.23 lineTopStartArrowLength

This property specifies the length of the line end decoration used at the start of the line.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																lineTopStartArrowLength															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0593.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

lineTopStartArrowLength (4 bytes): An [MSLINEENDLENGTH](#) enumeration value that specifies the length of the line end decoration used at the start of the line.

The default value for this property is mslineMediumLenArrow.

2.3.10.24 lineTopEndArrowWidth

This property specifies the width of the line end decoration used at the end of the line.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																lineTopEndArrowWidth															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0594.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

lineTopEndArrowWidth (4 bytes): An [MSOLINEENDWIDTH](#) enumeration value that specifies the width of the line end decoration used at the end of the line.

The default value for this property is msolineMediumWidthArrow.

2.3.10.25 lineTopEndArrowLength

This property specifies the length of the line end decoration used at the end of the line.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																lineTopEndArrowLength															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0595.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

lineTopEndArrowLength (4 bytes): An [MSOLINEENDLENGTH](#) enumeration value that specifies the length of the line end decoration used at the end of the line.

The default value for this property is msolineMediumLenArrow.

2.3.10.26 lineTopJoinStyle

This property specifies the style of the line joins.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																lineTopJoinStyle															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0596.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

lineTopJoinStyle (4 bytes): An [MSOLINEJOIN](#) enumeration value that specifies the style of the line joins.

The default value for this property is msolineJoinRound.

2.3.10.27 lineTopEndCapStyle

This property specifies the style of the line end caps.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																lineTopEndCapStyle															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0597.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

lineTopEndCapStyle (4 bytes): An [MSOLINECAP](#) enumeration value that specifies the style of the line end caps.

The default value for this property is msolineEndCapFlat.

2.3.10.28 lineTopColorExt

This property specifies the [extended](#) foreground color.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																lineTopColorExt															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0599.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

lineTopColorExt (4 bytes): An [OfficeArtCOLORREF](#) that specifies the [extended](#) foreground color.

The default value for this property is 0xFFFFFFFF.

2.3.10.29 reserved1434

MUST be 0xFFFFFFFF, and MUST be ignored.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																reserved1434															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x059A.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

reserved1434 (4 bytes): MUST be 0xFFFFFFFF, and MUST be ignored.

The default value for this property is 0xFFFFFFFF.

2.3.10.30 lineTopColorExtMod

This property specifies the color modification of the [extended](#) foreground color.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																lineTopColorExtMod															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x059B.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

lineTopColorExtMod (4 bytes): An [MSOTINTSHADE](#) that specifies the [extended](#) foreground color modification.

The default value for this property is 0x20000000.

2.3.10.31 reserved1436

MUST be zero, and MUST be ignored.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																reserved1436															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x059C.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

reserved1436 (4 bytes): MUST be zero, and MUST be ignored.

The default value for this property is 0x00000000.

2.3.10.32 lineTopBackColorExt

This property specifies the [extended](#) background color.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																lineTopBackColorExt															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x059D.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

lineTopBackColorExt (4 bytes): An [OfficeArtCOLORREF](#) that specifies the [extended](#) background color.

The default value for this property is 0xFFFFFFFF.

2.3.10.33 reserved1438

MUST be 0xFFFFFFFF, and MUST be ignored.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																reserved1438															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x059E.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

reserved1438 (4 bytes): MUST be 0xFFFFFFFF, and MUST be ignored.

The default value for this property is 0xFFFFFFFF.

2.3.10.34 lineTopBackColorExtMod

This property specifies the color modification of the [extended](#) background color.

0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1
opid																lineTopBackColorExtMod															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x059F.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

lineTopBackColorExtMod (4 bytes): An [MSOTINTSHADE](#) that specifies the [extended](#) background color modification.

The default value for this property is 0x20000000.

2.3.10.35 reserved1440

MUST be zero, and MUST be ignored.

0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1
opid																reserved1440															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x05A0.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

reserved1440 (4 bytes): MUST be zero, and MUST be ignored.

The default value for this property is 0x00000000.

2.3.10.36 reserved1441

MUST be 0xFFFFFFFF, and MUST be ignored.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																reserved1441															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x05A1.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

reserved1441 (4 bytes): MUST be 0xFFFFFFFF, and MUST be ignored.

The default value for this property is 0xFFFFFFFF.

2.3.10.37 reserved1442

MUST be 0xFFFFFFFF, and MUST be ignored.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																reserved1442															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x05A2.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

reserved1442 (4 bytes): MUST be 0xFFFFFFFF, and MUST be ignored.

The default value for this property is 0xFFFFFFFF.

2.3.10.38 Top Line Style Boolean Properties

This property specifies a 32-bit field of Boolean properties for the top line style.

											1																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	</
--	--	--	--	--	--	--	--	--	--	--	---	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	----

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x05BF.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

A - fTopNoLineDrawDash (1 bit): A bit that specifies whether a dashed line is drawn if the other properties specify there is no line. This value MUST be ignored if **fUsefTopNoLineDrawDash** is 0x0.

The default value for this property is 0x0.

B - fLineTopFillShape (1 bit): A bit that specifies how the fill is aligned. Values are further specified in the following table:

Value	Meaning
0x0	Specifies that the fill is aligned with the origin of the view.
0x1	Specifies that the fill is aligned relative to the shape so that it moves with the shape.

This value MUST be ignored if **fUsefLineTopFillShape** is 0x0.

The default value for this property is 0x1.

C - fTopHitTestLine (1 bit): A bit that specifies whether this line is hit tested. This value MUST be ignored if **fUsefTopHitTestLine** is 0x0.

The default value for this property is 0x1.

D - fTopLine (1 bit): A bit that specifies whether the other line properties in this line style are displayed when dealing with the top side of a rectangular 2D shape. If the **rh.recInstance** of the shape's [OfficeArtFSP](#) is not set to a value in the following list, then the line properties in this line style MUST NOT be displayed:

- [msosptRectangle](#)
- [msosptTextBox](#)
- [msosptBevel](#)
- [msosptHostControl](#)
- [msosptPictureFrame](#)
- [msosptFlowChartProcess](#)

- [msosptFlowChartPredefinedProcess](#)
- [msosptFlowChartInternalStorage](#)
- [msosptActionButtonBlank](#)
- [msosptActionButtonHome](#)
- [msosptActionButtonHelp](#)
- [msosptActionButtonInformation](#)
- [msosptActionButtonForwardNext](#)
- [msosptActionButtonBackPrevious](#)
- [msosptActionButtonEnd](#)
- [msosptActionButtonBeginning](#)
- [msosptActionButtonReturn](#)
- [msosptActionButtonDocument](#)
- [msosptActionButtonSound](#)
- [msosptActionButtonMovie](#)

This value MUST be ignored if **fUsefTopLine** is 0x0.

The default value for this property is 0x0.

E - reserved1 (1 bit): MUST be zero, and MUST be ignored.

F - fTopInsetPenOK (1 bit): A bit that specifies whether insetting the pen is allowed. This value MUST be ignored if **fUsefTopInsetPenOK** is 0x0.

The default value for this property is 0x1.

G - fTopInsetPen (1 bit): A bit that specifies whether to draw the line inside the shape. This bit MUST be ignored if fTopInsetPenOK is set to 0. This value MUST be ignored if **fUsefTopInsetPen** is 0x0.

The default value for this property is 0x0.

H - reserved2 (1 bit): MUST be zero, and MUST be ignored.

I - reserved3 (1 bit): MUST be zero, and MUST be ignored.

J - unused1 (1 bit): Undefined and MUST be ignored.

unused2 (6 bits): Undefined and MUST be ignored.

K - fUsefTopNoLineDrawDash (1 bit): A bit that specifies whether the **fTopNoLineDrawDash** bit is set. A value of 0x0 specifies that the **fTopNoLineDrawDash** bit MUST be ignored and the default value be used instead.

The default value for this property is 0x0.

L - fUsefLineTopFillShape (1 bit): A bit that specifies whether the **fLineTopFillShape** bit is set. A value of 0x0 specifies that the **fLineTopFillShape** bit MUST be ignored and the default value be used instead.

The default value for this property is 0x0.

M - fUsefTopHitTestLine (1 bit): A bit that specifies whether the **fTopHitTestLine** bit is set. A value of 0x0 specifies that the **fTopHitTestLine** bit MUST be ignored and the default value be used instead.

The default value for this property is 0x0.

N - fUsefTopLine (1 bit): A bit that specifies whether the **fTopLine** bit is set. A value of 0x0 specifies that the **fTopLine** bit MUST be ignored and the default value be used instead.

The default value for this property is 0x0.

O - unused3 (1 bit): Undefined and MUST be ignored.

P - fUsefTopInsetPenOK (1 bit): A bit that specifies whether the **fTopInsetPenOK** bit is set. A value of 0x0 specifies that the **fTopInsetPenOK** bit MUST be ignored and the default value be used instead.

The default value for this property is 0x0.

Q - fUsefTopInsetPen (1 bit): A bit that specifies whether the **fTopInsetPen** bit is set. A value of 0x0 specifies that the **fTopInsetPen** bit MUST be ignored and the default value be used instead.

The default value for this property is 0x0.

R - unused4 (1 bit): Undefined and MUST be ignored.

S - unused5 (1 bit): Undefined and MUST be ignored.

T - unused6 (1 bit): Undefined and MUST be ignored.

unused7 (6 bits): Undefined and MUST be ignored.

2.3.11 Right Line Style

This property set specifies the line attributes applied to the right side of a rectangular shape.

2.3.11.1 lineRightColor

This property specifies the foreground color of the line.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																lineRightColor															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x05C0.
opid.fBid	MUST be 0x0.

opid.fComplex	MUST be 0x0.
----------------------	--------------

lineRightColor (4 bytes): An [OfficeArtCOLORREF](#) record that specifies the foreground color of the line.

The default value for this property is 0x00000000.

2.3.11.2 lineRightOpacity

This property specifies the opacity level of the foreground color.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																lineRightOpacity															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x05C1.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

lineRightOpacity (4 bytes): A signed integer that specifies the opacity level of the foreground color. This property MUST be between 0x00000000 and 0x00010000 inclusive. A value of 0x00000000 is completely transparent. A value of 0x00010000 is completely opaque.

The default value for this property is 0x00010000.

2.3.11.3 lineRightBackColor

This property specifies the background color of the line.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																lineRightBackColor															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x05C2.
opid.fBid	MUST be 0x0.

opid.fComplex	MUST be 0x0.
----------------------	--------------

lineRightBackColor (4 bytes): An [OfficeArtCOLORREF](#) record that specifies the background color of the line.

The default value for this property is 0x00FFFFFF.

2.3.11.4 lineRightCrMod

This property specifies the foreground color of the line for black-and-white display mode.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																lineRightCrMod															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x05C3.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

lineRightCrMod (4 bytes): An [OfficeArtCOLORREF](#) record that specifies the foreground color of the line for black-and-white display mode.

The default value for this property is 0x20000000.

2.3.11.5 lineRightType

This property specifies the type of line.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																lineRightType															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x05C4.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

lineRightType (4 bytes): An [MSOLINETYPE](#) enumeration value that specifies the type of line.

The default value for this property is msolineSolid.

2.3.11.6 lineRightFillBlip

This property specifies the BLIP used to fill this line.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																lineRightFillBlip															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x05C5.
opid.fBid	MUST be ignored if fComplex is 0x1.
opid.fComplex	If 0x1 then lineRightFillBlip_complex MUST exist.

lineRightFillBlip (4 bytes): An unsigned integer that specifies the BLIP used to fill this line when the [lineRightType](#) property is set to msolinePattern or msolineTexture.

The meaning of this field is determined by the value of **opid.fComplex** as specified in the following table.

Value	Meaning
0x0	Specifies a one-based index into the rgfb array of the OfficeArtBStoreContainer record. A value of 0x00000000 MUST be ignored.
0x1	Specifies the number of bytes of data in lineRightFillBlip_complex .

The default value for this property is 0x00000000.

2.3.11.7 lineRightFillBlip_complex

This property specifies additional data for the [lineRightFillBlip](#) property. This property MUST exist if the **opid.fComplex** bit of the [lineRightFillBlip](#) property is 0x1.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
lineRightFillBlip_complex (variable)																															
...																															

lineRightFillBlip_complex (variable): An [OfficeArtBlip](#) record that specifies the BLIP used to fill this line when the [lineRightType](#) property is set to msolinePattern or msolineTexture.

2.3.11.8 lineRightFillBlipName

This property specifies a comment about the [lineRightFillBlip](#) property.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																lineRightFillBlipName															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x05C6.
opid.fBid	Undefined and MUST be ignored.
opid.fComplex	If 0x1 then the lineRightFillBlipName_complex property MUST exist.

lineRightFillBlipName (4 bytes): The number of bytes of data in the [lineRightFillBlipName_complex](#) property. This value MUST be 0x00000000 if **opid.fComplex** is 0x0.

The default value for this property is 0x00000000.

2.3.11.9 lineRightFillBlipName_complex

This property specifies additional data for the [lineRightFillBlipName](#) property. This property MUST exist if the **opid.fComplex** bit of the [lineRightFillBlipName](#) property is 0x1.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
lineRightFillBlipName_complex (variable)																															
...																															

lineRightFillBlipName_complex (variable): A Unicode null-terminated string that specifies a comment about the [lineRightFillBlip](#) property as specified by the [lineRightFillBlipFlags](#) property.

2.3.11.10 lineRightFillBlipFlags

This property specifies how to interpret the [lineRightFillBlipName_complex](#) property.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																lineRightFillBlipFlags															

...	
-----	--

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x05C7.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

lineRightFillBlipFlags (4 bytes): An [MSOBLIPFLAGS](#) enumeration value that specifies how to interpret the [lineRightFillBlipName](#) [complex](#) property. This value MUST be msoblipflagComment.

The default value for this property is msoblipflagComment.

2.3.11.11 lineRightFillWidth

This property specifies the width of a pattern or texture used to fill this line. The [lineRightFillDztype](#) property specifies how to interpret this value.

0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1
opid																lineRightFillWidth															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x05C8.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

lineRightFillWidth (4 bytes): A signed integer that specifies the width of a pattern or texture used to fill this line. If the value is 0x00000000, then the pattern or texture SHOULD NOT be expanded or contracted in pixel terms, so the fill is device dependent.

The default value for this property is 0x00000000.

2.3.11.12 lineRightFillHeight

This property specifies the height of a pattern or texture used to fill this line. The [lineRightFillDztype](#) property specifies how to interpret this value.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																lineRightFillHeight															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x05C9.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

lineRightFillHeight (4 bytes): A signed integer that specifies the height of a pattern or texture used to fill this line. If the value is 0x00000000, then the pattern or texture SHOULD NOT be expanded or contracted in pixel terms, so the fill is device dependent.

The default value for this property is 0x00000000.

2.3.11.13 lineRightFillDztype

This property specifies how the [lineRightFillWidth](#) and [lineRightFillHeight](#) properties MUST be interpreted.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																lineRightFillDztype															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x05CA.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

lineRightFillDztype (4 bytes): An [MSODZTYPE](#) enumeration value that specifies how the [lineRightFillWidth](#) and [lineRightFillHeight](#) properties MUST be interpreted.

The default value for this property is msodztypeDefault.

2.3.11.14 lineRightWidth

This property specifies the width of the line.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																lineRightWidth															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x05CB.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

lineRightWidth (4 bytes): A signed integer that specifies the width of the line in English Metric Units. This value MUST be between 0x00000000 and 0x0132F540 inclusive.

The default value for this property is 0x00002535.

2.3.11.15 lineRightMiterLimit

This property specifies the maximum allowed ratio of the miter length to the line width. The miter length is the distance from the intersection of the line walls on the inside of the join to the intersection of the line walls on the outside of the join.

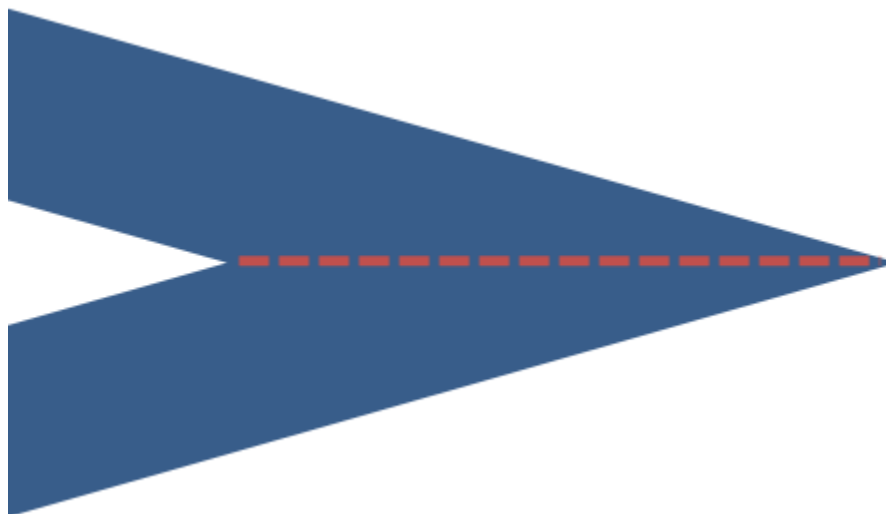


Figure 13: The dashed line represents the miter length

If the line miter length extends beyond the line miter limit, the line SHOULD be clipped.



Figure 14: A line whose miter length extended beyond the line miter limit and was clipped

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																lineRightMiterLimit															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x05CC.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

lineRightMiterLimit (4 bytes): A FixedPoint, as specified in [\[MS-OSHARED\] section 2.2.1.6](#), that specifies the maximum allowed ratio of the miter length to the line width.

The default value for this property is 0x00080000.

2.3.11.16 lineRightStyle

This property specifies the style of the line.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																lineRightStyle															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x05CD.
opid.fBid	MUST be 0x0.

opid.fComplex	MUST be 0x0.
----------------------	--------------

lineRightStyle (4 bytes): An [MSOLINESTYLE](#) enumeration value that specifies the style of the line.

The default value for this property is mslineSimple.

2.3.11.17 lineRightDashing

This property specifies the dash style of the line.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																lineRightDashing															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x05CE.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

lineRightDashing (4 bytes): An [MSOLINEDASHING](#) enumeration value that specifies the dash style of the line.

The default value for this property is mslineSolid.

2.3.11.18 lineRightDashStyle

This property specifies the custom dash style of the line.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																lineRightDashStyle															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x05CF.
opid.fBid	Undefined and MUST be ignored.
opid.fComplex	If 0x1 then lineRightDashStyle_complex MUST exist.

lineRightDashStyle (4 bytes): The number of bytes of data in the [lineRightDashStyle_complex](#) property. This MUST be 0x00000000 if **opid.fComplex** is 0x0.

The default value for this property is 0x00000000.

2.3.11.19 lineRightDashStyle_complex

This property specifies additional data for the [lineRightDashStyle](#) property. This property MUST exist if the **opid.fComplex** bit of the [lineRightDashStyle](#) property is 0x1.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
lineRightDashStyle_complex (variable)																															
...																															

lineRightDashStyle_complex (variable): An [IMsoArray](#) record of 32-bit unsigned integers that specifies a custom dash style for the line. The first element specifies the length of a dash, the second element specifies the length of a space, the third element specifies the length of a dash, and so on, alternating between spaces and dashes. The length of each dash and space in the dash style is the product of the element value and the line width. This value SHOULD only be used if the [lineRightDashing](#) property is not present or is equal to msolineSolid.

2.3.11.20 lineRightStartArrowhead

This property specifies the line end decoration used at the start of the line.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																lineRightStartArrowhead															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x05D0.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

lineRightStartArrowhead (4 bytes): An [MSOLINEEND](#) enumeration value that specifies the line end decoration used at the start of the line.

The default value for this property is msolineNoEnd.

2.3.11.21 lineRightEndArrowhead

This property specifies the line end decoration used at the end of the line.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																lineRightEndArrow head															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x05D1.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

lineRightEndArrow head (4 bytes): An [MSOLINEEND](#) enumeration value that specifies the line end decoration used at the end of the line.

The default value for this property is msolineNoEnd.

2.3.11.22 lineRightStartArrowWidth

This property specifies the width of the line end decoration used at the start of the line.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																lineRightStartArrowWidth															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x05D2.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

lineRightStartArrowWidth (4 bytes): An [MSOLINEENDWIDTH](#) enumeration value that specifies the width of the line end decoration used at the start of the line.

The default value for this property is msolineMediumWidthArrow.

2.3.11.23 lineRightStartArrowLength

This property specifies the length of the line end decoration used at the start of the line.

0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1
opid																lineRightStartArrowLength															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x05D3.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

lineRightStartArrowLength (4 bytes): An [MSOLINEENDLENGTH](#) enumeration value that specifies the length of the line end decoration used at the start of the line.

The default value for this property is msolineMediumLenArrow.

2.3.11.24 lineRightEndArrowWidth

This property specifies the width of the line end decoration used at the end of the line.

0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1
opid																lineRightEndArrowWidth															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x05D4.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

lineRightEndArrowWidth (4 bytes): An [MSOLINEENDWIDTH](#) enumeration value that specifies the width of the line end decoration used at the end of the line.

The default value for this property is msolineMediumWidthArrow.

2.3.11.25 lineRightEndArrowLength

This property specifies the length of the line end decoration used at the end of the line.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																lineRightEndArrowLength															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x05D5.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

lineRightEndArrowLength (4 bytes): An [MSOLINEENDLENGTH](#) enumeration value that specifies the length of the line end decoration used at the end of the line.

The default value for this property is msolineMediumLenArrow.

2.3.11.26 lineRightJoinStyle

This property specifies the style of the line joins.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																lineRightJoinStyle															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x05D6.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

lineRightJoinStyle (4 bytes): An [MSOLINEJOIN](#) enumeration value that specifies the style of the line joins.

The default value for this property is msolineJoinRound.

2.3.11.27 lineRightEndCapStyle

This property specifies the style of the line end caps.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																lineRightEndCapStyle															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x05D7.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

lineRightEndCapStyle (4 bytes): An [MSOLINECAP](#) enumeration value that specifies the style of the line end caps.

The default value for this property is msolineEndCapFlat.

2.3.11.28 lineRightColorExt

This property specifies the [extended](#) foreground color.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																lineRightColorExt															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x05D9.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

lineRightColorExt (4 bytes): An [OfficeArtCOLORREF](#) record that specifies the [extended](#) foreground color.

The default value for this property is 0xFFFFFFFF.

2.3.11.29 reserved1498

MUST be 0xFFFFFFFF, and MUST be ignored.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																reserved1498															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x05DA.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

reserved1498 (4 bytes): MUST be 0xFFFFFFFF, and MUST be ignored.

The default value for this property is 0xFFFFFFFF.

2.3.11.30 lineRightColorExtMod

This property specifies the color modification of the [extended](#) foreground color.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																lineRightColorExtMod															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x05DB.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

lineRightColorExtMod (4 bytes): An [MSOTINTSHADE](#) record that specifies the [extended](#) foreground color modification.

The default value for this property is 0x20000000.

2.3.11.31 reserved1500

MUST be zero, and MUST be ignored.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																reserved1500															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x05DC.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

reserved1500 (4 bytes): MUST be zero, and MUST be ignored.

The default value for this property is 0x00000000.

2.3.11.32 lineRightBackColorExt

This property specifies the [extended](#) background color.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																lineRightBackColorExt															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x05DD.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

lineRightBackColorExt (4 bytes): An [OfficeArtCOLORREF](#) record that specifies the [extended](#) background color.

The default value for this property is 0xFFFFFFFF.

2.3.11.33 reserved1502

MUST be 0xFFFFFFFF, and MUST be ignored.

0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1
opid																reserved1502															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x05DE.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

reserved1502 (4 bytes): MUST be 0xFFFFFFFF, and MUST be ignored.

The default value for this property is 0xFFFFFFFF.

2.3.11.34 lineRightBackColorExtMod

This property specifies the color modification of the [extended](#) background color.

0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1
opid																lineRightBackColorExtMod															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x05DF.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

lineRightBackColorExtMod (4 bytes): An [MSOTINTSHADE](#) record that specifies the [extended](#) background color modification.

The default value for this property is 0x20000000.

2.3.11.35 reserved1504

MUST be zero, and MUST be ignored.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																reserved1504															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x05E0.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

reserved1504 (4 bytes): MUST be zero, and MUST be ignored.

The default value for this property is 0x00000000.

2.3.11.36 reserved1505

MUST be 0xFFFFFFFF, and MUST be ignored.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																reserved1505															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x05E1.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

reserved1505 (4 bytes): MUST be 0xFFFFFFFF, and MUST be ignored.

The default value for this property is 0xFFFFFFFF.

2.3.11.37 reserved1506

MUST be 0xFFFFFFFF, and MUST be ignored.

0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1
opid																reserved1506															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x05E2.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

reserved1506 (4 bytes): MUST be 0xFFFFFFFF, and MUST be ignored.

The default value for this property is 0xFFFFFFFF.

2.3.11.38 Right Line Style Boolean Properties

This property specifies a 32-bit field of Boolean properties for the right line style.

										1										2										3			
0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1		
opid																A	B	C	D	E	F	G	H	I	J	unused2							
K	L	M	N	O	P	Q	R	S	T	unused7																							

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x05FF.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

A - fRightNoLineDrawDash (1 bit): A bit that specifies whether a dashed line is drawn if the other properties specify there is no line. This value MUST be ignored if **fUsefRightNoLineDrawDash** is 0x0.

The default value for this property is 0x0.

B - fLineRightFillShape (1 bit): A bit that specifies how the fill is aligned. Values are further specified in the following table:

Value	Meaning
0x0	Specifies that the fill is aligned with the origin of the view.
0x1	Specifies that the fill is aligned relative to the shape so that it moves with the shape.

This value MUST be ignored if **fUsefLineRightFillShape** is 0x0.

The default value for this property is 0x1.

C - fRightHitTestLine (1 bit): A bit that specifies whether this line is hit tested. This value MUST be ignored if **fUsefRightHitTestLine** is 0x0.

The default value for this property is 0x1.

D - fRightLine (1 bit): A bit that specifies whether the other line properties in this line style are displayed when dealing with the right side of a rectangular 2D shape. If the **rh.recInstance** of the shape's [OfficeArtFSP](#) record is not set to a value in the following list, then the line properties in this line style MUST NOT be displayed:

- [msosptRectangle](#)
- [msosptTextBox](#)
- [msosptBevel](#)
- [msosptHostControl](#)
- [msosptPictureFrame](#)
- [msosptFlowChartProcess](#)
- [msosptFlowChartPredefinedProcess](#)
- [msosptFlowChartInternalStorage](#)
- [msosptActionButtonBlank](#)
- [msosptActionButtonHome](#)
- [msosptActionButtonHelp](#)
- [msosptActionButtonInformation](#)
- [msosptActionButtonForwardNext](#)
- [msosptActionButtonBackPrevious](#)
- [msosptActionButtonEnd](#)
- [msosptActionButtonBeginning](#)
- [msosptActionButtonReturn](#)
- [msosptActionButtonDocument](#)
- [msosptActionButtonSound](#)
- [msosptActionButtonMovie](#)

This value MUST be ignored if **fUsefRightLine** is 0x0.

The default value for this property is 0x0.

E - reserved1 (1 bit): MUST be zero, and MUST be ignored.

F - fRightInsetPenOK (1 bit): A bit that specifies whether inseting the pen is allowed. This value MUST be ignored if **fUsefRightInsetPenOK** is 0x0.

The default value for this property is 0x1.

G - fRightInsetPen (1 bit): A bit that specifies whether to draw the line inside the shape. This bit MUST be ignored if **fRightInsetPenOK** is set to 0. This value MUST be ignored if **fUsefRightInsetPen** is 0x0.

The default value for this property is 0x0.

H - reserved2 (1 bit): MUST be zero, and MUST be ignored.

I - reserved3 (1 bit): MUST be zero, and MUST be ignored.

J - unused1 (1 bit): Undefined and MUST be ignored.

unused2 (6 bits): Undefined and MUST be ignored.

K - fUsefRightNoLineDrawDash (1 bit): A bit that specifies whether the **fRightNoLineDrawDash** bit is set. A value of 0x0 specifies that the **fRightNoLineDrawDash** bit MUST be ignored and the default value be used instead.

The default value for this property is 0x0.

L - fUsefLineRightFillShape (1 bit): A bit that specifies whether the **fLineRightFillShape** bit is set. A value of 0x0 specifies that the **fLineRightFillShape** bit MUST be ignored and the default value be used instead.

The default value for this property is 0x0.

M - fUsefRightHitTestLine (1 bit): A bit that specifies whether the **fRightHitTestLine** bit is set. A value of 0x0 specifies that the **fRightHitTestLine** bit MUST be ignored and the default value be used instead.

The default value for this property is 0x0.

N - fUsefRightLine (1 bit): A bit that specifies whether the **fRightLine** bit is set. A value of 0x0 specifies that the **fRightLine** bit MUST be ignored and the default value be used instead.

The default value for this property is 0x0.

O - unused3 (1 bit): Undefined and MUST be ignored.

P - fUsefRightInsetPenOK (1 bit): A bit that specifies whether the **fRightInsetPenOK** bit is set. A value of 0x0 specifies that the **fRightInsetPenOK** bit MUST be ignored and the default value be used instead.

The default value for this property is 0x0.

Q - fUsefRightInsetPen (1 bit): A bit that specifies whether the **fRightInsetPen** bit is set. A value of 0x0 specifies that the **fRightInsetPen** bit MUST be ignored and the default value be used instead.

The default value for this property is 0x0.

R - unused4 (1 bit): Undefined and MUST be ignored.

S - unused5 (1 bit): Undefined and MUST be ignored.

T - unused6 (1 bit): Undefined and MUST be ignored.

unused7 (6 bits): Undefined and MUST be ignored.

2.3.12 Bottom Line Style

This property set specifies the line attributes applied to the bottom side of a rectangular shape.

2.3.12.1 lineBottomColor

This property specifies the foreground color of the line.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																lineBottomColor															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0600.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

lineBottomColor (4 bytes): An [OfficeArtCOLORREF](#) record that specifies the foreground color of the line.

The default value for this property is 0x00000000.

2.3.12.2 lineBottomOpacity

This property specifies the opacity level of the foreground color.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																lineBottomOpacity															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0601.

opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

lineBottomOpacity (4 bytes): A signed integer that specifies the opacity level of the foreground color. This property MUST be between 0x00000000 and 0x00010000 inclusive. A value of 0x00000000 is completely transparent. A value of 0x00010000 is completely opaque.

The default value for this property is 0x00010000.

2.3.12.3 lineBottomBackColor

This property specifies the background color of the line.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																lineBottomBackColor															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0602.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

lineBottomBackColor (4 bytes): An [OfficeArtCOLORREF](#) record that specifies the background color of the line.

The default value for this property is 0x00FFFFFF.

2.3.12.4 lineBottomCrMod

This property specifies the foreground color of the line for black-and-white display mode.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																lineBottomCrMod															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0603.

opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

lineBottomCrMod (4 bytes): An [OfficeArtCOLORREF](#) record that specifies the foreground color of the line for black-and-white display mode.

The default value for this property is 0x20000000.

2.3.12.5 lineBottomType

This property specifies the type of line.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																lineBottomType															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0604.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

lineBottomType (4 bytes): An [MSOLINETYPE](#) enumeration value that specifies the type of line.

The default value for this property is msolineSolid.

2.3.12.6 lineBottomFillBlip

This property specifies the BLIP that is used to fill this line.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																lineBottomFillBlip															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0605.
opid.fBid	MUST be ignored if fComplex is 0x1.
opid.fComplex	If 0x1 then lineBottomFillBlip_complex MUST exist.

lineBottomFillBlip (4 bytes): An unsigned integer that specifies the BLIP that is used to fill this line when the [lineBottomType](#) property is set to mslinePattern or mslineTexture.

The meaning of this field is determined by the value of **opid.fComplex** as specified in the following table:

Value	Meaning
0x0	Specifies a one-based index into the rgfb array of the OfficeArtBStoreContainer record. A value of 0x00000000 MUST be ignored.
0x1	Specifies the number of bytes of data in lineBottomFillBlip_complex property.

The default value for this property is 0x00000000.

2.3.12.7 lineBottomFillBlip_complex

This property specifies additional data for the [lineBottomFillBlip](#) property. This property MUST exist if the **opid.fComplex** bit of the [lineBottomFillBlip](#) property is 0x1.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
lineBottomFillBlip_complex (variable)																															
...																															

lineBottomFillBlip_complex (variable): An [OfficeArtBlip](#) record that specifies the BLIP that is used to fill this line when the [lineBottomType](#) property is set to mslinePattern or mslineTexture.

2.3.12.8 lineBottomFillBlipName

This property specifies a comment about the [lineBottomFillBlip](#) property.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																lineBottomFillBlipName															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0606.
opid.fBid	Undefined and MUST be ignored.
opid.fComplex	If 0x1, then lineBottomFillBlipName_complex property MUST exist.

lineBottomFillBlipName (4 bytes): The number of bytes of data in the [lineBottomFillBlipName_complex](#) property. This value MUST be 0x00000000 if **opid.fComplex** is 0x0.

The default value for this property is 0x00000000.

2.3.12.9 lineBottomFillBlipName_complex

This property specifies additional data for the [lineBottomFillBlipName](#) property. This property MUST exist if the **opid.fComplex** bit of the [lineBottomFillBlipName](#) property is 0x1.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
lineBottomFillBlipName_complex (variable)																															
...																															

lineBottomFillBlipName_complex (variable): A Unicode null-terminated string that specifies a comment about [lineBottomFillBlip](#) as specified by the [lineBottomFillBlipFlags](#) property.

2.3.12.10 lineBottomFillBlipFlags

This property specifies how to interpret the [lineBottomFillBlipName_complex](#) property.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																lineBottomFillBlipFlags															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0607.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

lineBottomFillBlipFlags (4 bytes): An [MSOBLIPFLAGS](#) enumeration value that specifies how to interpret the [lineBottomFillBlipName_complex](#) property. This value MUST be msoblipflagComment.

The default value for this property is msoblipflagComment.

2.3.12.11 lineBottomFillWidth

This property specifies the width of a pattern or texture used to fill this line. The [lineBottomFillDztype](#) property specifies how to interpret this value.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																lineBottomFillWidth															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0608.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

lineBottomFillWidth (4 bytes): A signed integer that specifies the width of a pattern or texture used to fill this line. If the value is 0x00000000, then the pattern or texture SHOULD NOT be expanded or contracted in pixel terms, so the fill is device dependent.

The default value for this property is 0x00000000.

2.3.12.12 lineBottomFillHeight

This property specifies the height of a pattern or texture used to fill this line. The [lineBottomFillDztype](#) property specifies how to interpret this value.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																lineBottomFillHeight															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0609.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

lineBottomFillHeight (4 bytes): A signed integer that specifies the height of a pattern or texture used to fill this line. If the value is 0x00000000, then the pattern or texture SHOULD NOT be expanded or contracted in pixel terms, so the fill is device dependent.

The default value for this property is 0x00000000.

2.3.12.13 lineBottomFillDztype

This property specifies how the [lineBottomFillWidth](#) and [lineBottomFillHeight](#) properties MUST be interpreted.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																lineBottomFillDztype															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x060A.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

lineBottomFillDztype (4 bytes): An [MSODZTYPE](#) enumeration value that specifies how the [lineBottomFillWidth](#) and [lineBottomFillHeight](#) properties MUST be interpreted.

The default value for this property is msodztypeDefault.

2.3.12.14 lineBottomWidth

This property specifies the width of the line.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																lineBottomWidth															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x060B.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

lineBottomWidth (4 bytes): A signed integer that specifies the width of the line in English Metric Units. This value MUST be between 0x00000000 and 0x0132F540 inclusive.

The default value for this property is 0x00002535.

2.3.12.15 lineBottomMiterLimit

This property specifies the maximum allowed ratio of the miter length to the line width. The miter length is the distance from the intersection of the line walls on the inside of the join to the intersection of the line walls on the outside of the join.

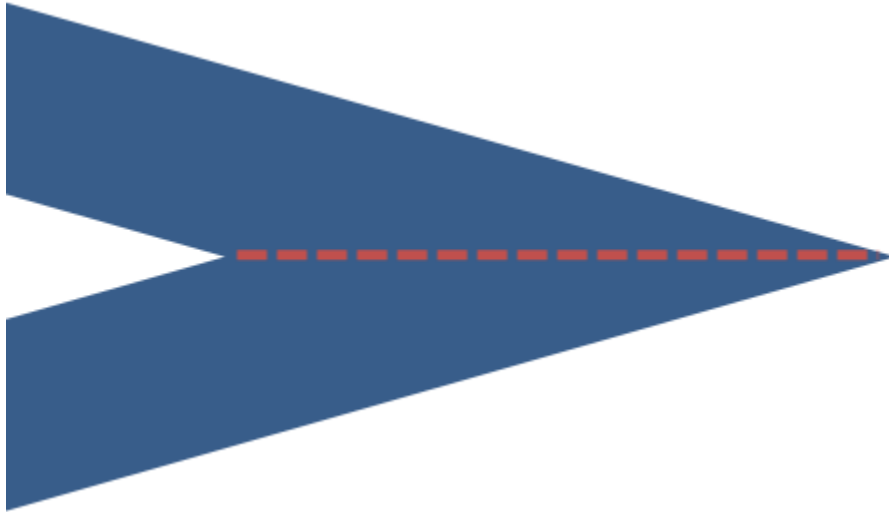


Figure 15: Dashed line that represents the miter length

If the line miter length extends beyond the line miter limit, the line SHOULD be clipped.



Figure 16: Line whose miter length extended beyond the line miter limit and was clipped

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																lineBottomMiterLimit															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x060C.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

lineBottomMiterLimit (4 bytes): A FixedPoint, as specified in [\[MS-OSHARED\] section 2.2.1.6](#), that specifies the maximum allowed ratio of the miter length to the line width.

The default value for this property is 0x00080000.

2.3.12.16 lineBottomStyle

This property specifies the style of the line.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																lineBottomStyle															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x060D.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

lineBottomStyle (4 bytes): An [MSOLINESTYLE](#) enumeration value that specifies the style of the line.

The default value for this property is msolineSimple.

2.3.12.17 lineBottomDashing

This property specifies the dash style of the line.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																lineBottomDashing															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x060E.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

lineBottomDashing (4 bytes): An [MSOLINEDASHING](#) enumeration value that specifies the dash style of the line.

The default value for this property is msolineSolid.

2.3.12.18 lineBottomDashStyle

This property specifies the custom dash style of the line.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																lineBottomDashStyle															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x060F.
opid.fBid	Undefined and MUST be ignored.
opid.fComplex	If 0x1 then the lineBottomDashStyle_complex property MUST exist.

lineBottomDashStyle (4 bytes): The number of bytes of data in the [lineBottomDashStyle_complex](#) property. This MUST be 0x00000000 if **opid.fComplex** is 0x0.

The default value for this property is 0x00000000.

2.3.12.19 lineBottomDashStyle_complex

This property specifies additional data for the [lineBottomDashStyle](#) property. This property MUST exist if the **opid.fComplex** bit of the [lineBottomDashStyle](#) property is 0x1.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
lineBottomDashStyle_complex (variable)																															
...																															

lineBottomDashStyle_complex (variable): An [IMsoArray](#) record of 32-bit unsigned integers that specifies a custom dash style for the line. The first element specifies the length of a dash, the second element specifies the length of a space, the third element specifies the length of a dash,

and so on, alternating between spaces and dashes. The length of each dash and space in the dash style is the product of the element value and the line width. This value SHOULD only be used if the [lineBottomDashing](#) property is not present or is equal to msolineSolid.

2.3.12.20 lineBottomStartArrowhead

This property specifies the line end decoration that is used at the start of the line.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																lineBottomStartArrowhead															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0610.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

lineBottomStartArrowhead (4 bytes): An [MSOLINEEND](#) enumeration value that specifies the line end decoration that is used at the start of the line.

The default value for this property is msolineNoEnd.

2.3.12.21 lineBottomEndArrowhead

This property specifies the line end decoration that is used at the end of the line.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																lineBottomEndArrowhead															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0611.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

lineBottomEndArrowhead (4 bytes): An [MSOLINEEND](#) enumeration value that specifies the line end decoration that is used at the end of the line.

The default value for this property is msolineNoEnd.

2.3.12.22 lineBottomStartArrowWidth

This property specifies the width of the line end decoration that is used at the start of the line.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																lineBottomStartArrowWidth															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0612.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

lineBottomStartArrowWidth (4 bytes): An [MSOLINEENDWIDTH](#) enumeration value that specifies the width of the line end decoration that is used at the start of the line.

The default value for this property is msolineMediumWidthArrow.

2.3.12.23 lineBottomStartArrowLength

This property specifies the length of the line end decoration that is used at the start of the line.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																lineBottomStartArrowLength															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0613.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

lineBottomStartArrowLength (4 bytes): An [MSOLINEENDLENGTH](#) enumeration value that specifies the length of the line end decoration that is used at the start of the line.

The default value for this property is msolineMediumLenArrow.

2.3.12.24 lineBottomEndArrowWidth

This property specifies the width of the line end decoration that is used at the end of the line.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																lineBottomEndArrowWidth															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0614.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

lineBottomEndArrowWidth (4 bytes): An [MSOLINEENDWIDTH](#) enumeration value that specifies the width of the line end decoration that is used at the end of the line.

The default value for this property is msolineMediumWidthArrow.

2.3.12.25 lineBottomEndArrowLength

This property specifies the length of the line end decoration that is used at the end of the line.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																lineBottomEndArrowLength															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0615.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

lineBottomEndArrowLength (4 bytes): An [MSOLINEENDLENGTH](#) enumeration value that specifies the length of the line end decoration that is used at the end of the line.

The default value for this property is msolineMediumLenArrow.

2.3.12.26 lineBottomJoinStyle

This property specifies the style of the line joins.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																lineBottomJoinStyle															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0616.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

lineBottomJoinStyle (4 bytes): An [MSOLINEJOIN](#) enumeration value that specifies the style of the line joins.

The default value for this property is msolineJoinRound.

2.3.12.27 lineBottomEndCapStyle

This property specifies the style of the line end caps.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																lineBottomEndCapStyle															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0617.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

lineBottomEndCapStyle (4 bytes): An [MSOLINECAP](#) enumeration value that specifies the style of the line end caps.

The default value for this property is msolineEndCapFlat.

2.3.12.28 lineBottomColorExt

This property specifies the [extended](#) foreground color.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																lineBottomColorExt															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0619.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

lineBottomColorExt (4 bytes): An [OfficeArtCOLORREF](#) record that specifies the [extended](#) foreground color.

The default value for this property is 0xFFFFFFFF.

2.3.12.29 reserved1562

MUST be 0xFFFFFFFF, and MUST be ignored.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																reserved1562															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x061A.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

reserved1562 (4 bytes): MUST be 0xFFFFFFFF, and MUST be ignored.

The default value for this property is 0xFFFFFFFF.

2.3.12.30 lineBottomColorExtMod

This property specifies the color modification of the [extended](#) foreground color.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																lineBottomColorExtMod															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x061B.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

lineBottomColorExtMod (4 bytes): An [MSOTINTSHADE](#) record that specifies the [extended](#) foreground color modification.

The default value for this property is 0x20000000.

2.3.12.31 reserved1564

MUST be zero, and MUST be ignored.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																reserved1564															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x061C.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

reserved1564 (4 bytes): MUST be zero, and MUST be ignored.

The default value for this property is 0x00000000.

2.3.12.32 lineBottomBackColorExt

This property specifies the [extended](#) background color.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																lineBottomBackColorExt															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x061D.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

lineBottomBackColorExt (4 bytes): An [OfficeArtCOLORREF](#) record that specifies the [extended](#) background color.

The default value for this property is 0xFFFFFFFF.

2.3.12.33 reserved1566

MUST be 0xFFFFFFFF, and MUST be ignored.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																reserved1566															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x061E.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

reserved1566 (4 bytes): MUST be 0xFFFFFFFF, and MUST be ignored.

The default value for this property is 0xFFFFFFFF.

2.3.12.34 lineBottomBackColorExtMod

This property specifies the color modification of the [extended](#) background color.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																lineBottomBackColorExtMod															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x061F.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

lineBottomBackColorExtMod (4 bytes): An [MSOTINTSHADE](#) record that specifies the [extended](#) background color modification.

The default value for this property is 0x20000000.

2.3.12.35 reserved1568

MUST be zero, and MUST be ignored.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																reserved1568															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0620.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

reserved1568 (4 bytes): MUST be zero, and MUST be ignored.

The default value for this property is 0x00000000.

2.3.12.36 reserved1569

MUST be 0xFFFFFFFF, and MUST be ignored.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																reserved1569															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0621.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

reserved1569 (4 bytes): MUST be 0xFFFFFFFF, and MUST be ignored.

The default value for this property is 0xFFFFFFFF.

2.3.12.37 reserved1570

MUST be 0xFFFFFFFF, and MUST be ignored.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																reserved1570															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0622.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

reserved1570 (4 bytes): MUST be 0xFFFFFFFF, and MUST be ignored.

The default value for this property is 0xFFFFFFFF.

2.3.12.38 Bottom Line Style Boolean Properties

This property specifies a 32-bit field of Boolean properties for the bottom line style.

											1																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
--	--	--	--	--	--	--	--	--	--	--	---	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x063F.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

A - fBottomNoLineDrawDash (1 bit): A bit that specifies whether a dashed line is drawn if the other properties specify there is no line. This value MUST be ignored if **fUsefBottomNoLineDrawDash** is 0x0.

The default value for this property is 0x0.

B - fLineBottomFillShape (1 bit): A bit that specifies how the fill is aligned. Values are further specified in the following table:

Value	Meaning
0x0	Specifies that the fill is aligned with the origin of the view.
0x1	Specifies that the fill is aligned relative to the shape so that it moves with the shape.

This value MUST be ignored if **fUsefLineBottomFillShape** is 0x0.

The default value for this property is 0x1.

C - fBottomHitTestLine (1 bit): A bit that specifies whether this line is hit tested. This value MUST be ignored if **fUsefBottomHitTestLine** is 0x0.

The default value for this property is 0x1.

D - fBottomLine (1 bit): A bit that specifies whether the other line properties in this line style are displayed when dealing with the bottom side of a rectangular 2D shape. If the **rh.recInstance** of the shape's [OfficeArtFSP](#) record is not set to a value in the following list, then the line properties in this line style MUST NOT be displayed:

- [msosptRectangle](#)
- [msosptTextBox](#)
- [msosptBevel](#)
- [msosptHostControl](#)
- [msosptPictureFrame](#)
- [msosptFlowChartProcess](#)

- [msosptFlowChartPredefinedProcess](#)
- [msosptFlowChartInternalStorage](#)
- [msosptActionButtonBlank](#)
- [msosptActionButtonHome](#)
- [msosptActionButtonHelp](#)
- [msosptActionButtonInformation](#)
- [msosptActionButtonForwardNext](#)
- [msosptActionButtonBackPrevious](#)
- [msosptActionButtonEnd](#)
- [msosptActionButtonBeginning](#)
- [msosptActionButtonReturn](#)
- [msosptActionButtonDocument](#)
- [msosptActionButtonSound](#)
- [msosptActionButtonMovie](#)

This value MUST be ignored if **fUsefBottomLine** is 0x0.

The default value for this property is 0x0.

E - reserved1 (1 bit): MUST be zero, and MUST be ignored.

F - fBottomInsetPenOK (1 bit): A bit that specifies whether insetting the pen is allowed. This value MUST be ignored if **fUsefBottomInsetPenOK** is 0x0.

The default value for this property is 0x1.

G - fBottomInsetPen (1 bit): A bit that specifies whether to draw the line inside the shape. This bit MUST be ignored if **fBottomInsetPenOK** is set to 0. This value MUST be ignored if **fUsefBottomInsetPen** is 0x0.

The default value for this property is 0x0.

H - reserved2 (1 bit): MUST be zero, and MUST be ignored.

I - reserved3 (1 bit): MUST be zero, and MUST be ignored.

J - unused1 (1 bit): Undefined and MUST be ignored.

unused2 (6 bits): Undefined and MUST be ignored.

K - fUsefBottomNoLineDrawDash (1 bit): A bit that specifies whether the **fBottomNoLineDrawDash** bit is set. A value of 0x0 specifies that the **fBottomNoLineDrawDash** bit MUST be ignored and the default value be used instead.

The default value for this property is 0x0.

L - fUsefLineBottomFillShape (1 bit): A bit that specifies whether the **fLineBottomFillShape** bit is set. A value of 0x0 specifies that the **fLineBottomFillShape** bit MUST be ignored and the default value be used instead.

The default value for this property is 0x0.

M - fUsefBottomHitTestLine (1 bit): A bit that specifies whether the **fBottomHitTestLine** bit is set. A value of 0x0 specifies that the **fBottomHitTestLine** bit MUST be ignored and the default value be used instead.

The default value for this property is 0x0.

N - fUsefBottomLine (1 bit): A bit that specifies whether the **fBottomLine** bit is set. A value of 0x0 specifies that the **fBottomLine** bit MUST be ignored and the default value be used instead.

The default value for this property is 0x0.

O - unused3 (1 bit): Undefined and MUST be ignored.

P - fUsefBottomInsetPenOK (1 bit): A bit that specifies whether the **fBottomInsetPenOK** bit is set. A value of 0x0 specifies that the **fBottomInsetPenOK** bit MUST be ignored and the default value be used instead.

The default value for this property is 0x0.

Q - fUsefBottomInsetPen (1 bit): A bit that specifies whether the **fBottomInsetPen** bit is set. A value of 0x0 specifies that the **fBottomInsetPen** bit MUST be ignored and the default value be used instead.

The default value for this property is 0x0.

R - unused4 (1 bit): Undefined and MUST be ignored.

S - unused5 (1 bit): Undefined and MUST be ignored.

T - unused6 (1 bit): Undefined and MUST be ignored.

unused7 (6 bits): Undefined and MUST be ignored.

2.3.13 Shadow Style

This property set specifies how a shadow will appear when drawn.

2.3.13.1 shadowType

This property specifies the style of shadow to display with the object.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																shadowType															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0200.

opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

shadowType (4 bytes): An [MSOSHADOWTYPE](#) enumeration value that specifies the type of shadow.

The default value for this property is msoshadowOffset.

2.3.13.2 shadowColor

This property specifies the primary color of the shadow.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																shadowColor															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0201.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

shadowColor (4 bytes): An [OfficeArtCOLORREF](#) record that specifies the shadow primary color.

The default value for this property is 0x00808080.

2.3.13.3 shadowHighlight

This property specifies the highlight color of the shadow. This property MUST exist if the [shadowType](#) property is equal to msoshadowDouble or msoshadowEmbossOrEngrave, otherwise it MUST be ignored.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																shadowHighlight															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0202.

opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

shadowHighlight (4 bytes): An [OfficeArtCOLORREF](#) record that specifies the shadow highlight color.

The default value for this property is 0x00CBCBCB.

2.3.13.4 shadowCrMod

This property specifies the primary shadow color modifier when running in black-and-white display mode. This property MUST exist if black-and-white display mode is to be used, otherwise it MUST be ignored.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																shadowCrMod															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0203.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

shadowCrMod (4 bytes): An [OfficeArtCOLORREF](#) record that specifies the shadow primary color modifier when running in black-and-white display mode.

The default value for this property is 0x20000000.

2.3.13.5 shadowOpacity

This property specifies the opacity level of the shadow.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																shadowOpacity															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0204.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

shadowOpacity (4 bytes): A FixedPoint, as specified in [\[MS-OSHARED\] section 2.2.1.6](#), that specifies the opacity of the shadow. This value MUST be a value between 0.0 and 1.0.

The default value for this property is 0x00010000.

2.3.13.6 shadowOffsetX

This property specifies the distance on the X axis that the shadow lies away from the shape. This property MUST exist if the [shadowType](#) property is equal to msoshadowOffset or msoshadowDouble, otherwise it MUST be ignored.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																shadowOffsetX															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0205.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

shadowOffsetX (4 bytes): A signed integer value that specifies the distance from the shape along the X axis in English Metric Units. If this value is positive, the shadow is offset from the right side of the shape's axis-aligned bounding rectangle. If this value is negative, the shadow is offset from the left side of the shape's axis-aligned bounding rectangle.

The default value for this property is 0x00006338.

2.3.13.7 shadowOffsetY

This property specifies the distance on the Y axis that the shadow lies away from the shape. This property MUST exist if the [shadowType](#) property is equal to msoshadowOffset or msoshadowDouble, otherwise it MUST be ignored.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																shadowOffsetY															

...	
-----	--

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0206.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

shadowOffsetY (4 bytes): A signed integer value that specifies the distance from the shape along the Y axis in English Metric Units. If this value is positive, the shadow is offset from the bottom of the shape's axis-aligned bounding rectangle. If this value is negative, the shadow is offset from the top of the shape's axis-aligned bounding rectangle.

The default value for this property is 0x00006338.

2.3.13.8 shadowSecondOffsetX

This property specifies the distance on the X axis that the highlighted shadow lies away from the shape. This property MUST exist if the [shadowType](#) property is equal to msoshadowDouble, otherwise it MUST be ignored.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																shadowSecondOffsetX															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0207.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

shadowSecondOffsetX (4 bytes): A signed integer value that specifies the distance from the shape along the X axis in English Metric Units that the highlighted portion of the shadow lies. If this value is positive, the shadow is offset from the right side of the shape's axis-aligned bounding rectangle. If this value is negative, the shadow is offset from the left side of the shape's axis-aligned bounding rectangle.

The default value for this property is 0x00000000.

2.3.13.9 shadowSecondOffsetY

This property specifies the distance on the Y axis that the highlighted shadow lies away from the shape. This property MUST exist if the [shadowType](#) property is equal to msoshadowDouble, otherwise it MUST be ignored.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																shadowSecondOffsetY															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0208.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

shadowSecondOffsetY (4 bytes): A signed integer value that specifies the distance from the shape along the Y axis in English Metric Units that the highlighted portion of the shadow lies. If this value is positive, the shadow is offset from the bottom of the shape's axis-aligned bounding rectangle. If this value is negative, the shadow is offset from the top of the shape's axis-aligned bounding rectangle.

The default value for this property is 0x00000000.

2.3.13.10 shadowOriginX

This property specifies the origin of the shadow on the X axis relative to the center of the shape.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																shadowOriginX															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0210.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

shadowOriginX (4 bytes): A FixedPoint, as specified in [\[MS-OSHARED\] section 2.2.1.6](#), in English Metric Units that specifies the origin of the shadow relative to the center of the shape along the X axis.

The default value for this property is 0x00000000.

2.3.13.11 shadowOriginY

This property specifies the origin of the shadow on the Y axis relative to the center of the shape.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																shadowOriginY															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0211.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

shadowOriginY (4 bytes): A FixedPoint, as specified in [\[MS-OSHARED\] section 2.2.1.6](#), in English Metric Units that specifies the origin of the shadow relative to the center of the shape along the Y axis.

The default value for this property is 0x00000000.

2.3.13.12 shadowColorExt

This property specifies the primary [extended_color](#) of the shadow.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																shadowColorExt															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0212.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

shadowColorExt (4 bytes): An [OfficeArtCOLORREF](#) record that specifies the shadow's primary [extended color](#).

The default value for this property is 0xFFFFFFFF.

2.3.13.13 reserved531

MUST be 0xFFFFFFFF, and MUST be ignored.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																reserved531															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0213.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

reserved531 (4 bytes): MUST be 0xFFFFFFFF, and MUST be ignored.

The default value for this property is 0xFFFFFFFF.

2.3.13.14 shadowColorExtMod

This property specifies the color modification of the primary [extended color](#) of the shadow.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																shadowColorExtMod															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0214.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

shadowColorExtMod (4 bytes): An [MSOTINTSHADE](#) record that specifies the shadow's primary [extended color](#) modification.

The default value for this property is 0x20000000.

2.3.13.15 reserved533

MUST be zero, and MUST be ignored.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																reserved533															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0215.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

reserved533 (4 bytes): MUST be zero, and MUST be ignored.

The default value for this property is 0x00000000.

2.3.13.16 shadowHighlightExt

This property specifies the [extended](#) highlight color of the shadow.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																shadowHighlightExt															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0216.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

shadowHighlightExt (4 bytes): An [OfficeArtCOLORREF](#) record that specifies the [extended](#) shadow highlight color.

The default value for this property is 0xFFFFFFFF.

2.3.13.17 reserved535

MUST be 0xFFFFFFFF, and MUST be ignored.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																reserved535															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0217.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

reserved535 (4 bytes): MUST be 0xFFFFFFFF, and MUST be ignored.

The default value for this property is 0xFFFFFFFF.

2.3.13.18 shadowHighlightExtMod

This property specifies the color modification of the [extended](#) highlight color of the shadow.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																shadowHighlightExtMod															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0218.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

shadowHighlightExtMod (4 bytes): An [MSOTINTSHADE](#) record that specifies the [extended](#) shadow highlight color modification.

The default value for this property is 0x20000000.

2.3.13.19 reserved537

MUST be zero, and MUST be ignored.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																reserved537															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0219.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

reserved537 (4 bytes): MUST be zero, and MUST be ignored.

The default value for this property is 0x00000000.

2.3.13.20 reserved538

MUST be 0xFFFFFFFF, and MUST be ignored.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																reserved538															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x021A.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

reserved538 (4 bytes): MUST be 0xFFFFFFFF, and MUST be ignored.

The default value for this property is 0xFFFFFFFF.

2.3.13.21 reserved539

MUST be 0xFFFFFFFF, and MUST be ignored.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																reserved539															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x021B.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

reserved539 (4 bytes): MUST be 0xFFFFFFFF, and MUST be ignored.

The default value for this property is 0xFFFFFFFF.

2.3.13.22 Shadow Style Boolean Properties

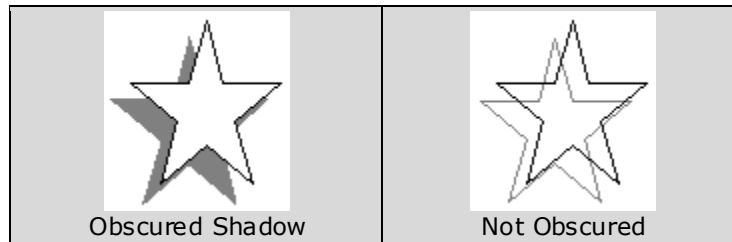
This property specifies a 32-bit field of Boolean properties for the shadow's state.

											1																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	</
--	--	--	--	--	--	--	--	--	--	--	---	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	----

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x023F.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

A - fshadowObscured (1 bit): A bit that specifies whether the shadow is fully obscured by the shape. This is visually different only when the shape has no fill properties.



This value MUST be ignored if **fUsefshadowObscured** is 0x0.

The default value for this property is 0x0.

B - fShadow (1 bit): A bit that specifies whether the shape has a shadow. This value MUST be ignored if **fUsefShadow** is 0x0.

The default value for this property is 0x0.

unused1 (14 bits): Undefined and MUST be ignored.

C - fUsefshadowObscured (1 bit): A bit that specifies whether the **fshadowObscured** bit is set. A value of 0x0 specifies that the **fshadowObscured** bit MUST be ignored and the default value be used instead.

The default value for this property is 0x0.

D - fUsefShadow (1 bit): A bit that specifies whether the **fShadow** bit is set. A value of 0x0 specifies that the **fShadow** bit MUST be ignored and the default value be used instead.

The default value for this property is 0x0.

unused2 (14 bits): Undefined and MUST be ignored.

2.3.14 Perspective Style

This property set specifies how a perspective transform is constructed and applied to a shape. The perspective transform matrix is specified as follows:

$$\begin{bmatrix} \text{perspectiveScaleXToX} & \text{perspectiveScaleXToY} & 0 \\ \text{perspectiveScaleYToX} & \text{perspectiveScaleYToY} & 0 \\ \text{perspectivePerspectiveX} & \text{perspectivePerspectiveY} & 1 \end{bmatrix}$$

Figure 17 Structure of the perspective matrix

2.3.14.1 perspectiveType

This property specifies the style of transform to be constructed for the perspective matrix.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																perspectiveType															

...	
-----	--

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0240.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

perspectiveType (4 bytes): An [MSOXFORMTYPE](#) enumeration value that specifies how the transform is to be applied to the shape.

The default value for this property is msoxformShape.

2.3.14.2 perspectiveOffsetX

This property specifies the offset applied to the shape along the X axis before the [perspective transform](#) is applied.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																perspectiveOffsetX															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0241.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

perspectiveOffsetX (4 bytes): This variable type specifies the offset applied to a shape. The offset is interpreted according to the [perspectiveType](#) property. If the [perspectiveType](#) property is msoxformShape then the offset is a FixedPoint, as specified in [\[MS-OSHARED\] section 2.2.1.6](#), otherwise it is an integral value in English Metric Units.

The default value for this property is 0x00000000.

2.3.14.3 perspectiveOffsetY

This property specifies the offset applied to the shape along the Y axis before the perspective transform is applied.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																perspectiveOffsetY															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0242.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

perspectiveOffsetY (4 bytes): This variable type specifies the offset applied to a shape. The offset is interpreted according to the [perspectiveType](#) property. If the [perspectiveType](#) property is msoxformShape then the offset is a FixedPoint, as specified in [\[MS-OSHARED\] section 2.2.1.6](#), otherwise it is an integral value in English Metric Units.

The default value for this property is 0x00000000.

2.3.14.4 perspectiveScaleXToX

This property specifies the X scale value of the shape perspective transform matrix.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																perspectiveScaleXToX															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0243.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

perspectiveScaleXToX (4 bytes): A FixedPoint, as specified in [\[MS-OSHARED\] section 2.2.1.6](#), that specifies the amount to scale along the X axis.

The default value for this property is 0x00010000.

2.3.14.5 perspectiveScaleYToX

This property specifies the Y axis to X axis transform value of the shape's perspective transform matrix.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																perspectiveScaleYToX															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0244.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

perspectiveScaleYToX (4 bytes): A FixedPoint, as specified in [\[MS-OSHARED\] section 2.2.1.6](#), that specifies the amount to transform from the Y axis to the X axis.

The default value for this property is 0x00000000.

2.3.14.6 perspectiveScaleXToY

This property specifies the X axis to Y axis transform value of the shape's perspective transform matrix.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																perspectiveScaleXToY															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0245.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

perspectiveScaleXToY (4 bytes): A FixedPoint, as specified in [\[MS-OSHARED\] section 2.2.1.6](#), that specifies the amount to transform from the X axis to the Y axis.

The default value for this property is 0x00000000.

2.3.14.7 perspectiveScaleYToY

This property specifies the Y scale value of the shape's perspective transform matrix.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																perspectiveScaleYToY															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0246.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

perspectiveScaleYToY (4 bytes): A FixedPoint, as specified in [\[MS-OSHARED\] section 2.2.1.6](#), that specifies the amount to scale along the Y axis.

The default value for this property is 0x00010000.

2.3.14.8 perspectivePerspectiveX

This property specifies the offset on the X axis of the shape's perspective transform matrix.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																perspectivePerspectiveX															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0247.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

perspectivePerspectiveX (4 bytes): A FixedPoint, as specified in [\[MS-OSHARED\] section 2.2.1.6](#), that specifies the offset on the X axis of the perspective divided by the [perspectiveWeight](#) property.

The default value for this property is 0x00000000.

2.3.14.9 perspectivePerspectiveY

This property specifies the offset on the Y axis of the shape's perspective transform matrix.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																perspectivePerspectiveY															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0248.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

perspectivePerspectiveY (4 bytes): A FixedPoint, as specified in [\[MS-OSHARED\] section 2.2.1.6](#), that specifies the offset on the Y axis of the perspective divided by the [perspectiveWeight](#) property.

The default value for this property is 0x00000000.

2.3.14.10 perspectiveWeight

This property specifies the perspective weighting of the shape's perspective skew matrix.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																perspectiveWeight															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0249.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

perspectiveWeight (4 bytes): An unsigned integer value that specifies the weighting of the perspective transform's [perspectivePerspectiveX](#) and [perspectivePerspectiveY](#) properties values.

The default value for this property is 0x00000100.

2.3.14.11 perspectiveOriginX

This property specifies the origin of the shape on the X axis relative to the center of the shape.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																perspectiveOriginX															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x024A.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

perspectiveOriginX (4 bytes): A FixedPoint, as specified in [\[MS-OSHARED\] section 2.2.1.6](#), in English Metric Units that specifies the origin of the shape relative to the center of the shape along the X axis.

The default value for this property is 0x00008000.

2.3.14.12 perspectiveOriginY

This property specifies the origin of the shape on the Y axis relative to the center of the shape.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																perspectiveOriginY															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x024B.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

perspectiveOriginY (4 bytes): A FixedPoint, as specified in [\[MS-OSHARED\] section 2.2.1.6](#), in English Metric Units that specifies the origin of the shape relative to the center of the shape along the Y axis.

The default value for this property is 0x00008000.

2.3.14.13 Perspective Style Boolean Properties

This property specifies a 32-bit field of Boolean properties for the perspective transform.

										1										2										3		
0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	
opid																A	unused1															
B	unused2																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x027F.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

A - fPerspective (1 bit): A bit that specifies whether the perspective transform is to be applied to a shape. This value MUST be ignored if **fUsefPerspective** is 0x0.

The default value for this property is 0x0.

unused1 (15 bits): Undefined and MUST be ignored.

B - fUsefPerspective (1 bit): A bit that specifies whether the **fPerspective** bit is set. A value of 0x0 specifies that the **fPerspective** bit MUST be ignored and the default value be used instead.

The default value for this property is 0x0.

unused2 (15 bits): Undefined and MUST be ignored.

2.3.15 3D Object

This property set specifies how a shape is to be rendered when displayed in 3D.

2.3.15.1 c3DSpecularAmt

This property specifies the ratio of incident to specular light that is reflected on a shape.

										1										2												3	
0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1		
opid																c3DSpecularAmt																	
...																																	

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0280.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

c3DSpecularAmt (4 bytes): A FixedPoint, as specified in [\[MS-OSHARED\] section 2.2.1.6](#), that specifies the ratio of incident to specular light that is reflected on a shape.

The default value for this property is 0x00000000.

2.3.15.2 c3DDiffuseAmt

This property specifies the ratio of incident to diffuse light that is reflected on a shape.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																c3DDiffuseAmt															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0281.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

c3DDiffuseAmt (4 bytes): A FixedPoint, as specified in [\[MS-OSHARED\] section 2.2.1.6](#), that specifies the ratio of incident to diffuse light that is reflected on a shape.

The default value for this property is 0x00010000.

2.3.15.3 c3DShininess

This property specifies the specular power applied to the specular light that is reflected from a shape. The higher the specular power, the larger the area of reflected specular light.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																c3DShininess															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0282.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

c3DShininess (4 bytes): A FixedPoint, as specified in [\[MS-OSHARED\] section 2.2.1.6](#), that specifies the amount of specular power to be applied to the specular highlight on a shape.

The default value for this property is 0x00000005.

2.3.15.4 c3DEdgeThickness

This property specifies the thickness of the specular edge.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																c3DEdgeThickness															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0283.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

c3DEdgeThickness (4 bytes): A signed integer value that specifies how thick the edge will be around the specular highlight. This value is in English Metric Units.

The default value for this property is 0x0000319C.

2.3.15.5 c3DExtrudeForward

This property specifies the distance to extrude the front face of the shape. The front face of the shape points towards the screen on a non-rotated shape.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																c3DExtrudeForward															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0284.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

c3DExtrudeForward (4 bytes): A signed integer value that specifies the distance to extrude the front face of the shape toward the screen. This value is in English Metric Units. This value MUST be between 0x00000000 and 0x007445A0.

The default value for this property is 0x00000000.

2.3.15.6 c3DExtrudeBackward

This property specifies the distance to extrude the back face of the shape. The back face of the shape points away from the screen on a nonrotated shape.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																c3DExtrudeBackward															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0285.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

c3DExtrudeBackward (4 bytes): A signed integer value that specifies the distance to extrude the back face of the shape away from the screen. This value is in English Metric Units. This value MUST be between 0x00000000 and 0x07445A00.

The default value for this property is 0x0006F9F0.

2.3.15.7 reserved646

MUST be 0x00000000 and MUST be ignored.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																reserved646															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0286.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

reserved646 (4 bytes): MUST be 0x00000000, and MUST be ignored.

The default value for this property is 0x00000000.

2.3.15.8 c3DExtrusionColor

This property specifies the color to apply to extruded geometry.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																c3DExtrusionColor															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0287.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

c3DExtrusionColor (4 bytes): An [OfficeArtCOLORREF](#) that specifies the color of the extruded shape geometry.

The default value for this property is 0x100000F7.

2.3.15.9 c3DCrMod

This property specifies the extrusion color modifier when running in black-and-white display mode. This property MUST exist if black-and-white display mode is to be used. Otherwise it MUST be ignored.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																c3DCrMod															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0288.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

c3DCrMod (4 bytes): An [OfficeArtCOLORREF](#) record that specifies the extrusion color modifier when running in black-and-white display mode.

The default value for this property is 0x20000000.

2.3.15.10 c3DExtrusionColorExt

This property specifies the extrusion [extended color](#) of the shape geometry.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																c3DExtrusionColorExt															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0289.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

c3DExtrusionColorExt (4 bytes): An [OfficeArtCOLORREF](#) record that specifies the extruded geometry's [extended color](#).

The default value for this property is 0xFFFFFFFF.

2.3.15.11 reserved650

MUST be 0xFFFFFFFF, and MUST be ignored.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																reserved650															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x028A.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

reserved650 (4 bytes): MUST be 0xFFFFFFFF, and MUST be ignored.

The default value for this property is 0xFFFFFFFF.

2.3.15.12 c3DExtrusionColorExtMod

This property specifies the color modification of the extruded geometry's [extended_color](#).

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																c3DExtrusionColorExtMod															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x028B.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

c3DExtrusionColorExtMod (4 bytes): An [MSOTINTSHADE](#) record that specifies the extruded geometry's [extended_color](#) modification.

The default value for this property is 0x20000000.

2.3.15.13 reserved652

MUST be zero, and MUST be ignored.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																reserved652															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x028C.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

reserved652 (4 bytes): MUST be zero, and MUST be ignored.

The default value for this property is 0x00000000.

2.3.15.14 reserved653

MUST be 0xFFFFFFFF, and MUST be ignored.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																reserved653															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x028D.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

reserved653 (4 bytes): MUST be 0xFFFFFFFF, and MUST be ignored.

The default value for this property is 0xFFFFFFFF.

2.3.15.15 3D-Object Boolean Properties

This property specifies a 32-bit field of Boolean properties for a 3D object.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31				
opid																A	B	C	D	unused1															
E	F	G	H	unused2																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x02BF.

opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

- A - fc3DLightFace (1 bit):** A bit that specifies whether the extruded geometry will be lit according to the current lighting model. This value MUST be ignored if **fUsefc3DLightFace** is 0x0.

The default value for this property is 0x1.

- B - fc3DUseExtrusionColor (1 bit):** A bit that specifies whether the extruded geometry will use a separate color than the shape color.

Value	Meaning
0x0	Specifies that the diffuse color will be used.
0x1	Specifies that the c3DExtrusionColor property will be used.

This value MUST be ignored if **fUsefc3DUseExtrusionColor** is 0x0.

The default value for this property is 0x0.

- C - fc3DMetallic (1 bit):** A bit that specifies whether the 3D shape lighting algorithm will treat the specular color as the diffuse color. This value MUST be ignored if **fUsefc3DMetallic** is 0x0.

The default value for this property is 0x0.

- D - f3D (1 bit):** A bit that specifies whether the shape contains 3D properties. This value MUST be ignored if **fUsef3D** is 0x0.

The default value for this property is 0x0.

unused1 (12 bits): Undefined and MUST be ignored.

- E - fUsefc3DLightFace (1 bit):** A bit that specifies whether the **fc3DLightFace** bit is set. A value of 0x0 specifies that the **fc3DLightFace** bit MUST be ignored and the default value be used instead.

The default value for this property is 0x0.

- F - fUsefc3DUseExtrusionColor (1 bit):** A bit that specifies whether the **fc3DUseExtrusionColor** bit is set. A value of 0x0 specifies that the **fc3DUseExtrusionColor** bit MUST be ignored and the default value be used instead.

The default value for this property is 0x0.

- G - fUsefc3DMetallic (1 bit):** A bit that specifies whether the **fc3DMetallic** bit is set. A value of 0x0 specifies that the **fc3DMetallic** bit MUST be ignored and the default value be used instead.

The default value for this property is 0x0.

- H - fUsef3D (1 bit):** A bit that specifies whether the **fc3D** bit is set. A value of 0x0 specifies that the **fc3D** bit MUST be ignored and the default value be used instead.

The default value for this property is 0x0.

unused2 (12 bits): Undefined and MUST be ignored.

2.3.16 3D Style

This property set specifies how a shape will be oriented when displayed in 3D.

2.3.16.1 c3DYRotationAngle

This property specifies the shape rotation around the Y axis. Rotation occurs around the Y axis first, then around the Z axis to rotate the shape for the [c3DXRotationAngle](#) property. If the **fc3DConstrainRotation** bit of [3D-Style Boolean Properties](#) is 0x1, this property MUST exist, otherwise it MUST be ignored.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																c3DYRotationAngle															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x02C0.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

c3DYRotationAngle (4 bytes): A FixedPoint, as specified in [\[MS-OSHARED\] section 2.2.1.6](#), that specifies the number of degrees to rotate the shape. Positive values rotate in the clockwise direction. Negative values rotate in the counterclockwise direction. Valid ranges are from -90.0 degrees to 90.0 degrees.

The default value for this property is 0x00000000.

2.3.16.2 c3DXRotationAngle

This property specifies the shape rotation around the Z axis. Rotation occurs around the Y axis first as specified by the [c3DYRotationAngle](#) property, then around the Z axis to rotate the shape for X. If the **fc3DConstrainRotation** bit of [3D-Style Boolean Properties](#) is 0x1, this property MUST exist, otherwise it MUST be ignored.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																c3DXRotationAngle															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x02C1.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

c3DXRotationAngle (4 bytes): A FixedPoint, as specified in [\[MS-OSHARED\] section 2.2.1.6](#), that specifies the number of degrees to rotate the shape on the Z axis. Positive values rotate in the clockwise direction. Negative values rotate in the counterclockwise direction. Valid ranges are from -90.0 degrees to 90.0 degrees.

The default value for this property is 0x00000000.

2.3.16.3 c3DRotationAxisX

This property specifies the X portion of the axis used to rotate the shape. If the **fc3DConstrainRotation** bit of [3D-Style Boolean Properties](#) is 0x0 this property MUST exist, otherwise it MUST be ignored.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																c3DRotationAxisX															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x02C2.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

c3DRotationAxisX (4 bytes): A FixedPoint, as specified in [\[MS-OSHARED\] section 2.2.1.6](#), that specifies the X portion of the axis used to rotate a shape.

The default value for this property is 0x00000064.

2.3.16.4 c3DRotationAxisY

This property specifies the Y portion of the axis used to rotate the shape. If the **fc3DConstrainRotation** bit of [3D-Style Boolean Properties](#) is 0x0 this property MUST exist, otherwise it MUST be ignored.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																c3DRotationAxisY															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x02C3.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

c3DRotationAxisY (4 bytes): A FixedPoint, as specified in [\[MS-OSHARED\] section 2.2.1.6](#), that specifies the Y portion of the axis used to rotate a shape.

The default value for this property is 0x00000000.

2.3.16.5 c3DRotationAxisZ

This property specifies the Z portion of the axis used to rotate the shape. If the **fc3DConstrainRotation** bit of [3D-Style Boolean Properties](#) is 0x0 this property MUST exist, otherwise it MUST be ignored.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																c3DRotationAxisZ															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x02C4.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

c3DRotationAxisZ (4 bytes): A FixedPoint, as specified in [\[MS-OSHARED\] section 2.2.1.6](#), that specifies the Z portion of the axis used to rotate a shape.

The default value for this property is 0x00000000.

2.3.16.6 c3DRotationAngle

This property specifies the number of degrees to rotate a shape around an axis.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																c3DRotationAngle															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x02C5.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

c3DRotationAngle (4 bytes): A FixedPoint, as specified in [\[MS-OSHARED\] section 2.2.1.6](#), that specifies the number of degrees to rotate the shape around the vector specified by [c3DRotationAxisX](#), [c3DRotationAxisY](#) and [c3DRotationAxisZ](#) properties. Positive values rotate in the clockwise direction. Negative values rotate in the counterclockwise direction.

The default value for this property is 0x00000000.

2.3.16.7 c3DRotationCenterX

This property specifies the location of the center of the shape along the X axis. If the **fc3DRotationCenterAuto** bit of [3D-Style Boolean Properties](#) is 0x0 this value MUST exist, otherwise it MUST be ignored.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																c3DRotationCenterX															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x02C6.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

c3DRotationCenterX (4 bytes): A FixedPoint, as specified in [\[MS-OSHARED\] section 2.2.1.6](#), that specifies a fraction of the geometry's scaled width and height.

The default value for this property is 0x00000000.

2.3.16.8 c3DRotationCenterY

This property specifies the location of the center of the shape along the Y axis. If the **fc3DRotationCenterAuto** bit of [3D-Style Boolean Properties](#) is 0x0 this value MUST exist, otherwise it MUST be ignored.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																c3DRotationCenterY															

...	
-----	--

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x02C7.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

c3DRotationCenterY (4 bytes): A FixedPoint, as specified in [\[MS-OSHARED\] section 2.2.1.6](#), that specifies a fraction of the geometry's scaled width and height.

The default value for this property is 0x00000000.

2.3.16.9 c3DRotationCenterZ

This property specifies the location of the center of the shape along the Z axis. If the **fc3DRotationCenterAuto** bit of [3D-Style Boolean Properties](#) is 0x0 this value MUST exist, otherwise it MUST be ignored.

0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1
opid																c3DRotationCenterZ															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x02C8.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

c3DRotationCenterZ (4 bytes): A FixedPoint, as specified in [\[MS-OSHARED\] section 2.2.1.6](#), that specifies a fraction of the geometry's scaled width and height.

The default value for this property is 0x00000000.

2.3.16.10 c3DRenderMode

This property specifies how to display a shape.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																c3DRenderMode															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x02C9.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

c3DRenderMode (4 bytes): An [MSO3DRENDERMODE](#) enumeration value that specifies how to display the shape.

The default value for this property is msoFullRender.

2.3.16.11 c3DTolerance

If the geometry is broken up for rendering purposes, this property specifies the geometric deviation permitted to render the shape.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																c3DTolerance															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x02CA.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

c3DTolerance (4 bytes): A FixedPoint, as specified in [\[MS-OSHARED\] section 2.2.1.6](#), that specifies the number of pixels that the geometry is allowed to deviate from the original geometry during rendering. This value MUST be greater than or equal to 0x00000000.

The default value for this property is 0x00007530.

2.3.16.12 c3DXViewpoint

This property specifies the location of the perspective camera on the X axis. If the **fc3DParallel** bit of [3D-Style Boolean Properties](#) is 0x0 this value MUST exist, otherwise it MUST be ignored.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																c3DXViewpoint															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x02CB.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

c3DXViewpoint (4 bytes): A FixedPoint, as specified in [\[MS-OSHARED\] section 2.2.1.6](#), that specifies the location of the perspective camera on the X axis in English Metric Units.

The default value for this property is 0x001312D0.

2.3.16.13 c3DYViewpoint

This property specifies the location of the perspective camera on the Y axis. If the **fc3DParallel** bit of [3D-Style Boolean Properties](#) is 0x0 this value MUST exist, otherwise it MUST be ignored.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																c3DYViewpoint															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x02CC.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

c3DYViewpoint (4 bytes): A FixedPoint, as specified in [\[MS-OSHARED\] section 2.2.1.6](#), that specifies the location of the perspective camera on the Y axis in English Metric Units.

The default value for this property is 0xFFECED30.

2.3.16.14 c3DZViewpoint

This property specifies the distance from the view plane of the perspective camera on the Z axis. If the **fc3DParallel** bit of [3D-Style Boolean Properties](#) is 0x0 this value MUST exist, otherwise it MUST be ignored.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																c3DZViewpoint															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x02CD.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

c3DZViewpoint (4 bytes): A FixedPoint, as specified in [\[MS-OSHARED\] section 2.2.1.6](#), that specifies the distance from the view plane of the perspective camera on the Z axis in English Metric Units.

The default value for this property is 0x00895440.

2.3.16.15 c3DOriginX

This property specifies the origin of the shape on the X axis when displayed with the perspective camera. The origin is specified as a multiple of the width and height of the shape, relative to the center of the shape. If the **fc3DParallel** bit of [3D-Style Boolean Properties](#) is 0x0 this value MUST exist, otherwise it MUST be ignored.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																c3DOriginX															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x02CE.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

c3DOriginX (4 bytes): A FixedPoint, as specified in [\[MS-OSHARED\] section 2.2.1.6](#), that specifies the displacement from the center of the shape to use as the shape origin on the X axis.

The default value for this property is 0x00008000.

2.3.16.16 c3DOriginY

This property specifies the origin of the shape on the Y axis when displayed with the perspective camera. The origin is specified as a multiple of the width and height of the shape, relative to the center of the shape. If the **fc3DParallel** bit of [3D-Style Boolean Properties](#) is 0x0 this value **MUST** exist, otherwise it **MUST** be ignored.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																c3DOriginY															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x02CF.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

c3DOriginY (4 bytes): A FixedPoint, as specified in [\[MS-OSHARED\] section 2.2.1.6](#), that specifies the displacement from the center of the shape to use as the shape origin on the Y axis.

The default value for this property is 0xFFFF8000.

2.3.16.17 c3DSkewAngle

This property specifies the amount of skew added to the shape when a parallel projection is used. If the **fc3DParallel** bit of [3D-Style Boolean Properties](#) is 0x1 this value **MUST** exist, otherwise it **MUST** be ignored.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																c3DSkewAngle															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x02D0.

opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

c3DSkewAngle (4 bytes): A FixedPoint, as specified in [\[MS-OSHARED\] section 2.2.1.6](#), that specifies the angle to skew the shape with a parallel projection. A value of 0x00000000 specifies an orthographic projection. A negative value skews the shape to the right. A positive value skews the shape to the left.

The default value for this property is 0xFF790000.

2.3.16.18 c3DSkewAmount

This property specifies the amount of skew to add to a shape as a percentage of the skew. If the **fc3DParallel** bit of [3D-Style Boolean Properties](#) is 0x1 this value MUST exist, otherwise it MUST be ignored.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																c3DSkewAmount															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x02D1.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

c3DSkewAmount (4 bytes): A signed integer value that specifies the percentage as a value from 0xFFFFF9C to 0x00000064 to skew the shape.

The default value for this property is 0x00000032.

2.3.16.19 c3DAmbientIntensity

This property specifies the intensity of the ambient light.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																c3DAmbientIntensity															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x02D2.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

c3DAmbientIntensity (4 bytes): A FixedPoint, as specified in [\[MS-OSHARED\] section 2.2.1.6](#), that specifies the intensity of the ambient light. This value MUST be between 0.0 and 1.0.

The default value for this property is 0x00004E20.

2.3.16.20 c3DKeyX

This property specifies the directional vector of the primary light source along the X axis.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																c3DKeyX															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x02D3.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

c3DKeyX (4 bytes): A FixedPoint, as specified in [\[MS-OSHARED\] section 2.2.1.6](#), that specifies the directional vector of the primary light source along the X axis.

The default value for this property is 0x0000C350.

2.3.16.21 c3DKeyY

This property specifies the directional vector of the primary light source along the Y axis.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																c3DKeyY															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x02D4.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

c3DKeyY (4 bytes): A FixedPoint, as specified in [\[MS-OSHARED\] section 2.2.1.6](#), that specifies the directional vector of the primary light source along the Y axis.

The default value for this property is 0x00000000.

2.3.16.22 c3DKeyZ

This property specifies the directional vector of the primary light source along the Z axis.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																c3DKeyZ															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x02D5.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

c3DKeyZ (4 bytes): A FixedPoint, as specified in [\[MS-OSHARED\] section 2.2.1.6](#), that specifies the directional vector of the primary light source along the Z axis.

The default value for this property is 0x00002710.

2.3.16.23 c3DKeyIntensity

This property specifies the intensity of the primary light source.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																c3DKeyIntensity															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x02D6.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

c3DKeyIntensity (4 bytes): A FixedPoint, as specified in [\[MS-OSHARED\] section 2.2.1.6](#), that specifies the intensity of the primary light source. This value SHOULD [<37>](#) be between 0.0 and 1.0.

The default value for this property is 0x00009470.

2.3.16.24 c3DFillX

This property specifies the directional vector of the secondary light source along the X axis.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																c3DFillX															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x02D7.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

c3DFillX (4 bytes): A FixedPoint, as specified in [\[MS-OSHARED\] section 2.2.1.6](#), that specifies the directional vector of the secondary light source along the X axis.

The default value for this property is 0xFFFF3CB0.

2.3.16.25 c3DFillY

This property specifies the directional vector of the secondary light source along the Y axis.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																c3DFillY															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x02D8.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

c3DFillY (4 bytes): A FixedPoint, as specified in [\[MS-OSHARED\] section 2.2.1.6](#), that specifies the directional vector of the secondary light source along the Y axis.

The default value for this property is 0x00000000.

2.3.16.26 c3DFillZ

This property specifies the directional vector of the secondary light source along the Z axis.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																c3DFillZ															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x02D9.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

c3DFillZ (4 bytes): A FixedPoint, as specified in [\[MS-OSHARED\] section 2.2.1.6](#), that specifies the directional vector of the secondary light source along the Z axis.

The default value for this property is 0x00002710.

2.3.16.27 c3DFillIntensity

This property specifies the intensity of the secondary light source.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																c3DFillIntensity															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x02DA.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

c3DFillIntensity (4 bytes): A FixedPoint, as specified in [\[MS-OSHARED\] section 2.2.1.6](#), that specifies the intensity of the secondary light source. This value SHOULD [<38>](#) be between 0.0 and 1.0.

The default value for this property is 0x00009470.

2.3.16.28 3D-Style Boolean Properties

This property specifies a 32-bit field of Boolean properties for the 3D object's style.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31					
opid																A	B	C	D	E	unused1															
F	G	H	I	J	unused2																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x02FF.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

A - fc3DFillHarsh (1 bit): A bit that specifies the lighting algorithm on the secondary light source.

Value	Meaning
0x0	Specifies an infinite uniform planar light source.
0x1	Specifies a directional light source.

The default value for this property is 0x0.

B - fc3DKeyHarsh (1 bit): A bit that specifies the lighting algorithm on the primary light source.

Value	Meaning
0x0	Specifies an infinite uniform planar light source.
0x1	Specifies a directional light source.

The default value for this property is 0x1.

C - fc3DParallel (1 bit): A bit that specifies whether the 3D object will use a parallel projection.

Value	Meaning
0x0	Specifies a perspective projection.
0x1	Specifies a parallel projection.

The default value for this property is 0x1.

D - fc3DRotationCenterAuto (1 bit): A bit that specifies how to treat the center of the shape.

Value	Meaning
0x0	Specifies that a user specified value will be used.
0x1	Specifies that the center of the shape will be used.

The default value for this property is 0x0.

E - fc3DConstrainRotation (1 bit): A bit that specifies how to rotate a shape.

Value	Meaning
0x0	Specifies the shape will rotate around an axis specified by the 3D style property set.
0x1	Specifies the shape will rotate along the screen's Z axis.

The default value for this property is 0x1.

unused1 (11 bits): Undefined and MUST be ignored.

F - fUsefc3DFillHarsh (1 bit): A bit that specifies whether the **fc3DFillHarsh** bit is set. A value of 0x0 specifies that the **fc3DFillHarsh** bit MUST be ignored and the default value be used instead.

The default value for this property is 0x0.

G - fUsefc3DKeyHarsh (1 bit): A bit that specifies whether the **fc3DKeyHarsh** bit is set. A value of 0x0 specifies that the **fc3DKeyHarsh** bit MUST be ignored and the default value be used instead.

The default value for this property is 0x0.

H - fUsefc3DParallel (1 bit): A bit that specifies whether the **fc3DParallel** bit is set. A value of 0x0 specifies that the **fc3DParallel** bit MUST be ignored and the default value be used instead.

The default value for this property is 0x0.

I - fUsefc3DRotationCenterAuto (1 bit): A bit that specifies whether the **fc3DRotationCenterAuto** bit is set. A value of 0x0 specifies that the **fc3DRotationCenterAuto** bit MUST be ignored and the default value be used instead.

The default value for this property is 0x0.

J - fUsefc3DConstrainRotation (1 bit): A bit that specifies whether the **fc3DConstrainRotation** bit is set. A value of 0x0 specifies that the **fc3DConstrainRotation** bit MUST be ignored and the default value be used instead.

The default value for this property is 0x0.

unused2 (11 bits): Undefined and MUST be ignored.

2.3.17 Diagram

This property set specifies style and layout attributes of a diagram.

2.3.17.1 dgmt

This property specifies the type of the diagram.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																dgmt															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0500.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

dgmt (4 bytes): An [MSODGMT](#) enumeration value that specifies the type of the diagram.

The default value for this property is 0x00000FFF.

2.3.17.2 dgmStyle

This property specifies a diagram style.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																dgmStyle															
...																															

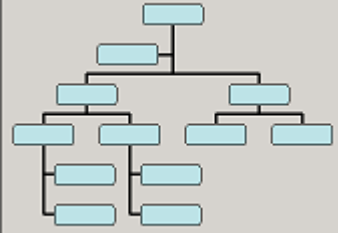
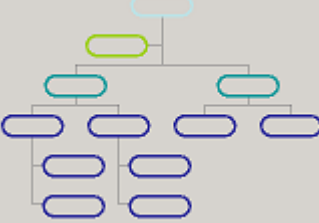
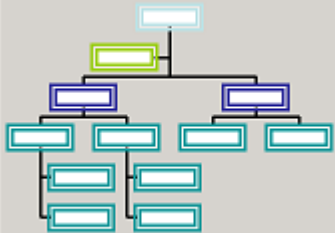
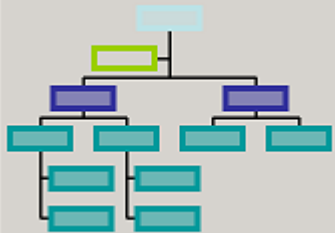
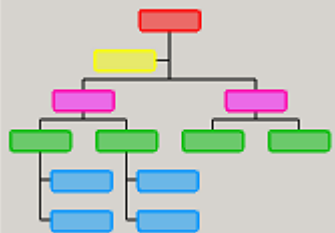
opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

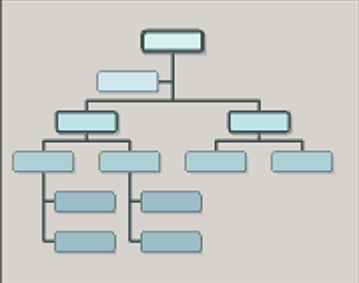
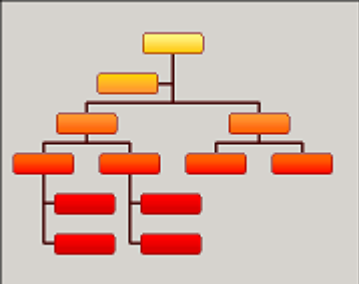
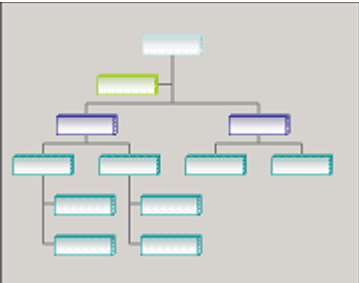

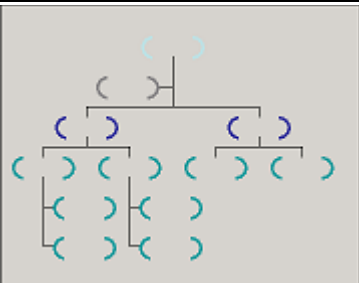
Field	Meaning
opid.opid	MUST be 0x0501.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

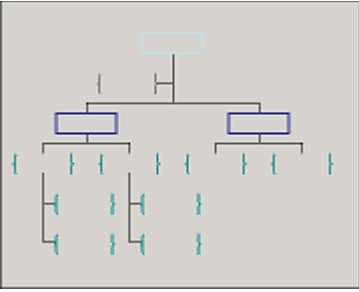
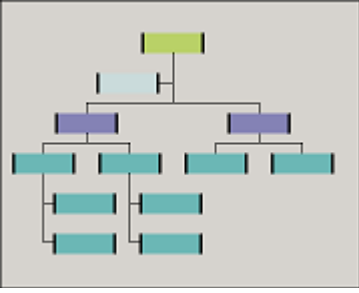
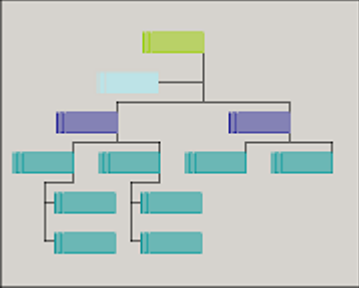
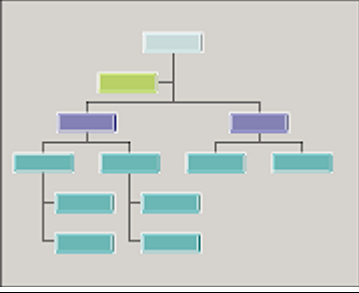
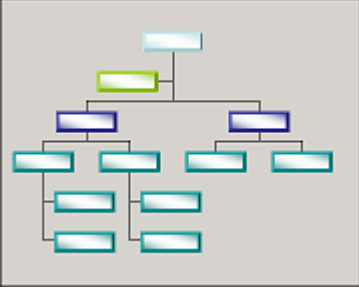
dgmStyle (4 bytes): An enumeration value that specifies a diagram style. Its meaning depends on the value of the [dgmt](#) property.

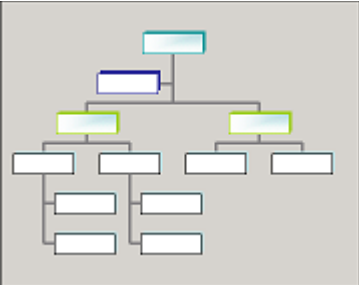
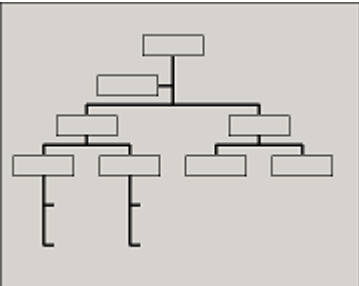
If the value of the [dgmt](#) property is equal to msodgmtCanvas, then **dgmStyle** MUST be ignored.

If the value of the [dgmt](#) property is equal to msodgmtOrgChart, then **dgmStyle** MUST be a value from the following enumeration:

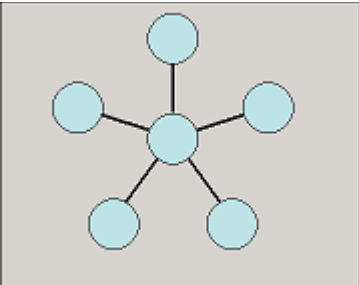
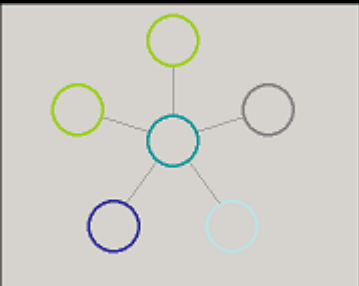

Name	Value	Meaning	Style
msodgmstOrgChartFirst	0x00000000	Default	
msodgmstOrgChart2	0x00000001	Outline	
msodgmstOrgChart3	0x00000002	Double Outline	
msodgmstOrgChart4	0x00000003	Thick Outline	
msodgmstOrgChart5	0x00000004	Primary Colors	


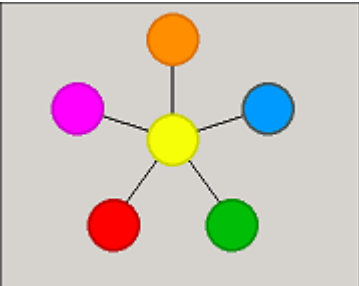
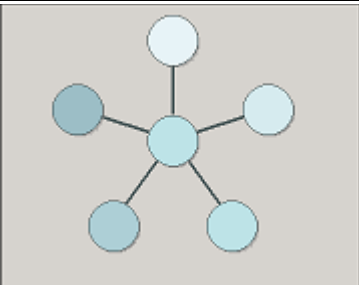
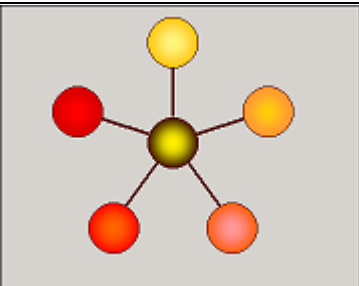
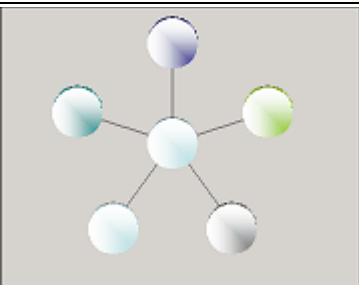
msodgmstOrgChart6	0x00000005	Shaded	
msodgmstOrgChart7	0x00000006	Fire	
msodgmstOrgChart8	0x00000007	3-D Color	
msodgmstOrgChart9	0x00000008	Gradient	
msodgmstOrgChart10	0x00000009	Brackets	

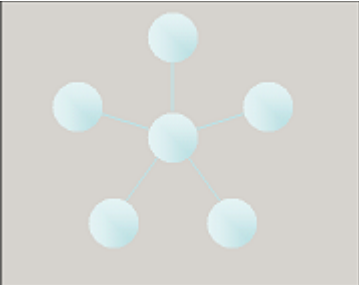
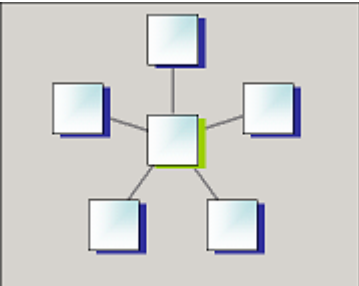
msodgmstOrgChart11	0x0000000A	Braces	 An organizational chart with a hierarchical structure. The root node is a light blue rectangle. It has two children, both purple rectangles. Each of these has two children, all four of which are teal rectangles. The chart is filled with a pattern of light blue and white braces.
msodgmstOrgChart12	0x0000000B	Bookend Fills	 An organizational chart with a hierarchical structure. The root node is a light blue rectangle. It has two children, both purple rectangles. Each of these has two children, all four of which are teal rectangles. The chart is filled with a pattern of light blue and white bookend shapes.
msodgmstOrgChart13	0x0000000C	Stripes	 An organizational chart with a hierarchical structure. The root node is a light blue rectangle. It has two children, both purple rectangles. Each of these has two children, all four of which are teal rectangles. The chart is filled with a pattern of light blue and white horizontal stripes.
msodgmstOrgChart14	0x0000000D	Beveled	 An organizational chart with a hierarchical structure. The root node is a light blue rectangle. It has two children, both purple rectangles. Each of these has two children, all four of which are teal rectangles. The chart is filled with a pattern of light blue and white beveled shapes.
msodgmstOrgChart15	0x0000000E	Beveled Gradient	 An organizational chart with a hierarchical structure. The root node is a light blue rectangle. It has two children, both purple rectangles. Each of these has two children, all four of which are teal rectangles. The chart is filled with a pattern of light blue and white beveled shapes with a gradient.

msodgmstOrgChart16	0x0000000F	Square Shadows	
msodgmstOrgChart17	0x00000010	Wire Frame	

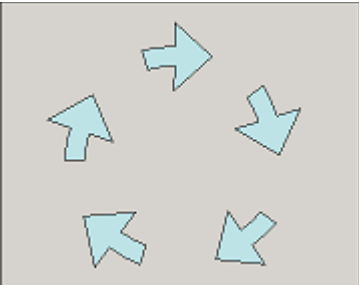

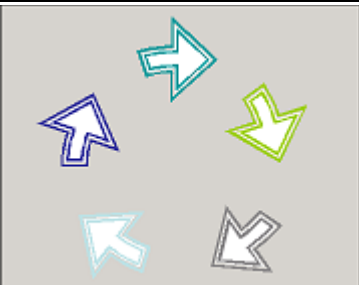
If the value of the [dgmt](#) property is equal to msodgmtRadial, then **dgmStyle** MUST be a value from the following enumeration:

Name	Value	Meaning	Style
msodgmstRadialFirst	0x00000000	Default	
msodgmstRadial2	0x00000001	Outline	
msodgmstRadial3	0x00000002	Double Outline	

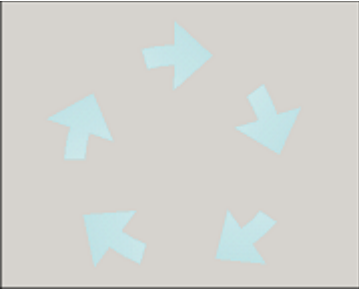
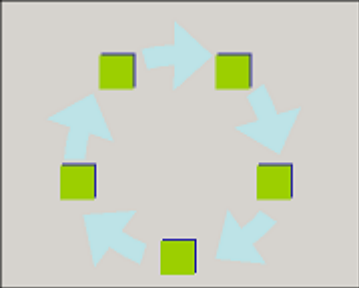
msodgmstRadial4	0x00000003	Thick Outline	 A central white circle with a thick black outline is connected by thin black lines to five surrounding circles. The surrounding circles are colored teal, light green, light blue, purple, and grey.
msodgmstRadial5	0x00000004	Primary Colors	 A central yellow circle is connected by thin black lines to five surrounding circles. The surrounding circles are colored orange, magenta, red, green, and blue.
msodgmstRadial6	0x00000005	Shaded	 A central light blue circle is connected by thin black lines to five surrounding circles. The surrounding circles are shaded in various tones of blue and grey.
msodgmstRadial7	0x00000006	Fire	 A central dark brown circle is connected by thin black lines to five surrounding circles. The surrounding circles are colored yellow, orange, red, and two shades of red.
msodgmstRadial8	0x00000007	3-D Color	 A central white circle is connected by thin black lines to five surrounding circles. The surrounding circles are colored with 3-D effects in shades of blue, green, and grey.

msodgmstRadial9	0x00000008	Gradient	
msodgmstRadial10	0x00000009	Square Shadows	

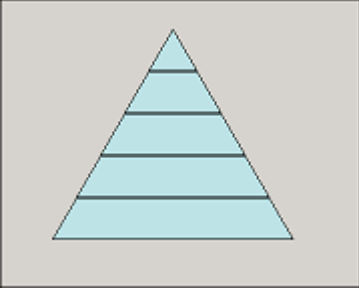
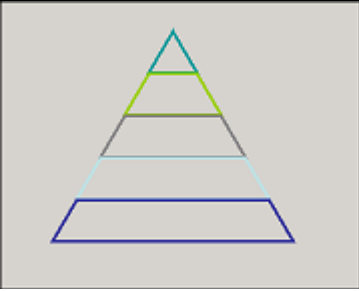
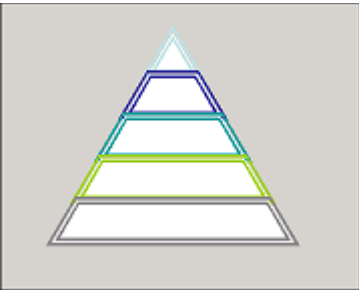
If the value of the [dgmt](#) property is equal to msodgmtCycle, then **dgmtStyle** MUST be a value from the following enumeration:

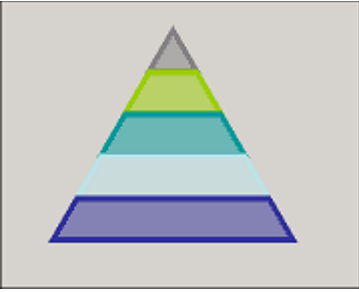
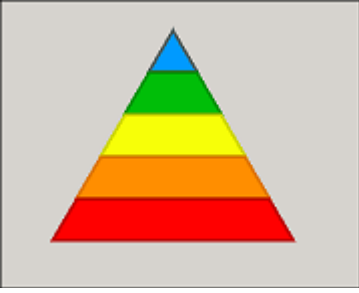
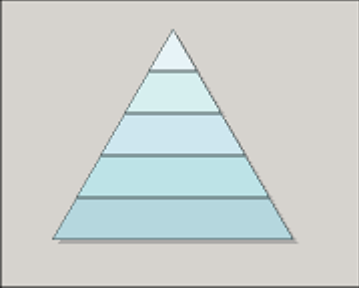
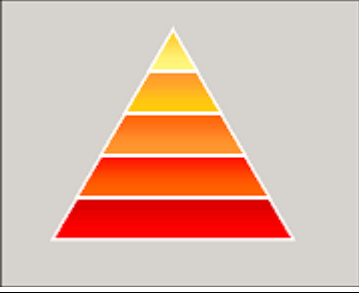
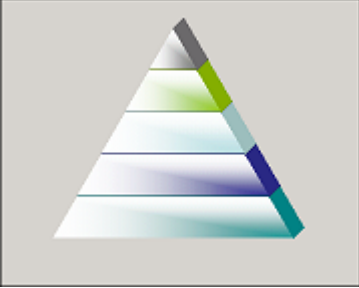
Name	Value	Meaning	Style
msodgmstCycle11	0x0000000A	Default	
msodgmstCycle12	0x0000000B	Outline	
msodgmstCycle13	0x0000000C	Double Outline	

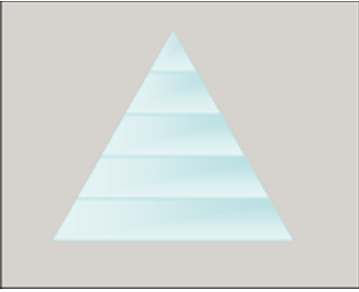
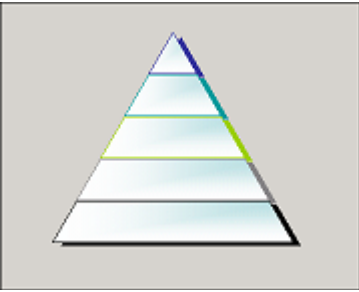
msodgmstCycle14	0x0000000D	Thick Outline	
msodgmstCycle15	0x0000000E	Primary Colors	
msodgmstCycle16	0x0000000F	Shaded	
msodgmstCycle17	0x00000010	Fire	
msodgmstCycle18	0x00000011	3-D Color	

msodgmstCycle19	0x00000012	Gradient	
msodgmstCycle20	0x00000013	Square Shadows	


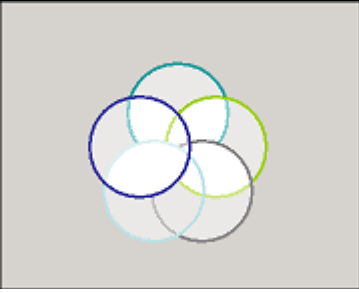

If the value of the [dgmt](#) property is equal to msodgmtStacked, then **dgmStyle** MUST be a value from the following enumeration:

Name	Value	Meaning	Style
msodgmstStackedFirst	0x00000000	Default	
msodgmstStacked2	0x00000001	Outline	
msodgmstStacked3	0x00000002	Double Outline	

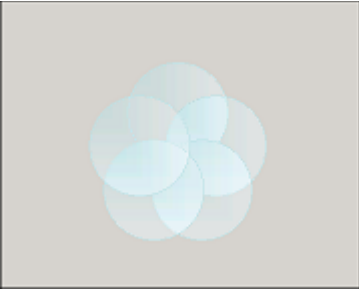
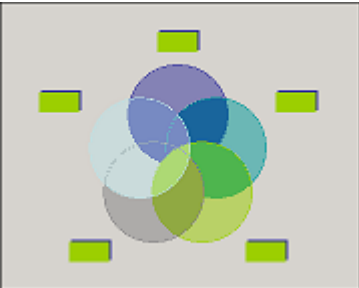
msodgmstStacked4	0x00000003	Thick Outline	
msodgmstStacked5	0x00000004	Primary Colors	
msodgmstStacked6	0x00000005	Shaded	
msodgmstStacked7	0x00000006	Fire	
msodgmstStacked8	0x00000007	3-D Color	

msodgmstStacked9	0x00000008	Gradient	
msodgmstStacked10	0x00000009	Square Shadows	

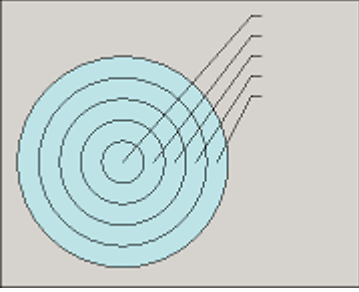
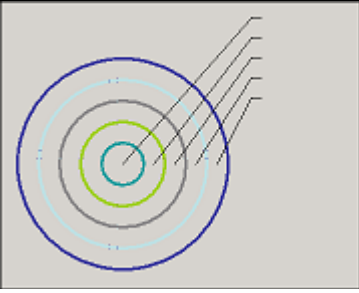
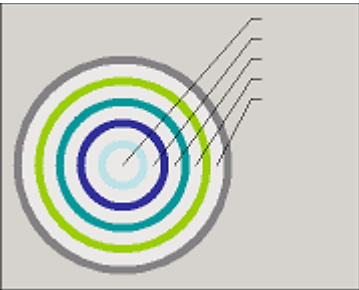
If the value of the [dgmt](#) property is equal to msodgmtVenn, then **dgmtStyle** MUST be a value from the following enumeration:

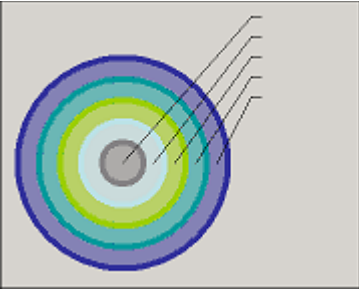
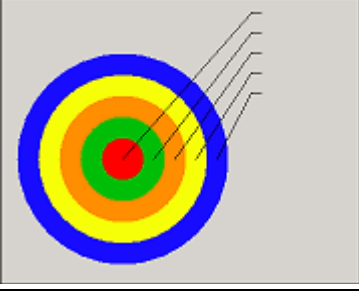
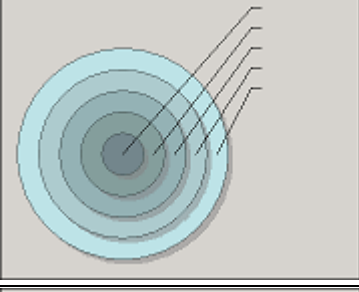
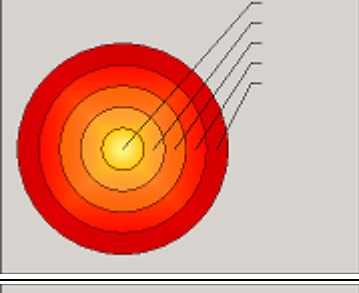
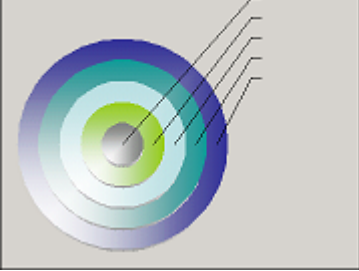
Name	Value	Meaning	Style
msodgmstVennFirst	0x00000000	Default	
msodgmstVenn2	0x00000001	Outline	
msodgmstVenn3	0x00000002	Double Outline	

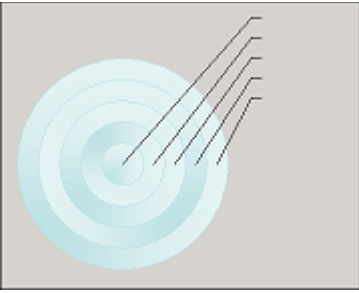
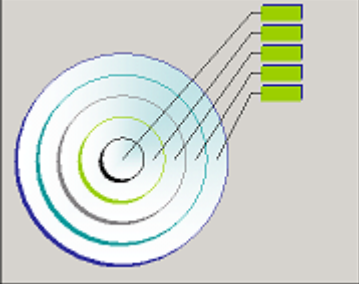
msodgmstVenn4	0x00000003	Thick Outline	
msodgmstVenn5	0x00000004	Primary Colors	
msodgmstVenn6	0x00000005	Shaded	
msodgmstVenn7	0x00000006	Fire	
msodgmstVenn8	0x00000007	3-D Color	

msodgmstVenn9	0x00000008	Gradient	
msodgmstVenn10	0x00000009	Square Shadows	

If the value of the [dgmt](#) property is equal to msodgmtBullsEye, then **dgmStyle** MUST be a value from the following enumeration:

Name	Value	Meaning	Style
msodgmstBullsEyeFirst	0x00000000	Default	
msodgmstBullsEye2	0x00000001	Outline	
msodgmstBullsEye3	0x00000002	Double Outline	

msodgmstBullsEye4	0x00000003	Thick Outline	 A bulls-eye graphic with a thick dark blue outer ring. Inside are concentric rings of light blue, green, and yellow, ending in a small dark grey center. Five thin lines radiate from the center towards the top right.
msodgmstBullsEye5	0x00000004	Primary Colors	 A bulls-eye graphic with concentric rings of primary colors: blue, yellow, green, and red, ending in a small red center. Five thin lines radiate from the center towards the top right.
msodgmstBullsEye6	0x00000005	Shaded	 A bulls-eye graphic with concentric rings of varying shades of blue, from light to dark, ending in a small dark blue center. Five thin lines radiate from the center towards the top right.
msodgmstBullsEye7	0x00000006	Fire	 A bulls-eye graphic with concentric rings of fire colors: red, orange, and yellow, ending in a small yellow center. Five thin lines radiate from the center towards the top right.
msodgmstBullsEye8	0x00000007	3-D Color	 A bulls-eye graphic with concentric rings of blue, green, and yellow, ending in a small dark grey center. The rings have a 3-D effect with a gradient. Five thin lines radiate from the center towards the top right.

msodgmstBullsEye9	0x00000008	Gradient	
msodgmstBullsEye10	0x00000009	Square Shadows	

The default value for this property is 0x0000FFFF.

2.3.17.3 pRelationTbl

This property specifies relationships in a diagram.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																pRelationTbl															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0504.
opid.fBid	Undefined and MUST be ignored.
opid.fComplex	If 0x1 then the pRelationTbl_complex property MUST exist.

pRelationTbl (4 bytes): The number of bytes of data in [pRelationTbl_complex](#). This value MUST be 0x00000000 if **opid.fComplex** is 0x0.

The default value for this property is 0x00000000.

2.3.17.4 pRelationTbl_complex

This property specifies additional data for the [pRelationTbl](#) property. This property MUST exist if the **opid.fComplex** bit of the [pRelationTbl](#) property is 0x1.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
pRelationTbl_complex (variable)																															
...																															

pRelationTbl_complex (variable): An [IMsoArray](#) record that specifies relationships in a diagram. Each array element is a connection between two shapes. Elements are 12 bytes and consist of three [MSOSPID](#) data types per element.

The three [MSOSPID](#) data types specify the source, destination, and connector shapes in that order. Each array element specifies a connection from the source to the destination via the connector.

2.3.17.5 dgmScaleX

This property specifies the amount to scale along the X axis.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																dgmScaleX															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0505.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

dgmScaleX (4 bytes): A FixedPoint, as specified in [\[MS-OSHARED\] section 2.2.1.6](#), that specifies the amount to scale along the X axis.

The default value for this property is 0x00010000.

2.3.17.6 dgmScaleY

This property specifies the amount to scale along the Y axis.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																dgmScaleY															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0506.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

dgmScaleY (4 bytes): A FixedPoint, as specified in [\[MS-OSHARED\] section 2.2.1.6](#), that specifies the amount to scale along the Y axis.

The default value for this property is 0x00010000.

2.3.17.7 dgmDefaultFontSize

This property specifies the default font size for new text in the diagram.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																dgmDefaultFontSize															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0507.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

dgmDefaultFontSize (4 bytes): A signed integer that specifies the default font size in [points](#) for new text in the diagram. This value MUST be ignored if equal to 0xFFFFFFFF.

The default value for this property is 0xFFFFFFFF.

2.3.17.8 dgmConstrainBounds

This property specifies the bounds of the diagram.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																dgmConstrainBounds															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0508.
opid.fBid	Undefined and MUST be ignored.
opid.fComplex	If 0x1 then the dgmConstrainBounds_complex property MUST exist.

dgmConstrainBounds (4 bytes): The number of bytes of data in the [dgmConstrainBounds_complex](#) property. This value MUST be 0x00000000 if **opid.fComplex** is 0x0.

The default value for this property is 0x00000000.

2.3.17.9 dgmConstrainBounds_complex

This property specifies additional data for the [dgmConstrainBounds](#) property. This property MUST exist if the **opid.fComplex** bit of the [dgmConstrainBounds](#) property is 0x1.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
dgmConstrainBounds_complex (variable)																															
...																															

dgmConstrainBounds_complex (variable): An [IMsoArray](#) record that specifies the bounds of the diagram. Each element in this array is a 32-bit signed integer. The value of **dgmConstrainBounds.nElems** MUST equal 0x0004. The four elements of this array specify in order the left, top, right, and bottom bounds of the diagram in application defined coordinates.

2.3.17.10 dgmBaseTextScale

This property specifies the amount to scale text. This property MAY [39](#) be ignored.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																dgmBaseTextScale															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0509.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

dgmBaseTextScale (4 bytes): A FixedPoint, as specified in [\[MS-OSHARED\] section 2.2.1.6](#), that specifies the amount to scale text.

The default value for this property is 0x00010000.

2.3.17.11 Diagram Boolean Properties

This property specifies a 32-bit field of Boolean properties for a diagram.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31					
opid																A	B	C	D	E	F	unused3														
G	H	I	J	K	L	unused6																														

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x053F.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

A - fPseudoInline (1 bit): A bit that specifies whether the diagram is placed inline with surrounding text. This value MUST be ignored if **fUsefPseudoInline** is 0x0.

The default value for this property is 0x0.

B - fDoLayout (1 bit): A bit that specifies whether the diagram has a layout that is not directly editable. This value MUST be ignored if **fUsefDoLayout** is 0x0.

The default value for this property is 0x1.

C - fReverse (1 bit): A bit that specifies whether the diagram is mirrored horizontally. This value MUST be ignored if **fUsefReverse** is 0x0.

The default value for this property is 0x0.

D - fDoFormat (1 bit): A bit that specifies whether the [dgmStyle](#) property is a nondefault formatting style for the diagram type. This value MUST be ignored if **fUsefDoFormat** is 0x0.

The default value for this property is 0x0.

E - unused1 (1 bit): Undefined and MUST be ignored.

F - unused2 (1 bit): Undefined and MUST be ignored.

unused3 (10 bits): Undefined and MUST be ignored.

G - fUsefPseudoInline (1 bit): A bit that specifies whether the **fPseudoInline** bit is set. A value of 0x0 specifies that the **fPseudoInline** bit MUST be ignored.

The default value for this property is 0x0.

H - fUsefDoLayout (1 bit): A bit that specifies whether the **fDoLayout** bit is set. A value of 0x0 specifies that the **fDoLayout** bit MUST be ignored.

The default value for this property is 0x0.

I - fUsefReverse (1 bit): A bit that specifies whether the **fReverse** bit is set. A value of 0x0 specifies that the **fReverse** bit MUST be ignored.

The default value for this property is 0x0.

J - fUsefDoFormat (1 bit): A bit that specifies whether the **fDoFormat** bit is set. A value of 0x0 specifies that the **fDoFormat** bit MUST be ignored.

The default value for this property is 0x0.

K - unused4 (1 bit): Undefined and MUST be ignored.

L - unused5 (1 bit): Undefined and MUST be ignored.

unused6 (10 bits): Undefined and MUST be ignored.

2.3.18 Transform

This property set specifies the values necessary to construct a transform that is applied to a shape prior to rendering.

2.3.18.1 left

This property specifies the left side of the bounding rectangle that contains an object.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																left															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0000.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

left (4 bytes): A signed integer that specifies the left side of the bounding rectangle in coordinates defined by the application.

The default value for this property is 0x00000000.

2.3.18.2 top

This property specifies the top of the bounding rectangle that contains an object.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																top															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0001.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

top (4 bytes): A signed integer value that specifies the top of the bounding rectangle in coordinates defined by the application.

The default value for this property is 0x00000000.

2.3.18.3 right

This property specifies the right side of the bounding rectangle that contains an object.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																right															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0002.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

right (4 bytes): A signed integer value that specifies the right side of the bounding rectangle in coordinates defined by the application.

The default value for this property is 0x00000001.

2.3.18.4 bottom

This property specifies the bottom of the bounding rectangle that contains an object.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																bottom															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0003.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

bottom (4 bytes): A signed integer value that specifies the bottom of the bounding rectangle in coordinates defined by the application.

The default value for this property is 0x00000001.

2.3.18.5 rotation

This property specifies the rotation on a shape.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																rotation															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0004.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

rotation (4 bytes): A FixedPoint, as specified in [\[MS-OSHARED\] section 2.2.1.6](#), that specifies the rotation applied to a shape in degrees. Positive values specify rotation in the clockwise direction. Negative values specify rotation in the counterclockwise direction. Rotation occurs around the center of the shape.

The default value for this property is 0x00000000.

2.3.18.6 gvPage

This property specifies the page an object is located on. This property MAY [<40>](#) be ignored.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																gvPage															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0005.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

gvPage (4 bytes): An unsigned integer value that specifies the page an object is located on.

The default value for this property is 0x00000000.

2.3.18.7 Transform Boolean Properties

This property specifies a 32-bit field of Boolean properties for the shape transform.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																A	B	C	unused2												
D	E	F	unused4																												

opid (2 bytes): An [EscherFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x003F.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

A - fFlipH (1 bit): A bit that specifies whether the object will be flipped along the horizontal axis. This value MUST be ignored if **fUsefFlipH** is 0x0.

The default value of this property is 0x0.

B - fFlipV (1 bit): A bit that specifies whether the object will be flipped along the vertical axis. This value MUST be ignored if **fUsefFlipV** is 0x0.

The default value of this property is 0x0.

C - unused1 (1 bit): Undefined and MUST be ignored.

unused2 (13 bits): Undefined and MUST be ignored.

D - fUsefFlipH (1 bit): A bit that specifies whether the **fFlipH** bit is set. A value of 0x0 specifies that the **fFlipH** bit MUST be ignored and the default value be used instead.

The default value of this property is 0x0.

E - fUsefFlipV (1 bit): A bit that specifies whether the **fFlipV** bit is set. A value of 0x0 specifies that the **fFlipV** bit MUST be ignored and the default value be used instead.

The default value of this property is 0x0.

F - unused3 (1 bit): Undefined and MUST be ignored.

unused4 (13 bits): Undefined and MUST be ignored.

2.3.19 Relative Transform

This property set specifies the values necessary to construct a transform relative to another shape that is applied to a shape prior to rendering.

2.3.19.1 relLeft

This property specifies the left side of the bounding rectangle that contains an object. The bounding rectangle specifies the location of the object relative to a parent object or group.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																relLeft															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x03C0.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

relLeft (4 bytes): A signed integer that specifies the left side of the bounding rectangle in coordinates defined by the application.

The default value for this property is 0x00000000.

2.3.19.2 relTop

This property specifies the top of the bounding rectangle that contains an object. The bounding rectangle specifies the location of the object relative to a parent object or group.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																relTop															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x03C1.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

relTop (4 bytes): A signed integer that specifies the top of the bounding rectangle in coordinates defined by the application.

The default value for this property is 0x00000000.

2.3.19.3 relRight

This property specifies the right side of the bounding rectangle that contains an object. The bounding rectangle specifies the location of the object relative to a parent object or group.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																relRight															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x03C2.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

relRight (4 bytes): A signed integer that specifies the right side of the bounding rectangle in coordinates defined by the application.

The default value for this property is 0x00000001.

2.3.19.4 relBottom

This property specifies the bottom of the bounding rectangle that contains an object. The bounding rectangle specifies the location of the object relative to a parent object or group.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																relBottom															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x03C3.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

relBottom (4 bytes): A signed integer that specifies the bottom of the bounding rectangle in coordinates defined by the application.

The default value for this property is 0x00000001.

2.3.19.5 relRotation

This property specifies the rotation on a shape relative to the parent object or group.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																relRotation															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x03C4.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

relRotation (4 bytes): A FixedPoint, as specified in [\[MS-OSHARED\] section 2.2.1.6](#), that specifies the rotation applied to a shape, in degrees. Positive values specify rotation in the clockwise direction. Negative values specify rotation in the counterclockwise direction. Rotation occurs around the center of the shape.

The default value for this property is 0x00000000.

2.3.19.6 gvRelPage

This property specifies the page an object is located on relative to a parent object or group. This property MAY [<41>](#) be ignored.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																gvRelPage															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x03C5.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

gvRelPage (4 bytes): An unsigned integer that specifies the page an object is located on relative to a parent object or group.

The default value for this property is 0x00000000.

2.3.19.7 Relative Transform Boolean Properties

This property specifies a 32-bit field of Boolean properties for the shape's relative transform.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																A	B	C	unused2												
D	E	F	unused4																												

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x03FF.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

A - fRelFlipH (1 bit): A bit that specifies whether the object will be flipped along the horizontal axis relative to its parent or group. This value MUST be ignored if **fUsefRelFlipH** is 0x0.

The default value for this property is 0x0.

B - fRelFlipV (1 bit): A bit that specifies whether the object will be flipped along the vertical axis relative to its parent or group. This value **MUST** be ignored if **fUsefRelFlipV** is 0x0.

The default value for this property is 0x0.

C - unused1 (1 bit): Undefined and **MUST** be ignored.

unused2 (13 bits): Undefined and **MUST** be ignored.

D - fUsefRelFlipH (1 bit): A bit that specifies whether the **fRelFlipH** bit is set. A value of 0x0 specifies that the **fRelFlipH** bit **MUST** be ignored and the default value be used instead.

The default value for this property is 0x0.

E - fUsefRelFlipV (1 bit): A bit that specifies whether the **fRelFlipV** bit is set. A value of 0x0 specifies that the **fRelFlipV** bit **MUST** be ignored and the default value be used instead.

The default value for this property is 0x0.

F - unused3 (1 bit): Undefined and **MUST** be ignored.

unused4 (13 bits): Undefined and **MUST** be ignored.

2.3.20 Protection

This property set specifies protection attributes that apply to a shape.

2.3.20.1 Protection Boolean Properties

This property specifies a 32-bit field of Boolean properties for the protection of the shape.

										1									2										3				
0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1		
opid																A	B	C	D	E	F	G	H	I	J	unused1							
K	L	M	N	O	P	Q	R	S	T	unused2																							

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x007F.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

A - fLockAgainstGrouping (1 bit): A bit that specifies whether the shape **SHOULD** be locked from being grouped with other shapes. This value **MUST** be ignored if fUsefLockAgainstGrouping is 0x0.

The default value of this property is 0x0.

B - fLockAdjustHandles (1 bit): A bit that specifies whether the adjust handles of a shape as specified by the [pAdjustHandles_complex](#) property **SHOULD** be locked from being edited. This value **MUST** be ignored if fUsefLockAdjustHandles is 0x0.

The default value of this property is 0x0.

- C - fLockText (1 bit):** A bit that specifies whether the text attached to a shape SHOULD be locked from being edited. This value MUST be ignored if fUsefLockText is 0x0.

The default value of this property is 0x0.

- D - fLockVertices (1 bit):** A bit that specifies whether the vertices of a path SHOULD be locked from being edited. This value MUST be ignored if fUsefLockVertices is 0x0.

The default value of this property is 0x0.

- E - fLockCropping (1 bit):** A bit that specifies whether [cropping](#) of a picture SHOULD be locked from being edited. This value MUST be ignored if fUsefLockCropping is 0x0.

The default value of this property is 0x0.

- F - fLockAgainstSelect (1 bit):** A bit that specifies whether the shape SHOULD be locked from being selectable in an editor. This value MUST be ignored if fUsefLockAgainstSelect is 0x0.

The default value of this property is 0x0.

- G - fLockPosition (1 bit):** A bit that specifies whether the position of a shape SHOULD be locked from being edited. This value MUST be ignored if fUsefLockPosition is 0x0.

The default value of this property is 0x0.

- H - fLockAspectRatio (1 bit):** A bit that specifies whether the aspect ratio of a shape SHOULD be locked from being edited. This value MUST be ignored if fUsefLockAspectRatio is 0x0.

The default value of this property is 0x0.

- I - fLockRotation (1 bit):** A bit that specifies whether the rotation of a shape SHOULD be locked from being edited. This value MUST be ignored if fUsefLockRotation is 0x0.

The default value of this property is 0x0.

- J - fLockAgainstUngrouping (1 bit):** A bit that specifies whether a grouped shape SHOULD be locked from being ungrouped. This bit MAY [<42>](#) be ignored. This value MUST be ignored if fUsefLockAgainstUngrouping is 0x0.

The default value of this property is 0x0.

unused1 (6 bits): Undefined and MUST be ignored.

- K - fUsefLockAgainstGrouping (1 bit):** A bit that specifies whether the **fLockAgainstGrouping** bit is set. A value of 0x0 specifies that the **fLockAgainstGrouping** bit MUST be ignored and the default value used instead.

The default value of this property is 0x0.

- L - fUsefLockAdjustHandles (1 bit):** A bit that specifies whether the **fLockAdjustHandles** bit is set. A value of 0x0 specifies that the **fLockAdjustHandles** bit MUST be ignored and the default value used instead.

The default value of this property is 0x0.

- M - fUsefLockText (1 bit):** A bit that specifies whether the **fLockText** bit is set. A value of 0x0 specifies that the **fLockText** bit MUST be ignored and the default value used instead.

N - fUsefLockVertices (1 bit): A bit that specifies whether the **fLockVertices** bit is set. A value of 0x0 specifies that the **fLockVertices** bit MUST be ignored and the default value used instead.

The default value of this property is 0x0.

O - fUsefLockCropping (1 bit): A bit that specifies whether the **fLockCropping** bit is set. A value of 0x0 specifies that the **fLockCropping** bit MUST be ignored and the default value used instead.

The default value of this property is 0x0.

P - fUsefLockAgainstSelect (1 bit): A bit that specifies whether the **fLockAgainstSelect** bit is set. A value of 0x0 specifies that the **fLockAgainstSelect** bit MUST be ignored and the default value used instead.

The default value of this property is 0x0.

Q - fUsefLockPosition (1 bit): A bit that specifies whether the **fLockPosition** bit is set. A value of 0x0 specifies that the **fLockPosition** bit MUST be ignored and the default value used instead.

The default value of this property is 0x0.

R - fUsefLockAspectRatio (1 bit): A bit that specifies whether the **fLockAspectRatio** bit is set. A value of 0x0 specifies that the **fLockAspectRatio** bit MUST be ignored and the default value used instead.

The default value of this property is 0x0.

S - fUsefLockRotation (1 bit): A bit that specifies whether the **fLockRotation** bit is set. A value of 0x0 specifies that the **fLockRotation** bit MUST be ignored and the default value used instead.

The default value of this property is 0x0.

T - fUsefLockAgainstUngrouping (1 bit): A bit that specifies whether the **fLockAgainstUngrouping** bit is set. A value of 0x0 specifies that the **fLockAgainstUngrouping** bit MUST be ignored and the default value used instead.

The default value of this property is 0x0.

unused2 (6 bits): Undefined and MUST be ignored.

2.3.21 Text

This property set specifies properties for text contained by shapes.

2.3.21.1 ITxid

This property specifies an identifier for the text.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																ITxid															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0080.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

ITxid (4 bytes): A signed integer that specifies an identifier for the text. This value is determined by the host application.

The default value for this property is 0x00000000.

2.3.21.2 dxTextLeft

This property specifies the margin size to the left of the text.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																dxTextLeft															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0081.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

dxTextLeft (4 bytes): A signed integer that specifies the margin size inside the containing shape to the left of the text. The unit of measurement for the value is English Metric Units. This value SHOULD [<43>](#) be between 0x00000000 and 0x0132F540 inclusive.

The default value for this property is 0x00016530.

2.3.21.3 dyTextTop

This property specifies the margin size above the text.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																dyTextTop															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0082.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

dyTextTop (4 bytes): A signed integer that specifies the margin size inside the containing shape above the text. The unit of measurement for the value is English Metric Units. This value SHOULD [<44>](#) be between 0x00000000 and 0x0132F540 inclusive.

The default value for this property is 0x0000B298.

2.3.21.4 dxTextRight

This property specifies the margin size to the right of the text.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																dxTextRight															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0083.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

dxTextRight (4 bytes): A signed integer that specifies the margin size inside the containing shape to the right of the text. The unit of measurement for the value is English Metric Units. This value SHOULD [<45>](#) be between 0x00000000 and 0x0132F540 inclusive.

The default value for this property is 0x00016530.

2.3.21.5 dyTextBottom

This property specifies the margin size below the text.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																dyTextBottom															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0084.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

dyTextBottom (4 bytes): A signed integer that specifies the margin size inside the containing shape below the text. The unit of measurement for the value is English Metric Units. This value SHOULD [<46>](#) be between 0x00000000 and 0x0132F540 inclusive.

The default value for this property is 0x0000B298.

2.3.21.6 WrapText

This property specifies the type of wrapping applied to the text.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																WrapText															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0085.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

WrapText (4 bytes): An [MSOWRAPMODE](#) enumeration value that specifies the type of wrapping applied to the text.

The default value for this property is msowrapSquare.

2.3.21.7 unused134

This property is undefined and MUST be ignored.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																unused134															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0086.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

unused134 (4 bytes): Undefined and MUST be ignored.

2.3.21.8 anchorText

This property specifies the type of anchor applied to the text. This value MAY [<47>](#47) be used.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																anchorText															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0087.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

anchorText (4 bytes): An [MSOANCHOR](#) enumeration value that specifies the type of anchor applied to the text.

The default value for this property is msoanchorTop.

2.3.21.9 txflTextFlow

This property specifies the type of flow applied to the text.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																txflTextFlow															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0088.
opid.fBid	MUST be 0x0.

opid.fComplex	MUST be 0x0.
----------------------	--------------

txflTextFlow (4 bytes): An [MSOTXFL](#) enumeration value that specifies the type of flow applied to the text.

The default value for this property is msotxflHorzN.

2.3.21.10 cdirFont

This property specifies the rotation applied to the text. This property MAY [<48>](#) be used.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																cdirFont															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0089.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

cdirFont (4 bytes): An [MSOCDIR](#) enumeration value that specifies the rotation applied to the text.

The default value for this property is msocdir0.

2.3.21.11 hspNext

This property specifies the next shape in a sequence of linked shapes. This property MAY [<49>](#) be used.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																hspNext															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x008A.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

hspNext (4 bytes): An [MSOSPID](#) data type that specifies the next shape in a sequence of linked shapes.

The default value for this property is 0x00000000.

2.3.21.12 txdir

This property specifies the direction of the text. This property MAY [<50>](#) be used.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																txdir															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x008B.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

txdir (4 bytes): An [MSOTXDIR](#) enumeration value that specifies the direction of the text.

The default value for this property is msotxdirLTR.

2.3.21.13 unused140

This property is undefined and MUST be ignored.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																unused140															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x008C.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

unused140 (4 bytes): Undefined and MUST be ignored.

2.3.21.14 unused141

This property is undefined and MUST be ignored.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																unused141															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x008D.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

unused141 (4 bytes): Undefined and MUST be ignored.

2.3.21.15 Text Boolean Properties

This property specifies a 32-bit field of Boolean properties for the text contained by a shape.

											1																				3	
0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	
opid																A	B	C	D	E	unused3											
F	G	H	I	J	unused6																											

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x00BF.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

A - unused1 (1 bit): Undefined and MUST be ignored.

B - fFitShapeToText (1 bit): A bit that specifies whether the containing shape SHOULD [<51>](#) adjust its dimensions to fit its contained text. This value MUST be ignored if **fUseFitShapeToText** is 0x0.

The default value of this property is 0x0.

C - unused2 (1 bit): Undefined and MUST be ignored.

D - fAutoTextMargin (1 bit): A bit that specifies whether the containing shape SHOULD [<52>](#) use a set of default internal margins for text on shapes. A value of 0x0 specifies that the containing shape's internal margins will assume the values specified by the [dxTextLeft](#), [dyTextTop](#), [dxTextRight](#), and [dyTextBottom](#) properties in the containing [OfficeArtRGFOPT](#) record, using defaults for any of these values that are not specified. This value MUST be ignored if **fUsefAutoTextMargin** is 0x0.

The default value of this property is 0x0.

E - fSelectText (1 bit): A bit that specifies whether the containing shape SHOULD [<53>](#) enter a text editing mode when the user clicks upon the contained text area. A value of 0x0 specifies that a single click will select the shape, and a second click is required to enter a text editing mode. This value MUST be ignored if **fUsefSelectText** is 0x0.

The default value of this property is 0x1.

unused3 (11 bits): Undefined and MUST be ignored.

F - unused4 (1 bit): Undefined and MUST be ignored.

G - fUsefFitShapeToText (1 bit): A bit that specifies whether or not the **fFitShapeToText** bit is set. A value of 0x0 specifies that the **fFitShapeToText** bit MUST be ignored and the default value be used instead.

The default value of this property is 0x0.

H - unused5 (1 bit): Undefined and MUST be ignored.

I - fUsefAutoTextMargin (1 bit): A bit that specifies whether or not the **fAutoTextMargin** bit is set. A value of 0x0 specifies that the **fAutoTextMargin** bit MUST be ignored and the default value be used instead.

The default value of this property is 0x0.

J - fUsefSelectText (1 bit): A bit specifies whether or not the **fSelectText** bit is set. A value of 0x0 specifies that the **fSelectText** bit MUST be ignored and the default value be used instead.

The default value of this property is 0x0.

unused6 (11 bits): Undefined and MUST be ignored.

2.3.22 Geometry Text

This property set specifies text that is drawn to follow the geometry of the shape containing it, as opposed to textbox text which uses the shape's geometry as a bounding rectangle. A shape SHOULD NOT have both [geometry text](#) and text for a textbox.

2.3.22.1 gtextUNICODE

This property specifies the text for this shape's geometry text.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																gtextUNICODE															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x00C0.
opid.fBid	Undefined and MUST be ignored.
opid.fComplex	If 0x1 then the gtextUNICODE_complex property MUST exist.

gtextUNICODE (4 bytes): The number of bytes of data in the [gtextUNICODE_complex](#) property. This MUST be 0x00000000 if **opid.fComplex** is 0x0.

The default value for this property is 0x00000000.

2.3.22.2 gtextUNICODE_complex

This property specifies additional data for the [gtextUNICODE](#) property. This property MUST exist if the **opid.fComplex** bit of the [gtextUNICODE](#) property is 0x1.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
gtextUNICODE_complex (variable)																															
...																															

gtextUNICODE_complex (variable): A Unicode null-terminated string that specifies the text to show.

2.3.22.3 gtextAlign

This property specifies how geometry text is aligned on this shape.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																gtextAlign															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x00C2.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

gtextAlign (4 bytes): An unsigned integer that specifies how geometry text is aligned on this shape. The alignment is only applicable if there is space left over after laying out a line of text along the

shape's geometry. The curve on which a single line of text is laid out is known as the path of that text. The allowed values are shown in the following table:

Name	Value	Meaning
msoalignTextStretch	0x00000000	Text SHOULD 54 be stretched to fill the entire length of the path. Multiple Lines of Text
msoalignTextCenter	0x00000001	Text is centered along the length of the path. Multiple Lines of Text
msoalignTextLeft	0x00000002	Text is placed at the beginning of the path. Multiple Lines of Text
msoalignTextRight	0x00000003	Text is placed at the end of the path. Multiple Lines of Text
msoalignTextLetterJust	0x00000004	Spacing between individual letters SHOULD 55 be added so that the letters fill the entire path.

		Multiple Lines o f T e x t
msoalignTextWordJust	0x00000005	Spacing between individual words SHOULD <56> be added so that the words fill the entire path. Multiple Lines of Text

The default value for this property is msoalignTextCenter.

2.3.22.4 gtextSize

This property specifies the font size of this shape's geometry text in points.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																gtextSize															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x00C3.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

gtextSize (4 bytes): A FixedPoint, as specified in [\[MS-OSHARED\] section 2.2.1.6](#), that specifies the font size of this shape's geometry text in points. This value MUST be greater than or equal to 0x00000000.

The default value for this property is 0x00240000.

2.3.22.5 gtextSpacing

This property specifies the amount of spacing between each character of the text.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																gtextSpacing															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x00C4.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

gtextSpacing (4 bytes): A FixedPoint, as specified in [\[MS-OSHARED\] section 2.2.1.6](#), that specifies a scaling factor to apply to the spacing between characters in this shape's geometry text. The quantity that the scaling factor is applied to is specified by the **gtextFTight** bit of this shape's [Geometry Text Boolean Properties](#). This value MUST be greater than or equal to 0x00000000, and less than or equal to 0x00050000. A value of 0x00010000 means that no scaling is necessary.

The default value for this property is 0x00010000.

2.3.22.6 gtextFont

This property specifies the font to use for the text.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																gtextFont															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x00C5.
opid.fBid	Undefined and MUST be ignored.
opid.fComplex	If 0x1 then the gtextFont_complex property MUST exist.

gtextFont (4 bytes): The number of bytes of data in the [gtextFont_complex](#) property. This MUST be 0x00000000 if **opid.fComplex** is 0x0.

The default value for this property is an empty string.

2.3.22.7 gtextFont_complex

This property specifies additional data for the [gtextFont](#) property. This property MUST exist if the **opid.fComplex** bit of the [gtextFont](#) property is 0x1.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
gtextFont_complex (variable)																															
...																															

gtextFont_complex (variable): A Unicode null-terminated string that specifies the font name to use for this text.

2.3.22.8 gtextCSSFont

This property specifies extra font information beyond the single font in the [gtextFont_complex](#) property. This property SHOULD [<57>](#) be used so that on conversion to and from [HTML](#) the correct font information is preserved.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																gtextCSSFont															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x00C6.
opid.fBid	Undefined and MUST be ignored.
opid.fComplex	If 0x1 then the gtextCSSFont_complex property MUST exist.

gtextCSSFont (4 bytes): The number of bytes of data in the [gtextCSSFont_complex](#) property. This MUST be 0x00000000 if **opid.fComplex** is 0x0.

The default value for this property is an empty string.

2.3.22.9 gtextCSSFont_complex

This property specifies additional data for the [gtextCSSFont](#) property. This property MUST exist if the **opid.fComplex** bit of the [gtextCSSFont](#) property is 0x1.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
gtextCSSFont_complex (variable)																															
...																															

gtextCSSFont_complex (variable): A Unicode null-terminated string that specifies extra font information beyond the font stored in this shape's [gtextFont_complex](#) property. The string contains a comma separated list of font family names and generic font-family names, as specified by the "font" or "font-family" attributes in [\[CSS-LEVEL2\]](#), minus the first value in that string. The first value is instead stored in the [gtextFont_complex](#) property. The font names are always enclosed by double quotes.

2.3.22.10 Geometry Text Boolean Properties

This property specifies a 32-bit field of Boolean values for text drawn with visual effects.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
Q	R	S	T	U	V	W	X	Y	Z	a	b	c	d	e	f																

opid (2 bytes): An [EscherFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x00FF.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

A - gtextFStrikethrough (1 bit): A bit that specifies whether this geometry text has a strikethrough. This value MAY [<58>](#) be ignored. This value MUST be ignored if **fUseTextFStrikethrough** is 0x0.

The default value of this property is 0x0.

B - gtextFSmallcaps (1 bit): A bit that specifies whether this geometry text shows every character in uppercase, with the lowercase characters in the text being smaller sized versions of their uppercase version. This value MAY [<59>](#) be ignored. This value MUST be ignored if **fUseTextFSmallcaps** is 0x0.

The default value of this property is 0x0.

C - gtextFShadow (1 bit): A bit that specifies whether this geometry text uses a shadow effect on the text characters. This value SHOULD be ignored. This value MUST be ignored if **fUseTextFShadow** is 0x0.

The default value of this property is 0x0.

D - gtextFUnderline (1 bit): A bit that specifies whether this geometry text uses an underline effect on the text characters. This value MAY [<60>](#) be ignored. This value MUST be ignored if **fUsegtextFUnderline** is 0x0.

The default value of this property is 0x0.

E - gtextFItalic (1 bit): A bit that specifies whether this geometry text uses italics. This value MUST be ignored if **fUsegtextFItalic** is 0x0.

The default value of this property is 0x0.





F - gtextFBold (1 bit): A bit that specifies whether this geometry text uses bold text. This value MUST be ignored if **fUsegtextFBold** is 0x0.

The default value of this property is 0x0.

G - gtextFDxMeasure (1 bit): A bit that specifies whether the distance used to calculate the amount to warp text along this shape's geometry SHOULD [<61>](#) use only the x component rather a combination of the x and y component. This value MUST be ignored if **fUsegtextFDxMeasure** is 0x0.

The default value of this property is 0x0.

H - gtextFNormalize (1 bit): A bit that specifies whether every character in the geometry text's string is adjusted to fill available space for that character. The definition of "available space" varies based on the orientation of the text, as specified by **gtextFVertical**:

Text Orientation	Un-normalized Text	Normalized Text
Horizontal	No character normalization. 	Character height is extended to fill the available height. 
Vertical	No character normalization. 	Character width is extended to fill the available width. 



This value MUST be ignored if **fUsegtextFNormalize** is 0x0.

I - gtextFBestFit (1 bit): A bit that specifies whether the geometry text SHOULD [<62>](#) be stretched to fill the entire line. Stretching occurs in the same direction as the geometry text orientation, as specified by **gtextFVertical**. This bit is only applicable if **gtextFStretch** is 0x0 or **fUsegtextFStretch** is 0x0, otherwise, it MAY be any value. This value MUST be ignored if **fUsegtextFBestFit** is 0x0.

The default value of this property is 0x0.

J - gtextFShrinkFit (1 bit): A bit that specifies whether the bounding rectangle of the geometry text SHOULD [<63>](#) be measured according to the bounding rectangle of the characters used in the string rather than the bounding rectangle of the characters in the font. This bit is only applicable if

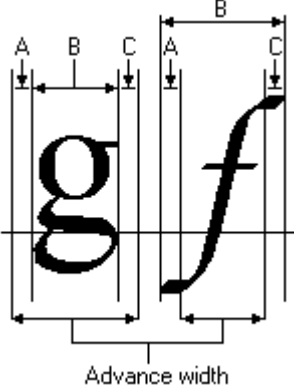
gtextFStretch is 0x1 and **fUsegtextFStretch** is 0x1, otherwise, it MAY be any value. This value MUST be ignored if **fUsegtextFShrinkFit** is 0x0.

Value (if applicable)	Meaning
0x0	The bounding rectangle of the text is calculated based on the font's normal character dimensions. 
0x1	The bounding rectangle of the text is calculated based on the characters used in the text. 

K - gtextFStretch (1 bit): A bit that specifies whether this shape's geometry text SHOULD [<64>](#) be stretched to fit the bounding rectangle of the container. This value MUST be ignored if **fUsegtextFStretch** is 0x0.

The default value of this property is 0x0.

L - gtextFTight (1 bit): A bit that specifies what quantity the scaling factor as specified by the [gtextSpacing](#) property SHOULD [<65>](#) be applied to.

Value	Meaning
0x0 (Tightening)	<p>The value of the gtextSpacing property is used to scale the character advance width. The character advance width is shown in the figure immediately following.</p>  <p style="text-align: center;">Figure 18: Character advance width</p> <p>The A spacing is the width to add to the current position before placing the character. The B spacing is the width of the character itself. The C spacing is the white space to the right of the character. The total advance width is determined by calculating the sum of A+B+C. Because characters can overhang or underhang the character cell, either or both of the A and C increments can be a negative number.</p>
0x1 (Tracking)	The value of the gtextSpacing property is used to scale the amount of spacing between each character.

This value MUST be ignored if **fUsegtextFTight** is 0x0.

The default value of this property is 0x0.

M - gtextFKern (1 bit): A bit that specifies whether this shape's geometry text SHOULD [<66>](#) use kerning. This value MUST be ignored if **fUsegtextFKern** is 0x0.

The default value of this property is 0x0.

N - gtextFVertical (1 bit): A bit that specifies whether this shape's geometry text's characters are laid out vertically rather than horizontally. This value MUST be ignored if **fUsegtextFVertical** is 0x0.

The default value of this property is 0x0.

O - fGtext (1 bit): A bit that specifies whether this shape has geometry text. If **fGtext** is 0x1, then the [gtextUNICODE_complex](#) property MUST exist. This value MUST be ignored if **fUsefGtext** is 0x0.

The default value of this property is 0x0.

P - gtextFReverseRows (1 bit): A bit that specifies whether the order that lines of geometry text are laid out SHOULD [<67>](#) be reversed. This bit is only applicable if the geometry text is in vertical orientation, as specified by **gtextFVertical**; otherwise, it MAY be any value. This value MUST be ignored if **fUsegtextFReverseRows** is 0x0.

The default value of this property is 0x0.

Q - fUsegtextFStrikethrough (1 bit): A bit that specifies whether or not the **gtextFStrikethrough** bit is set. A value of 0x0 specifies that the **gtextFStrikethrough** bit MUST be ignored and the default value be used instead.

The default value of this property is 0x0.

R - fUsegtextFSmallcaps (1 bit): A bit that specifies whether or not the **gtextFSmallcaps** bit is set. A value of 0x0 specifies that the **gtextFSmallcaps** bit MUST be ignored and the default value be used instead.

The default value of this property is 0x0.

S - fUsegtextFShadow (1 bit): A bit that specifies whether or not the **gtextFShadow** bit is set. A value of 0x0 specifies that the **gtextFShadow** bit MUST be ignored and the default value be used instead.

The default value of this property is 0x0.

T - fUsegtextFUnderline (1 bit): A bit that specifies whether or not the **gtextFUnderline** bit is set. A value of 0x0 specifies that the **gtextFUnderline** bit MUST be ignored and the default value be used instead.

The default value of this property is 0x0.

U - fUsegtextFItalic (1 bit): A bit that specifies whether or not the **gtextFItalic** bit is set. A value of 0x0 specifies that the **gtextFItalic** bit MUST be ignored and the default value be used instead.

The default value of this property is 0x0.

V - fUsegtextFBold (1 bit): A bit that specifies whether or not the **gtextFBold** bit is set. A value of 0x0 specifies that the **gtextFBold** bit MUST be ignored and the default value be used instead.

The default value of this property is 0x0.

W - fUsegtextFDxMeasure (1 bit): A bit that specifies whether or not the **gtextFDxMeasure** bit is set. A value of 0x0 specifies that the **gtextFDxMeasure** bit MUST be ignored and the default value be used instead.

The default value of this property is 0x0.

X - fUsegtextFNormalize (1 bit): A bit that specifies whether or not the **gtextFNormalize** bit is set. A value of 0x0 specifies that the **gtextFNormalize** bit MUST be ignored and the default value be used instead.

The default value of this property is 0x0.

Y - fUsegtextFBestFit (1 bit): A bit that specifies whether or not the **gtextFBestFit** bit is set. A value of 0x0 specifies that the **gtextFBestFit** bit MUST be ignored and the default value be used instead.

The default value of this property is 0x0.

Z - fUsegtextFShrinkFit (1 bit): A bit that specifies whether or not the **gtextFShrinkFit** bit is set. A value of 0x0 specifies that the **gtextFShrinkFit** bit MUST be ignored and the default value be used instead.

The default value of this property is 0x0.

a - fUsegtextFStretch (1 bit): A bit that specifies whether or not the **gtextFStretch** bit is set. A value of 0x0 specifies that the **gtextFStretch** bit MUST be ignored and the default value be used instead.

The default value of this property is 0x0.

b - fUsegtextFTight (1 bit): A bit that specifies whether or not the **gtextFTight** bit is set. A value of 0x0 specifies that the **gtextFTight** bit MUST be ignored and the default value be used instead.

The default value of this property is 0x0.

c - fUsegtextFKern (1 bit): A bit that specifies whether or not the **gtextFKern** bit is set. A value of 0x0 specifies that the **gtextFKern** bit MUST be ignored and the default value be used instead.

The default value of this property is 0x0.

d - fUsegtextFVertical (1 bit): A bit that specifies whether or not the **gtextFVertical** bit is set. A value of 0x0 specifies that the **gtextFVertical** bit MUST be ignored and the default value be used instead.

The default value of this property is 0x0.

e - fUsefGtext (1 bit): A bit that specifies whether or not the **fGtext** bit is set. A value of 0x0 specifies that the **fGtext** bit MUST be ignored and the default value be used instead.

The default value of this property is 0x0.

f - fUsegtextFReverseRows (1 bit): A bit that specifies whether or not the **gtextFReverseRows** bit is set. A value of 0x0 specifies that the **gtextFReverseRows** bit MUST be ignored and the default value be used instead.

The default value of this property is 0x0.

2.3.23 Blip

This property set specifies visual attributes of a picture shape.

2.3.23.1 cropFromTop

This property specifies the location of the top of the crop rectangle.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																cropFromTop															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0100.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

cropFromTop (4 bytes): A FixedPoint, as specified in [\[MS-OSHARED\] section 2.2.1.6](#), that specifies the location of the top of the crop rectangle expressed as a ratio of the height of the image. A value of 0x00000000 specifies that the top of the image is uncropped. Positive values specify cropping into the image. Negative values specify cropping out from the image.

The default value for this property is 0x00000000.

2.3.23.2 cropFromBottom

This property specifies the location of the bottom of the crop rectangle.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																cropFromBottom															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0101.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

cropFromBottom (4 bytes): A FixedPoint, as specified in [\[MS-OSHARED\] section 2.2.1.6](#), that specifies the location of the bottom of the crop rectangle expressed as a ratio of the height of the image. A value of 0x00000000 specifies that the bottom of the image is uncropped. Positive values specify cropping into the image. Negative values specify cropping out from the image.

The default value for this property is 0x00000000.

2.3.23.3 cropFromLeft

This property specifies the location of the left of the crop rectangle.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																cropFromLeft															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0102.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

cropFromLeft (4 bytes): A FixedPoint, as specified in [\[MS-OSHARED\] section 2.2.1.6](#), that specifies the location of the left of the crop rectangle expressed as a ratio of the width of the image. A value of 0x00000000 specifies that the left of the image is uncropped. Positive values specify cropping into the image. Negative values specify cropping out from the image.

The default value for this property is 0x00000000.

2.3.23.4 cropFromRight

This property specifies the location of the right of the crop rectangle.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																cropFromRight															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0103.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

cropFromRight (4 bytes): A FixedPoint, as specified in [\[MS-OSHARED\] section 2.2.1.6](#), that specifies the location of the right of the crop rectangle expressed as a ratio of the width of the

image. A value of 0x00000000 specifies that the right of the image is uncropped. Positive values specify cropping into the image. Negative values specify cropping out from the image.

The default value for this property is 0x00000000.

2.3.23.5 pib

This property specifies which BLIP in the [OfficeArtBStoreContainer](#) record to display in the picture shape.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																pib															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0104.
opid.fBid	MUST be 0x1 if fComplex is 0.0, otherwise this MUST be ignored.
opid.fComplex	If 0x1 then pib_complex MUST exist.

pib (4 bytes): An unsigned integer that specifies the BLIP to display in the picture shape.

The meaning of this field is determined by the value of **opid.fComplex** as specified in the following table:

Value	Meaning
0x0	Specifies a one-based index into the rgfb array of the OfficeArtBStoreContainer record. A value of 0x00000000 MUST be ignored.
0x1	Specifies the number of bytes of data in the fillBlip_complex property.

The default value for this property is 0x00000000.

2.3.23.6 pib_complex

This property specifies additional data for the [pib](#) property. This property MUST exist if the **opid.fComplex** bit of the [pib](#) property is 0x1.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
pib_complex (variable)																															
...																															

pib_complex (variable): An [OfficeArtBlip](#) record that specifies the BLIP to display in the picture shape.

2.3.23.7 pibName

This property specifies the comment, file name, or URL for this BLIP as specified by the [pibFlags](#) property.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																pibName															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0105.
opid.fBid	Undefined and MUST be ignored.
opid.fComplex	If 0x1 then the pibName_complex property MUST exist.

pibName (4 bytes): The number of bytes of data in the [pibName_complex](#) property. This value MUST be 0x00000000 if **opid.fComplex** is 0x0.

The default value for this property is 0x00000000.

2.3.23.8 pibName_complex

This property specifies additional data for the [pibName](#) property. This property MUST exist if the **opid.fComplex** bit of the [pibName](#) property is 0x1.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
pibName_complex (variable)																															
...																															

pibName_complex (variable): A Unicode null-terminated string that specifies the comment, the file name, or the URL of the BLIP as specified by the [pibFlags](#) property.

2.3.23.9 pibFlags

This property specifies a set of flags related to the usage of the BLIP.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																pibFlags															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0106.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

pibFlags (4 bytes): An [MSOBLIPFLAGS](#) enumeration value that specifies how to interpret the [pibName_complex](#) property and other properties of the BLIP to display.

The default value for this property is msoblipflagComment.

2.3.23.10 pictureTransparent

This property specifies the transparent pixel color.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																pictureTransparent															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0107.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

pictureTransparent (4 bytes): An [OfficeArtCOLORREF](#) record that specifies the color value that is treated as transparent.

The default value for this property is 0xFFFFFFFF.

2.3.23.11 pictureContrast

This property specifies the contrast modification for the picture.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																pictureContrast															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0108.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

pictureContrast (4 bytes): A signed integer that specifies the amount to modify the contrast of the picture. The minimum value of 0x00000000 specifies that the picture is rendered with no contrast. The maximum value of 0x7FFFFFFF specifies that the picture is rendered with maximum contrast.

The default value for this property is 0x00010000 and specifies no change to the contrast of the picture.

2.3.23.12 pictureBrightness

This property specifies the brightness modification for the picture.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																pictureBrightness															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0109.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

pictureBrightness (4 bytes): A signed integer that specifies the amount to modify the brightness of the picture. The minimum value of 0xFFFF8000 specifies that the picture is rendered with the minimum brightness. The maximum value of 0x00008000 specifies that the picture is rendered with the maximum brightness.

The default value for this property is 0x00000000 and specifies no change to the brightness of the picture.

2.3.23.13 pictureId

This property specifies the picture OLE identifier.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																pictureId															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x010B.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

pictureId (4 bytes): A signed integer that specifies the host-defined OLE identifier for the picture.

The default value for this property is 0x00000000.

2.3.23.14 pictureDbICrMod

This property specifies a shadow color for pictures with a double shadow used in black-and-white display mode.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																pictureDbICrMod															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x010C.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

pictureDbICrMod (4 bytes): An [OfficeArtCOLORREF](#) record that specifies the color used to modify the picture when there is a double shadow in black-and-white display mode. This value SHOULD [<68>](#) be ignored.

The default value for this property is 0x100000F4.

2.3.23.15 pictureFillCrMod

This property specifies the fill color modification used in black-and-white display mode.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																pictureFillCrMod															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x010D.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

pictureFillCrMod (4 bytes): An [OfficeArtCOLORREF](#) record that specifies the fill color modification used in black-and-white display mode.

The default value for this property is 0x20000000.

2.3.23.16 pictureLineCrMod

This property specifies the line color modification used in black-and-white display mode.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																pictureLineCrMod															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x010E.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

pictureLineCrMod (4 bytes): An [OfficeArtCOLORREF](#) record that specifies the line color modification used in black-and-white display mode.

The default value for this property is 0x20000000.

2.3.23.17 pibPrint

This property specifies which BLIP in the [OfficeArtBStoreContainer](#) record to print. By default, this property is not set, and the display BLIP that is specified by the [pib](#) or [pib_complex](#) properties will be printed.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																pibPrint															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x010F.
opid.fBid	MUST be 0x1 if fComplex is 0.0, otherwise this MUST be ignored.
opid.fComplex	If 0x1 then the pibPrint_complex property MUST exist.

pibPrint (4 bytes): An unsigned integer that specifies the BLIP to print.

The meaning of this field is determined by the value of **opid.fComplex** as specified in the following table:

Value	Meaning
0x0	Specifies a one-based index into the rgfb array of the OfficeArtBStoreContainer record. A value of 0x00000000 MUST be ignored.
0x1	Specifies the number of bytes of data in the pibPrint_complex property.

The default value for this property is 0x00000000.

2.3.23.18 pibPrint_complex

This property specifies additional data for the [pibPrint](#) property. This property MUST exist if the **opid.fComplex** bit of the [pibPrint](#) property is 0x1.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
pibPrint_complex (variable)																															
...																															

pibPrint_complex (variable): An [OfficeArtBlip](#) record that specifies the BLIP to print.

2.3.23.19 pibPrintName

This property specifies the comment, file name, or URL for the BLIP to print as specified by the [pibPrintFlags](#) property.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																pibPrintName															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0110.
opid.fBid	Undefined and MUST be ignored.
opid.fComplex	If 0x1 then the pibPrintName_complex property MUST exist.

pibPrintName (4 bytes): The number of bytes of data in the [pibPrintName_complex](#) property. This value MUST be 0x00000000 if **opid.fComplex** is 0x0.

The default value for this property is 0x00000000.

2.3.23.20 pibPrintName_complex

This property specifies additional data for the [pibPrintName](#) property. This property MUST exist if the **opid.fComplex** bit of the [pibPrintName](#) property is 0x1.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
pibPrintName_complex (variable)																															
...																															

pibPrintName_complex (variable): A Unicode null-terminated string that specifies the comment, the file name, or the URL of the BLIP to print, as specified by the [pibPrintFlags](#) property.

2.3.23.21 pibPrintFlags

This property specifies a set of flags related to the usage of the BLIP to print.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																pibPrintFlags															

...	
-----	--

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0111.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

pibPrintFlags (4 bytes): An [MSOBLIPFLAGS](#) enumeration value that specifies how to interpret the [pibPrintName_complex](#) property and other properties of the BLIP to print.

The default value for this property is msoblipflagComment.

2.3.23.22 movie

This property specifies movie data. This property SHOULD [<69>](#) be ignored.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																movie															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0112.
opid.fBid	Undefined and MUST be ignored.
opid.fComplex	If 0x1 then movie_complex property MUST exist.

movie (4 bytes): The number of bytes of data in the [movie_complex](#) property. This value MUST be 0x00000000 if **opid.fComplex** is 0x0.

The default value for this property is 0x00000000.

2.3.23.23 movie_complex

This property specifies movie data. This property SHOULD [<70>](#) be ignored.

2.3.23.24 pictureTransparentExt

This property specifies the transparent pixel [extended](#) color.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																pictureTransparentExt															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0115.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

pictureTransparentExt (4 bytes): An [OfficeArtCOLORREF](#) record that specifies the [extended](#) color value which is treated as transparent.

The default value for this property is 0xFFFFFFFF.

2.3.23.25 reserved278

MUST be 0xFFFFFFFF, and MUST be ignored.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																reserved278															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0116.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

reserved278 (4 bytes): MUST be 0xFFFFFFFF, and MUST be ignored.

The default value for this property is 0xFFFFFFFF.

2.3.23.26 pictureTransparentExtMod

This property specifies the color modification of the transparent pixel [extended](#) color.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																pictureTransparentExtMod															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0117.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

pictureTransparentExtMod (4 bytes): An [MSOTINTSHADE](#) record that specifies the color modification of the [extended](#) color value.

The default value for this property is 0x20000000.

2.3.23.27 reserved280

MUST be zero, and MUST be ignored.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																reserved280															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0118.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

reserved280 (4 bytes): MUST be zero, and MUST be ignored.

The default value for this property is 0x00000000.

2.3.23.28 reserved281

MUST be 0xFFFFFFFF, and MUST be ignored.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																reserved281															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0119.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

reserved281 (4 bytes): MUST be 0xFFFFFFFF, and MUST be ignored.

The default value for this property is 0xFFFFFFFF.

2.3.23.29 pictureRecolor

This property specifies the color used to recolor the image.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																pictureRecolor															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x011A.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

pictureRecolor (4 bytes): An [OfficeArtCOLORREF](#) record that specifies the color used to recolor the image.

The default value for this property is 0xFFFFFFFF.

2.3.23.30 pictureRecolorExt

This property specifies the [extended](#) color used to recolor the image.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																pictureRecolorExt															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x011B.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

pictureRecolorExt (4 bytes): An [OfficeArtCOLORREF](#) record that specifies the [extended](#) color used to recolor the image.

The default value for this property is 0xFFFFFFFF.

2.3.23.31 reserved284

MUST be 0xFFFFFFFF, and MUST be ignored.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																reserved284															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x011C.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

reserved284 (4 bytes): MUST be 0xFFFFFFFF, and MUST be ignored.

The default value for this property is 0xFFFFFFFF.

2.3.23.32 pictureRecolorExtMod

This property specifies the color modification of the [extended](#) color used to recolor the image.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																pictureRecolorExtMod															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x011D.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

pictureRecolorExtMod (4 bytes): An [MSOTINTSHADE](#) record that specifies the color modification of the [extended](#) color used to recolor the image.

The default value for this property is 0x20000000.

2.3.23.33 reserved286

MUST be zero, and MUST be ignored.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																reserved286															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x011E.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

reserved286 (4 bytes): MUST be zero, and MUST be ignored.

The default value for this property is 0x00000000.

2.3.23.34 reserved287

MUST be 0xFFFFFFFF, and MUST be ignored.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																reserved287															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x011F.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

reserved287 (4 bytes): MUST be 0xFFFFFFFF, and MUST be ignored.

The default value for this property is 0xFFFFFFFF.

2.3.23.35 Blip Boolean Properties

This property specifies a 32-bit field of Boolean properties for the BLIP style.

											1																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
--	--	--	--	--	--	--	--	--	--	--	---	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

opid (2 bytes): An [EscherFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x013F.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

A - fPictureActive (1 bit): A bit that specifies whether the OLE server that is associated with this picture is active. This value MUST be ignored if **fUsefPictureActive** is 0x0.

The default value of this property is 0x0.

B - fPictureBiLevel (1 bit): A bit that specifies whether this picture SHOULD be displayed in two-color black and white. This value MUST be ignored if **fUsefPictureBiLevel** is 0x0.

The default value of this property is 0x0.

C - fPictureGray (1 bit): A bit that specifies whether this picture SHOULD be displayed in grayscale. This value MUST be ignored if **fUsefPictureGray** is 0x0.

The default value of this property is 0x0.

D - fNoHitTestPicture (1 bit): A bit that specifies whether this picture is not selectable in UI. This value MUST be ignored if **fUsefNoHitTestPicture** is 0x0.

The default value of this property is 0x0.

E - fLooping (1 bit): A bit that specifies whether to loop this animated picture or movie. This value MUST be ignored if **fUsefLooping** is 0x0.

The default value of this property is 0x0.

F - fRewind (1 bit): A bit that specifies whether to rewind this animated picture or movie when finished playing. This value MUST be ignored if **fUsefRewind** is 0x0.

The default value of this property is 0x0.

G - fPicturePreserveGrays (1 bit): A bit that specifies whether color modifications to this picture leave gray values unchanged. This value MUST be ignored if **fUsefPicturePreserveGrays** is 0x0.

The default value of this property is 0x0.

unused1 (9 bits): Undefined and MUST be ignored.

H - fUsefPictureActive (1 bit): This bit specifies if the **fPictureActive** bit is set. A value of 0x0 specifies that the **fPictureActive** bit MUST be ignored and the default value used instead.

The default value of this property is 0x0.

I - fUsefPictureBiLevel (1 bit): This bit specifies if the **fPictureBiLevel** bit is set. A value of 0x0 specifies that the **fPictureBiLevel** bit MUST be ignored and the default value be used instead.

The default value of this property is 0x0.

J - fUsefPictureGray (1 bit): This bit specifies if the **fPictureGray** bit is set. A value of 0x0 specifies that the **fPictureGray** bit MUST be ignored and the default value be used instead.

The default value of this property is 0x0.

K - fUsefNoHitTestPicture (1 bit): This bit specifies if the **fNoHitTestPicture** bit is set. A value of 0x0 specifies that the **fNoHitTestPicture** bit MUST be ignored and the default value be used instead.

The default value of this property is 0x0.

L - fUsefLooping (1 bit): This bit specifies if the **fLooping** bit is set. A value of 0x0 specifies that the **fLooping** bit MUST be ignored and the default value be used instead.

The default value of this property is 0x0.

M - fUsefRewind (1 bit): This bit specifies if the **fRewind** bit is set. A value of 0x0 specifies that the **fRewind** bit MUST be ignored and the default value be used instead.

The default value of this property is 0x0.

N - fUsefPicturePreserveGrays (1 bit): This bit specifies if the **fPicturePreserveGrays** bit is set. A value of 0x0 specifies that the **fPicturePreserveGrays** bit MUST be ignored and the default value be used instead.

The default value of this property is 0x0.

unused2 (9 bits): Undefined and MUST be ignored.

2.3.24 Unknown HTML

This property set specifies the [Vector Markup Language \(VML\)](#), as specified in [\[ECMA-376\] Part 3, Section 6](#), of specific attributes of the shape that is imported from the HTML document.

2.3.24.1 wzLineId

This property specifies the identifier of the [VML](#) stroke element, as specified in [\[ECMA-376\] Part 3, Section 6](#). This property MAY [<71>](#) be ignored.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																wzLineId															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0402.
opid.fBid	Undefined and MUST be ignored.
opid.fComplex	If 0x1 then the wzLineId_complex property MUST exist.

wzLineId (4 bytes): The number of bytes of data in the [wzLineId_complex](#) property. This MUST be 0x00000000 if **opid.fComplex** is 0x0.

The default value for this property is 0x00000000.

2.3.24.2 wzLineId_complex

This property specifies additional data for the [wzLineId](#) property. This property MUST exist if the **opid.fComplex** bit of the [wzLineId](#) property is 0x1.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
wzLineId_complex (variable)																															
...																															

wzLineId_complex (variable): A Unicode null-terminated string that specifies the identifier of the VML stroke element, as specified in [\[ECMA-376\] Part 3, Section 6](#).

2.3.24.3 wzFillId

This property specifies the identifier of the VML fill element, as specified in [\[ECMA-376\] Part 3, Section 6](#). This property MAY [<72>](#) be ignored.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																wzFillId															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0403.
opid.fBid	Undefined and MUST be ignored.
opid.fComplex	If 0x1 then wzFillId_complex MUST exist.

wzFillId (4 bytes): The number of bytes of data in [wzFillId_complex](#). This MUST be 0x00000000 if **opid.fComplex** is 0x0.

The default value for this property is 0x00000000.

2.3.24.4 wzFillId_complex

This property specifies additional data for the [wzFillId](#) property. This property MUST exist if the **opid.fComplex** bit of the [wzFillId](#) property is 0x1.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
wzFillId_complex (variable)																															
...																															

wzFillId_complex (variable): A Unicode null-terminated string that specifies the identifier of the VML fill element, as specified in [\[ECMA-376\] Part 3, Section 6](#).

2.3.24.5 wzPictureId

This property specifies the identifier of the VML imagedata element, as specified in [\[ECMA-376\] Part 3, Section 6](#). This property MAY [<73>](#) be ignored.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																wzPictureId															

...	
-----	--

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0404.
opid.fBid	Undefined and MUST be ignored.
opid.fComplex	If 0x1 then wzPictureId_complex MUST exist.

wzPictureId (4 bytes): The number of bytes of data in [wzPictureId_complex](#). This MUST be 0x00000000 if **opid.fComplex** is 0x0.

The default value for this property is 0x00000000.

2.3.24.6 wzPictureId_complex

This property specifies additional data for the [wzPictureId](#) property. This property MUST exist if the **opid.fComplex** bit of the [wzPictureId](#) property is 0x1.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
wzPictureId_complex (variable)																															
...																															

wzPictureId_complex (variable): A Unicode null-terminated string that specifies the identifier of the VML imagedata element, as specified in [\[ECMA-376\] Part 3, Section 6](#).

2.3.24.7 wzPathId

This property specifies the identifier of the VML path element, as specified in [\[ECMA-376\] Part 3, Section 6](#). This property MAY [<74>](#) be ignored.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																wzPathId															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0405.
opid.fBid	Undefined and MUST be ignored.

opid.fComplex	If 0x1 then the wzPathId_complex property MUST exist.
----------------------	---

wzPathId (4 bytes): The number of bytes of data in the [wzPathId_complex](#) property. This MUST be 0x00000000 if **opid.fComplex** is 0x0.

The default value for this property is 0x00000000.

2.3.24.8 wzPathId_complex

This property specifies additional data for the [wzPathId](#) property. This property MUST exist if the **opid.fComplex** bit of the [wzPathId](#) property is 0x1.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
wzPathId_complex (variable)																															
...																															

wzPathId_complex (variable): A Unicode null-terminated string that specifies the identifier of the VML path element, as specified in [\[ECMA-376\] Part 3, Section 6](#).

2.3.24.9 wzShadowId

This property specifies the identifier of the VML shadow element, as specified in [\[ECMA-376\] Part 3, Section 6](#). This property MAY [<75>](#) be ignored.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																wzShadowId															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0406.
opid.fBid	Undefined and MUST be ignored.
opid.fComplex	If 0x1 then the wzShadowId_complex property MUST exist.

wzShadowId (4 bytes): The number of bytes of data in the [wzShadowId_complex](#) property. This MUST be 0x00000000 if **opid.fComplex** is 0x0.

The default value for this property is 0x00000000.

2.3.24.10 wzShadowId_complex

This property specifies additional data for the [wzShadowId](#) property. This property MUST exist if the **opid.fComplex** bit of the [wzShadowId](#) property is 0x1.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
wzShadowId_complex (variable)																															
...																															

wzShadowId_complex (variable): A Unicode null-terminated string that specifies the identifier of the VML shadow element, as specified in [\[ECMA-376\] Part 3, Section 6](#).

2.3.24.11 wzPerspectiveId

This property specifies the identifier of the VML skew element, as specified in [\[ECMA-376\] Part 3, Section 6](#). This property MAY [<76>](#) be ignored.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																wzPerspectiveId															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0407.
opid.fBid	Undefined and MUST be ignored.
opid.fComplex	If 0x1 then the wzPerspectiveId_complex property MUST exist.

wzPerspectiveId (4 bytes): The number of bytes of data in the [wzPerspectiveId_complex](#) property. This MUST be 0x00000000 if **opid.fComplex** is 0x0.

The default value for this property is 0x00000000.

2.3.24.12 wzPerspectiveId_complex

This property specifies additional data for the [wzPerspectiveId](#) property. This property MUST exist if the **opid.fComplex** bit of the [wzPerspectiveId](#) property is 0x1.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
wzPerspectiveId_complex (variable)																															
...																															

wzPerspectiveId_complex (variable): A Unicode null-terminated string that specifies the identifier of the VML skew element, as specified in [\[ECMA-376\] Part 3, Section 6](#).

2.3.24.13 wzGtextId

This property specifies the identifier of the VML textpath element, as specified in [\[ECMA-376\] Part 3, Section 6](#). This property MAY [<77>](#) be ignored.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																wzGtextId															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0408.
opid.fBid	Undefined and MUST be ignored.
opid.fComplex	If 0x1 then wzGtextId_complex MUST exist.

wzGtextId (4 bytes): The number of bytes of data in the [wzGtextId_complex](#) property. This MUST be 0x00000000 if **opid.fComplex** is 0x0.

The default value for this property is 0x00000000.

2.3.24.14 wzGtextId_complex

This property specifies additional data for the [wzGtextId](#) property. This property MUST exist if the **opid.fComplex** bit of the [wzGtextId](#) property is 0x1.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
wzGtextId_complex (variable)																															
...																															

wzGtextId_complex (variable): A Unicode null-terminated string that specifies the identifier of the VML textpath element, as specified in [\[ECMA-376\] Part 3, Section 6](#).

2.3.24.15 wzFormulaeId

This property specifies the identifier of the VML formulas element, as specified in [\[ECMA-376\] Part 3, Section 6](#). This property MAY [<78>](#) be ignored.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																wzFormulaeId															

...	
-----	--

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0409.
opid.fBid	Undefined and MUST be ignored.
opid.fComplex	If 0x1 then the wzFormulaeId_complex property MUST exist.

wzFormulaeId (4 bytes): The number of bytes of data in the [wzFormulaeId_complex](#) property. This MUST be 0x00000000 if **opid.fComplex** is 0x0.

The default value for this property is 0x00000000.

2.3.24.16 wzFormulaeId_complex

This property specifies additional data for the [wzFormulaeId](#) property. This property MUST exist if the **opid.fComplex** bit of the [wzFormulaeId](#) property is 0x1.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
wzFormulaeId_complex (variable)																															
...																															

wzFormulaeId_complex (variable): A Unicode null-terminated string that specifies the identifier of the VML formulas element, as specified in [\[ECMA-376\] Part 3, Section 6](#).

2.3.24.17 wzHandlesId

This property specifies the identifier of the VML handles element, as specified in [\[ECMA-376\] Part 3, Section 6](#). This property MAY <79> be ignored.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																wzHandlesId															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x040A.
opid.fBid	Undefined and MUST be ignored.

opid.fComplex	If 0x1 then wzHandlesId_complex MUST exist.
----------------------	---

wzHandlesId (4 bytes): The number of bytes of data in the [wzHandlesId_complex](#) property. This MUST be 0x00000000 if **opid.fComplex** is 0x0.

The default value for this property is 0x00000000.

2.3.24.18 wzHandlesId_complex

This property specifies additional data for the [wzHandlesId](#) property. This property MUST exist if the **opid.fComplex** bit of the [wzHandlesId](#) property is 0x1.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
wzHandlesId_complex (variable)																															
...																															

wzHandlesId_complex (variable): A Unicode null-terminated string that specifies the identifier of the VML handles element, as specified in [\[ECMA-376\] Part 3, Section 6](#).

2.3.24.19 wzCalloutId

This property specifies the identifier of the VML callout element, as specified in [\[ECMA-376\] Part 3, Section 6](#). This property MAY [<80>](#) be ignored.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																wzCalloutId															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x040B.
opid.fBid	Undefined and MUST be ignored.
opid.fComplex	If 0x1 then the wzCalloutId_complex property MUST exist.

wzCalloutId (4 bytes): The number of bytes of data in the [wzCalloutId_complex](#) property. This MUST be 0x00000000 if **opid.fComplex** is 0x0.

The default value for this property is 0x00000000.

2.3.24.20 wzCalloutId_complex

This property specifies additional data for the [wzCalloutId](#) property. This property MUST exist if the **opid.fComplex** bit of the [wzCalloutId](#) property is 0x1.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
wzCalloutId_complex (variable)																															
...																															

wzCalloutId_complex (variable): A Unicode null-terminated string that specifies the identifier of the VML callout element, as specified in [\[ECMA-376\] Part 3, Section 6](#).

2.3.24.21 wzLockId

This property specifies the identifier of the VML lock element, as specified in [\[ECMA-376\] Part 3, Section 6](#). This property MAY [<81>](#) be ignored.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																wzLockId															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x040C.
opid.fBid	Undefined and MUST be ignored.
opid.fComplex	If 0x1 then the wzLockId_complex property MUST exist.

wzLockId (4 bytes): The number of bytes of data in the [wzLockId_complex](#) property. This MUST be 0x00000000 if **opid.fComplex** is 0x0.

The default value for this property is 0x00000000.

2.3.24.22 wzLockId_complex

This property specifies additional data for the [wzLockId](#) property. This property MUST exist if the **opid.fComplex** bit of the [wzLockId](#) property is 0x1.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
wzLockId_complex (variable)																															
...																															

wzLockId_complex (variable): A Unicode null-terminated string that specifies the identifier of the VML lock element, as specified in [\[ECMA-376\] Part 3, Section 6](#).

2.3.24.23 wzTextId

This property specifies the identifier of the VML textbox element, as specified in [\[ECMA-376\] Part 3, Section 6](#). This property MAY [<82>](#) be ignored.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																wzTextId															
...																															

opid (2 bytes): An [OfficeArtFOPTOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x040D.
opid.fBid	Undefined and MUST be ignored.
opid.fComplex	If 0x1 then the wzTextId_complex property MUST exist.

wzTextId (4 bytes): The number of bytes of data in the [wzTextId_complex](#) property. This MUST be 0x00000000 if **opid.fComplex** is 0x0.

The default value for this property is 0x00000000.

2.3.24.24 wzTextId_complex

This property specifies additional data for the [wzTextId](#) property. This property MUST exist if the **opid.fComplex** bit of the [wzTextId](#) property is 0x1.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
wzTextId_complex (variable)																															
...																															

wzTextId_complex (variable): A Unicode null-terminated string that specifies the identifier of the VML textbox element, as specified in [\[ECMA-376\] Part 3, Section 6](#).

2.3.24.25 wzThreeDId

This property specifies the identifier of the VML extrusion element, as specified in [\[ECMA-376\] Part 3, Section 6](#). This property MAY [<83>](#) be ignored.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																wzThreeDId															

...	
-----	--

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x040E.
opid.fBid	Undefined and MUST be ignored.
opid.fComplex	If 0x1 then the wzThreeDId_complex property MUST exist.

wzThreeDId (4 bytes): The number of bytes of data in the [wzThreeDId_complex](#) property. This MUST be 0x00000000 if **opid.fComplex** is 0x0.

The default value for this property is 0x00000000.

2.3.24.26 wzThreeDId_complex

This property specifies additional data for the [wzThreeDId](#) property. This property MUST exist if the **opid.fComplex** bit of the [wzThreeDId](#) property is 0x1.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
wzThreeDId_complex (variable)																															
...																															

wzThreeDId_complex (variable): A Unicode null-terminated string that specifies the identifier of the VML extrusion element, as specified in [\[ECMA-376\] Part 3, Section 6](#).

2.3.24.27 Unknown HTML Boolean Properties

This property specifies a 32-bit field of Boolean properties of the shape that is imported from VML, as specified in [\[ECMA-376\] Part 3, Section 6](#), content. This property MAY [<84>](#) be ignored.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31			
opid																A	B	C	unused2															
D	E	F	unused4																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x043F.
opid.fBid	MUST be 0x0.

opid.fComplex	MUST be 0x0.
----------------------	--------------

A - unused1 (1 bit): Undefined and MUST be ignored.

B - fFakeMaster (1 bit): A bit that specifies whether the shape is imported from a VML shapetype element, as specified in [\[ECMA-376\] Part 3, Section 6](#). If this bit is set to 0x1, the shape will not be rendered and it can be used to create other shapes. This value MUST be ignored if **fUsefFakeMaster** is 0x0.

The default value for this property is 0x0.

C - fOleFromHtml (1 bit): A bit that specifies whether this shape is imported from a VML shape element, as specified in [\[ECMA-376\] Part 3, Section 6](#), which is an embedded object. This value MUST be ignored if **fUsefOleFromHtml** is 0x0.

The default value for this property is 0x0.

unused2 (13 bits): Undefined and MUST be ignored.

D - unused3 (1 bit): Undefined and MUST be ignored.

E - fUsefFakeMaster (1 bit): A bit that specifies whether the **fFakeMaster** bit is set. A value of 0x0 specifies that the **fFakeMaster** MUST be ignored.

The default value for this property is 0x0.

F - fUsefOleFromHtml (1 bit): A bit that specifies whether the **fOleFromHtml** bit is set. A value of 0x0 specifies that the **fOleFromHtml** MUST be ignored.

The default value for this property is 0x0.

unused4 (13 bits): Undefined and MUST be ignored.

2.3.25 Web Component

This property set specifies the HTML content attributes of the shape.

2.3.25.1 webComponentWzHtml

This property specifies the HTML content of the Web component. This property MAY [<85>](#) be ignored.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																webComponentWzHtml															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0680.
opid.fBid	Undefined and MUST be ignored.

opid.fComplex	If 0x1 then the webComponentWzHtml_complex property MUST exist.
----------------------	---

webComponentWzHtml (4 bytes): The number of bytes of data in the [webComponentWzHtml_complex](#) property. This MUST be 0x00000000 if **opid.fComplex** is 0x0.

The default value for this property is 0x00000000.

2.3.25.2 webComponentWzHtml_complex

This property specifies additional data for the [webComponentWzHtml](#) property. This property MUST exist if the **opid.fComplex** bit of the [webComponentWzHtml](#) property is 0x1.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
webComponentWzHtml_complex (variable)																															
...																															

webComponentWzHtml_complex (variable): A Unicode null-terminated string that specifies HTML content.

2.3.25.3 webComponentWzName

This property specifies the name of the Web component. This property MAY [<86>](#) be ignored.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																webComponentWzName															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0681.
opid.fBid	Undefined and MUST be ignored.
opid.fComplex	If 0x1 then the webComponentWzName_complex property MUST exist.

webComponentWzName (4 bytes): The number of bytes of data in the [webComponentWzName_complex](#) property. This MUST be 0x00000000 if **opid.fComplex** is 0x0.

The default value for this property is 0x00000000.

2.3.25.4 webComponentWzName_complex

This property specifies additional data for the [webComponentWzName](#) property. This property MUST exist if the **opid.fComplex** bit of the [webComponentWzName](#) property is 0x1.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
webComponentWzName_complex (variable)																															
...																															

webComponentWzName_complex (variable): A Unicode null-terminated string that specifies the name.

2.3.25.5 webComponentWzUrl

This property specifies the URL of the Web component. This property MAY [<87>](#) be ignored.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																webComponentWzUrl															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0682.
opid.fBid	Undefined and MUST be ignored.
opid.fComplex	If 0x1 then the webComponentWzUrl_complex property MUST exist.

webComponentWzUrl (4 bytes): The number of bytes of data in the [webComponentWzUrl_complex](#) property. This MUST be 0x00000000 if **opid.fComplex** is 0x0.

The default value for this property is 0x00000000.

2.3.25.6 webComponentWzUrl_complex

This property specifies additional data for the [webComponentWzUrl](#) property. This property MUST exist if the **opid.fComplex** bit of the [webComponentWzUrl](#) property is 0x1.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
webComponentWzUrl_complex (variable)																															
...																															

webComponentWzUrl_complex (variable): A Unicode null-terminated string that specifies the URL.

2.3.25.7 Web Component Boolean Properties

This property specifies a 32-bit field of Boolean properties for the Web component. This property MAY [<88>](#) be ignored.

										1									2											3		
0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	
opid																A	unused1															
B	unused2																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x06BF.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

A - fIsWebComponent (1 bit): A bit that specifies whether the shape is a Web component. This value MUST be ignored if **fUsefIsWebComponent** is 0x0.

The default value for this property is 0x0.

unused1 (15 bits): Undefined and MUST be ignored.

B - fUsefIsWebComponent (1 bit): A bit that specifies whether the **fIsWebComponent** bit is set. A value of 0x0 specifies that the **fIsWebComponent** MUST be ignored.

The default value for this property is 0x0.

unused2 (15 bits): Undefined and MUST be ignored.

2.3.26 Ink

This property set specifies the ink data of an [ink shape](#) or ink annotation.

2.3.26.1 pInkData

This property specifies the data used to represent an ink shape.

										1									2											3	
0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1
opid																pInkData															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0700.
opid.fBid	Undefined and MUST be ignored.
opid.fComplex	If 0x1 then the pInkData_complex property MUST exist.

pInkData (4 bytes): The number of bytes of data in the [pInkData_complex](#) property. This value MUST be 0x00000000 if **opid.fComplex** is 0x0.

The default value for this property is 0x00000000.

2.3.26.2 pInkData_complex

This property specifies additional data for the [pInkData](#) property. This property MUST exist if the **opid.fComplex** bit of the [pInkData](#) property flag is 0x1.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
pInkData_complex (variable)																															
...																															

pInkData_complex (variable): An Ink Serialization Format stream, as specified by [\[MC-ISF\]](#), that specifies the ink strokes in this shape.

This property contains custom data stored as extended properties on ink stroke objects. The extended property information is specified in the following table:

Name	GUID	Specifies
DrawAttributeColorScheme	000C6800-0000-0000-C000-000000000046	An MSOCR record that specifies an ink stroke color.
TimeStamp	8A54CF58-97E6-4fc5-8F06-F8BAD2E19B22	A TimeStamp, as specified in [MSDN-UATOS] .

2.3.26.3 Ink Boolean Properties

This property specifies a 32-bit field of boolean properties for ink shapes.

										1										2										3	
0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1
opid																A	B	C	D	unused1											
E	F	G	H	unused2																											

opid (2 bytes): An [EscherFOFTEOPID](#) record that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x073F.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

A - fRenderInk (1 bit): A bit that specifies whether to render the ink strokes in this shape. This value MUST be ignored if fUsefRenderInk is 0x0.

The default value for this property is 0x0.

B - fRenderShape (1 bit): A bit that specifies whether to render the shape effects specified by other graphics properties in the [EscherRGFOPE](#). This value MUST be ignored if fUsefRenderShape is 0x0.

The default value for this property is 0x0.

C - fHitTestInk (1 bit): A bit that specifies whether to allow mouse hit testing of the ink strokes in this shape. This value MUST be ignored if fUsefHitTestInk is 0x0.

The default value for this property is 0x1.

D - fInkAnnotation (1 bit): A bit that specifies whether this shape is an ink annotation. This value MUST be ignored if fUsefInkAnnotation is 0x0.

The default value for this property is 0x0.

unused1 (12 bits): Undefined and MUST be ignored.

E - fUsefRenderInk (1 bit): A bit that specifies if the **fRenderInk** bit is set. A value of 0x0 specifies that the **fRenderInk** bit MUST be ignored and the default value be used instead.

The default value for this property is 0x0.

F - fUsefRenderShape (1 bit): A bit that specifies if the **fRenderShape** bit is set. A value of 0x0 specifies that the **fRenderShape** bit MUST be ignored and the default value be used instead.

The default value for this property is 0x0.

G - fUsefHitTestInk (1 bit): A bit that specifies if the **fHitTestInk** bit is set. A value of 0x0 specifies that the **fHitTestInk** bit MUST be ignored and the default value be used instead.

The default value for this property is 0x0.

H - fUsefInkAnnotation (1 bit): A bit that specifies if the **fInkAnnotation** bit is set. A value of 0x0 specifies that the **fInkAnnotation** bit MUST be ignored and the default value be used instead.

The default value for this property is 0x0.

unused2 (12 bits): Undefined and MUST be ignored.

2.3.27 Signature Line

This property set specifies the attributes of the [digital signature](#) signing setup of the shape.

2.3.27.1 wzSigSetupId

This property specifies the GUID of the [signature line](#). This property MAY [<89>](#) be ignored.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																wzSigSetupId															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0781.
opid.fBid	Undefined and MUST be ignored.
opid.fComplex	If 0x1 then the wzSigSetupId_complex property MUST exist.

wzSigSetupId (4 bytes): The number of bytes of data in the [wzSigSetupId_complex](#) property. This value MUST be 0x00000000 if **opid.fComplex** is 0x0.

The default value for this property is 0x00000000.

2.3.27.2 wzSigSetupId_complex

This property specifies additional data for the [wzSigSetupId](#) property. This property MUST exist if the **opid.fComplex** bit of the [wzSigSetupId](#) property is 0x1.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
wzSigSetupId_complex (variable)																															
...																															

wzSigSetupId_complex (variable): A Unicode null-terminated string that specifies the GUID of the signature line. The GUID is formatted in this pattern: {XXXXXXXX-XXXX-XXXX-XXXX-XXXXXXXXXXXX}, where the value of GUID is represented as a series of hexadecimal digits in groups of 8, 4, 4, 4, and 12 digits and separated by hyphens then enclosed by braces.

2.3.27.3 wzSigSetupProvId

This property specifies the GUID of the provider that creates the signature line. This property MAY [<90>](#) be ignored.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																wzSigSetupProvId															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0782.
opid.fBid	Undefined and MUST be ignored.
opid.fComplex	If 0x1 then the wzSigSetupProvId_complex property MUST exist.

wzSigSetupProvId (4 bytes): The number of bytes of data in the [wzSigSetupProvId_complex](#) property. This value MUST be 0x00000000 if **opid.fComplex** is 0x0.

The default value for this property is 0x00000000.

2.3.27.4 wzSigSetupProvId_complex

This property specifies additional data for the [wzSigSetupProvId](#) property. This property MUST exist if the **opid.fComplex** bit of the [wzSigSetupProvId](#) property is 0x1.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
wzSigSetupProvId_complex (variable)																															
...																															

wzSigSetupProvId_complex (variable): A Unicode null-terminated string that specifies the GUID of the provider that creates the signature line. The GUID is formatted in this pattern: {XXXXXXXX-XXXX-XXXX-XXXX-XXXXXXXXXXXX}, where the value of GUID is represented as a series of hexadecimal digits in groups of 8, 4, 4, 4, and 12 digits and separated by hyphens then enclosed by braces.

2.3.27.5 wzSigSetupSuggSigner

This property specifies the name of the suggested signer. This property MAY [<91>](#) be ignored.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																wzSigSetupSuggSigner															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0783.
opid.fBid	Undefined and MUST be ignored.
opid.fComplex	If 0x1 then the wzSigSetupSuggSigner_complex property MUST exist.

wzSigSetupSuggSigner (4 bytes): The number of bytes of data in the [wzSigSetupSuggSigner_complex](#) property. This value MUST be 0x00000000 if **opid.fComplex** is 0x0.

The default value for this property is 0x00000000.

2.3.27.6 wzSigSetupSuggSigner_complex

This property specifies additional data for the [wzSigSetupSuggSigner](#) property. This property MUST exist if the **opid.fComplex** bit of the [wzSigSetupSuggSigner](#) property is 0x1.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
wzSigSetupSuggSigner_complex (variable)																															
...																															

wzSigSetupSuggSigner_complex (variable): A Unicode null-terminated string that specifies the name of the suggested signer.

2.3.27.7 wzSigSetupSuggSigner2

This property specifies the title or additional information of the suggested signer. This property MAY [<92>](#) be ignored.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																wzSigSetupSuggSigner2															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0784.
opid.fBid	Undefined and MUST be ignored.
opid.fComplex	If 0x1 then the wzSigSetupSuggSigner2_complex property MUST exist.

wzSigSetupSuggSigner2 (4 bytes): The number of bytes of data in the [wzSigSetupSuggSigner2_complex](#) property. This value MUST be 0x00000000 if **opid.fComplex** is 0x0.

The default value for this property is 0x00000000.

2.3.27.8 wzSigSetupSuggSigner2_complex

This property specifies additional data for the [wzSigSetupSuggSigner2](#) property. This property MUST exist if the **opid.fComplex** bit of the [wzSigSetupSuggSigner2](#) property is 0x1.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
wzSigSetupSuggSigner2_complex (variable)																															
...																															

wzSigSetupSuggSigner2_complex (variable): A Unicode null-terminated string that specifies the title or additional information of the suggested signer.

2.3.27.9 wzSigSetupSuggSignerEmail

This property specifies the e-mail address of the suggested signer. This property MAY [93](#) be ignored.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																wzSigSetupSuggSignerEmail															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0785.
opid.fBid	Undefined and MUST be ignored.
opid.fComplex	If 0x1 then the wzSigSetupSuggSignerEmail_complex property MUST exist.

wzSigSetupSuggSignerEmail (4 bytes): The number of bytes of data in the [wzSigSetupSuggSignerEmail_complex](#) property. This value MUST be 0x00000000 if **opid.fComplex** is 0x0.

The default value for this property is 0x00000000.

2.3.27.10 wzSigSetupSuggSignerEmail_complex

This property specifies additional data for the [wzSigSetupSuggSignerEmail](#) property. This property MUST exist if the **opid.fComplex** bit of the [wzSigSetupSuggSignerEmail](#) property is 0x1.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
wzSigSetupSuggSignerEmail_complex (variable)																															
...																															

wzSigSetupSuggSignerEmail_complex (variable): A Unicode null-terminated string that specifies the e-mail address of the suggested signer.

2.3.27.11 wzSigSetupSignInst

This property specifies the signing instruction displayed to the signer. This property MAY [<94>](#) be ignored.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																wzSigSetupSignInst															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0786.
opid.fBid	Undefined and MUST be ignored.
opid.fComplex	If 0x1 then the wzSigSetupSignInst_complex property MUST exist.

wzSigSetupSignInst (4 bytes): The number of bytes of data in the [wzSigSetupSignInst_complex](#) property. This value MUST be 0x00000000 if **opid.fComplex** is 0x0.

The default value for this property is 0x00000000.

2.3.27.12 wzSigSetupSignInst_complex

This property specifies additional data for the [wzSigSetupSignInst](#) property. This property MUST exist if the **opid.fComplex** bit of the [wzSigSetupSignInst](#) property is 0x1.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
wzSigSetupSignInst_complex (variable)																															
...																															

wzSigSetupSignInst_complex (variable): A Unicode null-terminated string that specifies the signing instruction displayed to the signer.

2.3.27.13 wzSigSetupAddIXml

This property specifies the additional information in XML format provided by the provider that creates the signature line. This property MAY [<95>](#) be ignored.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																wzSigSetupAddIXml															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0787.
opid.fBid	Undefined and MUST be ignored.
opid.fComplex	If 0x1 then the wzSigSetupAddIXml_complex property MUST exist.

wzSigSetupAddIXml (4 bytes): The number of bytes of data in the [wzSigSetupAddIXml_complex](#) property. This value MUST be 0x00000000 if **opid.fComplex** is 0x0.

The default value for this property is 0x00000000.

2.3.27.14 wzSigSetupAddIXml_complex

This property specifies additional data for the [wzSigSetupAddIXml](#) property. This property MUST exist if the **opid.fComplex** bit of the [wzSigSetupAddIXml](#) property is 0x1.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
wzSigSetupAddIXml_complex (variable)																															
...																															

wzSigSetupAddIXml_complex (variable): A Unicode null-terminated string that specifies the additional information in XML format.

2.3.27.15 wzSigSetupProvUrl

This property specifies the URL of the provider that creates the signature line. This property MAY [<96>](#) be ignored.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
opid																wzSigSetupProvUrl															
...																															

opid (2 bytes): An [OfficeArtFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x0788.
opid.fBid	Undefined and MUST be ignored.
opid.fComplex	If 0x1 then the wzSigSetupProvUrl_complex property MUST exist.

wzSigSetupProvUrl (4 bytes): The number of bytes of data in the [wzSigSetupProvUrl_complex](#) property. This value MUST be 0x00000000 if **opid.fComplex** is 0x0.

The default value for this property is 0x00000000.

2.3.27.16 wzSigSetupProvUrl_complex

This property specifies additional data for the [wzSigSetupProvUrl](#) property. This property MUST exist if the **opid.fComplex** bit of the [wzSigSetupProvUrl](#) property is 0x1.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
wzSigSetupProvUrl_complex (variable)																															
...																															

wzSigSetupProvUrl_complex (variable): A Unicode null-terminated string that specifies the URL of the provider.

2.3.27.17 Signature Line Boolean Properties

This property specifies a 32-bit field of Boolean properties for the signature line. This property MAY [<97>](#) be ignored.

										1									2										3		
0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1
opid																A	B	C	D	unused1											
E	F	G	H	unused2																											

opid (2 bytes): An [EscherFOPTEOPID](#) record that specifies the header for this property. Subfields are further specified in the following table:

Field	Meaning
opid.opid	MUST be 0x07BF.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

A - fIsSignatureLine (1 bit): A bit that specifies whether the shape is a signature line. This value MUST be ignored if **fUseIsSignatureLine** is 0x0.

The default value for this property is 0x0.

B - fSigSetupSignInstSet (1 bit): A bit that specifies whether the signing instruction is overridden.

Value	Meaning
0x0	Specifies that a default signing instruction is displayed.
0x1	Specifies that the wzSigSetupSignInst_complex property is displayed.

This value MUST be ignored if **fUsefSigSetupSignInstSet** is 0x0.

The default value for this property is 0x0.

C - fSigSetupAllowComments (1 bit): A bit that specifies whether the comment from the signer is allowed. This value MUST be ignored if **fUsefSigSetupAllowComments** is 0x0.

The default value for this property is 0x0.

D - fSigSetupShowSignDate (1 bit): A bit that specifies whether the signing date is displayed. This value MUST be ignored if **fUsefSigSetupShowSignDate** is 0x0.

The default value for this property is 0x1.

unused1 (12 bits): Undefined and MUST be ignored.

E - fUsefIsSignatureLine (1 bit): A bit that specifies whether the **fIsSignatureLine** bit is set. A value of 0x0 specifies the **fIsSignatureLine** bit MUST be ignored.

The default value for this property is 0x0.

F - fUsefSigSetupSignInstSet (1 bit): A bit that specifies whether the **fSigSetupSignInstSet** bit is set. A value of 0x0 specifies the **fSigSetupSignInstSet** bit MUST be ignored.

The default value for this property is 0x0.

G - fUsefSigSetupAllowComments (1 bit): A bit that specifies whether the **fSigSetupAllowComments** bit is set. A value of 0x0 specifies the **fSigSetupAllowComments** bit MUST be ignored.

The default value for this property is 0x0.

H - fUsefSigSetupShowSignDate (1 bit): A bit that specifies whether the **fSigSetupShowSignDate** bit is set. A value of 0x0 specifies the **fSigSetupShowSignDate** bit MUST be ignored.

The default value for this property is 0x0.

unused2 (12 bits): Undefined and MUST be ignored.

2.4 Enumerations

2.4.1 MSOBLIPTYPE

Referenced by: [OfficeArtFBSE](#)

The **MSOBLIPTYPE Enumeration** specifies the persistence format of bitmap data.

Name	Value	Meaning
msoblipERROR	0x00	There was an error reading the file.
msoblipUNKNOWN	0x01	Unknown BLIP type.

msoblipEMF	0x02	EMF format.
msoblipWMF	0x03	WMF format.
msoblipPICT	0x04	Macintosh PICT format.
msoblipJPEG	0x05	JPEG format.
msoblipPNG	0x06	PNG format.
msoblipDIB	0x07	DIB format.
msoblipTIFF	0x11	TIFF format.
msoblipCMYKJPEG	0x12	JPEG format in YCK or CMYK color space.

2.4.2 MSODGCID

The **MSODGCID Enumeration** specifies the command identifiers that are used for customization of toolbars and keyboard shortcuts.

Name	Value	Meaning
msodgcidNil	0x0000	Undefined, the command is specified by toolbar control identifier (TCID).
msodgcidPaste	0x0004	Paste.
msodgcidSelectAll	0x0006	Select all drawing objects.
msodgcidRepeat	0x0008	Repeat the last action.
msodgcidBringToFront	0x000C	Bring drawing objects to front.
msodgcidSendToBack	0x000D	Send drawing objects to back.
msodgcidBringForward	0x000E	Bring drawing objects forward.
msodgcidSendBackward	0x000F	Send drawing objects backward.
msodgcidBringInFrontOfDocument	0x0010	Bring drawing objects in front of text.
msodgcidSendBehindDocument	0x0011	Send drawing objects behind text.
msodgcidGroup	0x0012	Group drawing objects.
msodgcidUngroup	0x0013	Ungroup grouped drawing objects.
msodgcidRegroup	0x0014	Regroup drawing objects.
msodgcidInsertPolygonPt	0x0019	Add point to a polygon shape.
msodgcidDeletePolygonPt	0x001A	Delete point from a polygon shape.
msodgcidCopyPolygonPt	0x001C	Copy a polygon point.
msodgcidClosePolygon	0x001D	Close path on a shape with an open path.
msodgcidOpenPolygon	0x001E	Open path on a shape with a closed path.
msodgcidPolygonReshape	0x0020	Reshape the polygon.
msodgcidAutoVertex	0x0021	Edit point on a shape to be an auto point.
msodgcidSmoothVertex	0x0022	Edit point on a shape to be a smooth point.
msodgcidStraightVertex	0x0023	Edit point on a shape to be a straight point.
msodgcidCornerVertex	0x0024	Edit point on a shape to be a corner

		point.
msodgcidStraightSegment	0x0025	Edit segment on a shape to be a straight segment.
msodgcidCurvedSegment	0x0026	Edit segment on a shape to be a curved segment.
msodgcidRotateLeft90	0x0029	Rotate drawing objects 90 degrees counterclockwise.
msodgcidRotateRight90	0x002A	Rotate drawing objects 90 degrees clockwise.
msodgcidFlipHorizontal	0x002B	Flip drawing objects in horizontal.
msodgcidFlipVertical	0x002C	Flip drawing objects in vertical.
msodgcidAlignLeft	0x002D	Align drawing objects to left.
msodgcidAlignCenterHorizontal	0x002E	Align drawing objects to center.
msodgcidAlignRight	0x002F	Align drawing objects to right.
msodgcidAlignTop	0x0030	Align drawing objects to top.
msodgcidAlignCenterVertical	0x0031	Align drawing objects to middle.
msodgcidAlignBottom	0x0032	Align drawing objects to bottom.
msodgcidAlignPageRelative	0x0033	Align drawing objects relative to page.
msodgcidDistributeHorizontal	0x0034	Distribute drawing objects horizontally.
msodgcidDistributeVertical	0x0035	Distribute drawing objects vertically.
msodgcidDistributePageRelative	0x0036	Align drawing objects relative to page/slide.
msodgcidNudgeLeft	0x0037	Nudge drawing objects left.
msodgcidNudgeRight	0x0038	Nudge drawing objects right.
msodgcidNudgeUp	0x0039	Nudge drawing objects up.
msodgcidNudgeDown	0x003A	Nudge drawing objects down.
msodgcidNudgeLeftOne	0x003B	Nudge drawing objects left one pixel.
msodgcidNudgeRightOne	0x003C	Nudge drawing objects right one pixel.
msodgcidNudgeUpOne	0x003D	Nudge drawing objects up one pixel.
msodgcidNudgeDownOne	0x003E	Nudge drawing objects down one pixel.
msodgcidToggleReshapeMode	0x003F	Toggle reshape mode.
msodgcidToggleRotateMode	0x0040	Free rotate a shape.
msodgcidToggleCropMode	0x0041	Crop picture.
msodgcidMoreFillColor	0x0043	Show more fill colors.
msodgcidFillEffect	0x0044	Show more fill effects.
msodgcidMoreLineColor	0x0045	Show more outline colors.
msodgcidMoreLineWidth	0x0046	Show more line widths.
msodgcidMoreArrow	0x0047	Show more line end decorations.
msodgcidTextEffectRotateCharacters	0x0048	Display WordArt text as vertical text.
msodgcidTextEffectStretchToFill	0x0049	Stretch text to fill the shape.
msodgcidTextEffectSameHeight	0x004A	Set all letters to the same height for WordArt text.

msodgcidTextEffectAlignLeft	0x004B	Align WordArt text to left.
msodgcidTextEffectAlignCenter	0x004C	Align WordArt text to center.
msodgcidTextEffectAlignRight	0x004D	Align WordArt text to right.
msodgcidTextEffectAlignLetterJustify	0x004E	Set WordArt alignment to letter justify.
msodgcidTextEffectAlignWordJustify	0x0050	Set WordArt alignment to word justify.
msodgcidTextEffectAlignStretchJustify	0x0051	Set WordArt alignment to stretch justify.
msodgcidTextEffectSpacingVeryTight	0x0052	Set WordArt text spacing very tight.
msodgcidTextEffectSpacingTight	0x0053	Set WordArt text spacing tight.
msodgcidTextEffectSpacingNormal	0x0054	Set WordArt text spacing normal.
msodgcidTextEffectSpacingLoose	0x0055	Set WordArt text spacing loose.
msodgcidTextEffectSpacingVeryLoose	0x0056	Set WordArt text spacing very loose.
msodgcidTextEffectKernPairs	0x0057	Kern character pairs in WordArt text.
msodgcidTextEffectEditText	0x0058	Edit WordArt text.
msodgcidPictureMoreContrast	0x0059	Increase the contrast of the picture.
msodgcidPictureLessContrast	0x005A	Decrease the contrast of the picture.
msodgcidPictureMoreBrightness	0x005B	Increase the brightness of the picture.
msodgcidPictureLessBrightness	0x005C	Decrease the brightness of the picture.
msodgcidPictureReset	0x005D	Reset picture to default settings.
msodgcidPictureImageAutomatic	0x005E	Use automatic picture colors.
msodgcidPictureImageGrayscale	0x005F	Display picture in grayscale mode.
msodgcidPictureImageBlackWhite	0x0060	Display picture in black and white mode.
msodgcidPictureImageWatermark	0x0061	Add watermark to a picture.
msodgcidPictureInLine	0x0062	Set the picture inline with text.
msodgcidMoreShadow	0x0067	Show the shadow settings.
msodgcidMoreShadowColor	0x0068	Show more shadow colors.
msodgcidNudgeShadowUp	0x0069	Nudge shadow up.
msodgcidNudgeShadowDown	0x006A	Nudge shadow down.
msodgcidNudgeShadowLeft	0x006B	Nudge shadow left.
msodgcidNudgeShadowRight	0x006C	Nudge shadow right.
msodgcidMore3D	0x006D	Show the 3D settings.
msodgcidMore3DColor	0x006E	Show more 3D colors.
msodgcid3DToggle	0x006F	Set 3D options On/Off.
msodgcid3DTiltForward	0x0070	Tilt 3D drawing objects down.
msodgcid3DTiltBackward	0x0071	Tilt 3D drawing objectsup.
msodgcid3DTiltLeft	0x0072	Tilt 3D drawing objectsleft.
msodgcid3DTiltRight	0x0073	Tilt 3D drawing objectsright.
msodgcid3DDepth0	0x0074	Set 3D depth to 0 points.
msodgcid3DDepth1	0x0075	Set 3D depth to 36 points.
msodgcid3DDepth2	0x0076	Set 3D depth to 72 points.

msodgcid3DDepth3	0x0077	Set 3D depth to 144 points.
msodgcid3DDepth4	0x0078	Set 3D depth to 288 points.
msodgcid3DDepthInfinite	0x0079	Set 3D depth to infinity.
msodgcid3DPerspective	0x007A	Set 3D direction to perspective.
msodgcid3DParallel	0x007B	Set 3D direction to parallel.
msodgcid3DLightingFlat	0x007C	Set 3D lighting to bright.
msodgcid3DLightingNormal	0x007D	Set 3D lighting to normal.
msodgcid3DLightingHarsh	0x007E	Set 3D lighting to dim.
msodgcid3DSurfaceMatte	0x007F	Set 3D surface to matte.
msodgcid3DSurfacePlastic	0x0080	Set 3D surface to plastic.
msodgcid3DSurfaceMetal	0x0081	Set 3D surface to metal.
msodgcid3DSurfaceWireFrame	0x0082	Set 3D surface to wire frame.
msodgcidToolPointer	0x0087	Select drawing objects
msodgcidToolMarquee	0x0088	Drag a rectangle to select multiple drawing objects
msodgcidToolLine	0x008C	Insert a line shape.
msodgcidToolArrow	0x008D	Insert an arrow shape.
msodgcidToolDoubleArrow	0x008E	Insert a double arrow shape.
msodgcidToolArc	0x008F	Insert an arc shape.
msodgcidToolPolygon	0x0090	Insert a polygon shape.
msodgcidToolFilledPolygon	0x0091	Insert a filled polygon shape.
msodgcidToolCurve	0x0092	Insert a curve shape.
msodgcidToolFreeform	0x0093	Insert a freeform shape.
msodgcidToolFilledFreeform	0x0094	Insert a filled freeform shape.
msodgcidToolFreehand	0x0095	Insert a scribble shape.
msodgcidToolText	0x0098	Insert a textbox.
msodgcidToolStraightConnector	0x009D	Insert a straight connector shape.
msodgcidToolAngledConnector	0x009E	Insert an elbow connector shape.
msodgcidToolCurvedConnector	0x009F	Insert a curved connector shape.
msodgcidSwatchFillColorNone	0x00A1	Set fill color to no color.
msodgcidSwatchFillColorStandard	0x00A2	Standard fill colors.
msodgcidSwatchFillColorMRU	0x00A3	Recently used fill colors.
msodgcidSwatchLineColorNone	0x00A4	Set line color to no color.
msodgcidSwatchLineColorStandard	0x00A5	Standard line colors.
msodgcidSwatchLineColorMRU	0x00A6	Recently used line colors.
msodgcidSwatchShadowColorStandard	0x00A8	Standard shadow colors.
msodgcidSwatchShadowColorMRU	0x00A9	Recently used shadow colors.
msodgcidSwatch3DColorAutomatic	0x00AB	Automatic 3D colors.
msodgcidSwatch3DColorStandard	0x00AC	Standard 3D colors.
msodgcidSwatch3DColorMRU	0x00AD	Recently used 3D colors.
msodgcidSwatchDlgGradientFgColorStandard	0x00BD	Pick the gradient foreground from standard colors.
msodgcidSwatchDlgColorMRU	0x00C7	Recently used colors.
msodgcidSplitMenuLineColor	0x00DF	Recently used line colors.

msodgcidSplitMenuShadowColor	0x00E0	Recently used shadow colors.
msodgcidSplitMenu3DColor	0x00E1	Recently used 3D colors.
msodgcidRerouteConnections	0x00E2	Reroute connectors.
msodgcidStraightStyle	0x00E3	Changes the selected connector to a straight connector.
msodgcidAngledStyle	0x00E4	Changes the selected connector to an elbow connector.
msodgcidCurvedStyle	0x00E5	Changes the selected connector to an arrow connector.
msodgcidToggleFill	0x00E6	Set the fill color.
msodgcidToggleLine	0x00E7	Set the line color.
msodgcidToggleShadow	0x00E8	Set shadow on/off.
msodgcidEditPicture	0x00EB	Edit picture.
msodgcidFormatShape	0x00EC	Format the shape object.
msodgcidTextEffectInsert	0x00F0	Show WordArt options.
msodgcidTextEffectToolbarToggle	0x00F1	Show the WordArt toolbar.
msodgcidLinePatternFill	0x00FD	Show the patterned lines options.
msodgcidActivateText	0x010A	Add text to drawing object.
msodgcidToggleShadowOpacity	0x010B	Set shadow opacity.
msodgcidExitReshapeMode	0x010C	Exit edit point mode.
msodgcidToolVerticalText	0x010D	Insert a vertical textbox.
msodgcidExitRotateMode	0x010E	Exit rotate mode.
msodgcidTogglePictureToolbar	0x010F	Show picture toolbar.
msodgcidSetDefaults	0x0110	Set the selected shape as default shape.
msodgcidToolStraightArrowConnector	0x0112	Insert a straight arrow connector shape.
msodgcidToolAngledArrowConnector	0x0113	Insert an elbow arrow connector shape.
msodgcidToolCurvedArrowConnector	0x0114	Insert a curved arrow connector shape.
msodgcidToolStraightDbArrowConnector	0x0115	Insert a straight double-arrow connector shape.
msodgcidToolAngledDbArrowConnector	0x0116	Insert an elbow double-arrow connector shape.
msodgcidToolCurvedDbArrowConnector	0x0117	Insert a curved double-arrow connector shape.
msodgcidToolSetTransparentColor	0x0118	Set transparent color.
msodgcidTextEffectGallery	0x0119	Show the WordArt gallery.
msodgcidShowAutoShapesAndDrawingToolbars	0x011A	Show the autoshapes and drawing toolbars.
msodgcidDeleteSegment	0x011D	Delete line segment from shape.
msodgcidTogglePointerMode	0x0122	Select objects.
msodgcidInsertScript	0x0136	Insert a script on the web page.
msodgcidRunCag	0x0139	Open the Clip Art task pane.
msodgcidRunCagForPictures	0x013A	Insert picture from clip organizer.

msodgcidRunCagForMovies	0x013B	Insert movie from clip organizer.
msodgcidRunCagForSounds	0x013C	Insert sound from clip organizer.
msodgcidRunCagForShapes	0x013D	Show autosshapes from clip organizer.
msodgcidMultiSelect	0x013F	Select multiple objects.
msodgcidInsertDrawingCanvas	0x0140	Insert a new drawing canvas.
msodgcidInsertOrgChart	0x0141	Insert an organization chart diagram.
msodgcidInsertRadialChart	0x0142	Insert a radial diagram.
msodgcidInsertCycleChart	0x0143	Insert a cycle diagram.
msodgcidInsertStackedChart	0x0144	Insert a pyramid diagram.
msodgcidInsertBullsEyeChart	0x0145	Insert a target diagram.
msodgcidInsertVennDiagram	0x0146	Insert a venn diagram.
msodgcidOrgChartInsertSubordinate	0x0147	Insert an organization chart subordinate node.
msodgcidOrgChartInsertCoworker	0x0148	Insert an organization chart coworker node.
msodgcidOrgChartInsertAssistant	0x0149	Insert an organization chart assistant node.
msodgcidOrgChartDeleteNode	0x014A	Delete the diagram node.
msodgcidOrgChartLayoutHorizontal1	0x014B	Set organization chart layout to standard.
msodgcidOrgChartLayoutHorizontal2	0x014C	Set organization chart layout to both hanging.
msodgcidOrgChartLayoutVertical1	0x014D	Set organization chart layout to right hanging.
msodgcidOrgChartLayoutVertical2	0x014E	Set organization chart layout to left hanging.
msodgcidDiagramStyle	0x014F	Change the diagram style.
msodgcidConvertToVenn	0x0151	Convert to a venn diagram.
msodgcidConvertToRadial	0x0152	Convert to a radial diagram.
msodgcidConvertToCycle	0x0153	Convert to a cycle diagram.
msodgcidConvertToBullsEye	0x0154	Convert to a target diagram.
msodgcidConvertToPyramid	0x0155	Convert to a pyramid diagram.
msodgcidMoveDiagramShapeUp	0x0156	Move diagram shape backward.
msodgcidMoveDiagramShapeDown	0x0157	Move diagram shape forward.
msodgcidInsertDiagramShape	0x0158	Insert a shape to diagram.
msodgcidInsertDiagram	0x0159	Insert a diagram.
msodgcidCanvasFit	0x015B	Fit diagram to canvas.
msodgcidCanvasResize	0x015C	Resize drawing canvas.
msodgcidToggleCanvasToolbar	0x015D	Show drawing canvas toolbar.
msodgcidCanvasExpand	0x015F	Expand drawing canvas.
msodgcidAlignCanvasRelative	0x0179	Align diagram relative to drawing canvas.
msodgcidOrgChartSelectLevel	0x017A	Select level inside organization chart.
msodgcidOrgChartSelectBranch	0x017B	Select branch inside organization chart.

msodgcidOrgChartSelectAllAssistants	0x017C	Select all assistants.
msodgcidOrgChartSelectAllConnectors	0x017D	Select all connector shapes.
msodgcidDiagramDeleteNode	0x017E	Delete shape from diagram.
msodgcidDiagramReverse	0x017F	Reverse diagram.
msodgcidDiagramAutoLayout	0x0180	Set diagram layout to autolayout.
msodgcidOrgChartAutoLayout	0x0181	Set organization chart layout to autolayout.
msodgcidOptimizePictDialog	0x0187	Show the compress pictures options.
msodgcidDiagramFit	0x018D	Fit diagram to contents.
msodgcidDiagramResize	0x018E	Resize diagram.
msodgcidDiagramExpand	0x018F	Expand diagram.
msodgcidOrgChartFit	0x0190	Fit organization chart to contents.
msodgcidOrgChartResize	0x01F5	Resize organization chart.
msodgcidOrgChartExpand	0x01F6	Expand organization chart.
msodgcidOrgChartStyle	0x01F7	Change the style for the organization chart.
msodgciSplitMenuOrgChartInsertShape	0x01F8	Recently used organization chart shape.
msodgcidDiagramAutoFormat	0x01F9	Use autoformat for the organization chart.
msodgcidCanvasScale	0x01FB	Scale drawing canvas.
msodgcidOrgChartScale	0x01FC	Scale organization chart.
msodgcidDiagramScale	0x01FD	Scale diagram.
msodgcidAlignOrgChartRelative	0x01FF	Align relative to the organization chart.
msodgcidAlignDiagramRelative	0x0200	Align relative to the diagram.
msodgcidSplitMenuInkColor	0x0204	Recently used ink color.
msodgcidSplitMenuInkAnntColor	0x0206	Recently used annotation color.
msodgcidInkStyle1	0x0208	Set ink style to color 1.
msodgcidInkStyle2	0x0209	Set ink style to color 2.
msodgcidInkStyle3	0x020A	Set ink style to color 3.
msodgcidInkStyle4	0x020B	Set ink style to color 4.
msodgcidInkStyle5	0x020C	Set ink style to color 5.
msodgcidInkStyle6	0x020D	Set ink style to color 6.
msodgcidInkStyle7	0x020E	Set ink style to color 7.
msodgcidInkStyle8	0x020F	Set ink style to color 8.
msodgcidInkStyle9	0x0210	Set ink style to color 9.
msodgcidInkAnnotationStyle1	0x0211	Set annotation style to color 1.
msodgcidInkAnnotationStyle2	0x0212	Set annotation style to color 2.
msodgcidInkAnnotationStyle3	0x0213	Set annotation style to color 3.
msodgcidInkAnnotationStyle4	0x0214	Set annotation style to color 4.
msodgcidInkAnnotationStyle5	0x0215	Set annotation style to color 5.
msodgcidInkAnnotationStyle6	0x0216	Set annotation style to color 6.
msodgcidInkAnnotationStyle7	0x0217	Set annotation style to color 7.
msodgcidInkAnnotationStyle8	0x0218	Set annotation style to color 8.

msodgcidInkAnnotationStyle9	0x0219	Set annotation style to color 9.
msodgcidToggleInkToolbar	0x021A	Show ink drawing and writing toolbar.
msodgcidToggleInkAnnotationToolbar	0x021B	Show ink annotations toolbar.
msodgcidClearAllInkAnnotations	0x021C	Delete all ink annotations in document.
msodgcidInkDrawing	0x021E	Toggle ink drawing/writing mode.
msodgcidExitInkMode	0x0220	Exit ink mode.
msodgcidInkEraser	0x0221	Use ink eraser.
msodgcidInkAnnotationEraser	0x0222	Use annotation eraser.
msodgcidExitInkAnnotationMode	0x0223	Exit ink annotation mode.
msodgcidInkLabel1	0x0224	Use the ballpoint pen for ink.
msodgcidInkLabel2	0x0225	Use the felt tip pen for ink.
msodgcidInkLabel3	0x0226	Use the highlighter pen for ink.
msodgcidOrgChartFitText	0x0227	Fit text inside organization chart.
msodgcidEyedropperFillColor	0x0228	Set eyedropper fill color.
msodgcidEyedropperLineColor	0x0229	Set eyedropper line color.
msodgcidEyedropperShadowColor	0x022A	Set eyedropper shadow color.
msodgcidEyedropper3DColor	0x022B	Set eyedropper 3D color.
msodgcidPictureFill	0x022C	Set picture fill.
msodgcidAlignSelectionRelativeSmart	0x022D	Align selected objects.
msodgcidAlignContainerRelativeSmart	0x022E	Align drawing objects to page.
msodgcidDistributeHorizontalSmart	0x0235	Distribute drawing objects horizontally.
msodgcidDistributeVerticalSmart	0x0236	Distribute drawing objects vertically.
msodgcidInkInsertSpace	0x023A	Insert a space inside the ink shape.
msodgcidInkAnnotationBallpoint	0x0242	Use the ballpoint pen for ink annotation.
msodgcidInkAnnotationFelt	0x0243	Use the felt tip pen for ink annotation.
msodgcidInkAnnotationHighlighter	0x0244	Use the highlighter pen for ink annotation.
msodgcidMoreColorsLines	0x0245	Show additional color and line options.
msodgcidAlignRelativeToMarginSmart	0x0248	Align drawing objects to margin.
msodgcidMoreSize	0x0249	Show additional size options.
msodgcidMoreInkColor	0x024B	Show more pen colors.
msodgcidFillEffectGradient	0x024C	Show the gradient options.
msodgcidFillEffectTexture	0x024D	Show the textures options.
msodgcidFillEffectPattern	0x024E	Show the pattern options.
msodgcidCloseInkTab	0x024F	Close ink tools.
msodgcidShapeRectangle	0x1001	Insert a rectangle shape.
msodgcidShapeRoundRectangle	0x1002	Insert a rounded rectangle shape.
msodgcidShapeEllipse	0x1003	Insert an oval shape.
msodgcidShapeDiamond	0x1004	Insert a diamond shape.

msodgcidShapeIsocelesTriangle	0x1005	Insert an isosceles triangle shape.
msodgcidShapeRightTriangle	0x1006	Insert a right triangle shape.
msodgcidShapeParallelogram	0x1007	Insert a parallelogram shape.
msodgcidShapeTrapezoid	0x1008	Insert a trapezoid shape.
msodgcidShapeHexagon	0x1009	Insert a hexagon shape.
msodgcidShapeOctagon	0x100A	Insert an octagon shape.
msodgcidShapePlus	0x100B	Insert a cross shape.
msodgcidShapeStar	0x100C	Insert a 5-point star shape.
msodgcidShapeArrow	0x100D	Insert a right arrow shape.
msodgcidShapeHomePlate	0x100F	Insert a pentagon shape.
msodgcidShapeCube	0x1010	Insert a cube shape.
msodgcidShapeBalloon	0x1011	Insert a balloon shape.
msodgcidShapeArc	0x1013	Insert an arc shape.
msodgcidShapePlaque	0x1015	Insert a plaque shape.
msodgcidShapeCan	0x1016	Insert a can shape.
msodgcidShapeDonut	0x1017	Insert a donut shape.
msodgcidShapeCallout1	0x1029	Insert a line callout 2 (no border) shape.
msodgcidShapeCallout2	0x102A	Insert a line callout 3 (no border) shape.
msodgcidShapeCallout3	0x102B	Insert a line callout 4 (no border) shape.
msodgcidShapeAccentCallout1	0x102C	Insert a line callout 2 (accent bar) shape.
msodgcidShapeAccentCallout2	0x102D	Insert a line callout 3 (accent bar) shape.
msodgcidShapeAccentCallout3	0x102E	Insert a line callout 4 (accent bar) shape.
msodgcidShapeBorderCallout1	0x102F	Insert a line callout 2 shape.
msodgcidShapeBorderCallout2	0x1030	Insert a line callout 3 shape.
msodgcidShapeBorderCallout3	0x1031	Insert a line callout 4 shape.
msodgcidShapeAccentBorderCallout1	0x1032	Insert a line callout 2 (border and accent bar) shape.
msodgcidShapeAccentBorderCallout2	0x1033	Insert a line callout 3 (border and accent bar) shape.
msodgcidShapeAccentBorderCallout3	0x1034	Insert a line callout 4 (border and accent bar) shape.
msodgcidShapeRibbon	0x1035	Insert a down ribbon shape.
msodgcidShapeRibbon2	0x1036	Insert an up ribbon shape.
msodgcidShapeChevron	0x1037	Insert a chevron shape.
msodgcidShapePentagon	0x1038	Insert a regular pentagon shape.
msodgcidShapeNoSmoking	0x1039	Insert a no symbol shape.
msodgcidShapeSeal8	0x103A	Insert an 8-point star shape.
msodgcidShapeSeal16	0x103B	Insert a 16-point star shape.
msodgcidShapeSeal32	0x103C	Insert a 32-point star shape.
msodgcidShapeWedgeRectCallout	0x103D	Insert a rectangular callout shape.

msodgcidShapeWedgeRRectCallout	0x103E	Insert a rounded rectangular callout shape.
msodgcidShapeWedgeEllipseCallout	0x103F	Insert an oval callout shape.
msodgcidShapeWave	0x1040	Insert a wave shape.
msodgcidShapeFoldedCorner	0x1041	Insert a folded corner shape.
msodgcidShapeLeftArrow	0x1042	Insert a left arrow shape.
msodgcidShapeDownArrow	0x1043	Insert a down arrow shape.
msodgcidShapeUpArrow	0x1044	Insert an up arrow shape.
msodgcidShapeLeftRightArrow	0x1045	Insert a left-right arrow shape.
msodgcidShapeUpDownArrow	0x1046	Insert an up-down arrow shape.
msodgcidShapeIrregularSeal1	0x1047	Insert an explosion 1 shape.
msodgcidShapeIrregularSeal2	0x1048	Insert an explosion 2 shape.
msodgcidShapeLightningBolt	0x1049	Insert a lightning bolt shape.
msodgcidShapeHeart	0x104A	Insert a heart shape.
msodgcidShapeQuadArrow	0x104C	Insert a quad arrow shape.
msodgcidShapeLeftArrowCallout	0x104D	Insert a left arrow callout shape.
msodgcidShapeRightArrowCallout	0x104E	Insert a right arrow callout shape.
msodgcidShapeUpArrowCallout	0x104F	Insert an up arrow callout shape.
msodgcidShapeDownArrowCallout	0x1050	Insert a down arrow callout shape.
msodgcidShapeLeftRightArrowCallout	0x1051	Insert a left-right arrow callout shape.
msodgcidShapeUpDownArrowCallout	0x1052	Insert an up-down arrow callout shape.
msodgcidShapeQuadArrowCallout	0x1053	Insert a quad arrow callout shape.
msodgcidShapeBevel	0x1054	Insert a bevel shape.
msodgcidShapeLeftBracket	0x1055	Insert a left bracket shape.
msodgcidShapeRightBracket	0x1056	Insert a right bracket shape.
msodgcidShapeLeftBrace	0x1057	Insert a left brace shape.
msodgcidShapeRightBrace	0x1058	Insert a right brace shape.
msodgcidShapeLeftUpArrow	0x1059	Insert a left-up arrow shape.
msodgcidShapeBentUpArrow	0x105A	Insert a bent-up arrow shape.
msodgcidShapeBentArrow	0x105B	Insert a bent arrow shape.
msodgcidShapeSeal24	0x105C	Insert a 24-point star shape.
msodgcidShapeStripedRightArrow	0x105D	Insert a striped right arrow shape.
msodgcidShapeNotchedRightArrow	0x105E	Insert a notched right arrow shape.
msodgcidShapeBlockArc	0x105F	Insert a block arc shape.
msodgcidShapeSmileyFace	0x1060	Insert a smiley face shape.
msodgcidShapeVerticalScroll	0x1061	Insert a vertical scroll shape.
msodgcidShapeHorizontalScroll	0x1062	Insert a horizontal scroll shape.
msodgcidShapeCircularArrow	0x1063	Insert a circular arrow shape.
msodgcidShapeNotchedCircularArrow	0x1064	Insert a reserved shape.
msodgcidShapeUturnArrow	0x1065	Insert a U-turn arrow shape.
msodgcidShapeCurvedRightArrow	0x1066	Insert a curved right arrow shape.
msodgcidShapeCurvedLeftArrow	0x1067	Insert a curved left arrow shape.

msodgcidShapeCurvedUpArrow	0x1068	Insert a curved up arrow shape.
msodgcidShapeCurvedDownArrow	0x1069	Insert a curved down arrow shape.
msodgcidShapeCloudCallout	0x106A	Insert a cloud callout shape.
msodgcidShapeEllipseRibbon	0x106B	Insert a curved down ribbon shape.
msodgcidShapeEllipseRibbon2	0x106C	Insert a curved up ribbon shape.
msodgcidShapeFlowChartProcess	0x106D	Insert a flow chart process shape.
msodgcidShapeFlowChartDecision	0x106E	Insert a flow chart decision shape.
msodgcidShapeFlowChartInputOutput	0x106F	Insert a flow chart data shape.
msodgcidShapeFlowChartPredefinedProcess	0x1070	Insert a flow chart predefined process shape.
msodgcidShapeFlowChartInternalStorage	0x1071	Insert a flow chart internal storage shape.
msodgcidShapeFlowChartDocument	0x1072	Insert a flow chart document shape.
msodgcidShapeFlowChartMultidocument	0x1073	Insert a flow chart multidocument shape.
msodgcidShapeFlowChartTerminator	0x1074	Insert a flow chart terminator shape.
msodgcidShapeFlowChartPreparation	0x1075	Insert a flow chart preparation shape.
msodgcidShapeFlowChartManualInput	0x1076	Insert a flow chart manual input shape.
msodgcidShapeFlowChartManualOperation	0x1077	Insert a flow chart manual operation shape.
msodgcidShapeFlowChartConnector	0x1078	Insert a flow chart connector shape.
msodgcidShapeFlowChartPunchedCard	0x1079	Insert a flow chart card shape.
msodgcidShapeFlowChartPunchedTape	0x107A	Insert a flow chart punched tape shape.
msodgcidShapeFlowChartSummingJunction	0x107B	Insert a flow chart summing junction shape.
msodgcidShapeFlowChartOr	0x107C	Insert a flow chart or shape.
msodgcidShapeFlowChartCollate	0x107D	Insert a flow chart collate shape.
msodgcidShapeFlowChartSort	0x107E	Insert a flow chart sort shape.
msodgcidShapeFlowChartExtract	0x107F	Insert a flow chart extract shape.
msodgcidShapeFlowChartMerge	0x1080	Insert a flow chart merge shape.
msodgcidShapeFlowChartOfflineStorage	0x1081	Insert a flow chart offline storage shape.
msodgcidShapeFlowChartOnlineStorage	0x1082	Insert a flow chart stored data shape.
msodgcidShapeFlowChartMagneticTape	0x1083	Insert a flow chart sequential access storage shape.
msodgcidShapeFlowChartMagneticDisk	0x1084	Insert a flow chart magnetic disk shape.
msodgcidShapeFlowChartMagneticDrum	0x1085	Insert a flow chart direct access storage shape.
msodgcidShapeFlowChartDisplay	0x1086	Insert a flow chart display shape.
msodgcidShapeFlowChartDelay	0x1087	Insert a flow chart delay shape.
msodgcidShapeFlowChartAlternateProcess	0x10B0	Insert a flow chart alternate process shape.
msodgcidShapeFlowChartOffpageConnector	0x10B1	Insert a flow chart off-page connector shape.

msodgcidShapeCallout90	0x10B2	Insert a line callout 1 (no border) shape.
msodgcidShapeAccentCallout90	0x10B3	Insert a line callout 1 (accent bar) shape.
msodgcidShapeBorderCallout90	0x10B4	Insert a line callout 1 shape.
msodgcidShapeAccentBorderCallout90	0x10B5	Insert a line callout 1 (border and accent bar) shape.
msodgcidShapeLeftRightUpArrow	0x10B6	Insert a left-right-up arrow shape.
msodgcidShapeSun	0x10B7	Insert a sun shape.
msodgcidShapeMoon	0x10B8	Insert a moon shape.
msodgcidShapeBracketPair	0x10B9	Insert a double bracket shape.
msodgcidShapeBracePair	0x10BA	Insert a double brace shape.
msodgcidShapeSeal4	0x10BB	Insert a 4-point star shape.
msodgcidShapeDoubleWave	0x10BC	Insert a double wave shape.
msodgcidShapeMinusSign	0x10CC	Insert a minus sign shape.
msodgcidShapeMultiplySign	0x10CD	Insert a multiply sign shape.
msodgcidShapeDivisionSign	0x10CE	Insert a division sign shape.
msodgcidShapeEqualSign	0x10CF	Insert an equal sign shape.
msodgcidShapeNotEqualSign	0x10D0	Insert a not equal sign shape.
msodgcidShapeSnipSingleCornerRectangle	0x10D1	Insert a snip single corner rectangle shape.
msodgcidShapeSnipSameSideCornerRectangle	0x10D2	Insert a snip same side corner rectangle shape.
msodgcidShapeSnipDiagonalCornerRectangle	0x10D3	Insert a snip diagonal corner rectangle shape.
msodgcidShapeSnipRoundSingleCornerRectangle	0x10D4	Insert a snip round single corner rectangle shape.
msodgcidShapeRoundSingleCornerRectangle	0x10D5	Insert a round single corner rectangle shape.
msodgcidShapeRoundSameSideCornerRectangle	0x10D6	Insert a round same side corner rectangle shape.
msodgcidShapeRoundDiagonalCornerRectangle	0x10D7	Insert a round diagonal corner rectangle shape.
msodgcidShapeDecagon	0x10D8	Insert a decagon shape.
msodgcidShapeDodecagon	0x10D9	Insert a dodecagon shape.
msodgcidShapeDiagonalStripe	0x10DA	Insert a diagonal stripe shape.
msodgcidShapeTearDrop	0x10DB	Insert a tear drop shape.
msodgcidShapeChord	0x10DC	Insert a chord shape.
msodgcidShapeHeptagon	0x10DD	Insert a heptagon shape.
msodgcidShapeFrame	0x10DE	Insert a frame shape.
msodgcidShapeHalfFrame	0x10DF	Insert a half frame shape.
msodgcidShapePie	0x10E0	Insert a pie shape.
msodgcidShapeLShape	0x10E1	Insert an L-shape shape.
msodgcidShape6PointStar	0x10E2	Insert a 6-point star shape.
msodgcidShape7PointStar	0x10E3	Insert a 7-point star shape.
msodgcidShape10PointStar	0x10E4	Insert a 10-point star shape.

msodgcidShape12PointStar	0x10E5	Insert a 12-point star shape.
msodgcidShapeCloud	0x10E6	Insert a cloud shape.
msodgcidChangeShapeRectangle	0x2001	Change the selected shape to a rectangle shape.
msodgcidChangeShapeRoundRectangle	0x2002	Change the selected shape to a rounded rectangle shape.
msodgcidChangeShapeEllipse	0x2003	Change the selected shape to an oval shape.
msodgcidChangeShapeDiamond	0x2004	Change the selected shape to a diamond shape.
msodgcidChangeShapeIsocelesTriangle	0x2005	Change the selected shape to an isosceles triangle shape.
msodgcidChangeShapeRightTriangle	0x2006	Change the selected shape to a right triangle shape.
msodgcidChangeShapeParallelogram	0x2007	Change the selected shape to a parallelogram shape.
msodgcidChangeShapeTrapezoid	0x2008	Change the selected shape to a trapezoid shape.
msodgcidChangeShapeHexagon	0x2009	Change the selected shape to a hexagon shape.
msodgcidChangeShapeOctagon	0x200A	Change the selected shape to an octagon shape.
msodgcidChangeShapePlus	0x200B	Change the selected shape to a cross shape.
msodgcidChangeShapeStar	0x200C	Change the selected shape to a 5-point star shape.
msodgcidChangeShapeArrow	0x200D	Change the selected shape to a right arrow shape.
msodgcidChangeShapeHomePlate	0x200F	Change the selected shape to a pentagon shape.
msodgcidChangeShapeCube	0x2010	Change the selected shape to a cube shape.
msodgcidChangeShapeArc	0x2013	Change the selected shape to an arc shape.
msodgcidChangeShapePlaque	0x2015	Change the selected shape to a plaque shape.
msodgcidChangeShapeCan	0x2016	Change the selected shape to a can shape.
msodgcidChangeShapeDonut	0x2017	Change the selected shape to a donut shape.
msodgcidChangeShapeCallout1	0x2029	Change the selected shape to a line callout 2 (no border) shape.
msodgcidChangeShapeCallout2	0x202A	Change the selected shape to a line callout 3 (no border) shape.
msodgcidChangeShapeCallout3	0x202B	Change the selected shape to a line callout 4 (no border) shape.
msodgcidChangeShapeAccentCallout1	0x202C	Change the selected shape to a line callout 2 (accent bar) shape.
msodgcidChangeShapeAccentCallout2	0x202D	Change the selected shape to a line

		callout 3 (accent bar) shape.
msodgcidChangeShapeAccentCallout3	0x202E	Change the selected shape to a line callout 4 (accent bar) shape.
msodgcidChangeShapeBorderCallout1	0x202F	Change the selected shape to a line callout 2 shape.
msodgcidChangeShapeBorderCallout2	0x2030	Change the selected shape to a line callout 3 shape.
msodgcidChangeShapeBorderCallout3	0x2031	Change the selected shape to a line callout 4 shape.
msodgcidChangeShapeAccentBorderCallout1	0x2032	Change the selected shape to a line callout 2 (border and accent bar) shape.
msodgcidChangeShapeAccentBorderCallout2	0x2033	Change the selected shape to a line callout 3 (border and accent bar) shape.
msodgcidChangeShapeAccentBorderCallout3	0x2034	Change the selected shape to a line callout 4 (border and accent bar) shape.
msodgcidChangeShapeRibbon	0x2035	Change the selected shape to a down ribbon shape.
msodgcidChangeShapeRibbon2	0x2036	Change the selected shape to an up ribbon shape.
msodgcidChangeShapeChevron	0x2037	Change the selected shape to a chevron shape.
msodgcidChangeShapePentagon	0x2038	Change the selected shape to a regular pentagon shape.
msodgcidChangeShapeNoSmoking	0x2039	Change the selected shape to a no symbol shape.
msodgcidChangeShapeSeal8	0x203A	Change the selected shape to an 8-point star shape.
msodgcidChangeShapeSeal16	0x203B	Change the selected shape to a 16-point star shape.
msodgcidChangeShapeSeal32	0x203C	Change the selected shape to a 32-point star shape.
msodgcidChangeShapeWedgeRectCallout	0x203D	Change the selected shape to a rectangular callout shape.
msodgcidChangeShapeWedgeRRectCallout	0x203E	Change the selected shape to a rounded rectangular callout shape.
msodgcidChangeShapeWedgeEllipseCallout	0x203F	Change the selected shape to an oval callout shape.
msodgcidChangeShapeWave	0x2040	Change the selected shape to a wave shape.
msodgcidChangeShapeFoldedCorner	0x2041	Change the selected shape to a folded corner shape.
msodgcidChangeShapeLeftArrow	0x2042	Change the selected shape to a left arrow shape.
msodgcidChangeShapeDownArrow	0x2043	Change the selected shape to a down arrow shape.
msodgcidChangeShapeUpArrow	0x2044	Change the selected shape to an up arrow shape.

msodgcidChangeShapeLeftRightArrow	0x2045	Change the selected shape to a left-right arrow shape.
msodgcidChangeShapeUpDownArrow	0x2046	Change the selected shape to an up-down arrow shape.
msodgcidChangeShapeIrregularSeal1	0x2047	Change the selected shape to an explosion 1 shape.
msodgcidChangeShapeIrregularSeal2	0x2048	Change the selected shape to an explosion 2 shape.
msodgcidChangeShapeLightningBolt	0x2049	Change the selected shape to lightning bolt shape.
msodgcidChangeShapeHeart	0x204A	Change the selected shape to a heart shape.
msodgcidChangeShapeQuadArrow	0x204C	Change the selected shape to a quad arrow shape.
msodgcidChangeShapeLeftArrowCallout	0x204D	Change the selected shape to a left arrow callout shape.
msodgcidChangeShapeRightArrowCallout	0x204E	Change the selected shape to a right arrow callout shape.
msodgcidChangeShapeUpArrowCallout	0x204F	Change the selected shape to an up arrow callout shape.
msodgcidChangeShapeDownArrowCallout	0x2050	Change the selected shape to a down arrow callout shape.
msodgcidChangeShapeLeftRightArrowCallout	0x2051	Change the selected shape to a left-right arrow callout shape.
msodgcidChangeShapeUpDownArrowCallout	0x2052	Change the selected shape to an up-down arrow callout shape.
msodgcidChangeShapeQuadArrowCallout	0x2053	Change the selected shape to a quad arrow callout shape.
msodgcidChangeShapeBevel	0x2054	Change the selected shape to a bevel shape.
msodgcidChangeShapeLeftBracket	0x2055	Change the selected shape to a left bracket shape.
msodgcidChangeShapeRightBracket	0x2056	Change the selected shape to a right bracket shape.
msodgcidChangeShapeLeftBrace	0x2057	Change the selected shape to a left brace shape.
msodgcidChangeShapeRightBrace	0x2058	Change the selected shape to a right brace shape.
msodgcidChangeShapeLeftUpArrow	0x2059	Change the selected shape to a left-up arrow shape.
msodgcidChangeShapeBentUpArrow	0x205A	Change the selected shape to a bent-up arrow shape.
msodgcidChangeShapeBentArrow	0x205B	Change the selected shape to a bent arrow shape.
msodgcidChangeShapeSeal24	0x205C	Change the selected shape to a 24-point star shape.
msodgcidChangeShapeStripedRightArrow	0x205D	Change the selected shape to a striped right arrow shape.
msodgcidChangeShapeNotchedRightArrow	0x205E	Change the selected shape to a

		notched right arrow shape.
msodgcidChangeShapeBlockArc	0x205F	Change the selected shape to a block arc shape.
msodgcidChangeShapeSmileyFace	0x2060	Change the selected shape to a smiley face shape.
msodgcidChangeShapeVerticalScroll	0x2061	Change the selected shape to a vertical scroll shape.
msodgcidChangeShapeHorizontalScroll	0x2062	Change the selected shape to a horizontal scroll shape.
msodgcidChangeShapeCircularArrow	0x2063	Change the selected shape to a circular arrow shape.
msodgcidChangeShapeUturnArrow	0x2065	Change the selected shape to a U-turn arrow shape.
msodgcidChangeShapeCurvedRightArrow	0x2066	Change the selected shape to a curved right arrow shape.
msodgcidChangeShapeCurvedLeftArrow	0x2067	Change the selected shape to a curved left arrow shape.
msodgcidChangeShapeCurvedUpArrow	0x2068	Change the selected shape to a curved up arrow shape.
msodgcidChangeShapeCurvedDownArrow	0x2069	Change the selected shape to a curved down arrow shape.
msodgcidChangeShapeCloudCallout	0x206A	Change the selected shape to a cloud callout shape.
msodgcidChangeShapeEllipseRibbon	0x206B	Change the selected shape to a curved down ribbon shape.
msodgcidChangeShapeEllipseRibbon2	0x206C	Change the selected shape to a curved up ribbon shape.
msodgcidChangeShapeFlowChartProcess	0x206D	Change the selected shape to a flowchart process shape.
msodgcidChangeShapeFlowChartDecision	0x206E	Change the selected shape to a flowchart decision shape.
msodgcidChangeShapeFlowChartInputOutput	0x206F	Change the selected shape to a flowchart data shape.
msodgcidChangeShapeFlowChartPredefinedProcess	0x2070	Change the selected shape to a flowchart predefined process shape.
msodgcidChangeShapeFlowChartInternalStorage	0x2071	Change the selected shape to a flowchart internal storage shape.
msodgcidChangeShapeFlowChartDocument	0x2072	Change the selected shape to a flowchart document shape.
msodgcidChangeShapeFlowChartMultidocument	0x2073	Change the selected shape to a flowchart multidocument shape.
msodgcidChangeShapeFlowChartTerminator	0x2074	Change the selected shape to a flowchart terminator shape.
msodgcidChangeShapeFlowChartPreparation	0x2075	Change the selected shape to a flowchart preparation shape.
msodgcidChangeShapeFlowChartManualInput	0x2076	Change the selected shape to a flowchart manual input shape.
msodgcidChangeShapeFlowChartManualOperation	0x2077	Change the selected shape to a flowchart manual operation shape.

msodgcidChangeShapeFlowChartConnector	0x2078	Change the selected shape to a flowchart connector shape.
msodgcidChangeShapeFlowChartPunchedCard	0x2079	Change the selected shape to a flowchart card shape.
msodgcidChangeShapeFlowChartPunchedTape	0x207A	Change the selected shape to a flowchart punched tape shape.
msodgcidChangeShapeFlowChartSummingJunction	0x207B	Change the selected shape to a flowchart summing junction shape.
msodgcidChangeShapeFlowChartOr	0x207C	Change the selected shape to a flowchart or shape.
msodgcidChangeShapeFlowChartCollate	0x207D	Change the selected shape to a flowchart collate shape.
msodgcidChangeShapeFlowChartSort	0x207E	Change the selected shape to a flowchart sort shape.
msodgcidChangeShapeFlowChartExtract	0x207F	Change the selected shape to a flowchart extract shape.
msodgcidChangeShapeFlowChartMerge	0x2080	Change the selected shape to a flowchart merge shape.
msodgcidChangeShapeFlowChartOnlineStorage	0x2082	Change the selected shape to a flowchart stored data shape.
msodgcidChangeShapeFlowChartMagneticTape	0x2083	Change the selected shape to a flowchart sequential access storage shape.
msodgcidChangeShapeFlowChartMagneticDisk	0x2084	Change the selected shape to a flowchart magnetic disk shape.
msodgcidChangeShapeFlowChartMagneticDrum	0x2085	Change the selected shape to a flowchart direct access storage shape.
msodgcidChangeShapeFlowChartDisplay	0x2086	Change the selected shape to a flowchart display shape.
msodgcidChangeShapeFlowChartDelay	0x2087	Change the selected shape to a flowchart delay shape.
msodgcidChangeShapeFlowChartAlternateProcess	0x20B0	Change the selected shape to a flowchart alternate process shape.
msodgcidChangeShapeFlowChartOffpageConnector	0x20B1	Change the selected shape to a flowchart off-page connector shape.
msodgcidChangeShapeCallout90	0x20B2	Change the selected shape to a line callout 1 (no border) shape.
msodgcidChangeShapeAccentCallout90	0x20B3	Change the selected shape to a line callout 1 (accent bar) shape.
msodgcidChangeShapeBorderCallout90	0x20B4	Change the selected shape to a line callout 1 shape.
msodgcidChangeShapeAccentBorderCallout90	0x20B5	Change the selected shape to a line callout 1 (border and accent bar) shape.
msodgcidChangeShapeLeftRightUpArrow	0x20B6	Change the selected shape to a left-right-up arrow shape.
msodgcidChangeShapeSun	0x20B7	Change the selected shape to a sun shape.
msodgcidChangeShapeMoon	0x20B8	Change the selected shape to a

		moon shape.
msodgcidChangeShapeBracketPair	0x20B9	Change the selected shape to a double bracket shape.
msodgcidChangeShapeBracePair	0x20BA	Change the selected shape to a double brace shape.
msodgcidChangeShapeSeal4	0x20BB	Change the selected shape to a 4-point star shape.
msodgcidChangeShapeDoubleWave	0x20BC	Change the selected shape to a double wave shape.

2.4.3 MSOWRAPMODE

Referenced by: [WrapText](#)

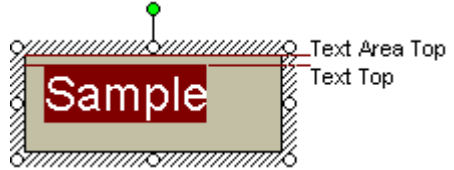
The **MSOWRAPMODE Enumeration** specifies the wrapping rule of a body of text.


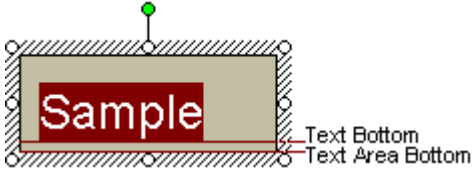
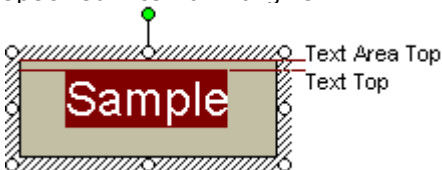

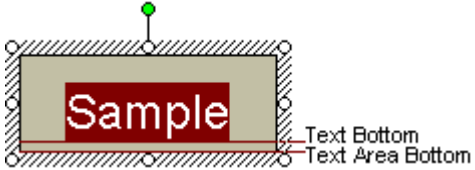
Name	Value	Meaning
msowrapSquare	0x00000000	This wrapping mode specifies that a line of text will continue on subsequent lines instead of extending into or beyond a margin. This value MAY <98> be used.
msowrapByPoints	0x00000001	This wrapping mode is equivalent to msowrapSquare and MAY <99> be used.
msowrapNone	0x00000002	This wrapping mode specifies that a line of text will extend into or beyond a margin instead of continuing on subsequent lines. This value MAY <100> be used.
msowrapTopBottom	0x00000003	This wrapping mode is undefined and MUST be ignored.
msowrapThrough	0x00000004	This wrapping mode is undefined and MUST be ignored.

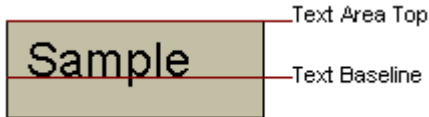
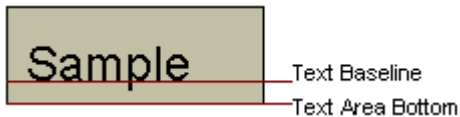
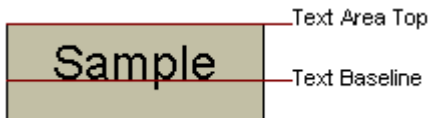
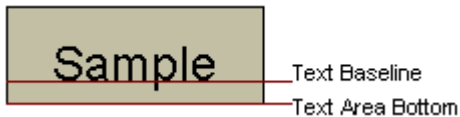
2.4.4 MSOANCHOR

Referenced by: [anchorText](#)

The **MSOANCHOR Enumeration** specifies the suggested placement rule of a body of text. These values are relative to the orientation, textbox area, and margin sizes of the containing shape. Exact placement of the text is application dependent and will vary to accommodate other languages and text properties. These values MAY [<101>](#) be used.

Name	Value	Meaning
msoanchorTop	0x00000000	<p>The primary determinant for the placement of the text is that the top of the text coincides with the top internal margin of the textbox area.</p> 
msoanchorMiddle	0x00000001	<p>The primary determinant for the placement of the text is that the vertical center of the text coincides with the vertical mid-point of the internal margins of the textbox area.</p>

		 <p>Text Area Middle And Text Middle</p>
msoanchorBottom	0x00000002	<p>The primary determinant for the placement of the text is that the bottom of the text coincides with the bottom internal margin of the textbox area.</p>  <p>Text Bottom Text Area Bottom</p>
msoanchorTopCentered	0x00000003	<p>This anchor mode specifies the same vertical placement as msoanchorTop. Additionally, the primary determinant for the horizontal placement of the text is that the horizontal center of the text coincides with the horizontal center of the textbox area, respecting the specified internal margins.</p>  <p>Text Area Top Text Top</p>
msoanchorMiddleCentered	0x00000004	<p>This anchor mode specifies the same vertical placement as msoanchorMiddle. Additionally, the primary determinant for the horizontal placement of the text is that the horizontal center of the text coincides with the horizontal center of the textbox area, respecting the specified internal margins.</p>  <p>Text Area Middle And Text Middle</p>
msoanchorBottomCentered	0x00000005	<p>This anchor mode specifies the same vertical placement as msoanchorBottom. Additionally, the primary determinant for the horizontal placement of the text is that the horizontal center of the text coincides with the horizontal center of the textbox area, respecting the specified internal margins.</p>  <p>Text Bottom Text Area Bottom</p>
msoanchorTopBaseline	0x00000006	<p>The primary determinant for the placement of the text is the offset of the baseline of the text from the top internal margin of the textbox area. This value SHOULD NOT <102> be used.</p>

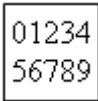

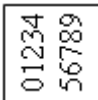
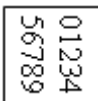

		<p>The value msoanchorTop MAY be used instead.</p> 
msoanchorBottomBaseline	0x00000007	<p>The primary determinant for the placement of the text is the offset of the baseline of the text from the bottom internal margin of the textbox area. This value SHOULD NOT <103> be used. The value msoanchorBottom MAY be used instead.</p> 
msoanchorTopCenteredBaseline	0x00000008	<p>This anchor mode specifies the same vertical placement as msoanchorTopBaseline. Additionally, the primary determinant for the horizontal placement of the text is that the horizontal center of the text coincides with the horizontal center of the textbox area, respecting the specified internal margins. This value SHOULD NOT <104> be used. The value msoanchorTopCentered MAY be used instead.</p> 
msoanchorBottomCenteredBaseline	0x00000009	<p>This anchor mode specifies the same vertical placement as msoanchorBottomBaseline. Additionally, the primary determinant for the horizontal placement of the text is that the horizontal center of the text coincides with the horizontal center of the textbox area, respecting the specified internal margins. This value SHOULD NOT <105> be used. The value msoanchorBottomCentered MAY be used instead.</p> 


2.4.5 MSOTXFL

Referenced by: [txflTextFlow](#)

The **MSOTXFL Enumeration** specifies the text flow rule of a body of text. These rules encompass the rotation of individual character glyphs, the relational positioning of a sequence of character glyphs, and the relational positioning of a sequence of lines of text. Descriptions provided in the following

table use spatial direction terminology relative to the container of the body of text. Exact placement of the text is application dependent and will vary to accommodate other languages and text properties.

Name	Value	Meaning
msotxfIHorzN	0x00000000	Character glyphs are oriented such that their tops are closest to the top of the text body container. Subsequent character glyphs are placed to the right of antecedent character glyphs. Subsequent lines of text are placed below antecedent lines of text. This value SHOULD NOT <106> be used. 
msotxfITtoBA	0x00000001	Character glyphs are oriented such that their tops are closest to the right side of the text body container. Subsequent character glyphs are placed below antecedent character glyphs. Subsequent lines of text are placed to the left of antecedent lines of text. This value MAY <107> be used. 
msotxfIBtoT	0x00000002	Character glyphs are oriented such that their tops are closest to the left side of the text body container. Subsequent character glyphs are placed above antecedent character glyphs. Subsequent lines of text are placed to the right of antecedent lines of text. This value MAY <108> be used. 
msotxfITtoBN	0x00000003	Character glyphs are oriented such that their tops are closest to the right side of the text body container. Subsequent character glyphs are placed below antecedent character glyphs. Subsequent lines of text are placed to the left of antecedent lines of text. This value MAY <109> be used. 
msotxfIHorzA	0x00000004	Character glyphs are oriented such that their tops are closest to the top of the text body container. Subsequent character glyphs are placed to the right of antecedent character glyphs. Subsequent lines of text are placed below antecedent lines of text. This value SHOULD NOT <110> be used. 
msotxfIVertN	0x00000005	Character glyphs are oriented such that their tops are closest to the right side of the text body container. Subsequent character glyphs are placed below antecedent character glyphs. Subsequent lines of text

		are placed to the left of antecedent lines of text. This value MAY <111> be used.
		

2.4.6 MSOCDIR

Referenced by: [cdirFont](#)

The **MSOCDIR enumeration** specifies a rotation. Rotation begins horizontally to the right and proceeds in a clockwise direction completing a full rotation at 360°.

Name	Value	Meaning
msocdir0	0x00000000	Specifies no rotation or a horizontal right direction.
msocdir90	0x00000001	Specifies 90° rotation or a vertical down direction.
msocdir180	0x00000002	Specifies 180° rotation or a horizontal left direction.
msocdir270	0x00000003	Specifies 270° rotation or a vertical up direction.

2.4.7 MSOTXDIR

Referenced by: [txdir](#)

The **MSOTXDIR enumeration** specifies the direction of a [text run](#). Used for bidirectional text.

Name	Value	Meaning
msotxdirLTR	0x00000000	Specifies that the text is read from left to right. <112>
msotxdirRTL	0x00000001	Specifies that the text is read from right to left. <113>
msotxdirContext	0x00000002	Specifies that the direction SHOULD <114> be determined from the text string.

2.4.8 MSOBLIPFLAGS

Referenced by: [fillBlipFlags](#), [lineBottomFillBlipFlags](#), [lineFillBlipFlags](#), [lineLeftFillBlipFlags](#), [lineRightFillBlipFlags](#), [lineTopFillBlipFlags](#), [pibFlags](#), [pibPrintFlags](#)

The **MSOBLIPFLAGS Enumeration** specifies a set of flags used by the BLIP properties. Enumeration values may be combined, except where prohibited in the following table:

Name	Value	Meaning
msoblipflagComment	0x00000000	Specifies that the name in the property set is a comment. This value is mutually exclusive with msoblipflagFile and msoblipflagURL .
msoblipflagFile	0x00000001	Specifies that the name in the property set is a file name. This value is mutually exclusive with msoblipflagComment and msoblipflagURL .
msoblipflagURL	0x00000002	Specifies that the name in the property set is a URL. This value is mutually exclusive with msoblipflagComment and msoblipflagFile .
msoblipflagDoNotSave	0x00000004	Specifies that the BLIP data MUST not be embedded on save. If this flag is set, then msoblipflagLinkToFile MUST also be

		set.
msoblipflagLinkToFile	0x00000008	Specifies that the BLIP data is linked in the specified URL. If this flag is set then either msoblipflagFile or msoblipflagURL MUST also be set.

2.4.9 MSOSHAPEPATH

Referenced by: [shapePath](#)

The **MSOSHAPEPATH Enumeration** specifies how all of the vertices along the path of a shape are connected by lines.

Name	Value	Meaning
msoshapeLines	0x00000000	An open path of straight line segments.
msoshapeLinesClosed	0x00000001	A closed path of straight line segments.
msoshapeCurves	0x00000002	An open path of Bezier curve line segments.
msoshapeCurvesClosed	0x00000003	A closed path of Bezier curve line segments.
msoshapeComplex	0x00000004	A complex path made of a combination of multiple types of lines. This shape's pSegmentInfo_complex property specifies the types of lines that form the path, and that property MUST exist.

2.4.10 MSOCXK

Referenced by: [cxk](#)

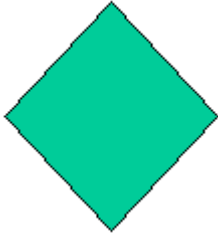
The **MSOCXK Enumeration** specifies the types of connection points.

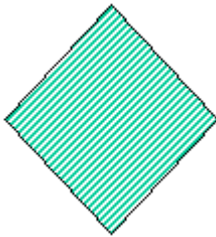


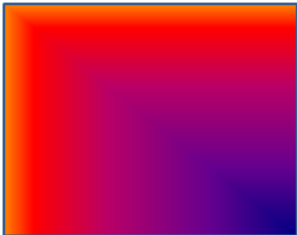

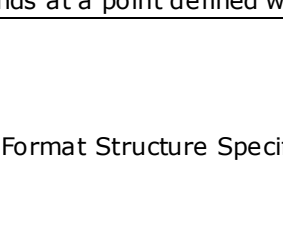
Name	Value	Meaning
msocxkNone	0x00000000	No connection points.
msocxkSegments	0x00000001	The edit points of the shape are used as connection points.
msocxkCustom	0x00000002	A custom array of connection points.
msocxkRect	0x00000003	Standard four connection points at midpoints of top, bottom, left and right sides.





2.4.11 MSOFILLTYPE

Referenced by: [fillType](#)

The **MSOFILLTYPE Enumeration** specifies the fill types.

Name	Value	Meaning
msofillSolid	0x00000000	The shape is filled with a single solid color. 

msofillPattern	0x00000001	The shape is filled with a single repeatable pattern. 
msofillTexture	0x00000002	The shape is filled with a repeatable image. 
msofillPicture	0x00000003	An image is scaled to fit entirely within the shape. 
msofillShade	0x00000004	The shape is filled with a gradient that starts and ends with defined endpoints. 
msofillShadeCenter	0x00000005	The shape is filled with a gradient that starts and ends based on the bounds of the shape. 
msofillShadeShape	0x00000006	The shape is filled with a gradient that starts on the outline and ends at a point defined within the shape. 

		
msofillShadeScale	0x00000007	<p>The shape is filled with a gradient that starts on the outline and ends at a point defined within the shape. The fill angle is scaled by the aspect ratio of the shape.</p> 
msofillShadeTitle	0x00000008	<p>The shape is filled with a gradient. This style is intended for slide titles.</p> 
msofillBackground	0x00000009	<p>The shape is filled using the fill properties of the background, simulating transparency.</p> 

2.4.12 MSODZTYPE

Referenced by: [fillDztype](#), [lineBottomFillDztype](#), [lineFillDztype](#), [lineLeftFillDztype](#), [lineRightFillDztype](#), [lineTopFillDztype](#)

The **MSODZTYPE Enumeration** specifies the units for measuring length and how drawing parameters will be interpreted.




Name	Value	Meaning
msodztypeDefault	0x00000000	Width and height are ignored. The shape dimensions are used.
msodztypeA	0x00000001	Values are in English Metric Units.
msodztypeV	0x00000002	Values are in pixels.

msodztypeShape	0x00000003	Values are a FixedPoint, as specified in [MS-OSHARED] section 2.2.1.6 , that specify fractions of a shape dimension.
msodztypeFixedAspect	0x00000004	The aspect ratio of the shape is maintained. Width and height are ignored. The shape dimensions are used.
msodztypeAFixed	0x00000005	Values are in English Metric Units. The aspect ratio of the shape is maintained.
msodztypeVFixed	0x00000006	Values are in pixels. The aspect ratio of the shape is maintained.
msodztypeShapeFixed	0x00000007	Values are proportional to the size of the shape. The aspect ratio of the shape is maintained.
msodztypeFixedAspectEnlarge	0x00000008	The aspect ratio is maintained favoring the largest dimension.
msodztypeAFixedBig	0x00000009	Values are in English Metric Units. The aspect ratio is maintained favoring the largest dimension.
msodztypeVFixedBig	0x0000000A	Values are in pixels. The aspect ratio is maintained favoring the largest dimension.
msodztypeShapeFixedBig	0x0000000B	Values are proportional to the size of the shape. The aspect ratio is maintained favoring the largest dimension.

2.4.13 MSOLINETYPE

Referenced by: [lineBottomType](#), [lineLeftType](#), [lineRightType](#), [lineTopType](#), [lineType](#)






The **MSOLINETYPE Enumeration** specifies the fill properties for a line.

Name	Value	Meaning
msolineSolidType	0x00000000	The line is filled with a single solid color. 
msolinePattern	0x00000001	The line is filled with a single repeatable pattern. 
msolineTexture	0x00000002	The line is filled with a repeatable image. 

2.4.14 MSOLINESTYLE

Referenced by: [lineBottomStyle](#), [lineLeftStyle](#), [lineRightStyle](#), [lineStyle](#), [lineTopStyle](#)











The **MSOLINESTYLE Enumeration** specifies the line style type that will be used.



Name	Value	Meaning
msolineSimple	0x00000000	One line. 
msolineDouble	0x00000001	Two lines of equal width. 
msolineThickThin	0x00000002	Two lines: one thick, one thin. 
msolineThinThick	0x00000003	Two lines: one thin, one thick. 
msolineTriple	0x00000004	Three lines: thin, thick, thin. 

2.4.15 MSOLINEDASHING

Referenced by: [lineBottomDashing](#), [lineDashing](#), [lineLeftDashing](#), [lineRightDashing](#), [lineTopDashing](#)

The **MSOLINEDASHING Enumeration** specifies preset line dash values. Each style contains a precise binary representation of the repeating dash style. Each 1 corresponds to a line segment, and each 0 corresponds to a space.






Name	Value	Meaning
msolineSolid	0x00000000	1 
msolineDashSys	0x00000001	1110 
msolineDotSys	0x00000002	10 
msolineDashDotSys	0x00000003	111010 
msolineDashDotDotSys	0x00000004	11101010 
msolineDotGEL	0x00000005	1000 
msolineDashGEL	0x00000006	1111000 
msolineLongDashGEL	0x00000007	11111111000 
msolineDashDotGEL	0x00000008	11110001000 
msolineLongDashDotGEL	0x00000009	111111110001000 

		
msolineLongDashDotDotGEL	0x0000000A	1111111100010001000
		

2.4.16 MSOLINEEND

Referenced by: [lineBottomEndArrowhead](#), [lineBottomStartArrowhead](#), [lineEndArrowhead](#), [lineLeftEndArrowhead](#), [lineLeftStartArrowhead](#), [lineRightEndArrowhead](#), [lineRightStartArrowhead](#), [lineStartArrowhead](#), [lineTopEndArrowhead](#), [lineTopStartArrowhead](#)




The **MSOLINEEND Enumeration** specifies the line end decoration that appears at the ends of lines.

Name	Value	Meaning
msolineNoEnd	0x00000000	No shape.
msolineArrowEnd	0x00000001	Triangle arrow head. 
msolineArrowStealthEnd	0x00000002	Stealth arrow head. 
msolineArrowDiamondEnd	0x00000003	Diamond. 
msolineArrowOvalEnd	0x00000004	Oval. 
msolineArrowOpenEnd	0x00000005	Line arrow head. 
msolineArrowChevronEnd	0x00000006	This value MUST be ignored.
msolineArrowDoubleChevronEnd	0x00000007	This value MUST be ignored.

2.4.17 MSOLINEENDWIDTH

Referenced by: [lineBottomEndArrowWidth](#), [lineBottomStartArrowWidth](#), [lineEndArrowWidth](#), [lineLeftEndArrowWidth](#), [lineLeftStartArrowWidth](#), [lineRightEndArrowWidth](#), [lineRightStartArrowWidth](#), [lineStartArrowWidth](#), [lineTopEndArrowWidth](#), [lineTopStartArrowWidth](#)




The **MSOLINEENDWIDTH Enumeration** specifies the width of the line end decoration relative to the width of the line itself.

Name	Value	Meaning
msolineNarrowArrow	0x00000000	Narrow. 
msolineMediumWidthArrow	0x00000001	Medium. 
msolineWideArrow	0x00000002	Wide. 

2.4.18 MSOLINEENDLENGTH

Referenced by: [lineBottomEndArrowLength](#), [lineBottomStartArrowLength](#), [lineEndArrowLength](#), [lineLeftEndArrowLength](#), [lineLeftStartArrowLength](#), [lineRightEndArrowLength](#), [lineRightStartArrowLength](#), [lineStartArrowLength](#), [lineTopEndArrowLength](#), [lineTopStartArrowLength](#)




The **MSOLINEENDLENGTH Enumeration** specifies the length of the line end decoration.

Name	Value	Meaning
msolineShortArrow	0x00000000	Short. 
msolineMediumLenArrow	0x00000001	Medium. 
msolineLongArrow	0x00000002	Long. 

2.4.19 MSOLINEJOIN

Referenced by: [lineBottomJoinStyle](#), [lineJoinStyle](#), [lineLeftJoinStyle](#), [lineRightJoinStyle](#), [lineTopJoinStyle](#)




The **MSOLINEJOIN Enumeration** specifies the different types of [join styles](#) that can be applied to lines in the document.

Name	Value	Meaning
msolineJoinBevel	0x00000000	Bevel. 
msolineJoinMiter	0x00000001	Miter. 
msolineJoinRound	0x00000002	Round. 

2.4.20 MSOLINECAP

Referenced by: [lineBottomEndCapStyle](#), [lineEndCapStyle](#), [lineLeftEndCapStyle](#), [lineRightEndCapStyle](#), [lineTopEndCapStyle](#)





The **MSOLINECAP Enumeration** specifies how to cap the ends of lines in the document.

Name	Value	Meaning
msolineEndCapRound	0x00000000	Rounded end protruding past line end point. 
msolineEndCapSquare	0x00000001	Square end protruding past line end point. 
msolineEndCapFlat	0x00000002	Flat end ending at line end point. 

2.4.21 MSOSHADOWTYPE

Referenced by: [shadowType](#)

The **MSOSHADOWTYPE Enumeration** specifies how to display shadows applied to a shape.

Name	Value	Meaning
msoshadowOffset	0x00000000	Only the offset of the shadow is used. 
msoshadowDouble	0x00000001	A double shadow is cast. Only the offset of the shadow is used. 
msoshadowRich	0x00000002	The shadow offset and a transformation is applied to skew the shadow relative to the drawing. 
msoshadowShape	0x00000003	The shadow offset and a transformation is applied to skew the shadow relative to the shape. 

		
msoshadowDrawing	0x00000004	The shadow is cast onto a drawing plane . 
msoshadowEmbossOrEngrave	0x00000005	A double shadow cast to create an embossed or engraved appearance. Embossed:  Engraved: 

2.4.22 MSOXFORMTYPE

Referenced by: [perspectiveType](#)

The **MSOXFORMTYPE Enumeration** specifies how a perspective transformation SHOULD be applied.

Name	Value	Meaning
msoxformAbsolute	0x00000000	Transform applied in absolute space , centered on the shape.
msoxformShape	0x00000001	Transform applied to shape geometry.
msoxformDrawing	0x00000002	Transform applied in drawing space .

2.4.23 MSO3DRENDERMODE





Referenced by: [c3DRenderMode](#)







The **MSO3DRENDERMODE Enumeration** specifies the rendering mode to be used for a shape.



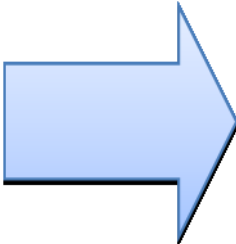
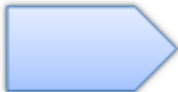


Name	Value	Meaning
msoFullRender	0x00000000	Rendering displays a solid shape.
msoWireframe	0x00000001	Rendering displays a wireframe shape.
msoBoundingCube	0x00000002	Rendering displays the bounding cube that contains the shape.







2.4.24 MSOSPT

The **MSOSPT Enumeration** specifies the preset shape or preset text shape geometry that will be used for a shape. An enumeration of this type is used so that a custom geometry does not have to be specified, but instead can be constructed automatically by the generating application.


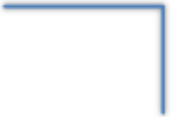





Name	Value	Meaning
msosptNotPrimitive	0x00000000	A shape that has no preset geometry, and is drawn with custom geometry instead. For example, freeform shapes drawn by users fall into this category.
msosptRectangle	0x00000001	A rectangle shape. 
msosptRoundRectangle	0x00000002	A rectangle shape with rounded corners. 
msosptEllipse	0x00000003	An ellipse shape. 
msosptDiamond	0x00000004	A diamond shape. 
msosptIsocelesTriangle	0x00000005	An isosceles triangle shape.








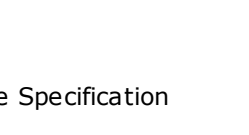
			
msosptRightTriangle	0x00000006	A right triangle shape.	
msosptParallelogram	0x00000007	A parallelogram shape.	
msosptTrapezoid	0x00000008	A trapezoid shape.	
msosptHexagon	0x00000009	A hexagon shape.	
msosptOctagon	0x0000000A	An octagon shape.	






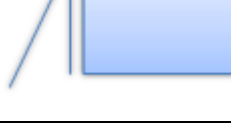
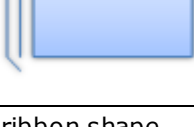
msosptPlus	0x0000000B	A plus shape. 
msosptStar	0x0000000C	A star shape. 
msosptArrow	0x0000000D	An arrow shape. 
msosptThickArrow	0x0000000E	This value SHOULD NOT be used.
msosptHomePlate	0x0000000F	An irregular pentagon shape. 
msosptCube	0x00000010	A cube shape. 
msosptBalloon	0x00000011	A speech balloon shape. 
msosptSeal	0x00000012	A seal shape.







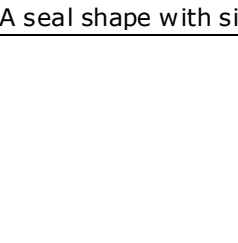
		
msosptArc	0x00000013	A curved arc shape. 
msosptLine	0x00000014	A line shape. 
msosptPlaque	0x00000015	A plaque shape. 
msosptCan	0x00000016	A cylinder shape. 
msosptDonut	0x00000017	A donut shape. 
msosptTextSimple	0x00000018	A simple text shape. Text SHOULD <115> be drawn on a straight line.

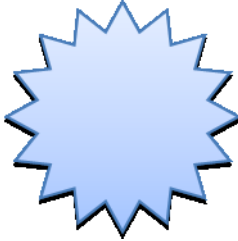
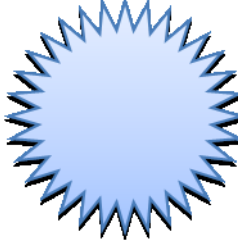




		Sample Text
msosptTextOctagon	0x00000019	An octagonal text shape. Text SHOULD <116> be drawn within an octagonal boundary. Sample Text
msosptTextHexagon	0x0000001A	A hexagonal text shape. Text SHOULD <117> be drawn within a hexagonal boundary. sample Text
msosptTextCurve	0x0000001B	A curved text shape. Text SHOULD <118> be drawn on a curved line. Sample Text
msosptTextWave	0x0000001C	A wavy text shape. Text SHOULD <119> be drawn on a wavy line. Sample Text
msosptTextRing	0x0000001D	A ringed text shape. Text SHOULD <120> be drawn within a semicircular arc. Sample Text
msosptTextOnCurve	0x0000001E	A text shape that draws text on a curve. Text SHOULD <121> be drawn on a curved line. Sample Text
msosptTextOnRing	0x0000001F	A text shape that draws text on a ring. Text SHOULD <122> be drawn on a semicircular arc. Sample Text
msosptStraightConnector1	0x00000020	A straight connector shape.





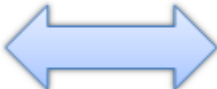


		
msosptBentConnector2	0x00000021	A bent connector shape. 
msosptBentConnector3	0x00000022	A bent connector shape. 
msosptBentConnector4	0x00000023	A bent connector shape. 
msosptBentConnector5	0x00000024	A bent connector shape. 
msosptCurvedConnector2	0x00000025	A curved connector shape. 
msosptCurvedConnector3	0x00000026	A curved connector shape. 







msosptCurvedConnector4	0x00000027	A curved connector shape. 
msosptCurvedConnector5	0x00000028	A curved connector shape. 
msosptCallout1	0x00000029	A callout shape. 
msosptCallout2	0x0000002A	A callout shape. 
msosptCallout3	0x0000002B	A callout shape. 
msosptAccentCallout1	0x0000002C	A callout shape with side accent. 
msosptAccentCallout2	0x0000002D	A callout shape with side accent. 
msosptAccentCallout3	0x0000002E	A callout shape with side accent. 







		
msosptBorderCallout1	0x0000002F	A callout shape with border. 
msosptBorderCallout2	0x00000030	A callout shape with border. 
msosptBorderCallout3	0x00000031	A callout shape with border. 
msosptAccentBorderCallout1	0x00000032	A callout shape with border and side accent. 
msosptAccentBorderCallout2	0x00000033	A callout shape with border and side accent. 
msosptAccentBorderCallout3	0x00000034	A callout shape with border and side accent. 
msosptRibbon	0x00000035	A ribbon shape.








		
msosptRibbon2	0x00000036	A ribbon shape. 
msosptChevron	0x00000037	A chevron shape. 
msosptPentagon	0x00000038	A regular pentagon shape. 
msosptNoSmoking	0x00000039	A circle-slash shape. 
msosptSeal8	0x0000003A	A seal shape with eight points. 
msosptSeal16	0x0000003B	A seal shape with sixteen points. 


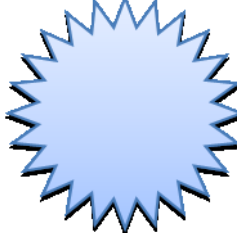

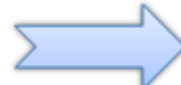



		
msosptSeal32	0x0000003C	A seal shape with thirty-two points. 
msosptWedgeRectCallout	0x0000003D	A rectangular callout shape. 
msosptWedgeRRectCallout	0x0000003E	A rectangular callout shape with rounded corners. 
msosptWedgeEllipseCallout	0x0000003F	An elliptical callout shape. 
msosptWave	0x00000040	A wave shape. 
msosptFoldedCorner	0x00000041	A rectangular shape with a folded corner.







		
msosptLeftArrow	0x00000042	An arrow shape pointing left. 
msosptDownArrow	0x00000043	An arrow shape pointing down. 
msosptUpArrow	0x00000044	An arrow shape pointing up. 
msosptLeftRightArrow	0x00000045	An arrow shape pointing left and right. 
msosptUpDownArrow	0x00000046	An arrow shape pointing down and up. 
msosptIrregularSeal1	0x00000047	An irregular seal shape. 





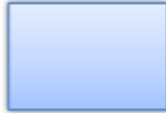


msosptIrregularSeal2	0x00000048	An irregular seal shape. 
msosptLightningBolt	0x00000049	A lightning bolt shape. 
msosptHeart	0x0000004A	A heart shape. 
msosptPictureFrame	0x0000004B	A frame shape. 
msosptQuadArrow	0x0000004C	A shape with arrows pointing down, left, right, and up. 
msosptLeftArrowCallout	0x0000004D	A callout shape with an arrow pointing left. 





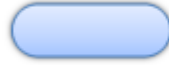



msosptRightArrowCallout	0x0000004E	A callout shape with an arrow pointing right. 
msosptUpArrowCallout	0x0000004F	A callout shape with an arrow pointing up. 
msosptDownArrowCallout	0x00000050	A callout shape with an arrow pointing down. 
msosptLeftRightArrowCallout	0x00000051	A callout shape with arrows pointing left and right. 
msosptUpDownArrowCallout	0x00000052	A callout shape with arrows pointing down and up. 
msosptQuadArrowCallout	0x00000053	A callout shape with arrows pointing down, left, right, and up. 
msosptBevel	0x00000054	A beveled rectangle shape.








		
msosptLeftBracket	0x00000055	An opening bracket shape. 
msosptRightBracket	0x00000056	A closing bracket shape. 
msosptLeftBrace	0x00000057	An opening brace shape. 
msosptRightBrace	0x00000058	A closing brace shape. 
msosptLeftUpArrow	0x00000059	An arrow shape pointing left and up. 
msosptBentUpArrow	0x0000005A	A bent arrow shape with its base on the left, pointing up. 
msosptBentArrow	0x0000005B	A curved arrow shape with its base on the








		<p>bottom, pointing right.</p> 
msosptSeal24	0x0000005C	<p>A seal shape with twenty-four points.</p> 
msosptStripedRightArrow	0x0000005D	<p>A striped arrow shape pointing right.</p> 
msosptNotchedRightArrow	0x0000005E	<p>A notched arrow shape pointing right.</p> 
msosptBlockArc	0x0000005F	<p>A semicircular arc shape.</p> 
msosptSmileyFace	0x00000060	<p>A smiling face shape.</p> 
msosptVerticalScroll	0x00000061	<p>A scroll shape opened vertically.</p> 
msosptHorizontalScroll	0x00000062	<p>A scroll shape opened horizontally.</p>





		
msosptCircularArrow	0x00000063	A semicircular arrow shape. 
msosptNotchedCircularArrow	0x00000064	This value SHOULD NOT be used.
msosptUturnArrow	0x00000065	A semicircular arrow shape with a straight tail. 
msosptCurvedRightArrow	0x00000066	An arrow shape that curves to the right. 
msosptCurvedLeftArrow	0x00000067	An arrow shape that curves to the left. 
msosptCurvedUpArrow	0x00000068	An arrow shape that curves upward. 
msosptCurvedDownArrow	0x00000069	An arrow shape that curves downward.

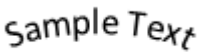
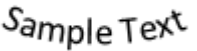


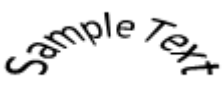


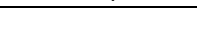
		
msosptCloudCallout	0x0000006A	A cloud-shaped callout. 
msosptEllipseRibbon	0x0000006B	An elliptical ribbon shape. 
msosptEllipseRibbon2	0x0000006C	An elliptical ribbon shape. 
msosptFlowChartProcess	0x0000006D	A process shape for flowcharts. 
msosptFlowChartDecision	0x0000006E	A decision shape for flowcharts. 
msosptFlowChartInputOutput	0x0000006F	An input-output shape for flowcharts. 
msosptFlowChartPredefinedProcess	0x00000070	A predefined process shape for flow charts.




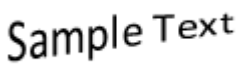
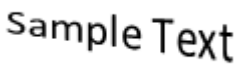



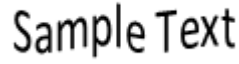

		
msosptFlowChartInternalStorage	0x00000071	An internal storage shape for flowcharts. 
msosptFlowChartDocument	0x00000072	A document shape for flowcharts. 
msosptFlowChartMultidocument	0x00000073	A multidocument shape for flowcharts. 
msosptFlowChartTerminator	0x00000074	A terminator shape for flowcharts. 
msosptFlowChartPreparation	0x00000075	A preparation shape for flowcharts. 
msosptFlowChartManualInput	0x00000076	A manual input shape for flowcharts. 
msosptFlowChartManualOperation	0x00000077	A manual operation shape for flowcharts. 
msosptFlowChartConnector	0x00000078	A connector shape for flowcharts.

		
msosptFlowChartPunchedCard	0x00000079	A punched card shape for flowcharts. 
msosptFlowChartPunchedTape	0x0000007A	A punched tape shape for flowcharts. 
msosptFlowChartSummingJunction	0x0000007B	A summing junction shape for flowcharts. 
msosptFlowChartOr	0x0000007C	An OR shape for flowcharts. 
msosptFlowChartCollate	0x0000007D	A collation shape for flowcharts. 
msosptFlowChartSort	0x0000007E	A sorting shape for flowcharts. 
msosptFlowChartExtract	0x0000007F	An extraction shape for flowcharts.



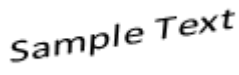
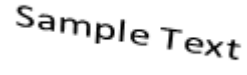
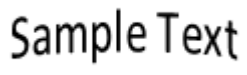

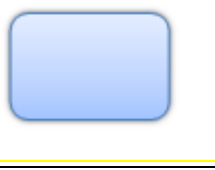

		
msosptFlowChartMerge	0x00000080	A merging shape for flowcharts. 
msosptFlowChartOfflineStorage	0x00000081	An offline storage shape for flowcharts. 
msosptFlowChartOnlineStorage	0x00000082	An online storage shape for flowcharts. 
msosptFlowChartMagneticTape	0x00000083	A magnetic tape shape for flowcharts. 
msosptFlowChartMagneticDisk	0x00000084	A magnetic disk shape for flowcharts. 
msosptFlowChartMagneticDrum	0x00000085	A magnetic drum shape for flowcharts. 
msosptFlowChartDisplay	0x00000086	A display shape for flowcharts.







		
msosptFlowChartDelay	0x00000087	A delay shape for flow charts. 
msosptTextPlainText	0x00000088	A plain text shape. Sample Text
msosptTextStop	0x00000089	An octagonal text shape. sample Text
msosptTextTriangle	0x0000008A	A triangular text shape pointing upwards. sample Text
msosptTextTriangleInverted	0x0000008B	A triangular text shape pointing downwards. Sample Text
msosptTextChevron	0x0000008C	A chevron text shape pointing upwards. Sample Text
msosptTextChevronInverted	0x0000008D	A chevron text shape pointing downwards. Sample Text
msosptTextRingInside	0x0000008E	A circular text shape, as if reading an inscription on the inside of a ring. 
msosptTextRingOutside	0x0000008F	A circular text shape, as if reading an inscription on the outside of a ring. 







msosptTextArchUpCurve	0x00000090	An upward arching curved text shape. 
msosptTextArchDownCurve	0x00000091	A downward arching curved text shape. 
msosptTextCircleCurve	0x00000092	A circular text shape. 
msosptTextButtonCurve	0x00000093	A text shape that resembles a button. 
msosptTextArchUpPour	0x00000094	An upward arching text shape. 
msosptTextArchDownPour	0x00000095	A downward arching text shape. 
msosptTextCirclePour	0x00000096	A circular text shape. 
msosptTextButtonPour	0x00000097	A text shape that resembles a button. 






		
msosptTextCurveUp	0x00000098	An upward curving text shape. 
msosptTextCurveDown	0x00000099	A downward curving text shape. 
msosptTextCascadeUp	0x0000009A	A cascading text shape pointed upwards. 
msosptTextCascadeDown	0x0000009B	A cascading text shape pointed downwards. 
msosptTextWave1	0x0000009C	A wavy text shape. 
msosptTextWave2	0x0000009D	A wavy text shape. 
msosptTextWave3	0x0000009E	A wavy text shape. 
msosptTextWave4	0x0000009F	A wavy text shape. 
msosptTextInflate	0x000000A0	A text shape that expands vertically in the middle. 
msosptTextDeflate	0x000000A1	A text shape that shrinks vertically in the







		middle. Sample Text
msosptTextInflateBottom	0x000000A2	A text shape that expands downward in the middle. Sample Text
msosptTextDeflateBottom	0x000000A3	A text shape that shrinks upwards in the middle. Sample Text
msosptTextInflateTop	0x000000A4	A text shape that expands upward in the middle. sample Text
msosptTextDeflateTop	0x000000A5	A text shape that shrinks downward in the middle. Sample Text
msosptTextDeflateInflate	0x000000A6	A text shape where lower lines expand upward. Upper lines shrink to compensate. Sample Text sample Text
msosptTextDeflateInflateDeflate	0x000000A7	A text shape where lines in the center expand vertically. Upper and lower lines shrink to compensate. Sample Text Sample Text Sample Text
msosptTextFadeRight	0x000000A8	A text shape that shrinks vertically on the right side. Sample Text
msosptTextFadeLeft	0x000000A9	A text shape that shrinks vertically on the left side.

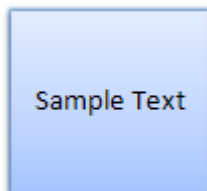
		sample Text
msosptTextFadeUp	0x000000AA	A text shape that shrinks horizontally on top. 
msosptTextFadeDown	0x000000AB	A text shape that shrinks horizontally on bottom. 
msosptTextSlantUp	0x000000AC	An upward slanted text shape. 
msosptTextSlantDown	0x000000AD	A downward slanted text shape. 
msosptTextCanUp	0x000000AE	A text shape that is curved upwards as if being read on the side of a can. 
msosptTextCanDown	0x000000AF	A text shape that is curved downwards as if being read on the side of a can. 
msosptFlowChartAlternateProcess	0x000000B0	An alternate process shape for flow charts. 
msosptFlowChartOffpageConnector	0x000000B1	An off page connector shape for flow charts. 
msosptCallout90	0x000000B2	A callout shape.

		
msosptAccentCallout90	0x000000B3	A callout shape. 
msosptBorderCallout90	0x000000B4	A callout shape with border. 
msosptAccentBorderCallout90	0x000000B5	A callout shape with border. 
msosptLeftRightUpArrow	0x000000B6	A shape with arrows pointing left, right, and up. 
msosptSun	0x000000B7	A sun shape. 
msosptMoon	0x000000B8	A moon shape.

		
msosptBracketPair	0x000000B9	A shape enclosed in brackets. 
msosptBracePair	0x000000BA	A shape enclosed in braces. 
msosptSeal4	0x000000BB	A seal shape with four points. 
msosptDoubleWave	0x000000BC	A double wave shape. 
msosptActionButtonBlank	0x000000BD	A blank button shape. 
msosptActionButtonHome	0x000000BE	A home button shape.

		
msosptActionButtonHelp	0x000000BF	A help button shape. 
msosptActionButtonInformation	0x000000C0	An information button shape. 
msosptActionButtonForwardNext	0x000000C1	A forward or next button shape. 
msosptActionButtonBackPrevious	0x000000C2	A back or previous button shape. 
msosptActionButtonEnd	0x000000C3	An end button shape.

		
msosptActionButtonBeginning	0x000000C4	A beginning button shape. 
msosptActionButtonReturn	0x000000C5	A return button shape. 
msosptActionButtonDocument	0x000000C6	A document button shape. 
msosptActionButtonSound	0x000000C7	A sound button shape. 
msosptActionButtonMovie	0x000000C8	A movie button shape. 

msosptHostControl	0x000000C9	This value SHOULD NOT be used.
msosptTextBox	0x000000CA	A text box shape. 

2.4.25 MSOCXSTYLE

Referenced by: [cxstyle](#)

The **MSOCXSTYLE Enumeration** specifies the type of connector.

Name	Value	Meaning
msocxstyleStraight	0x00000000	A straight connector.
msocxstyleBent	0x00000001	An elbow-shaped connector.
msocxstyleCurved	0x00000002	A curved connector.
msocxstyleNone	0x00000003	No connector.

2.4.26 MSOBWMODE

Referenced by: [bWMode](#), [bWModeBW](#), [bWModePureBW](#)

The **MSOBWMODE Enumeration** specifies how an object should be rendered when specified to be in black-and-white display mode.

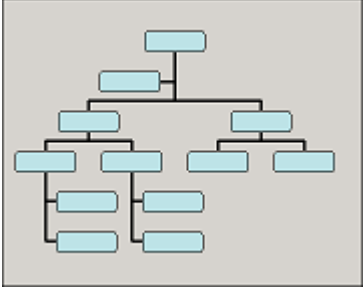
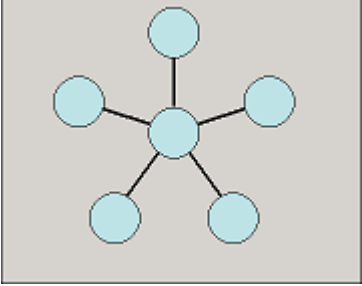
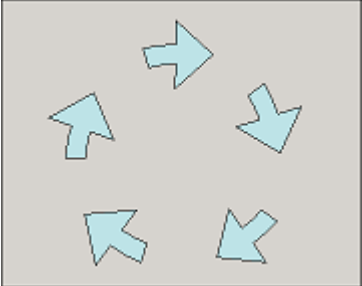
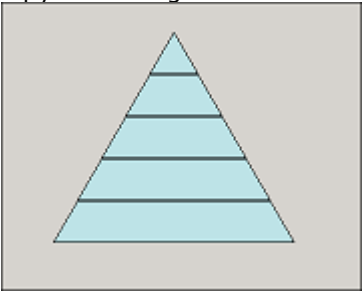

Name	Value	Meaning
msobwColor	0x00000000	Object rendered with normal coloring.
msobwAutomatic	0x00000001	Object rendered with automatic coloring.
msobwGrayScale	0x00000002	Object rendered with gray coloring.
msobwLightGrayScale	0x00000003	Object rendered with light gray coloring.
msobwInverseGray	0x00000004	Object rendered with inverse gray coloring.
msobwGrayOutline	0x00000005	Object rendered with gray and white coloring.
msobwBlackTextLine	0x00000006	Object rendered with black and gray coloring.
msobwHighContrast	0x00000007	Object rendered with black and white coloring.
msobwBlack	0x00000008	Object rendered with black-only coloring.
msobwWhite	0x00000009	Object rendered with white coloring.
msobwDontShow	0x0000000A	Object not rendered.

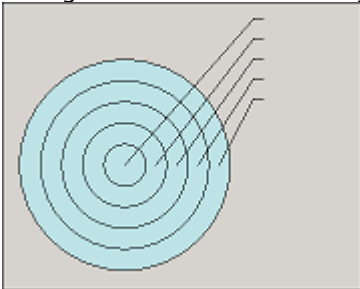
2.4.27 MSODGMT

Referenced by: [dgmt](#)

The **MSODGMT Enumeration** specifies the type of a diagram.

Name	Value	Meaning
msodgmtCanvas	0x00000000	A drawing area for ink and shapes.

msodgmtOrgChart	0x00000001	<p>An organization chart diagram.</p> 
msodgmtRadial	0x00000002	<p>A diagram showing relationships to a central entity.</p> 
msodgmtCycle	0x00000003	<p>A diagram showing a cyclical process.</p> 
msodgmtStacked	0x00000004	<p>A pyramid diagram.</p> 
msodgmtVenn	0x00000005	<p>A Venn diagram.</p> 

msodgmtBullsEye	0x00000006	A diagram with concentric rings. 
-----------------	------------	--

2.4.28 MSODGSLK

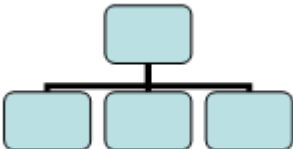
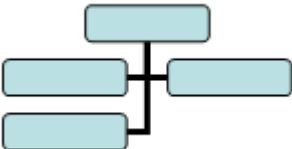
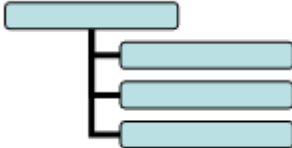
The **MSODGSLK Enumeration** specifies the selection state of the selected shapes.

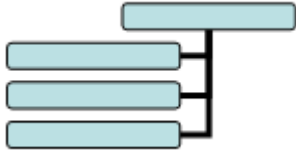

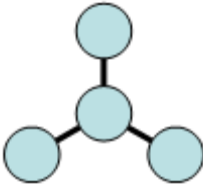
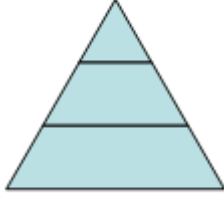

Name	Value	Meaning
msodgslkNormal	0x00000000	The default state.
msodgslkRotate	0x00000001	Ready to rotate.
msodgslkReshape	0x00000002	Ready to change the curvature of line shapes.
msodgslkCrop	0x00000007	Ready to crop the picture.

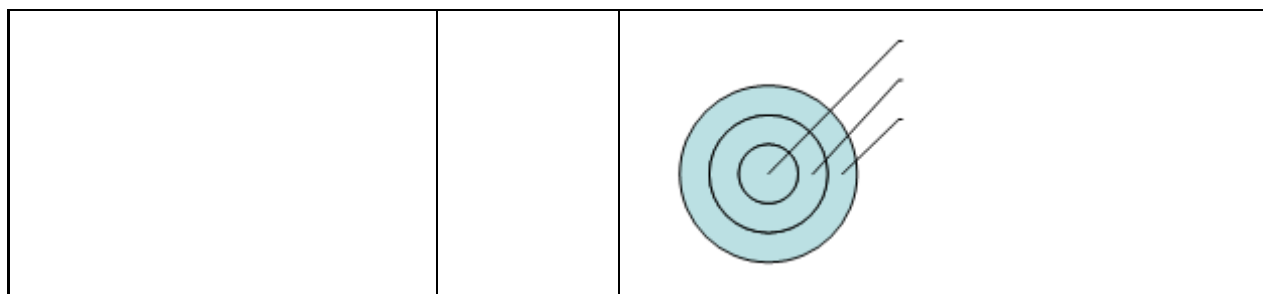
2.4.29 MSODGMLO

Referenced by: [dgmLayout](#), [dgmLayoutMRU](#)

The **MSODGMLO Enumeration** specifies the layout of a shape which is a node in a diagram.

Name	Value	Meaning
msodgmloOrgChartStd	0x00000000	Organizational chart. 
msodgmloOrgChartBothHanging	0x00000001	Organizational chart with child nodes hanging both left and right. 
msodgmloOrgChartRightHanging	0x00000002	Organizational chart with child nodes hanging to the right. 
msodgmloOrgChartLeftHanging	0x00000003	Organizational chart with child nodes hanging to

		<p>the left.</p> 
msodgmloCycleStd	0x00000004	<p>Cycle diagram.</p> 
msodgmloRadialStd	0x00000005	<p>Radial diagram.</p> 
msodgmloStackedStd	0x00000006	<p>Pyramid diagram.</p> 
msodgmloVennStd	0x00000007	<p>Venn diagram.</p> 
msodgmloBullsEyeStd	0x00000008	<p>Target diagram.</p>



2.4.30 MSOPATHTYPE

The **MSOPATHTYPE Enumeration** specifies how the individual pieces of a path SHOULD be interpreted.

Name	Value	Meaning
msopathLineTo	0x00000000	For each POINT in the array, add a straight line segment from the current end POINT to the new POINT . The number of POINT values to process is equal to the number of segments. The last POINT in the array becomes the new end POINT .
msopathCurveTo	0x00000001	For each segment, three POINT values are used to draw a cubic Bezier curve. The first two POINT values are control POINT values and the last POINT is the new end POINT . The number of POINT values consumed is three times the number of segments.
msopathMoveTo	0x00000002	Start a new sub-path using a single POINT . The starting POINT becomes the current end POINT . The value of the segment field MUST be zero. The number of POINT values used is one.
msopathClose	0x00000003	If the starting POINT and the end POINT are not the same a single straight line is drawn to connect the starting POINT and ending POINT of the path. The number of segments MUST be one. The number of POINT values used is zero.
msopathEnd	0x00000004	The end of the current path. All consecutive lines and fill values MUST be drawn before any following path or line is drawn. The number of segments MUST be zero. The number of POINT values used is zero.
msopathEscape	0x00000005	The MSOPATHINFO record is treated as an MSOPATHESCAPEINFO record.
msopathClientEscape	0x00000006	The MSOPATHINFO record is treated as an MSOPATHESCAPEINFO record.

2.4.31 MSOPATHESCAPE

The **MSOPATHESCAPE Enumeration** modifies the path properties by adding elements to a path, providing additional control, or specifying how to handle editing of [POINT](#) data.

Name	Value	Meaning
msopathEscapeExtension	0x00000000	Adds additional POINT values to the escape code that follows msopathEscapeExtension.
msopathEscapeAngleEllipseTo	0x00000001	The first POINT specifies the center of the ellipse.

		The second POINT specifies the starting radius in x and the ending radius in y. The third POINT specifies the starting angle in the x value and the ending angle in the y value. Angles are in degrees. The number of ellipse segments drawn is equal to the number of segments divided by three.
msopathEscapeAngleEllipse	0x00000002	The first POINT specifies the center of the ellipse. The second POINT specifies the starting radius in x and the ending radius in y. The third POINT specifies the starting angle in the x value and the ending angle in the y value. Angles are in degrees. The number of ellipse segments drawn is equal to the number of segments divided by three. The first POINT of the ellipse becomes the first POINT of a new path.
msopathEscapeArcTo	0x00000003	The first two POINT values specify the bounding rectangle of the ellipse. The second two POINT values specify the radial vectors for the ellipse. The radial vectors are cast from the center of the bounding rectangle. The path will start at the POINT where the first radial vector intersects the bounding rectangle to the POINT where the second radial vector intersects the bounding rectangle. The drawing direction is always counterclockwise. If the path has already been started, a line is drawn from the last POINT to the starting POINT of the arc; otherwise a new path is started. The number of arc segments drawn is equal to the number of segments divided by four.
msopathEscapeArc	0x00000004	The first two POINT values specify the bounding rectangle of the ellipse. The second two POINT values specify the radial vectors for the ellipse. The radial vectors are cast from the center of the bounding rectangle. The path will start at the POINT where the first radial vector intersects the bounding rectangle to the POINT where the second radial vector intersects the bounding rectangle. The drawing direction is always counterclockwise. The number of arc segments drawn is equal to the number of segments divided by four.
msopathEscapeClockwiseArcTo	0x00000005	The first two POINT values specify the bounding rectangle of the ellipse. The second two POINT values specify the radial vectors for the ellipse. The radial vectors are cast from the center of the bounding rectangle. The path will start at the POINT where the first radial vector intersects the bounding rectangle to the POINT where the second radial vector intersects the bounding rectangle. The drawing direction is always clockwise. If the path has already been started, a line is drawn from the last POINT to the starting POINT of the arc; otherwise a new path is started. The number of arc segments drawn is

		equal to the number of segments divided by four.
msopathEscapeClockwiseArc	0x00000006	The first two POINT values specify the bounding rectangle of the ellipse. The second two POINT values specify the radial vectors for the ellipse. The radial vectors are cast from the center of the bounding rectangle. The path will start at the POINT where the first radial vector intersects the bounding rectangle to the POINT where the second radial vector intersects the bounding rectangle. The drawing direction is always clockwise. The number of arc segments drawn is equal to the number of segments divided by four. This escape code always starts a new path.
msopathEscapeEllipticalQuadrantX	0x00000007	Add an ellipse to the path from the current POINT to the next POINT starting. The ellipse is drawn as a quadrant that starts as a tangent to the X axis. Multiple elliptical quadrants are joined by a straight line. The number of elliptical quadrants drawn is equal to the number of segments.
msopathEscapeEllipticalQuadrantY	0x00000008	Add an ellipse to the path from the current POINT to the next POINT starting. The ellipse is drawn as a quadrant that starts as a tangent to the Y axis. Multiple elliptical quadrants are joined by a straight line. The number of elliptical quadrants drawn is equal to the number of segments.
msopathEscapeQuadraticBezier	0x00000009	Each POINT defines a control point for a quadratic Bezier curve. The number of control POINT values is defined by the segments parameter.
msopathEscapeNoFill	0x0000000A	The path SHOULD <123> not be filled, even if passed to a rendering routine that would normally fill the path.
msopathEscapeNoLine	0x0000000B	The path SHOULD <124> not be drawn, even if passed to a rendering routine that would normally draw the path.
msopathEscapeAutoLine	0x0000000C	For Bezier curve editing, vertex joints are calculated, are equal lengths, and are collinear. The segment after the POINT is a line. The tangent is not visible.
msopathEscapeAutoCurve	0x0000000D	For Bezier curve editing, vertex joints are calculated, are equal lengths, and are collinear. The segment after the POINT is a curve. The tangent is not visible.
msopathEscapeCornerLine	0x0000000E	For Bezier curve editing, vertex joints are not calculated, are not equal lengths, and are not collinear. The segment after the POINT is a line. The tangent is visible.
msopathEscapeCornerCurve	0x0000000F	For Bezier curve editing, vertex joints are not calculated, are not equal lengths, and are not collinear. The segment after the POINT is a curve. The tangent is visible.

msopathEscapeSmoothLine	0x00000010	For Bezier curve editing, vertex joints are not calculated, are not equal lengths, and are not collinear. The segment after the POINT is a line. The tangent is visible.
msopathEscapeSmoothCurve	0x00000011	For Bezier curve editing, vertex joints are not calculated, are not equal lengths, and are not collinear. The segment after the POINT is a curve. The tangent is visible.
msopathEscapeSymmetricLine	0x00000012	For Bezier curve editing, vertex joints are not calculated, are equal lengths, and are not collinear. The segment after the POINT is a line. The tangent is visible.
msopathEscapeSymmetricCurve	0x00000013	For Bezier curve editing vertex joints are not calculated, are equal lengths, and are not collinear. The segment after the POINT is a curve. The tangent is visible.
msopathEscapeFreeform	0x00000014	For Bezier curve editing, vertex joints are calculated, are equal lengths and are collinear. The tangent is not visible.
msopathEscapeFillColor	0x00000015	Sets a new fill color. A single POINT is used to represent the colors. X is an OfficeArtCOLORREF that specifies the new foreground color. Y is an OfficeArtCOLORREF that specifies the new background color.
msopathEscapeLineColor	0x00000016	Sets a new line drawing color. A single POINT is used to represent the colors. X is an OfficeArtCOLORREF that specifies the new foreground color. Y is an OfficeArtCOLORREF that specifies the new background color.

2.5 Algorithms

2.5.1 Information Data for VtHyperlink

The following algorithm specifies how hyperlink properties ([\[MS-OSHARED\] section 2.3.3.1.18](#)) that are associated with OfficeArt shapes construct their **dwInfo** structure member value.

If the hyperlink defines a link that is associated with the shape itself, the **dwInfo** value MUST be 0x00000004.

If the hyperlink defines a URL (Uniform Resource Locator) path to an image resource that specifies the background image of the document, the **dwInfo** value MUST be 0x00000000.

If the hyperlink defines a URL (Uniform Resource Locator) path to an image resource that specifies the foreground graphic displayed for the shape, the **dwInfo** value MUST be 0x00000001.

If the hyperlink defines a URL (Uniform Resource Locator) path to an image resource that specifies the fill graphic for the shape, the **dwInfo** value MUST be 0x00000002.

If the hyperlink defines a URL (Uniform Resource Locator) path to an image resource that specifies the graphic used for the shape outline, the **dwInfo** value MUST be 0x00000003.

3 Structure Examples

The following section provides structure examples for different features of the Microsoft Office Drawing Binary File Format.

3.1 Introduction

The following example structures are derived from sample files created using Microsoft® Office PowerPoint® 2003. The example structures are similar in Office applications, but may vary slightly for records and fields that are defined by the client application.

3.2 Diagram Example

This section provides an example of the record hierarchy within a drawing container that specifies the structure of a diagram. This example section will outline some of the records that define the structure and properties specific to the following list of Microsoft® Office 97, Microsoft® Office 2000, Microsoft® Office XP, and Microsoft® Office 2003 drawing objects:

- Basic Shapes
 - Shape Fill and Color
 - Shape Outline
 - Shape Position
 - Shape Grouping
- Text
- Diagram type, Layout, and Protection
- Connector Lines

The diagram image shown in the following figure represents a basic org-chart diagram consisting of a top level shape, assistant shape, coworker shapes and a subordinate shape. All shapes in the diagram contain text, a fill color and a shape outline. All shapes are connected with lines called connectors.

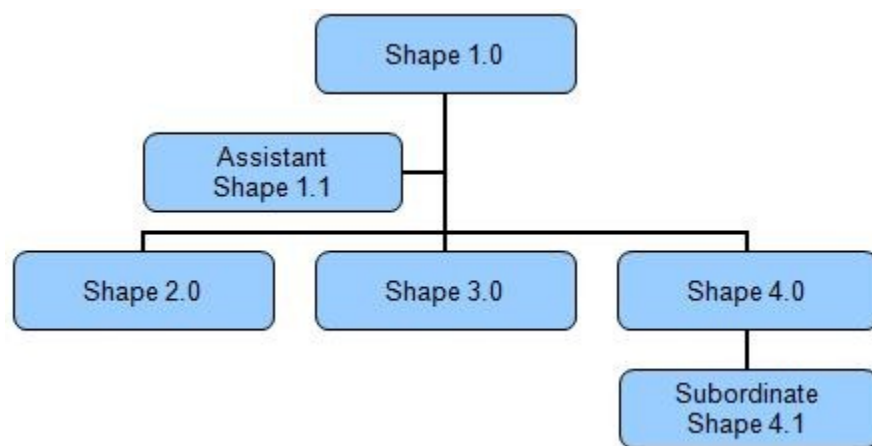


Figure 19: Basic org chart

The following structure examples show the record hierarchy used to define a diagram and the shapes used to construct a diagram. Definitions for some of the record types, properties, and fields shown in the following structure examples are only explained once, but may appear in multiple example sections. Refer to [Section 2: Structures](#) for detailed specifications of each record mentioned in these examples.

3.2.1 DrawingContainer

All records used to construct the multiple parts of a diagram are stored in the drawing container. The drawing container is defined by the host application and may be named differently in the file format of the host application.

The child-record hierarchy of the DrawingContainer record named “drawing” is shown in the following figure. This example focuses on the four top level containers labeled 1, 2, 3 and 4 within the [OfficeArtDgContainer](#) record.

Offset	Size	Structure
00000D6F	0A7E	DrawingContainer - drawing
00000D6F	0008	RecordHeader - rh
00000D77	0A76	OfficeArtDgContainer - OfficeArtDg
00000D77	0008	OfficeArtRecordHeader - rh
00000D7F	0010	① OfficeArtFDG - drawingData
00000D8F	0966	② OfficeArtSpgrContainer - groupShape
000016F5	0050	③ OfficeArtSpContainer - shape
00001745	00A8	④ OfficeArtSolverContainer - solvers

Figure 20: “DrawingContainer” child-record hierarchy

The top level records of the drawing containers are specified as follows:

drawing: The drawing container contains an [OfficeArtRecordHeader](#) record and a top level [OfficeArtDgContainer](#) drawing container.

OfficeArtDg: The [OfficeArtDgContainer](#) contains all per-slide, document and sheet information, including the shapes.

OfficeArtDg.drawingData: The [OfficeArtFDG](#) record contains information about the shape count, drawing identifier, and shape identifier of the last shape in a drawing.

OfficeArtDg.groupShape: This is a container for groups of shapes. The group container contains a variable number of shape containers and other group containers. The group itself is a shape.

OfficeArtDg.shape: The [OfficeArtSpContainer](#) is a container for shapes.

OfficeArtDg.solvers: The [OfficeArtSolverContainer](#) is a container for rules applicable to shapes.

The containers shown in Figure 20 labeled 1, 2, 3 and 4 will be described in more detail in the following four example structures.

3.2.2 OfficeArtFDG

The child-record hierarchy of the [OfficeArtFDG](#) container record 1 from Figure 20 is shown in the following figure.

Offset	Size	Structure	Value
00000D7F	0010	1 OfficeArtFDG - drawingData	
00000D7F	0008	OfficeArtRecordHeader - rh	
00000D7F	4 bits	bit - recVer	0x0
00000D7F	12 bits	bit - recInstance	0x002
00000D81	0002	USHORT - recType	0xF008
00000D83	0004	DWORD - recLen	0x00000008
00000D87	0004	ULONG - csp	0x0000000E
00000D8B	0004	ULONG - spidCur	0x00000818

Figure 21: OfficeArtFDG container 1 child-record hierarchy

The records contained within [OfficeArtFDG](#) container 1 are specified as follows:

rh: An [OfficeArtRecordHeader](#) which describes the record data. This 8 byte header contains the record type, the record length, and if it is an atom type, a version identifier.

rh.recVer: 0x0 specifies the version if the record is an atom. If the record is a container, this field would have a value of 0xF.

rh.recInstance: 0x002 specifies how to differentiate atoms contained in the record. The instance of a record is useful for differentiating atoms when there is more than one atom of the same type in a particular container.

rh.recType: 0xF008 specifies the signature or type of the record. OfficeArt uses values from 0xF000 to 0xFFFF. Clients may define their own records in other ranges.

rh.recLen: 0x00000008 specifies the length of the record in bytes. If the record is an atom, it specifies the length of the atom excluding the header. If the record is a container, it specifies the sum of the lengths of the atoms it contains, plus the length of each record header for each atom.

csp: 0x0000000E specifies the number of shapes in this drawing.

spidCur: 0x00000818 specifies the shape identifier of the last shape in this drawing.

3.2.3 OfficeArtSpgrContainer

The child-record hierarchy of the [OfficeArtSpgrContainer](#) container record 2 from Figure 20 is shown in the following figure.

Offset	Size	Structure
0000D8F	0966	2 OfficeArtSpgrContainer - groupShape
0000D8F	0008	OfficeArtRecordHeader - rh
0000D97	095E	OfficeArtSpgrContainerFileBlockArray - rgfb
0000D97	0030	A OfficeArtSpgrContainerFileBlock - OfficeArtSpgrContainerFB
0000DC7	092E	OfficeArtSpgrContainerFileBlock - OfficeArtSpgrContainerFB
0000DC7	092E	OfficeArtSpgrContainer - case_of_msofbtSpgrContainer
0000DC7	0008	OfficeArtRecordHeader - rh
0000DCF	0926	OfficeArtSpgrContainerFileBlockArray - rgfb
0000DCF	00EA	B OfficeArtSpgrContainerFileBlock - OfficeArtSpgrContainerFB
0000EB9	005C	C OfficeArtSpgrContainerFileBlock - OfficeArtSpgrContainerFB
0000F15	007C	D OfficeArtSpgrContainerFileBlock - OfficeArtSpgrContainerFB
0000F91	0076	OfficeArtSpgrContainerFileBlock - OfficeArtSpgrContainerFB
0001007	007C	OfficeArtSpgrContainerFileBlock - OfficeArtSpgrContainerFB
0001083	007C	OfficeArtSpgrContainerFileBlock - OfficeArtSpgrContainerFB
00010FF	007C	OfficeArtSpgrContainerFileBlock - OfficeArtSpgrContainerFB
000117B	00EB	E OfficeArtSpgrContainerFileBlock - OfficeArtSpgrContainerFB
0001266	00E5	F OfficeArtSpgrContainerFileBlock - OfficeArtSpgrContainerFB
000134B	00E5	OfficeArtSpgrContainerFileBlock - OfficeArtSpgrContainerFB
0001430	00E5	G OfficeArtSpgrContainerFileBlock - OfficeArtSpgrContainerFB
0001515	00EF	OfficeArtSpgrContainerFileBlock - OfficeArtSpgrContainerFB
0001604	00F1	OfficeArtSpgrContainerFileBlock - OfficeArtSpgrContainerFB

Figure 22: OfficeArtSpgrContainer container 2 child-record hierarchy

Record types within [OfficeArtSpgrContainer](#) container 2 that are not already discussed in previous structure examples are specified as follows:

rgfb: An array of [OfficeArtSpgrContainerFileBlock](#) records that specifies groups or shapes contained within this group.

rgfb.OfficeArtSpgrContainerFB: This record specifies a container for groups of shapes. The group container contains a variable number of shape containers and other group containers. Each group is a shape.

Records labeled A, B, C, D, E, F, and G from container 2 in Figure 22 are shown in more detail in the following seven structure examples.

The child-record hierarchy of the [OfficeArtSpgrContainerFileBlock](#) record A from Figure 22 is shown in the following figure.

Offset	Size	Structure	Value
00000D97	0030	A OfficeArtSpgrContainerFileBlock - OfficeArtSpgrContainerFB	
00000D97	0030	OfficeArtSpContainer - case_of_msofibtSpContainer	
00000D97	0008	OfficeArtRecordHeader - rh	
00000D9F	0018	OfficeArtFSPGR - shapeGroup	
00000D9F	0008	OfficeArtRecordHeader - rh	
00000DA7	0010	OfficeArtFRC - frc	
00000DA7	0004	LONG - xLeft	0x00000000
00000DAB	0004	LONG - yTop	0x00000000
00000DAF	0004	LONG - xRight	0x00000000
00000DB3	0004	LONG - yBottom	0x00000000
00000DB7	0010	H OfficeArtFSP - shapeProp	

Figure 23: OfficeArtSpgrContainerFileBlock record A child-record hierarchy

Record types within [OfficeArtSpgrContainerFileBlock](#) record A not already discussed in previous structure examples are specified as follows:

case_of_msofibtSpContainer.shapeGroup.frc: This record specifies the coordinate system of the group shape, which the anchors of the child shape are expressed in. This structure is only present in group shapes.

case_of_msofibtSpContainer.shapeGroup.frc.xLeft: 0x00000000 specifies the left boundary of the group's coordinate system.

case_of_msofibtSpContainer.shapeGroup.frc.yTop: 0x00000000 specifies the top boundary of the group's coordinate system.

case_of_msofibtSpContainer.shapeGroup.frc.xRight: 0x00000000 specifies the right boundary of the group's coordinate system.

case_of_msofibtSpContainer.shapeGroup.frc.yBottom: 0x00000000 specifies the bottom boundary of the group's coordinate system.

case_of_msofibtSpContainer.shapeProp: The [OfficeArtFSP](#) record contains an instance of a shape. The record header contains the shape type, and the record itself contains the shape identifier and a set of bits that further define the shape.

The child-record hierarchy of the [OfficeArtFSP](#) record H from Figure 23 is shown in the following figure.

Offset	Size	Structure	Value
00000DB7	0010	H OfficeArtFSP - shapeProp	
00000DB7	0008	OfficeArtRecordHeader - rh	
00000DBF	0004	ULONG - spid	0x00000800
00000DC3	1 bit	bit - fGroup	0x1
00000DC3	1 bit	bit - fChild	0x0
00000DC3	1 bit	bit - fPatriarch	0x1
00000DC3	1 bit	bit - fDeleted	0x0
00000DC3	1 bit	bit - fOleShape	0x0
00000DC3	1 bit	bit - fHaveMaster	0x0
00000DC3	1 bit	bit - fFlipH	0x0
00000DC3	1 bit	bit - fFlipV	0x0
00000DC3	1 bit	bit - fConnector	0x0
00000DC3	1 bit	bit - fHaveAnchor	0x0
00000DC3	1 bit	bit - fBackground	0x0
00000DC3	1 bit	bit - fHaveSpt	0x0
00000DC3	20 bits	bit - unused1	0x00000

Figure 24: OfficeArtFSP record H child-record hierarchy

Record types within [OfficeArtFSP](#) record H that are not already discussed in previous structure examples are specified as follows:

spid: 0x00000800 specifies the identifier of this shape.

fGroup: 0x1 specifies this shape is a group shape.

fChild: 0x0 specifies this shape is not a [child](#) shape.

fPatriarch: 0x1 specifies this shape is the topmost group shape. There is exactly one of these per drawing.

fDeleted: 0x0 specifies this shape has not been deleted.

fOleShape: 0x0 specifies this shape is not an OLE object.

fHaveMaster: 0x0 specifies this shape does not have a valid master in the [hspMaster](#) property.

fFlipH: 0x0 specifies this shape is not flipped horizontally.

fFlipV: 0x0 specifies this shape is not flipped vertically.

fConnector: 0x0 specifies this shape is not a connector shape.

fHaveAnchor: 0x0 specifies this shape does not have an anchor.

fBackground: 0x0 specifies this shape is not a background shape.

fHaveSpt: 0x0 specifies this shape does not have a shape type property.

unused1: This value is undefined and MUST be ignored.

The child-record hierarchy of the [OfficeArtSpgrContainerFileBlock](#) record B from Figure 22 is shown in the following figure.

Offset	Size	Structure	Value
00000DCF	00EA	B OfficeArtSpgrContainerFileBlock - OfficeArtSpgrContainerFB	
00000DCF	00EA	OfficeArtSpContainer - case_of_msofibtSpContainer	
00000DCF	0008	OfficeArtRecordHeader - rh	
00000DD7	0018	OfficeArtFSPGR - shapeGroup	
00000DEF	0010	OfficeArtFSP - shapeProp	
00000DFF	000E	OfficeArtFOPT - shapePrimaryOptions	
00000E0D	009C	OfficeArtTertiaryFOPT - shapeTertiaryOptions	
00000E0D	0008	OfficeArtRecordHeader - rh	
00000E15	0094	OfficeArtRGFOPT - fopt	
00000E15	0006	dgmt - Diagram Type	
00000E15	0002	OfficeArtFOPT - opid	
00000E17	0004	MSODGMT - dgmt	0x00000001
00000E1B	0006	dgmStyle - Diagram Style	
00000E1B	0002	OfficeArtFOPT - opid	
00000E1D	0004	LONG - dgmStyle	0x00000000
00000E21	0006	pRelationTbl - Diagram Shape Relationship	
00000E21	0002	OfficeArtFOPT - opid	
00000E23	0004	ULONG - pRelationTbl	0x0000004E
00000E27	0006	dgmScaleX - Diagram ScaleX	
00000E27	0002	OfficeArtFOPT - opid	
00000E29	0004	FixedPoint - dgmScaleX	0x00013333
00000E2D	0006	dgmScaleY - Diagram ScaleY	
00000E2D	0002	OfficeArtFOPT - opid	
00000E2F	0004	FixedPoint - dgmScaleY	0x00011748
00000E33	0006	dgmDefaultFontSize - Diagram Default Font Size	
00000E33	0002	OfficeArtFOPT - opid	
00000E35	0004	LONG - dgmDefaultFontSize	0x0000000D
00000E39	0006	dgmConstrainBounds - Diagram Bounds	
00000E39	0002	OfficeArtFOPT - opid	
00000E3B	0004	ULONG - dgmConstrainBounds	0x00000016
00000E3F	0006	I Diagram Boolean Properties - Diagram Boolean	
00000E45	004E	J pRelationTbl_complex - Diagram Shape Relationship Data	
00000E93	0016	K dgmConstrainBounds_complex - Diagram Bounds Data	
00000EA9	0010	OfficeArtClientAnchor - clientAnchor	

Figure 25: OfficeArtSpgrContainerFileBlock record H child-record hierarchy

Record types within [OfficeArtSpgrContainerFileBlock](#) record B that are not already discussed in previous structure examples are specified as follows:

case_of_msofbtSpContainer.shapeTertiaryOptions: The [OfficeArtTertiaryFOPT](#) record contains a table of [OfficeArtRGFOPT](#) properties.

case_of_msofbtSpContainer.shapeTertiaryOptions.fopt.Diagram Type.opid: The [OfficeArtFOPTTEOPID](#) record specifies the header for an entry in a property table.

case_of_msofbtSpContainer.shapeTertiaryOptions.fopt.Diagram Type.dgmt: 0x00000001 specifies this diagram type is an organization chart diagram.

case_of_msofbtSpContainer.shapeTertiaryOptions.fopt.Diagram Style: This property specifies a diagram style.

case_of_msofbtSpContainer.shapeTertiaryOptions.fopt.Diagram Style.dgmStyle: 0x00000000 specifies this diagram is the Default style.

case_of_msofbtSpContainer.shapeTertiaryOptions.fopt.Diagram Shape Relationship: The [pRelationTbl](#) property specifies relationships in a diagram.

case_of_msofbtSpContainer.shapeTertiaryOptions.fopt.Diagram Shape Relationship.pRelationTbl: 0x0000004E specifies the number of bytes of data in the [pRelationTbl](#) [complex](#) property.

case_of_msofbtSpContainer.shapeTertiaryOptions.fopt.Diagram ScaleX: This property specifies the amount to scale along the X axis.

case_of_msofbtSpContainer.shapeTertiaryOptions.fopt.Diagram ScaleX.dgmScaleX: 0x00013333 specifies the amount to scale along the X axis.

case_of_msofbtSpContainer.shapeTertiaryOptions.fopt.Diagram ScaleY: This property specifies the amount to scale along the Y axis.

case_of_msofbtSpContainer.shapeTertiaryOptions.fopt.Diagram ScaleY.dgmScaleY: 0x00011748 specifies the amount to scale along the Y axis.

case_of_msofbtSpContainer.shapeTertiaryOptions.fopt.Diagram Default Font Size: This property specifies the default font size for new text in this diagram.

case_of_msofbtSpContainer.shapeTertiaryOptions.fopt.Diagram Default Font Size.dgmDefaultFontSize: 0x0000000D specifies the default font size in points for new text in this diagram.

case_of_msofbtSpContainer.shapeTertiaryOptions.fopt.Diagram Bounds: The [dgmConstrainBounds](#) property specifies the bounds of this diagram.

case_of_msofbtSpContainer.shapeTertiaryOptions.fopt.Diagram Bounds.dgmConstrainBounds: 0x00000016 specifies the number of bytes of data in the [dgmConstrainBounds](#) [complex](#) property.

case_of_msofbtSpContainer.shapeTertiaryOptions.fopt.Diagram Boolean: Specifies a 32-bit field of boolean properties for a diagram.

case_of_msofbtSpContainer.shapeTertiaryOptions.fopt.Diagram Shape Relationship Data: The [pRelationTbl](#) [complex](#) property specifies additional data for [pRelationTbl](#).

case_of_msofbtSpContainer.shapeTertiaryOptions.fopt.Diagram Bounds Data: The [dgmConstrainBounds](#) [complex](#) property specifies additional data for [dgmConstrainBounds](#).

Records labeled I, J, and K from [OfficeArtSpgrContainerFileBlock](#) record B in Figure 25 are shown in more detail in the following three example structures.

The child-record hierarchy of the [Diagram Boolean Properties](#) record I from Figure 25 is shown in the following figure.

Offset	Size	Structure	Value
00000E3F	0006	I Diagram Boolean Properties - Diagram Boolean Properties	
00000E3F	0002	OfficeArtFOPTePID - opid	
00000E3F	14 bits	bit - opid	0x053F
00000E3F	1 bit	bit - fBid	0x0
00000E3F	1 bit	bit - fComplex	0x0
00000E41	1 bit	bit - fPseudoInline	0x0
00000E41	1 bit	bit - fDoLayout	0x0
00000E41	1 bit	bit - fReverse	0x0
00000E41	1 bit	bit - fDoFormat	0x0
00000E41	1 bit	bit - unused1	0x0
00000E41	1 bit	bit - unused2	0x0
00000E41	10 bits	bit - unused3	0x000
00000E41	1 bit	bit - fUsefPseudoInline	0x0
00000E41	1 bit	bit - fUsefDoLayout	0x0
00000E41	1 bit	bit - fUsefReverse	0x0
00000E41	1 bit	bit - fUsefDoFormat	0x1
00000E41	1 bit	bit - unused4	0x0
00000E41	1 bit	bit - unused5	0x0
00000E41	10 bits	bit - unused6	0x000

Figure 26: Diagram Boolean Properties record I child-record hierarchy

The [Diagram Boolean Properties](#) listed in record I shown in Figure 26 are specific to Diagrams. Record types within the [Diagram Boolean Properties](#) record I that are not already discussed in previous structure examples are specified as follows:

opid.opid: 0x053F specifies the identifier of the property in this entry.

opid.fBid: 0x0 specifies the value in the **op** field is not a BLIP identifier.

opid.fComplex: 0x0 specifies this property is not a complex property.

fPseudoInline: 0x0 specifies this diagram is not placed in line with surrounding text.

fDoLayout: 0x0 specifies this diagram has a layout that is directly editable.

fReverse: 0x0 specifies this diagram is not mirrored horizontally.

fDoFormat: 0x0 specifies that the [dgmStyle](#) property for this diagram is a default formatting style for this diagram type.

fUsefPseudoInline: 0x0 specifies that the **fPseudoInline** bit MUST be ignored.

fUsefDoLayout: 0x0 specifies that the **fDoLayout** bit MUST be ignored.

fUsefReverse: 0x0 specifies that the **fReverse** bit MUST be ignored.

fUsefDoFormat: 0x1 specifies that the **fDoFormat** bit has been set.

The child-record hierarchy of the [pRelationTbl_complex](#) record J from Figure 25 is shown in the following figure.

Offset	Size	Structure	Value
00000E45	004E	J pRelationTbl_complex - Diagram Shape Relationship Data	
00000E45	004E	IMsoArray - pRelationTbl	
00000E45	0002	USHORT - nElems	0x0006
00000E47	0002	USHORT - nElemsAlloc	0x0008
00000E49	0002	USHORT - cbElem	0x000C
00000E4B	0048	Blob - data 40 95 09 97 40 95 09 97 00 00 00 00 EB CE CB F8 40 95 09 97	

Figure 27: pRelationTbl_complex record J child-record hierarchy

Record types within [pRelationTbl_complex](#) record J that are not already discussed in previous structure examples are specified as follows:

pRelationTbl: This [IMsoArray](#) record specifies relationships in a diagram. Each array element is a connection between two shapes.

pRelationTbl.nElems: 0x0006 specifies the number of elements contained in this record. As shown in Figure 19, there are six shapes in this diagram.

pRelationTbl.nElemsAlloc: 0x0008 specifies the maximum number of elements this record can contain.

pRelationTbl.cbElem: 0x000C specifies the size in bytes of each element in **data**.

pRelationTbl.data: 40 95 09 97 40 95 09 97 00 00 00 00 EB CE CB F8 40 95 09 97 28 9D E6 D3 01 A4 12 8E 40 95 09 97 4C DA BC 3B C2 F7 3F A5 40 95 09 97 0D EB A7 22 83 C6 24 BC 40 95 09 97 AA FF D0 E1 8E A9 77 40 83 C6 24 BC 4D FA 5A 6B specifies an array that contains **nElems** elements, each of which is **cbElem** bytes in size.

The child-record hierarchy of the [dgmConstrainBounds_complex](#) record K from Figure 25 is shown in the following figure.

Offset	Size	Structure	Value
00000E93	0016	K dgmConstrainBounds_complex - Diagram Bounds Data	
00000E93	0016	IMsoArray - dgmConstrainBounds	
00000E93	0002	USHORT - nElems	0x0004
00000E95	0002	USHORT - nElemsAlloc	0x0004
00000E97	0002	USHORT - cbElem	0x0004
00000E99	0010	Blob - data 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00	

Figure 28: dgmConstrainBounds_complex record K child-record hierarchy

Record types within [dgmConstrainBounds_complex](#) record K that are not already discussed in previous structure examples are specified as follows:

dgmConstrainBounds: The four elements of this [IMsoArray](#) specify in order the left, top, right, and bottom bounds of the diagram in application defined coordinates.

The child-record hierarchy of the [OfficeArtSpgrContainerFileBlock](#) record C from Figure 22 is shown in the following figure.

Offset	Size	Structure	Value
00000EB9	005C	C OfficeArtSpgrContainerFileBlock - OfficeArtSpgrContainerFB	
00000EB9	005C	OfficeArtSpContainer - case_of_msofibtSpContainer	
00000EB9	0008	OfficeArtRecordHeader - rh	
00000EC1	0010	L OfficeArtFSP - shapeProp	
00000ED1	002C	OfficeArtFOPT - shapePrimaryOptions	
00000ED1	0008	OfficeArtRecordHeader - rh	
00000ED9	0024	OfficeArtRGFOPT - fopt	
00000ED9	0006	M Protection Boolean Properties - Protection Boolean	
00000EDF	0006	cxk - Shape Connection Points	
00000EDF	0002	OfficeArtFOPT - opid	
00000EE1	0004	MSOCXK - cxk	0x00000000
00000EE5	0006	N Geometry Boolean Properties - Geometry Boolean	
00000EEB	0006	O Fill Style Boolean Properties - Fill Style Boolean	
00000EF1	0006	P Line Style Boolean Properties - Line Style Boolean	
00000EF7	0006	Q Shape Boolean Properties - Shape Boolean Properties	
00000EFD	0018	R OfficeArtChildAnchor - childAnchor	

Figure 29: OfficeArtSpgrContainerFileBlock record C child-record hierarchy

Record types within [OfficeArtSpgrContainerFileBlock](#) record C that are not already discussed in previous structure examples are specified as follows:

case_of_msofibtSpContainer.shapePrimaryOptions.fopt.Protection Boolean: A 32-bit field that aggregates Boolean values to prevent editing of certain shape properties.

case_of_msofibtSpContainer.shapePrimaryOptions.fopt.Shape Connection Points: An [MSOCXK](#) enumeration value that specifies where the connection points are on the shape.

case_of_msofibtSpContainer.shapePrimaryOptions.fopt.Shape Connection Points.cxk: 0x00000000 specifies this shape has no connection points.

case_of_msofibtSpContainer.shapePrimaryOptions.fopt.Geometry Boolean: This property specifies a 32-bit field that aggregates the Boolean values for geometry properties of the shape.

case_of_msofibtSpContainer.shapePrimaryOptions.fopt.Fill Style Boolean: This property specifies a 32-bit field that aggregates the Boolean properties of the fill style.

case_of_msofibtSpContainer.shapePrimaryOptions.fopt.Line Style Boolean: A 32-bit field that aggregates the Boolean properties of the line style.

case_of_msofibtSpContainer.shapePrimaryOptions.fopt.Shape Boolean Properties: This property specifies a 32-bit field that aggregates Boolean properties for a shape.

case_of_msofibtSpContainer.childAnchor: This record specifies four signed integers that specify the anchor for the shape that contains this record. This record is only present when the containing shape is a member of a group of shapes. These values specify the offset from the origin of the coordinate system specified by the [OfficeArtFSPGR](#) contained in the same [OfficeArtSpgrContainer](#)

that contains this record. These values are in units of the coordinate system specified by the same [OfficeArtFSPGR](#).

Records labeled L, M, N, O, P, Q, and R from [OfficeArtSpgrContainerFileBlock](#) record C in Figure 29 are shown in more detail in the following seven example structures.

The child-record hierarchy of the [OfficeArtFSP](#) record L from Figure 29 is shown in the following figure.

Offset	Size	Structure	Value
00000EC1	0010	L OfficeArtFSP - shapeProp	
00000EC1	0008	OfficeArtRecordHeader - rh	
00000EC9	0004	ULONG - spid	0x00000804
00000ECD	1 bit	bit - fGroup	0x0
00000ECD	1 bit	bit - fChild	0x1
00000ECD	1 bit	bit - fPatriarch	0x0
00000ECD	1 bit	bit - fDeleted	0x0
00000ECD	1 bit	bit - fOleShape	0x0
00000ECD	1 bit	bit - fHaveMaster	0x0
00000ECD	1 bit	bit - fFlipH	0x0
00000ECD	1 bit	bit - fFlipV	0x0
00000ECD	1 bit	bit - fConnector	0x0
00000ECD	1 bit	bit - fHaveAnchor	0x1
00000ECD	1 bit	bit - fBackground	0x0
00000ECD	1 bit	bit - fHaveSpt	0x1
00000ECD	20 bits	bit - unused1	0x00000

Figure 30: OfficeArtFSP record L child-record hierarchy

The records listed in [OfficeArtFSP](#) record L shown in Figure 30 are similar to the [OfficeArtFSP](#) record H shown in Figure 24, but represent a different shape in the diagram. The difference can be seen in the **fChild** and **fPatriarch** values. In [OfficeArtFSP](#) record H the **fChild** value is 0x0 specifying that it is not a child shape, and the **fPatriarch** value is 0x1 specifying that it is the top most shape. The values shown for **fChild** and **fPatriarch** in [OfficeArtFSP](#) record L specify that the shape is a child shape and that it is not the top most shape.

The child-record hierarchy of the [Protection Boolean Properties](#) record M from Figure 29 is shown in the following figure.

Offset	Size	Structure	Value
00000ED9	0006	M Protection Boolean Properties - Protection Boolean Properties	
00000ED9	0002	OfficeArtFOPTePID - opid	
00000ED9	14 bits	bit - opid	0x007F
00000ED9	1 bit	bit - fBid	0x0
00000ED9	1 bit	bit - fComplex	0x0
00000EDB	1 bit	bit - fLockAgainstGrouping	0x0
00000EDB	1 bit	bit - fLockAdjustHandles	0x0
00000EDB	1 bit	bit - fLockText	0x1
00000EDB	1 bit	bit - fLockVertices	0x0
00000EDB	1 bit	bit - fLockCropping	0x0
00000EDB	1 bit	bit - fLockAgainstSelect	0x0
00000EDB	1 bit	bit - fLockPosition	0x0
00000EDB	1 bit	bit - fLockAspectRatio	0x0
00000EDB	1 bit	bit - fLockRotation	0x0
00000EDB	1 bit	bit - fLockAgainstUngrouping	0x0
00000EDB	6 bits	bit - unused1	0x00
00000EDB	1 bit	bit - fUsefLockAgainstGrouping	0x0
00000EDB	1 bit	bit - fUsefLockAdjustHandles	0x0
00000EDB	1 bit	bit - fUsefLockText	0x1
00000EDB	1 bit	bit - fUsefLockVertices	0x0
00000EDB	1 bit	bit - fUsefLockCropping	0x0
00000EDB	1 bit	bit - fUsefLockAgainstSelect	0x0
00000EDB	1 bit	bit - fUsefLockPosition	0x0
00000EDB	1 bit	bit - fUsefLockAspectRatio	0x0
00000EDB	1 bit	bit - fUsefLockRotation	0x0
00000EDB	1 bit	bit - fUsefLockAgainstUngrouping	0x0
00000EDB	6 bits	bit - unused2	0x00

Figure 31: Protection Boolean Properties record M child-record hierarchy

Record types within [Protection Boolean Properties](#) record M that are not already discussed in previous structure examples are specified as follows:

fLockAgainstGrouping: 0x0 specifies the shape is not locked from being grouped with other shapes.

fLockAdjustHandles: 0x0 specifies the adjust handles of the shape are not locked from being edited.

fLockText: 0x1 specifies the text attached to the shape is locked from being edited.

fLockVertices: 0x0 specifies the vertices of the path are not locked from being edited.

fLockCropping: 0x0 specifies the cropping of a picture in the diagram is not locked from being edited.

fLockAgainstSelect: 0x0 specifies the shape is not locked from being selectable in an [editor](#).

fLockPosition: 0x0 specifies the position of the shape is not locked from being edited.

fLockAspectRatio: 0x0 specifies the aspect ratio of the shape is not locked from being edited.

fLockRotation: 0x0 specifies the rotation of the shape is not locked from being edited.

fLockAgainstUngrouping: 0x0 specifies the grouped shape is not locked from being ungrouped.

fUsefLockAgainstGrouping: 0x0 specifies the **fLockAgainstGrouping** flag will be ignored and the default value used instead.

fUsefLockAdjustHandles: 0x0 specifies the **fLockAdjustHandles** flag will be ignored and the default value used instead.

fUsefLockText: 0x1 specifies the **fLockText** flag is set.

fUsefLockVertices: 0x0 specifies that the **fLockVertices** flag will be ignored and the default value used instead.

fUsefLockCropping: 0x0 specifies that the **fLockCropping** flag will be ignored and the default value used instead.

fUsefLockAgainstSelect: 0x0 specifies that the **fLockAgainstSelect** flag will be ignored and the default value used instead.

fUsefLockPosition: 0x0 specifies that the **fLockPosition** flag will be ignored and the default value used instead.

fUsefLockAspectRatio: 0x0 specifies that the **fLockAspectRatio** flag will be ignored and the default value used instead.

fUsefLockRotation: 0x0 specifies that the **fLockRotation** flag will be ignored and the default value used instead.

fUsefLockAgainstUngrouping: 0x0 specifies that the **fLockAgainstUngrouping** flag will be ignored and the default value used instead.

The child-record hierarchy of the [Geometry Boolean Properties](#) record N from Figure 29 is shown in the following figure.

Offset	Size	Structure	Value
00000EE5 0006		N Geometry Boolean Properties - Geometry Boolean Properties	
00000EE5 0002		OfficeArtFOPTePID - opid	
00000EE5 14 bits		bit - opid	0x017F
00000EE5 1 bit		bit - fBid	0x0
00000EE5 1 bit		bit - fComplex	0x0
00000EE7 1 bit		bit - fFillOK	0x1
00000EE7 1 bit		bit - fFillShadeShapeOK	0x0
00000EE7 1 bit		bit - fGtextOK	0x0
00000EE7 1 bit		bit - fLineOK	0x1
00000EE7 1 bit		bit - f3DOK	0x1
00000EE7 1 bit		bit - fShadowOK	0x1
00000EE7 1 bit		bit - unused1	0x0
00000EE7 9 bits		bit - unused2	0x000
00000EE7 1 bit		bit - fUsefFillOK	0x1
00000EE7 1 bit		bit - fUsefFillShadeShapeOK	0x0
00000EE7 1 bit		bit - fUsefGtextOK	0x0
00000EE7 1 bit		bit - fUsefLineOK	0x1
00000EE7 1 bit		bit - fUsef3DOK	0x1
00000EE7 1 bit		bit - fUsefShadowOK	0x1
00000EE7 1 bit		bit - unused3	0x0
00000EE7 9 bits		bit - unused4	0x000

Figure 32: Geometry Boolean Properties record N child-record hierarchy

Record types within [Geometry Boolean Properties](#) record N that are not already discussed in previous structure examples are specified as follows:

fFillOK: 0x1 specifies the fill of this shape is set to display if applied.

fFillShadeShapeOK: 0x0 specifies that the fill is aligned to the bounding rectangle of the shape.

fGtextOK: 0x0 specifies the text aligned to this shape will not display.

fLineOK: 0x1 specifies the line of this shape is set to display if applied.

f3DOK: 0x1 specifies the extrusion effect of this shape is set to display if applied.

fShadowOK: 0x1 specifies the shadow of this shape is set to display if applied.

fUsefFillOK: 0x1 specifies the **fFillOK** bit is set.

fUsefFillShadeShapeOK: 0x0 specifies the **fFillShadeShapeOK** bit will be ignored and the default value used instead.

fUsefGtextOK: 0x0 specifies the **fGtextOK** bit will be ignored and the default value used instead.

fUsefLineOK: 0x1 specifies the **fLineOK** bit is set.

fUsef3DOK: 0x1 specifies the **f3DOK** bit is set.

fUsefShadowOK: 0x1 specifies the **fShadowOK** bit is set.

The child-record hierarchy of the [Fill Style Boolean Properties](#) record O from Figure 29 is shown in the following figure.

Offset	Size	Structure	Value
00000EEB	0006	O Fill Style Boolean Properties - Fill Style Boolean Properties	
00000EEB	0002	OfficeArtFOPTePID - opid	
00000EEB	14 bits	bit - opid	0x01BF
00000EEB	1 bit	bit - fBid	0x0
00000EEB	1 bit	bit - fComplex	0x0
00000EED	1 bit	bit - fNoFillHitTest	0x1
00000EED	1 bit	bit - fillUseRect	0x0
00000EED	1 bit	bit - fillShape	0x0
00000EED	1 bit	bit - fHitTestFill	0x0
00000EED	1 bit	bit - fFilled	0x0
00000EED	1 bit	bit - fUseShapeAnchor	0x0
00000EED	1 bit	bit - fRecolorFillAsPicture	0x0
00000EED	9 bits	bit - unused1	0x000
00000EED	1 bit	bit - fUsefNoFillHitTest	0x1
00000EED	1 bit	bit - fUsefillUseRect	0x0
00000EED	1 bit	bit - fUsefillShape	0x0
00000EED	1 bit	bit - fUsefHitTestFill	0x0
00000EED	1 bit	bit - fUsefFilled	0x1
00000EED	1 bit	bit - fUsefUseShapeAnchor	0x0
00000EED	1 bit	bit - fUsefRecolorFillAsPicture	0x0
00000EED	9 bits	bit - unused2	0x000

Figure 33: Fill Style Boolean Properties record O child-record hierarchy

Record types within [Fill Style Boolean Properties](#) record O that are not already discussed in previous structure examples are specified as follows:

fNoFillHitTest: 0x1 specifies this shape should be hit test as though it is filled.

fillUseRect: 0x0 specifies to use the bounding rectangle of the shape as the filled area.

fillShape: 0x0 specifies the fill is aligned with the origin of the view.

fHitTestFill: 0x0 specifies this fill should not be hit test.

fFilled: 0x0 specifies the fill of this shape is not rendered.

fUseShapeAnchor: 0x0 specifies the fill is not rotated with the shape.

fRecolorFillAsPicture: 0x0 specifies the [fillCrMod](#) property is used for re-coloring.

fUsefNoFillHitTest: 0x1 specifies the **fNoFillHitTest** bit is set.

fUsefillUseRect: 0x0 specifies the **fillUseRect** will be ignored and the default value used instead.

fUsefillShape: 0x0 specifies the **fillShape** will be ignored and the default value used instead.

fUsefHitTestFill: 0x0 specifies the **fHitTestFill** will be ignored and the default value used instead.

fUsefFilled: 0x1 specifies the **fFilled** bit is set.

fUsefUseShapeAnchor: 0x0 specifies the **fUseShapeAnchor** will be ignored and the default value used instead.

fUsefRecolorFillAsPicture: 0x0 specifies the **fRecolorFillAsPicture** will be ignored and the default value used instead.

The child-record hierarchy of the [Line Style Boolean Properties](#) record P from Figure 29 is shown in the following figure.

Offset	Size	Structure	Value
00000EF1	0006	P Line Style Boolean Properties - Line Style Boolean Properties	
00000EF1	0002	OfficeArtFOPTePID - opid	
00000EF1	14 bits	bit - opid	0x01FF
00000EF1	1 bit	bit - fBid	0x0
00000EF1	1 bit	bit - fComplex	0x0
00000EF3	1 bit	bit - fNoLineDrawDash	0x0
00000EF3	1 bit	bit - fLineFillShape	0x0
00000EF3	1 bit	bit - fHitTestLine	0x0
00000EF3	1 bit	bit - fLine	0x0
00000EF3	1 bit	bit - fArrowheadsOK	0x0
00000EF3	1 bit	bit - fInsetPenOK	0x0
00000EF3	1 bit	bit - fInsetPen	0x0
00000EF3	1 bit	bit - reserved1	0x0
00000EF3	1 bit	bit - reserved2	0x0
00000EF3	1 bit	bit - fLineOpaqueBackColor	0x0
00000EF3	6 bits	bit - unused1	0x00
00000EF3	1 bit	bit - fUsefNoLineDrawDash	0x0
00000EF3	1 bit	bit - fUsefLineFillShape	0x0
00000EF3	1 bit	bit - fUsefHitTestLine	0x0
00000EF3	1 bit	bit - fUsefLine	0x1
00000EF3	1 bit	bit - fUsefArrowheadsOK	0x0
00000EF3	1 bit	bit - fUsefInsetPenOK	0x0
00000EF3	1 bit	bit - fUsefInsetPen	0x0
00000EF3	1 bit	bit - unused2	0x0
00000EF3	1 bit	bit - unused3	0x0
00000EF3	1 bit	bit - fUsefLineOpaqueBackColor	0x0
00000EF3	6 bits	bit - unused4	0x00

Figure 34: Line Style Boolean Properties record P child-record hierarchy

Record types within [Line Style Boolean Properties](#) record P that are not already discussed in previous structure examples are specified as follows:

fNoLineDrawDash: 0x0 specifies a dashed line should not be drawn.

fLineFillShape: 0x0 specifies the pattern or texture fill is to be aligned with the origin of the view.

fHitTestLine: 0x0 specifies this line should not be hit test.

fLine: 0x0 specifies the lines of this shape will not be drawn.

fArrowheadsOK: 0x0 specifies the arrowhead properties should not be editable.

fInsetPenOK: 0x0 specifies insetting the pen is not allowed.

fInsetPen: 0x0 specifies that the pen is not inset.

fLineOpaqueBackColor: 0x0 specifies that an extra line should not be rendered underneath the line specified by this property set.

fUsefNoLineDrawDash: 0x0 specifies the **fNoLineDrawDash** will be ignored and the default value used instead.

fUsefLineFillShape: 0x0 specifies the **fLineFillShape** will be ignored and the default value used instead.

fUsefHitTestLine: 0x0 specifies the **fHitTestLine** will be ignored and the default value used instead.

fUsefLine: 0x1 specifies the **fLine** bit is set.

fUsefArrowheadsOK: 0x0 specifies the **fArrowheadsOK** will be ignored and the default value used instead.

fUsefInsetPenOK: 0x0 specifies the **fInsetPenOK** will be ignored and the default value used instead.

fUsefInsetPen: 0x0 specifies the **fInsetPen** will be ignored and the default value used instead.

fUsefLineOpaqueBackColor: 0x0 specifies the **fLineOpaqueBackColor** will be ignored and the default value used instead.

The child-record hierarchy of the [Shape Boolean Properties](#) record Q from Figure 29 is shown in the following figure.

Offset	Size	Structure	Value
00000EF7	0006	Q Shape Boolean Properties - Shape Boolean Properties	
00000EF7	0002	OfficeArtFOPTePID - opid	
00000EF7	14 bits	bit - opid	0x033F
00000EF7	1 bit	bit - fBid	0x0
00000EF7	1 bit	bit - fComplex	0x0
00000EF9	1 bit	bit - fBackground	0x0
00000EF9	1 bit	bit - reserved1	0x0
00000EF9	1 bit	bit - fInitiator	0x0
00000EF9	1 bit	bit - fLockShapeType	0x0
00000EF9	1 bit	bit - fPreferRelativeResize	0x0
00000EF9	1 bit	bit - fOleIcon	0x0
00000EF9	1 bit	bit - fFlipVOverride	0x0
00000EF9	1 bit	bit - fFlipHOverride	0x0
00000EF9	1 bit	bit - fPolicyBarcode	0x0
00000EF9	1 bit	bit - fPolicyLabel	0x0
00000EF9	6 bits	bit - unused1	0x00
00000EF9	1 bit	bit - fUsefBackground	0x0
00000EF9	1 bit	bit - unused2	0x0
00000EF9	1 bit	bit - fUsefInitiator	0x0
00000EF9	1 bit	bit - fUsefLockShapeType	0x0
00000EF9	1 bit	bit - fUsefPreferRelativeResize	0x1
00000EF9	1 bit	bit - fUsefOleIcon	0x0
00000EF9	1 bit	bit - fUsefFlipVOverride	0x0
00000EF9	1 bit	bit - fUsefFlipHOverride	0x0
00000EF9	1 bit	bit - fUsefPolicyBarcode	0x0
00000EF9	1 bit	bit - fUsefPolicyLabel	0x0
00000EF9	6 bits	bit - unused3	0x00

Figure 35: Shape Boolean Properties record Q child-record hierarchy

Record types within [Shape Boolean Properties](#) record Q that are not already discussed in previous structure examples are specified as follows:

fBackground: 0x0 specifies this shape is not the background shape of a drawing.

fInitiator: 0x0 specifies this shape should not be processed by a rules engine.

fLockShapeType: 0x0 specifies the shape type is not locked and can be changed by the end user.

fPreferRelativeResize: 0x0 specifies the application's UI for resizing this shape should not express its size relative to the current size.

fOleIcon: 0x0 specifies this OLE object will not be displayed as an icon.

fFlipVOverride: 0x0 specifies the **fFlipV** flag in the containing [OfficeArtSpContainer](#)'s [OfficeArtFSP](#) should be used.

fFlipHOverride: 0x0 specifies the **fFlipH** flag in the containing [OfficeArtSpContainer](#)'s [OfficeArtFSP](#) should be used.

fPolicyBarcode: 0x0 specifies this object is not a barcode image and will not be used to identify the containing document as part of a content management system.

fPolicyLabel: 0x0 specifies this object is not a label image and will not be used to identify the containing document as part of a content management system.

fUsefBackground: 0x0 specifies the **fBackground** will be ignored and the default value used instead.

fUsefInitiator: 0x0 specifies the **fInitiator** will be ignored and the default value used instead.

fUsefLockShapeType: 0x0 specifies the **fLockShapeType** will be ignored and the default value used instead.

fUsefPreferRelativeResize: 0x1 specifies the **fPreferRelativeResize** bit has been set.

fUsefOleIcon: 0x0 specifies the **fOleIcon** will be ignored and the default value used instead.

fUsefFlipVOverride: 0x0 specifies the **fFlipVOverride** will be ignored and the default value used instead.

fUsefFlipHOverride: 0x0 specifies the **fFlipHOverride** will be ignored and the default value used instead.

fUsefPolicyBarcode: 0x0 specifies the **fPolicyBarcode** will be ignored and the default value used instead.

fUsefPolicyLabel: 0x0 specifies the **fPolicyLabel** will be ignored and the default value used instead.

The child-record hierarchy of the [OfficeArtChildAnchor](#) record R from Figure 29 is shown in the following figure.

Offset	Size	Structure	Value
00000EFD	0018	R OfficeArtChildAnchor - case_of_msofbcChildAnchor	
00000EFD	0008	OfficeArtRecordHeader - rh	
00000F05	0010	OfficeArtFRC - frc	
00000F05	0004	LONG - xLeft	0x00000480
00000F09	0004	LONG - yTop	0x00000510
00000F0D	0004	LONG - xRight	0x00000FC0
00000F11	0004	LONG - yBottom	0x00000B40

Figure 36: OfficeArtChildAnchor record R child-record hierarchy

[OfficeArtChildAnchor](#) record R in Figure 36 specifies the coordinate system of the group shape, which the anchors of the child shape are expressed in.

The child-record hierarchy of the [OfficeArtSpgrContainerFileBlock](#) record D from Figure 22 is shown in the following figure.

Offset	Size	Structure	Value
00000F15	007C	D OfficeArtSpgrContainerFileBlock - OfficeArtSpgrContainerFB	
00000F15	007C	OfficeArtSpContainer - case_of_msofibtSpContainer	
00000F15	0008	OfficeArtRecordHeader - rh	
00000F1D	0010	OfficeArtFSP - shapeProp	
00000F2D	004C	OfficeArtFOPT - shapePrimaryOptions	
00000F2D	0008	OfficeArtRecordHeader - rh	
00000F35	0044	OfficeArtRGFOPT - fopt	
00000F35	0006	rotation - rotation	
00000F35	0002	OfficeArtFOPT - EOPID - opid	
00000F37	0004	FixedPoint - rotation	0x010E0000
00000F3B	0006	adjustValue - adjustValue	
00000F3B	0002	OfficeArtFOPT - EOPID - opid	
00000F3D	0004	LONG - adjustValue	0xFFFF769F3
00000F41	0006	adjust2Value - adjust2Value	
00000F41	0002	OfficeArtFOPT - EOPID - opid	
00000F43	0004	LONG - adjust2Value	0xFFFFFFFF
00000F47	0006	adjust3Value - adjust3Value	
00000F47	0002	OfficeArtFOPT - EOPID - opid	
00000F49	0004	LONG - adjust3Value	0xFFFF769F3
00000F4D	0006	S lineColor - lineColor	
00000F4D	0002	OfficeArtFOPT - EOPID - opid	
00000F4F	0004	OfficeArtCOLORREF - lineColor	
00000F53	0006	lineWidth - lineWidth	
00000F53	0002	OfficeArtFOPT - EOPID - opid	
00000F55	0004	LONG - lineWidth	0x00006F9F
00000F59	0006	T Line Style Boolean Properties - Line Style Boolean	
00000F5F	0006	cxstyle - cxstyle	
00000F5F	0002	OfficeArtFOPT - EOPID - opid	
00000F61	0004	MSOXCSTYLE - cxstyle	0x00000001
00000F65	0006	wzName - wzName	
00000F65	0002	OfficeArtFOPT - EOPID - opid	
00000F67	0004	ULONG - wzName	0x0000000E
00000F6B	000E	wzName_complex - wzName_complex	
00000F6B	000E	WideString - wzName	_s2072
00000F79	0018	OfficeArtChildAnchor - childAnchor	

Figure 37: OfficeArtSpgrContainerFileBlock record D child-record hierarchy

Record types within [OfficeArtSpgrContainerFileBlock](#) record D that are not already discussed in previous structure examples are specified as follows:

case_of_msofbtSpContainer.shapePrimaryOptions.fopt.rotation: This property specifies the rotation on a shape.

case_of_msofbtSpContainer.shapePrimaryOptions.fopt.rotation.rotation: 0x010E0000 specifies the rotation on the shape.

case_of_msofbtSpContainer.shapePrimaryOptions.fopt.adjustValue: This property specifies a value that a user could change to adjust the shape's geometry.

case_of_msofbtSpContainer.shapePrimaryOptions.fopt.adjustValue.adjustValue: 0xFFFF769F3 specifies a value used to adjust this shape's geometry.

case_of_msofbtSpContainer.shapePrimaryOptions.fopt.adjust2Value: This property specifies a value that a user could change to adjust the shape's geometry.

case_of_msofbtSpContainer.shapePrimaryOptions.fopt.adjust2Value.adjust2Value: 0xFFFFFFFF specifies a value used to adjust this shape's geometry.

case_of_msofbtSpContainer.shapePrimaryOptions.fopt.adjust3Value: This property specifies a value that a user could change to adjust the shape's geometry.

case_of_msofbtSpContainer.shapePrimaryOptions.fopt.adjust3Value.adjust3Value: 0xFFFF769F3 specifies a value used to adjust this shape's geometry.

case_of_msofbtSpContainer.shapePrimaryOptions.fopt.lineColor: This property specifies the foreground color of the line.

case_of_msofbtSpContainer.shapePrimaryOptions.fopt.lineColor.lineColor: This [OfficeArtCOLORREF](#) record specifies the color to use while drawing.

case_of_msofbtSpContainer.shapePrimaryOptions.fopt.lineWidth: This property specifies the width of the line.

case_of_msofbtSpContainer.shapePrimaryOptions.fopt.lineWidth.lineWidth: 0x00006F9F specifies the width of the line.

case_of_msofbtSpContainer.shapePrimaryOptions.fopt.cxstyle: This property specifies the connector style.

case_of_msofbtSpContainer.shapePrimaryOptions.fopt.cxstyle.cxstyle: 0x00000001 specifies this shape is an elbow-shaped connector.

case_of_msofbtSpContainer.shapePrimaryOptions.fopt.wzName: This property specifies the name of the shape.

case_of_msofbtSpContainer.shapePrimaryOptions.fopt.wzName.wzName: 0x0000000E specifies the number of bytes of data in the [wzName_complex](#) property.

case_of_msofbtSpContainer.shapePrimaryOptions.fopt.wzName_complex: This property specifies additional data for [wzName](#) property.

case_of_msofbtSpContainer.shapePrimaryOptions.fopt.wzName_complex.wzName: _s2072 specifies the name of the shape.

Records labeled S and T in [OfficeArtSpgrContainerFileBlock](#) record D from Figure 37 are shown in more detail in the following two example structures.

The child-record hierarchy of the [lineColor](#) record S from Figure 37 is shown in the following figure.

Offset	Size	Structure	Value
00000F4D	0006	S lineColor - lineColor	
00000F4D	0002	OfficeArtFOPTOPID - opid	
00000F4D	14 bits	bit - opid	0x01C0
00000F4D	1 bit	bit - fBid	0x0
00000F4D	1 bit	bit - fComplex	0x0
00000F4F	0004	OfficeArtCOLORREF - lineColor	
00000F4F	0001	BYTE - red	0x01
00000F50	0001	BYTE - green	0x00
00000F51	0001	BYTE - blue	0x00
00000F52	1 bit	bit - fPaletteIndex	0x0
00000F52	1 bit	bit - fPaletteRGB	0x0
00000F52	1 bit	bit - fSystemRGB	0x0
00000F52	1 bit	bit - fSchemeIndex	0x1
00000F52	1 bit	bit - fSysIndex	0x0
00000F52	1 bit	bit - unused1	0x0
00000F52	1 bit	bit - unused2	0x0
00000F52	1 bit	bit - unused3	0x0

Figure 38: lineColor record S child-record hierarchy

Record types within [lineColor](#) record S that are not already discussed in previous structure examples are specified as follows:

opid: The [OfficeArtFOPTOPID](#) record specifies the header for an entry in a property table.

lineColor: This [OfficeArtCOLORREF](#) property specifies the foreground color of the line.

lineColor.red: 0x01 specifies an index into the current scheme color table since **fSchemeIndex** is set to 0x1.

lineColor.green: This property will be ignored since **fSchemeIndex** is set to 0x1.

lineColor.blue: This property will be ignored since **fSchemeIndex** is set to 0x1.

lineColor.fPaletteIndex: 0x0 specifies the current palette will not be used to determine the color.

lineColor.fPaletteRGB: 0x0 specifies the current palette will not be used to determine the color.

lineColor.fSystemRGB: 0x0 specifies whether the color is a standard RGB color. The value of 0x00 indicates the RGB color may use half-tone dithering to display.

lineColor.fSchemeIndex: 0x1 specifies the current color scheme will be used to determine the color. The value of 0x1 indicates that **red** is an index into the current scheme color table. When this value is 0x1, **green** and **blue** MUST be 0x00.

lineColor.fSysIndex: 0x0 specifies the system color scheme will not be used to determine the color.

lineColor.unused1: This value is undefined and MUST be ignored.

lineColor.unused2: This value is undefined and MUST be ignored.

lineColor.unused3: This value is undefined and MUST be ignored.

The child-record hierarchy of the [Line Style Boolean Properties](#) record T from Figure 37 is shown in the following figure.

Offset	Size	Structure	Value
00000F59	0006	T Line Style Boolean Properties - Line Style Boolean Properties	
00000F59	0002	OfficeArtFOPTePID - opid	
00000F59	14 bits	bit - opid	0x01FF
00000F59	1 bit	bit - fBid	0x0
00000F59	1 bit	bit - fComplex	0x0
00000F5B	1 bit	bit - fNoLineDrawDash	0x0
00000F5B	1 bit	bit - lineFillShape	0x0
00000F5B	1 bit	bit - fHitTestLine	0x0
00000F5B	1 bit	bit - fLine	0x1
00000F5B	1 bit	bit - fArrowheadsOK	0x0
00000F5B	1 bit	bit - fInsetPenOK	0x0
00000F5B	1 bit	bit - fInsetPen	0x0
00000F5B	1 bit	bit - reserved1	0x0
00000F5B	1 bit	bit - reserved2	0x0
00000F5B	1 bit	bit - fLineOpaqueBackColor	0x0
00000F5B	6 bits	bit - unused1	0x00
00000F5B	1 bit	bit - fUsefNoLineDrawDash	0x0
00000F5B	1 bit	bit - fUsefLineFillShape	0x0
00000F5B	1 bit	bit - fUsefHitTestLine	0x0
00000F5B	1 bit	bit - fUsefLine	0x1
00000F5B	1 bit	bit - fUsefArrowheadsOK	0x0
00000F5B	1 bit	bit - fUsefInsetPenOK	0x0
00000F5B	1 bit	bit - fUsefInsetPen	0x0
00000F5B	1 bit	bit - unused2	0x0
00000F5B	1 bit	bit - unused3	0x0
00000F5B	1 bit	bit - fUsefLineOpaqueBackColor	0x0
00000F5B	6 bits	bit - unused4	0x00

Figure 39: Line Style Boolean Properties record T child-record hierarchy

The [Line Style Boolean Properties](#) record T shown in Figure 39 is similar to record P shown in Figure 34 except that in record T, **fLine** is set to 0x1 which indicates to display other line properties in the line style when dealing with a 2D shape. The **fLine** property in record P is set to 0x0, and the other line properties in that line style will not be displayed.

The child-record hierarchy of the [OfficeArtSpgrContainerFileBlock](#) record E from Figure 22 is shown in the following figure.

Offset	Size	Structure	Value
0000117B	00EB	E OfficeArtSpgrContainerFileBlock - OfficeArtSpgrContainerFB	
0000117B	00EB	OfficeArtSpContainer - case_of_msofibtSpContainer	
0000117B	0008	OfficeArtRecordHeader - rh	
00001183	0010	OfficeArtFSP - shapeProp	
00001193	005E	OfficeArtFOPT - shapePrimaryOptions	
00001193	0008	OfficeArtRecordHeader - rh	
0000119B	0056	OfficeArtRGFOPT - fopt	
0000119B	0006	ITxid - ITxid	
0000119B	0002	OfficeArtFOPT - opid	
0000119D	0004	LONG - ITxid	0x00AEDC04
000011A1	0006	dxTextLeft - dxTextLeft	
000011A1	0002	OfficeArtFOPT - opid	
000011A3	0004	LONG - dxTextLeft	0x00000000
000011A7	0006	dyTextTop - dyTextTop	
000011A7	0002	OfficeArtFOPT - opid	
000011A9	0004	LONG - dyTextTop	0x00000000
000011AD	0006	dxTextRight - dxTextRight	
000011AD	0002	OfficeArtFOPT - opid	
000011AF	0004	LONG - dxTextRight	0x00000000
000011B3	0006	dyTextBottom - dyTextBottom	
000011B3	0002	OfficeArtFOPT - opid	
000011B5	0004	LONG - dyTextBottom	0x00000000
000011B9	0006	WrapText - WrapText	
000011B9	0002	OfficeArtFOPT - opid	
000011BB	0004	MSOWRAPMODE - WrapText	0x00000002
000011BF	0006	anchorText - anchorText	
000011BF	0002	OfficeArtFOPT - opid	
000011C1	0004	MSOANCHOR - anchorText	0x00000001
000011C5	0006	U fillColor - fillColor	
000011CB	0006	V Fill Style Boolean Properties - Fill Style Boolean Properties	
000011D1	0006	lineColor - lineColor	
000011D1	0002	OfficeArtFOPT - opid	
000011D3	0004	OfficeArtCOLORREF - lineColor	
000011D7	0006	Line Style Boolean Properties - Line Style Boolean Properties	
000011DD	0006	wzName - wzName	
000011DD	0002	OfficeArtFOPT - opid	
000011DF	0004	ULONG - wzName	0x0000000E

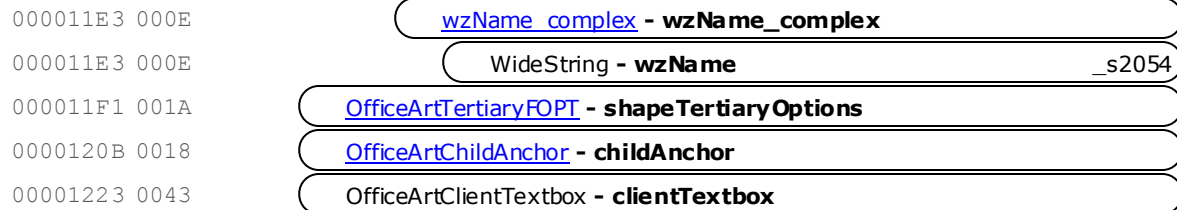


Figure 40: OfficeArtSpgrContainerFileBlock record E child-record hierarchy

Record types within [OfficeArtSpgrContainerFileBlock](#) record E that are not already discussed in previous structure examples are specified as follows:

case_of_msofbtSpContainer.shapePrimaryOptions.fopt.ITxid: This property specifies an identifier for the text.

case_of_msofbtSpContainer.shapePrimaryOptions.fopt.ITxid.ITxid: 0x00AEDC04 specifies an identifier for the text. This value is determined by the host application.

case_of_msofbtSpContainer.shapePrimaryOptions.fopt.dxTextLeft: This property specifies the margin size to the left of the text.

case_of_msofbtSpContainer.shapePrimaryOptions.fopt.dxTextLeft.dxTextLeft: 0x00000000 specifies the margin size inside the containing shape to the left of the text. The unit of measurement for the value is English Metric Unit (EMU).

case_of_msofbtSpContainer.shapePrimaryOptions.fopt.dyTextTop: This property specifies the margin size above the text.

case_of_msofbtSpContainer.shapePrimaryOptions.fopt.dyTextTop.dyTextTop: 0x00000000 specifies the margin size inside the containing shape above the text. The unit of measurement for the value is English Metric Unit (EMU).

case_of_msofbtSpContainer.shapePrimaryOptions.fopt.dxTextRight: This property specifies the margin size to the right of the text.

case_of_msofbtSpContainer.shapePrimaryOptions.fopt.dxTextRight.dxTextRight: 0x00000000 specifies the margin size inside the containing shape to the right of the text. The unit of measurement for the value is English Metric Unit (EMU).

case_of_msofbtSpContainer.shapePrimaryOptions.fopt.dyTextBottom: This property specifies the margin size below the text.

case_of_msofbtSpContainer.shapePrimaryOptions.fopt.dyTextBottom.dyTextBottom: 0x00000000 specifies the margin size inside the containing shape below the text. The unit of measurement for the value is English Metric Unit (EMU).

case_of_msofbtSpContainer.shapePrimaryOptions.fopt.WrapText: This property specifies the type of wrapping applied to the text.

case_of_msofbtSpContainer.shapePrimaryOptions.fopt.WrapText.WrapText: 0x00000002 specifies that a line of text will extend into or beyond a margin instead of continuing on subsequent lines.

case_of_msofbtSpContainer.shapePrimaryOptions.fopt.anchorText: This property specifies the type of anchor applied to the text.

case_of_msofbtSpContainer.shapePrimaryOptions.fopt.anchorText.anchorText: 0x00000001 specifies the primary determinant for the placement of the text is that the vertical center of the text coincides with the vertical mid-point of the internal margins of the textbox area.

case_of_msofبتSpContainer.shapePrimaryOptions.fopt.fillColor: This property specifies the foreground color of the fill.

Records labeled U and V in [OfficeArtSpgrContainerFileBlock](#) record E from Figure 40 are shown in more detail in the following two example structures.

The child-record hierarchy of the [fillColor](#) record U from Figure 40 is shown in the following figure.

Offset	Size	Structure	Value
000011C5	0006	U fillColor - fillColor	
000011C5	0002	OfficeArtFOPTePID - opid	
000011C5	14 bits	bit - opid	0x0181
000011C5	1 bit	bit - fBid	0x0
000011C5	1 bit	bit - fComplex	0x0
000011C7	0004	OfficeArtCOLORREF - fillColor	
000011C7	0001	BYTE - red	0x04
000011C8	0001	BYTE - green	0x00
000011C9	0001	BYTE - blue	0x00
000011CA	1 bit	bit - fPaletteIndex	0x0
000011CA	1 bit	bit - fPaletteRGB	0x0
000011CA	1 bit	bit - fSystemRGB	0x0
000011CA	1 bit	bit - fSchemeIndex	0x1
000011CA	1 bit	bit - fSysIndex	0x0
000011CA	1 bit	bit - unused1	0x0
000011CA	1 bit	bit - unused2	0x0
000011CA	1 bit	bit - unused3	0x0

Figure 41: fillColor record U child-record hierarchy

The [fillColor](#) properties listed in Figure 40 look similar to the color properties listed for the [lineColor](#) example structure S in Figure 38. The example structure shown in Figure 41 outlines color properties applied for a shape fill. The example structure shown in Figure 38 outlines properties applied for a line color. See the property value definitions listed for the example structure S in Figure 38 for more information about the property values listed in the [fillColor](#) example structure U shown previously.

The child-record hierarchy of the [Fill Style Boolean Properties](#) record V from Figure 40 is shown in the following figure.

Offset	Size	Structure	Value
000011CB 0006		V Fill Style Boolean Properties - Fill Style Boolean Properties	
000011CB 0002		OfficeArtFOPTePID - opid	
000011CB 14 bits		bit - opid	0x01BF
000011CB 1 bit		bit - fBid	0x0
000011CB 1 bit		bit - fComplex	0x0
000011CD 1 bit		bit - fNoFillHitTest	0x0
000011CD 1 bit		bit - fillUseRect	0x0
000011CD 1 bit		bit - fillShape	0x0
000011CD 1 bit		bit - fHitTestFill	0x0
000011CD 1 bit		bit - fFilled	0x1
000011CD 1 bit		bit - fUseShapeAnchor	0x0
000011CD 1 bit		bit - fRecolorFillAsPicture	0x0
000011CD 9 bits		bit - unused1	0x000
000011CD 1 bit		bit - fUsefNoFillHitTest	0x0
000011CD 1 bit		bit - fUsefillUseRect	0x0
000011CD 1 bit		bit - fUsefillShape	0x0
000011CD 1 bit		bit - fUsefHitTestFill	0x0
000011CD 1 bit		bit - fUsefFilled	0x1
000011CD 1 bit		bit - fUsefUseShapeAnchor	0x0
000011CD 1 bit		bit - fUsefRecolorFillAsPicture	0x0
000011CD 9 bits		bit - unused2	0x000

Figure 42: Fill Style Boolean Properties record V child-record hierarchy

The [Fill Style Boolean Properties](#) example shown in Figure 42 is similar to the [Fill Style Boolean Properties](#) example structure O shown in Figure 33. Example structure O outlines property settings that will not render the shape fill. Example structure V shown previously outlines values that will render the fill of the shape represented by this structure. Please see the property value definitions listed for the example structure in Figure 33 for more information about the property values listed in the [Fill Style Boolean Properties](#) example structure V shown previously.

The child-record hierarchy of the [OfficeArtSpgrContainerFileBlock](#) record F from Figure 22 is shown in the following figure.

Offset	Size	Structure	Value
00001266	00E5	F OfficeArtSpgrContainerFileBlock - OfficeArtSpgrContainerFB	
00001266	00E5	OfficeArtSpContainer - case_of_msofibtSpContainer	
00001266	0008	OfficeArtRecordHeader - rh	
0000126E	0010	OfficeArtFSP - shapeProp	
0000127E	005E	OfficeArtFOPT - shapePrimaryOptions	
000012DC	0014	W OfficeArtTertiaryFOPT - shapeTertiaryOptions	
000012F0	0018	OfficeArtChildAnchor - childAnchor	
00001308	0043	OfficeArtClientTextbox - clientTextbox	
00001308	0008	OfficeArtRecordHeader - rh	
00001310	003B	TextClientDataRecordArray - rgChildRec	
00001310	000C	TextClientDataSubContainerOrAtom - rec	
00001310	000C	TextHeaderAtom - case_of_RT_TextHeaderAtom	
00001310	0008	RecordHeader - rh	
00001318	0004	TextTypeEnum - textType	0x00000004
0000131C	0011	TextClientDataSubContainerOrAtom - rec1	
0000131C	0011	TextBytesAtom - case_of_RT_TextBytesAtom	
0000131C	0008	RecordHeader - rh	
00001324	0009	NarrowStringBufferEx - textBytes	Shape 2.0
0000132D	001E	TextClientDataSubContainerOrAtom - rec2	
0000132D	001E	StyleTextPropAtom - case_of_RT_StyleTextPropAtom	
0000132D	0008	RecordHeader - rh	
00001335	000C	X TextPFRunArray - rgTextPFRun	
00001341	000A	Y TextCFRunArray - rgTextCFRun	

Figure 43: OfficeArtSpgrContainerFileBlock record Fchild-record hierarchy

Record types within [OfficeArtSpgrContainerFileBlock](#) record F that are not already discussed in previous structure examples are specified in the following definitions. The following fields and records are defined by the host application; they are explained in more detail in their host application file format specifications. The following specifications are specified in [\[MS-PPT\] section2.9.76](#):

case_of_msofibtSpContainer.clientTextbox.rgChildRec: An array of **TextClientDataSubContainerOrAtom**.

case_of_msofibtSpContainer.clientTextbox.rgChildRec.rec: The **TextClientDataSubContainerOrAtom** record is a variable type record whose type and meaning are dictated by the value of the RecordHeader **rh.recType** (not shown in this example).

case_of_msofibtSpContainer.clientTextbox.rgChildRec.rec.case_of_RT_TextHeaderAtom: An atom record that specifies the type of a text body.

case_of_msofibtSpContainer.clientTextbox.rgChildRec.rec.case_of_RT_TextHeaderAtom.textType: 0x00000004 specifies the text is of type "Any other text".

case_of_msofibtSpContainer.clientTextbox.rgChildRec.rec1.case_of_RT_TextBytesAtom: An atom record that specifies Unicode characters.

case_of_msofibtSpContainer.clientTextbox.rgChildRec.rec1.case_of_RT_TextBytesAtom.text Bytes: "Shape 2.0" specifies the text string within the shape. **textBytes** is an array of bytes that specifies the characters of the *corresponding text*.

case_of_msofibtSpContainer.clientTextbox.rgChildRec.rec2.case_of_RT_StyleTextPropAtom: An atom record that specifies character-level and paragraph-level formatting.

case_of_msofibtSpContainer.clientTextbox.rgChildRec.rec2.case_of_RT_StyleTextPropAtom.rgTextPFRun: An array of **TextPFRun** that specifies paragraph-level formatting for the *corresponding text*. **TextPFRun** is a container record that specifies the paragraph-level formatting of a length of text.

case_of_msofibtSpContainer.clientTextbox.rgChildRec.rec2.case_of_RT_StyleTextPropAtom.rgTextCFRun: An array of **TextCFRun** that specifies character-level formatting for the *corresponding text*. **TextCFRun** is a container record that specifies the character-level formatting of a length of text.

Records labeled W, X, and Y in [OfficeArtSpgrContainerFileBlock](#) record F from Figure 43 are shown in more detail in the following three example structures.

The child-record hierarchy of the [OfficeArtTertiaryFOPT](#) record W from Figure 43 is shown in the following figure.

Offset	Size	Structure	Value
000012DC	0014	W OfficeArtTertiaryFOPT - shapeTertiaryOptions	
000012DC	0008	OfficeArtRecordHeader - rh	
000012E4	000C	OfficeArtRGFOPT - fopt	
000012E4	0006	dgmLayout - dgmLayout	
000012E4	0002	OfficeArtFOPTEOPID - opid	
000012E4	14 bits	bit - opid	0x0309
000012E4	1 bit	bit - fBid	0x0
000012E4	1 bit	bit - fComplex	0x0
000012E6	0004	MSODGMLO - dgmLayout	0x00000000
000012EA	0006	dgmNodeKind - dgmNodeKind	
000012EA	0002	OfficeArtFOPTEOPID - opid	
000012EA	14 bits	bit - opid	0x030A
000012EA	1 bit	bit - fBid	0x0
000012EA	1 bit	bit - fComplex	0x0
000012EC	0004	LONG - dgmNodeKind	0x00000000

Figure 44: OfficeArtTertiaryFOPT record W child-record hierarchy

Record types within [OfficeArtTertiaryFOPT](#) record W that are not already discussed in previous structure examples are specified as follows:

fopt.dgmLayout: This property specifies the diagram node layout for a shape.

fopt.dgmLayout.dgmLayout: 0x00000000 specifies this [MSODGMLO](#) layout is an "Organizational chart".

fopt.dgmNodeKind: This property specifies a diagram node type.

fopt.dgmNodeKind.dgmNodeKind: 0x00000000 specifies this node is a regular diagram node of no particular type.

The child-record hierarchy of the **TextPFRunArray** record X from Figure 43 is shown in the following figure.

Offset	Size	Structure	Value
00001335	000C	(X) TextPFRunArray - rgTextPFRun	
00001335	000C	TextPFRun - textPFRun	
00001335	0004	ULONG - runCount	0x0000000A
00001339	0002	USHORT - indentLevel	0x0000
0000133B	0006	TextPFException - pf	
0000133B	0004	PFMasks - masks	
0000133F	0002	TextAlignmentEnum - textAlignment	0x0001

Figure 45: TextPFRunArray record X child-record hierarchy

The fields and records for text shown in Figure 45 are defined by the host application and are specified in [\[MS-PPT\] section 2.9.45](#). The structure example X shown in Figure 45 may appear differently in each host application. Some text, font, and paragraph properties may be located in other containers depending on the structure requirements for each Microsoft Office host application.

The child-record hierarchy of the **TextCFRunArray** record Y from Figure 43 is shown in the following figure.

Offset	Size	Structure	Value
00001341	000A	(Y) TextCFRunArray - rgTextCFRun	
00001341	000A	TextCFRun - textCFRun	
00001341	0004	ULONG - runCount	0x0000000A
00001345	0006	TextCFException - cf	
00001345	0004	CFMasks - masks	
00001349	0002	SHORT - fontSize	0x000D

Figure 46: TextCFRunArray record Y child-record hierarchy

The fields and records for text shown in Figure 46 are defined by the host application and are specified in [\[MS-PPT\] section 2.9.46](#). The structure example Y shown in Figure 46 may appear differently in each host application. Some text, font, and paragraph properties may be located in other containers depending on the structure requirements for each Microsoft Office host application.

The child-record hierarchy of the [OfficeArtSpgrContainerFileBlock](#) record G from Figure 22 is shown in the following figure.

Offset	Size	Structure	Value
00001430	00E5	G OfficeArtSpgrContainerFileBlock - OfficeArtSpgrContainerFB	
00001430	00E5	OfficeArtSpContainer - case_of_msofibtSpContainer	
00001430	0008	OfficeArtRecordHeader - rh	
00001438	0010	OfficeArtFSP - shapeProp	
00001448	005E	OfficeArtFOPT - shapePrimaryOptions	
000014A6	0014	OfficeArtTertiaryFOPT - shapeTertiaryOptions	
000014A6	0008	OfficeArtRecordHeader - rh	
000014AE	000C	OfficeArtRGFOPT - fopt	
000014AE	0006	dgmLayout - dgmLayout	
000014AE	0002	OfficeArtFOPTEOPID - opid	
000014B0	0004	MSODGMLO - dgmLayout	0x00000000
000014B4	0006	dgmNodeKind - dgmNodeKind	
000014B4	0002	OfficeArtFOPTEOPID - opid	
000014B6	0004	LONG - dgmNodeKind	0x00000000
000014BA	0018	OfficeArtChildAnchor - childAnchor	
000014D2	0043	OfficeArtClientTextbox - clientTextbox	

Figure 47: OfficeArtSpgrContainerFileBlock record G child-record hierarchy

3.2.4 OfficeArtSpContainer

The child-record hierarchy of the [OfficeArtSpContainer](#) container 3 from Figure 20 is shown in the following figure.

Offset	Size	Structure	Value
000016F5	0050	3 OfficeArtSpContainer - shape	
000016F5	0008	OfficeArtRecordHeader - rh	
000016FD	0010	OfficeArtFSP - shapeProp	
0000170D	0038	OfficeArtFOPT - shapePrimaryOptions	
0000170D	0008	OfficeArtRecordHeader - rh	
00001715	0030	OfficeArtRGFOPT - fopt	
00001715	0006	fillColor - fillColor	
00001715	0002	OfficeArtFOPTEOPID - opid	
00001717	0004	OfficeArtCOLORREF - fillColor	
0000171B	0006	fillBackColor - fillBackColor	
0000171B	0002	OfficeArtFOPTEOPID - opid	
0000171D	0004	A OfficeArtCOLORREF - fillBackColor	
00001721	0006	fillRectRight - fillRectRight	
00001721	0002	OfficeArtFOPTEOPID - opid	
00001723	0004	LONG - fillRectRight	0x008B9F8E
00001727	0006	fillRectBottom - fillRectBottom	
00001727	0002	OfficeArtFOPTEOPID - opid	
00001729	0004	LONG - fillRectBottom	0x0068BDDE
0000172D	0006	Fill Style Boolean Properties - Fill Style Boolean Properties	
00001733	0006	Line Style Boolean Properties - Line Style Boolean	
00001739	0006	bWMode - bWMode	
00001739	0002	OfficeArtFOPTEOPID - opid	
0000173B	0004	MSO BWMODE - bWMode	0x00000009
0000173F	0006	Shape Boolean Properties - Shape Boolean Properties	

Figure 48: OfficeArtSpContainer container 3 child-record hierarchy

Record types within [OfficeArtSpContainer](#) container 3 that are not already discussed in previous structure examples are specified as follows:

shapePrimaryOptions.fopt.fillBackColor: This property specifies the background color of the fill.

shapePrimaryOptions.fopt.fillRectRight: Specifies the rectangle right bound of the shaded fill in English Metric Unit (EMU).

shapePrimaryOptions.fopt.fillRectRight.fillRectRight: 0x008B9F8E specifies the rectangle right bound of the shaded fill.

shapePrimaryOptions.fopt.fillRectBottom: Specifies the rectangle bottom bound of the shaded fill in English Metric Unit (EMU).

shapePrimaryOptions.fopt.fillRectBottom.fillRectBottom: 0x0068BDDE specifies the rectangle bottom bound of the shaded fill.

shapePrimaryOptions.fopt.bWMode: This property specifies how a shape will render in black-and-white display mode.

shapePrimaryOptions.fopt.bWMode.bWMode: 0x00000009 specifies that the shape will be rendered with white coloring.

The child-record hierarchy of the [OfficeArtCOLORREF](#) record A from Figure 48 is shown in the following figure.

Offset	Size	Structure	Value
0000171D	0004	A OfficeArtCOLORREF - fillBackColor	
0000171D	0001	BYTE - red	0x05
0000171E	0001	BYTE - green	0x00
0000171F	0001	BYTE - blue	0x00
00001720	1 bit	bit - fPaletteIndex	0x0
00001720	1 bit	bit - fPaletteRGB	0x0
00001720	1 bit	bit - fSystemRGB	0x0
00001720	1 bit	bit - fSchemeIndex	0x1
00001720	1 bit	bit - fSysIndex	0x0
00001720	1 bit	bit - unused1	0x0
00001720	1 bit	bit - unused2	0x0
00001720	1 bit	bit - unused3	0x0

Figure 49: OfficeArtCOLORREF record A child-record hierarchy

3.2.5 OfficeArtSolverContainer

The child-record hierarchy of the [OfficeArtSolverContainer](#) container 4 from Figure 20 is shown in the following figure.

Offset	Size	Structure	Value
00001745	00A8	4 OfficeArtSolverContainer - solvers	
00001745	0008	OfficeArtRecordHeader - rh	
0000174D	00A0	OfficeArtSolverContainerFileBlockArray - rgfb	
0000174D	0020	OfficeArtSolverContainerFileBlock - OfficeArtSolverContainerFB	
0000174D	0020	OfficeArtFConnectorRule - case_of_msofbtConnectorRule	
0000174D	0008	OfficeArtRecordHeader - rh	
00001755	0004	ULONG - ruid	0x00000001
00001759	0004	ULONG - spidA	0x00000807
0000175D	0004	ULONG - spidB	0x00000806
00001761	0004	ULONG - spidC	0x0000080A
00001765	0004	ULONG - cptiA	0x00000000
00001769	0004	ULONG - cptiB	0x00000002
0000176D	0020	OfficeArtSolverContainerFileBlock - OfficeArtSolverContainerFB	
0000178D	0020	OfficeArtSolverContainerFileBlock - OfficeArtSolverContainerFB	
000017AD	0020	OfficeArtSolverContainerFileBlock - OfficeArtSolverContainerFB	
000017CD	0020	OfficeArtSolverContainerFileBlock - OfficeArtSolverContainerFB	

Figure 50: OfficeArtSolverContainer container 4 child-record hierarchy

Record types within [OfficeArtSolverContainer](#) container 4 that are not already discussed in previous structure examples are specified as follows:

rgfb: This record specifies a file block that contains a record that specifies rule data.

rgfb.OfficeArtSolverContainerFB: This record specifies a file block containing a record that specifies drawing-wide data.

rgfb.OfficeArtSolverContainerFB.case_of_msofbtConnectorRule: This record specifies the connection between two shapes via a connector shape.

rgfb.OfficeArtSolverContainerFB.case_of_msofbtConnectorRule.ruid: 0x00000001 specifies the identifier of this rule.

rgfb.OfficeArtSolverContainerFB.case_of_msofbtConnectorRule.spidA: 0x00000807 specifies the identifier of the shape where the connector shape starts.

rgfb.OfficeArtSolverContainerFB.case_of_msofbtConnectorRule.spidB: 0x00000806 specifies the identifier of the shape where the connector shape ends.

rgfb.OfficeArtSolverContainerFB.case_of_msofbtConnectorRule.spidC: 0x0000080A specifies the identifier of the connector shape.

rgfb.OfficeArtSolverContainerFB.case_of_msofbtConnectorRule.cptiA: 0x00000000 specifies the connection site index of the shape where the connector shape starts.

rgfb.OfficeArtSolverContainerFB.case_of_msofbtConnectorRule.cptiB: 0x00000002 specifies the connection site index of shape where the connector shape ends.

3.3 Shape Properties Example

This section provides an example of a shape with effects. The following figure shows a rounded rectangle containing text with a gradient background fill, double line outline, and shadow properties applied.



Figure 51: Shape with effects

The following sections will provide example structures outlining properties specific to Office 97, Office 2000, Office XP, and Office 2003 shapes.

Specifications for some of the record types, properties, and fields shown in the following structure examples will be explained only once, but may appear in multiple example sections. Refer to [Section 2: Structures](#) for detailed specifications of each record mentioned in these examples. Some properties already specified in [Section 3.2 Diagram Example](#) may not be duplicated in the following sections.

3.3.1 Shape Type Properties

The [OfficeArtFSP](#) record specifies an instance of a shape. The [OfficeArtRecordHeader](#) contains the shape type, and the record contains the shape identifier and a set of bits that further define the shape.

The child-record hierarchy of the [OfficeArtFSP](#) container for the shape is shown expanded in the following figure.

Offset	Size	Structure	Value
00000DBB	0010	OfficeArtFSP - shapeProp	
00000DBB	0008	OfficeArtRecordHeader - rh	
00000DBB	4 bits	bit - recVer	0x2
00000DBB	12 bits	bit - recInstance	0x002
00000DBD	0002	USHORT - recType	0xF00A
00000DBF	0004	DWORD - recLen	0x00000008
00000DC3	0004	ULONG - spid	0x00000804
00000DC7	1 bit	bit - fGroup	0x0
00000DC7	1 bit	bit - fChild	0x0
00000DC7	1 bit	bit - fPatriarch	0x0
00000DC7	1 bit	bit - fDeleted	0x0
00000DC7	1 bit	bit - fOleShape	0x0
00000DC7	1 bit	bit - fHaveMaster	0x0
00000DC7	1 bit	bit - fFlipH	0x0
00000DC7	1 bit	bit - fFlipV	0x0
00000DC7	1 bit	bit - fConnector	0x0
00000DC7	1 bit	bit - fHaveAnchor	0x1
00000DC7	1 bit	bit - fBackground	0x0
00000DC7	1 bit	bit - fHaveSpt	0x1
00000DC7	20 bits	bit - unused1	0x00000

Figure 52: OfficeArtFSP shape properties

The records contained within the [OfficeArtFSP](#) container are specified as follows:

shapeProp: The [OfficeArtFSP](#) record specifies an instance of the shape.

rh: The [OfficeArtRecordHeader](#) header contains the record type, the record length, and if it is an atom type, a version identifier.

rh.recVer: 0x2 specifies the record version.

rh.recInstance: 0x002 specifies the shape type is a rectangle shape with rounded corners.

rh.recType: 0xF00A specifies the type for this record.

rh.recLen: 0x00000008 specifies the length of the record in bytes.

spid: 0x00000804 specifies the identifier of this shape.

fGroup: 0x0 specifies this shape is not a group shape.

fChild: 0x0 specifies this shape is not a child shape.

fPatriarch: 0x0 specifies this shape is not the topmost group shape.

fDeleted: 0x0 specifies this shape has not been deleted.

fOleShape: 0x0 specifies this shape is not an OLE object.

fHaveMaster: 0x0 specifies this shape does not have a master in the [hspMaster](#) property.

fFlipH: 0x0 specifies this shape is not flipped horizontally.

fFlipV: 0x0 specifies this shape is not flipped vertically.

fConnector: 0x0 specifies this shape is not a connector shape.

fHaveAnchor: 0x1 specifies this shape has an anchor.

fBackground: 0x0 specifies this shape is not a background shape.

fHaveSpt: 0x1 specifies this shape has a shape type property, as specified by the **recInstance** property in the [OfficeArtRecordHeader](#).

unused1: This value is undefined and MUST be ignored.

3.3.2 Shape Primary Options

The following structure example outlines the list of primary property options for the shape shown in Figure 51.

The child-record hierarchy of the [OfficeArtFOPT](#) container for the shape is shown in the following figure.

Offset	Size	Structure
00000DCB	0074	OfficeArtFOPT - shapePrimaryOptions
00000DCB	0008	OfficeArtRecordHeader - rh
00000DD3	006C	OfficeArtRGFOPT - fopt
00000DD3	0006	Protection Boolean Properties - Protection Boolean Properties
00000DD9	0006	A ITxid - Text ID
00000DDF	0006	B WrapText - Wrap Text
00000DE5	0006	C anchorText - Anchor Text
00000DEB	0006	D fillType - Fill Type
00000DF1	0006	fillColor - Fill Color
00000DF7	0006	fillBackColor - Fill Back Color
00000DFD	0006	E fillFocus - Fill Focus
00000E03	0006	F fillShadeType - Shade Type
00000E09	0006	Fill Style Boolean Properties - Fill Style Boolean Properties
00000E0F	0006	lineColor - Line Color
00000E15	0006	G lineWidth - Line Width
00000E1B	0006	H lineStyle - Line Style
00000E21	0006	Line Style Boolean Properties - Line Style Boolean Properties
00000E27	0006	shadowColor - Shadow Color
00000E2D	0006	I shadowOpacity - Shadow Opacity
00000E33	0006	J Shadow Style Boolean Properties - Shadow Style Boolean Properties
00000E39	0006	3D-Object Boolean Properties - 3D Object Boolean Properties

Figure 53: OfficeArtFOPT shape primary options

Record types within the [OfficeArtFOPT](#) container shown previously that are not already discussed in previous structure examples are specified as follows:

shapePrimaryOptions: The [OfficeArtFOPT](#) record specifies a table of [OfficeArtRGFOPT](#) properties.

fopt: The [OfficeArtRGFOPT](#) record specifies a table of properties that contains an array of fixed size property table entries followed by a variable-length field of complex data.

fopt.Protection Boolean Properties: This property specifies a 32-bit field of Boolean properties for the protection of the shape.

fopt.Text ID: This property specifies an identifier for the text.

fopt.Wrap Text: An [MSOWRAPMODE](#) enumeration value that specifies the type of wrapping applied to the text. The default value for this property is **msowrapSquare**.

fopt.Anchor Text: This property specifies the type of anchor applied to the text.

fopt.Fill Type: This property set specifies the fill attributes of the shape or the background of the slide.

fopt.Fill Color: This property specifies the foreground color of the fill.

fopt.Fill Back Color: This property specifies the background color of the fill.

fopt.Fill Focus: This property specifies the relative position of the last color in the shaded fill.

fopt.Shade Type: This property specifies how the shaded fill should be computed.

fopt.Fill Style Boolean Properties: This property specifies a 32-bit field of Boolean properties for the fill style.

fopt.Line Color: This property specifies the foreground color of the line.

fopt.Line Width: This property specifies the width of the line.

fopt.Line Style: This property specifies the style of the line.

fopt.Line Style Boolean Properties: This property specifies a 32-bit field of Boolean properties for the line style.

fopt.Shadow Color: This property specifies the primary color of the shadow.

fopt.Shadow Opacity: This property specifies the opacity level of the shadow.

fopt.Shadow Style Boolean Properties: This property specifies a 32-bit field of Boolean properties for the shadow's state.

fopt.3D Object Boolean Properties: This property specifies a 32-bit field of Boolean properties for a 3D object.

Records labeled A, B, C, D, E, F, G, H, I, and J from the [OfficeArtFOPT](#) container in Figure 53 are shown expanded to reveal more detail in the following 10 example structures.

The [ITxid](#) property A from Figure 53 is shown expanded in the following figure.

Offset	Size	Structure	Value
0000DD9	0006	A ITxid - Text ID	
0000DD9	0002	OfficeArtFOPTePID - opid	
0000DDB	0004	LONG - ITxid	0x01D82D38

Figure 54: ITxid shape property options

ITxid: 0x01D82D38 specifies an identifier for the text inside the shape.

The [WrapText](#) property B from Figure 53 is shown expanded in the following figure.

Offset	Size	Structure	Value
0000DDF	0006	B WrapText - Wrap Text	
0000DDF	0002	OfficeArtFOPTePID - opid	
0000DE1	0004	MSOWRAPMODE - WrapText	0x00000002

Figure 55: WrapText shape property options

WrapText: 0x00000002 [MSOWRAPMODE](#) value specifies that a line of text will extend into or beyond a margin instead of continuing on subsequent lines.

The [anchorText](#) property C from Figure 53 is shown expanded in the following figure.

Offset	Size	Structure	Value
0000DE5	0006	C anchorText - Anchor Text	
0000DE5	0002	OfficeArtFOPTePID - opid	
0000DE7	0004	MSOANCHOR - anchorText	0x00000001

Figure 56: anchorText shape property options

anchorText: 0x00000001 [MSOANCHOR](#) value specifies that the vertical center of the text coincides with the vertical midpoint of the internal margins of the textbox area.

The [fillType](#) property D from Figure 53 is shown expanded in the following figure.

Offset	Size	Structure	Value
0000DEB	0006	D fillType - Fill Type	
0000DEB	0002	OfficeArtFOPTePID - opid	
0000DED	0004	MSOFILLTYPE - fillType	0x00000007

Figure 57: fillType shape property options

fillType: 0x00000007 [MSOFILLTYPE](#) value specifies the shape is filled with a gradient that starts on the outline and ends at a point defined within the shape. The fill angle is scaled by the aspect ratio of the shape.

The [fillFocus](#) property E from Figure 53 is shown expanded in the following figure.

Offset	Size	Structure	Value
0000DFD	0006	E fillFocus - Fill Focus	
0000DFD	0002	OfficeArtFOPTePID - opid	
0000DFF	0004	LONG - fillFocus	0xFFFFFFFFCE

Figure 58: fillFocus shape property options

fillFocus: 0xFFFFFFFFCE specifies the relative position of the last color in the shaded fill.

The [fillShadeType](#) property F from Figure 53 is shown in the following figure.

Offset	Size	Structure	Value
00000E03	0006	F fillShadeType - Fill Shade Type	
00000E03	0002	OfficeArtFOPTTEOPID - opid	
00000E05	0004	MSOSHADETYPE - fillShadeType	
00000E05	1 bit	bit - msoshadeNone	0x1
00000E05	1 bit	bit - msoshadeGamma	0x1
00000E05	1 bit	bit - msoshadeSigma	0x0
00000E05	1 bit	bit - msoshadeBand	0x1
00000E05	1 bit	bit - msoshadeOneColor	0x0
00000E05	27 bits	bit - unused1	0x0200000

Figure 59: fillShadeType shape property options

[fillShadeType](#) properties shown previously that are not already discussed in previous structure examples are specified as follows:

fillShadeType: This [MSOSHADETYPE](#) record specifies the interpolation of colors between the color/position values stated for the fill. Values can be combined to produce compounded effects.

fillShadeType.msoshadeNone: 0x1 specifies no color correction will be done after interpolation.

fillShadeType.msoshadeGamma: 0x1 specifies that gamma correction will be applied after interpolation.

fillShadeType.msoshadeSigma: 0x0 specifies no sigma transfer function will be applied after interpolation.

fillShadeType.msoshadeBand: 0x1 specifies that a flat band will be added at the start of the interpolation.

fillShadeType.msoshadeOneColor: 0x0 specifies more than one color can be used to determine the fill.

fillShadeType.unused1: This value is undefined and MUST be ignored.

The [lineWidth](#) property G from Figure 53 is shown expanded in the following figure.

Offset	Size	Structure	Value
00000E15	0006	G lineWidth - Line Width	
00000E15	0002	OfficeArtFOPTTEOPID - opid	
00000E17	0004	LONG - lineWidth	0x000094D4

Figure 60: lineWidth shape property options

lineWidth: 0x000094D4 specifies the width of the line in English Metric Units.

The [lineStyle](#) property H from Figure 53 is shown in the following figure.

Offset	Size	Structure	Value
00000E1B	0006	H lineStyle - Line Style	
00000E1B	0002	OfficeArtFOPTePID - opid	
00000E1D	0004	MSOLINESTYLE - lineStyle	0x00000001

Figure 61: lineStyle shape property options

lineStyle: 0x00000001 specifies the shape outline [MSOLINESTYLE](#) line style is two lines of equal width.

The [shadowOpacity](#) property I from Figure 53 is shown in the following figure.

Offset	Size	Structure	Value
00000E2D	0006	I shadowOpacity - Shadow Opacity	
00000E2D	0002	OfficeArtFOPTePID - opid	
00000E2F	0004	FixedPoint - shadowOpacity	0x00008000

Figure 62: shadowOpacity shape property options

shadowOpacity: 0x00008000 specifies the opacity of the shadow applied to the shape.

The [Shadow Style Boolean Properties](#) record J from Figure 53 is shown in the following figure.

Offset	Size	Structure	Value
00000E33	0006	J Shadow Style Boolean Properties - Shadow Style Boolean Properties	
00000E33	0002	OfficeArtFOPTePID - opid	
00000E35	1 bit	bit - fshadowObscured	0x0
00000E35	1 bit	bit - fShadow	0x1
00000E35	14 bits	bit - unused1	0x0000
00000E35	1 bit	bit - fUsefshadowObscured	0x0
00000E35	1 bit	bit - fUsefShadow	0x1
00000E35	14 bits	bit - unused2	0x0000

Figure 63: Shape Shadow Style Boolean Properties options

fshadowObscured: 0x0 specifies the shadow is not fully obscured by the shape.

fShadow: 0x1 specifies that the shape has a shadow.

unused1: This value is undefined and MUST be ignored.

fUsefshadowObscured: 0x0 specifies the **fshadowObscured** bit is not set.

fUsefShadow: 0x1 specifies that the **fShadow** bit is set.

unused2: This value is undefined and MUST be ignored.

3.3.3 Shape Text Properties

Text in a shape is host-dependent and not all text properties are supported by each host application.

The following text-related fields and records are defined by the host application; they are explained in more detail by one of the host application file format specifications. The specifications for the following structure examples are specified in [\[MS-PPT\] section 2.9.76](#).

The **OfficeArtClientTextbox** record is shown in the following figure.

Offset	Size	Structure	Value
00000E5D	0049	OfficeArtClientTextbox - clientTextbox	
00000E5D	0008	OfficeArtRecordHeader - rh	
00000E65	0041	TextClientDataRecordArray - rgChildRec	
00000E65	000C	TextClientDataSubContainerOrAtom - rec	
00000E65	000C	TextHeaderAtom - case_of_RT_TextHeaderAtom	
00000E65	0008	RecordHeader - rh	
00000E6D	0004	TextTypeEnum - textType	0x00000004
00000E71	0017	TextClientDataSubContainerOrAtom - rec	
00000E71	0017	TextBytesAtom - case_of_RT_TextBytesAtom	
00000E71	0008	RecordHeader - rh	
00000E79	000F	NarrowStringBufferEx - textBytes	Shape with text
00000E88	001E	TextClientDataSubContainerOrAtom - rec	
00000E88	001E	StyleTextPropAtom - case_of_RT_StyleTextPropAtom	
00000E88	0008	RecordHeader - rh	
00000E90	000C	TextPFRunArray - rgTextPFRun	
00000E9C	000A	TextCRunArray - rgTextCRun	

Figure 64: OfficeArtClientTextbox shape text properties

The records contained within the **OfficeArtClientTextbox** container that are not already discussed in previous structure examples are specified as follows:

clientTextbox: A container record that specifies text related data for a shape.

rgChildRec: An array of **TextClientDataSubContainerOrAtom** that specifies text-related data.

rgChildRec.rec: A variable type record whose type and meaning are dictated by the value of **rh.recType**.

rgChildRec.rec.case_of_RT_TextHeaderAtom: An atom record that specifies the type of a text body. The presence of this atom indicates a text body whose properties are specified by other atom and container records that follow.

rgChildRec.rec.case_of_RT_TextHeaderAtom.textType: 0x00000004 specifies that the text type is defined as **TextTypeEnum** name **Tx_TYPE_OTHER** which means any other text.

rgChildRec.rec.case_of_RT_TextBytesAtom: An atom record that specifies Unicode characters.

rgChildRec.rec.case_of_RT_TextBytesAtom.textBytes: "Shape with text" specifies an array of bytes that specifies the characters of the *corresponding text* within the shape.

rgChildRec.rec.case_of_RT_StyleTextPropAtom: An atom record that specifies character-level and paragraph-level formatting.

4 Security Considerations

This format allows HTML and associated script to be inserted into a shape. When the shape is exported to an HTML format, it is possible that the associated script could be executed. Whether this happens is dependent on the nature of the script and how the HTML document is opened.

The [Signature Line](#) can contain personally identifiable information such as the user's name or e-mail address. This information is optional and can either be replaced with defaults or omitted entirely. For privacy reasons, applications should provide users with a way to remove this information from files. Any personally identifiable information in this format is not backed by any kind of authentication system. For example, the signer's name does not need to be tied to the author's login credentials or any other form of identity verification. Therefore, applications should not make security decisions based on this information.

5 Appendix A: Product Behavior

The information in this specification is applicable to the following Microsoft products and technologies:

- Microsoft® Office Word 2007 Service Pack 1
- Microsoft® Office Word 2003
- Microsoft® Word 2002
- Microsoft® Word 2000
- Microsoft® Word 97
- Microsoft® Office Excel® 2007 Service Pack 1
- Microsoft® Office Excel® 2003
- Microsoft® Excel® 2002
- Microsoft® Excel® 2000
- Microsoft® Excel® 97
- Microsoft® Office PowerPoint® 2007 Service Pack 1
- Microsoft® Office PowerPoint® 2003
- Microsoft® PowerPoint® 2002
- Microsoft® PowerPoint® 2000
- Microsoft® PowerPoint® 97

Exceptions, if any, are noted below. Unless otherwise specified, any statement of optional behavior in this specification prescribed using the terms SHOULD or SHOULD NOT implies the aforementioned Microsoft products' behavior is in accordance with the SHOULD or SHOULD NOT prescription. Unless otherwise specified, the term MAY implies these Microsoft products do not follow the prescription.

[<1> Section 2.2.2](#): This color may be dithered if the rendering system supports dithering or half-tone dithering.

[<2> Section 2.2.13](#): This array is only supported by Word 97, Word 2000, Word 2002, and Office Word 2003.

[<3> Section 2.2.15](#): Word 97, Word 2000, Word 2002, Office Word 2003, and Microsoft® Office Word 2007 do not ignore this record.

[<4> Section 2.2.32](#): If the values of btWin32 and btMacOS differ, and the BLIP in the store does not match the operating system of the application, then the Microsoft Office application loading the file will convert the file on open to the type specified.

[<5> Section 2.2.33](#): Excel 97, Excel 2000, Excel 2002, and Office Excel 2003 do not ignore this record.

[<6> Section 2.2.35](#): Microsoft® Office Excel® 2007 and Microsoft® Office PowerPoint® 2007 do not persist this record. Office Excel 2007 supports it only if the shape is contained by a [dialog sheet](#), as specified in [\[MS-XLS\] section 2.1.7.20.2](#).

- [<7> Section 2.2.36](#): Word 97 and Word 2000 ignore this record.
- [<8> Section 2.2.37](#): Word 97, Word 2000, Word 2002, and Office Word 2003 use this record.
- [<9> Section 2.3.2.6](#): Microsoft® Office 2000, Microsoft® Office XP and Microsoft® Office 2003 use this field.
- [<10> Section 2.3.2.11](#): Office Word 2007 uses this field.
- [<11> Section 2.3.2.12](#): Excel 97, PowerPoint 97, Word 97, Excel 2000 and PowerPoint 2000 and Word 2000 do not use this bit.
- [<12> Section 2.3.2.12](#): Excel 97, PowerPoint 97, Word 97, Excel 2000, PowerPoint 2000 and Word 2000 do not use this bit.
- [<13> Section 2.3.2.12](#): Office Excel 2007, Office PowerPoint 2007 and Office Word 2007 use this bit.
- [<14> Section 2.3.2.12](#): Office Excel 2007, Office PowerPoint 2007 and Office Word 2007 use this bit.
- [<15> Section 2.3.4.19](#): Word 2000, Word 2002, Office Word 2003 and Office Word 2007 use this field.
- [<16> Section 2.3.4.20](#): Word 2000, Word 2002, Office Word 2003 and Office Word 2007 use this field.
- [<17> Section 2.3.4.21](#): Word 2000, Word 2002, Office Word 2003 and Office Word 2007 use this field.
- [<18> Section 2.3.4.22](#): Word 2000, Word 2002, Office Word 2003 and Office Word 2007 use this field.
- [<19> Section 2.3.4.23](#): Word 2000, Word 2002, Office Word 2003 and Office Word 2007 do not ignore this property.
- [<20> Section 2.3.4.24](#): Word 2000, Word 2002, Office Word 2003 and Office Word 2007 do not ignore this property.
- [<21> Section 2.3.4.25](#): Word 2000, Word 2002, Office Word 2003 and Office Word 2007 do not ignore this property.
- [<22> Section 2.3.4.26](#): Word 2000, Word 2002, Office Word 2003 and Office Word 2007 do not ignore this property.
- [<23> Section 2.3.4.36](#): PowerPoint 97, PowerPoint 2000, PowerPoint 2002, Office PowerPoint 2003, Office PowerPoint 2007 do not ignore this property.
- [<24> Section 2.3.4.37](#): PowerPoint 97, PowerPoint 2000, PowerPoint 2002, Office PowerPoint 2003, Office PowerPoint 2007 do not ignore this property.
- [<25> Section 2.3.4.41](#): the 2007 Microsoft® Office system does not ignore this property.
- [<26> Section 2.3.4.43](#): Office Word 2007 does not ignore this property.
- [<27> Section 2.3.5.1](#): Office Word 2007 does not ignore this property.
- [<28> Section 2.3.5.2](#): Office Word 2007 does not ignore this property.
- [<29> Section 2.3.5.3](#): Office Word 2007 does not ignore this property.
- [<30> Section 2.3.5.4](#): Office Word 2007 does not ignore this property.

[<31> Section 2.3.5.5](#): Office Word 2007 does not ignore this property.

[<32> Section 2.3.5.6](#): Office Word 2007 does not ignore this property.

[<33> Section 2.3.6.25](#): Office Excel 2007 and Office PowerPoint 2007 do not show the adjust handles specified in the [pAdjustHandles](#) property.

[<34> Section 2.3.6.31](#): Microsoft® Office 97, Office 2000, Office XP, Office 2003, and the 2007 Office system ignore this bit.

[<35> Section 2.3.7.8](#): Excel 97, Excel 2000, Excel 2002, Office Excel 2003 and Office Excel 2007 do not ignore this property.

[<36> Section 2.3.8.38](#): Office 97 and Office 2000 do not render the line end decorations if line end decoration properties are specified and this bit is set to 0x0.

[<37> Section 2.3.16.23](#): Values below 0.0 will invert the lighting effect. Values above 1.0 can be used for brighter lighting effects.

[<38> Section 2.3.16.27](#): Values below 0.0 will invert the lighting effect. Values above 1.0 can be used for brighter lighting effects

[<39> Section 2.3.17.10](#): Office 97, Office 2000, and Office XP ignore this property.

[<40> Section 2.3.18.6](#): Word 97, Word 2000, Word 2002, Office Word 2003 and Office Word 2007 do not ignore this property.

[<41> Section 2.3.19.6](#): Word 97, Word 2000, Word 2002, Office Word 2003 and Office Word 2007 do not ignore this property.

[<42> Section 2.3.20.1](#): Office 97 ignores this bit.

[<43> Section 2.3.21.2](#): Values outside the specified range are not fully supported.

[<44> Section 2.3.21.3](#): Values outside the specified range are not fully supported.

[<45> Section 2.3.21.4](#): Values outside the specified range are not fully supported.

[<46> Section 2.3.21.5](#): Values outside the specified range are not fully supported.

[<47> Section 2.3.21.8](#): PowerPoint 97, PowerPoint 2000, PowerPoint 2002, Office PowerPoint 2003 and Office PowerPoint 2007 use this field. [MSOANCHOR](#) specifies exceptions for some individual values.

[<48> Section 2.3.21.10](#): This property is only supported by Office Excel 2007, PowerPoint 97, PowerPoint 2000, PowerPoint 2002, Office PowerPoint 2003 and Office PowerPoint 2007.

[<49> Section 2.3.21.11](#): Word 97, Word 2000, Word 2002, Office Word 2003 and Office Word 2007 use this property.

[<50> Section 2.3.21.12](#): Excel 2000, Excel 2002, Office Excel 2003 and Office Excel 2007 use this property.

[<51> Section 2.3.21.15](#): Word 97 and Word 2000 do not use this bit.

[<52> Section 2.3.21.15](#): Excel 97, Excel 2000, Excel 2002, and Office Excel 2003 use this bit. Office Excel 2007 reads and uses the value of 0x1 properly but does not write it.

[<53> Section 2.3.21.15](#): Excel 97, PowerPoint 97, Excel 2000, PowerPoint 2000, Excel 2002, PowerPoint 2002, Office Excel 2003, Office PowerPoint 2003 and use this bit.

[<54> Section 2.3.22.3](#): Office Excel 2007 and Office PowerPoint 2007 treat `msoalignTextStretch` as `msoalignTextCenter`.

[<55> Section 2.3.22.3](#): Office Excel 2007 and Office PowerPoint 2007 do not use `msoalignTextLetterJust`.

[<56> Section 2.3.22.3](#): Office Excel 2007 and Office PowerPoint 2007 do not use `msoalignTextWordJust`.

[<57> Section 2.3.22.8](#): Office 97 does not use this property.

[<58> Section 2.3.22.10](#): Office Excel 2007 and Office PowerPoint 2007 do not ignore this bit.

[<59> Section 2.3.22.10](#): Office Excel 2007 and Office PowerPoint 2007 do not ignore this bit.

[<60> Section 2.3.22.10](#): Office Excel 2007 and Office PowerPoint 2007 do not ignore this bit.

[<61> Section 2.3.22.10](#): Office Excel 2007 and Office PowerPoint 2007 ignore this bit.

[<62> Section 2.3.22.10](#): Office Excel 2007 and Office PowerPoint 2007 ignore this bit.

[<63> Section 2.3.22.10](#): Office Excel 2007 and Office PowerPoint 2007 ignore this bit.

[<64> Section 2.3.22.10](#): Office Excel 2007 and Office PowerPoint 2007 ignore this bit.

[<65> Section 2.3.22.10](#): Office Excel 2007 and Office PowerPoint 2007 ignore this bit, and always apply scaling to the character advance width.

[<66> Section 2.3.22.10](#): Office Excel 2007 and Office PowerPoint 2007 ignore this bit.

[<67> Section 2.3.22.10](#): Office Excel 2007 and Office PowerPoint 2007 do not use this bit.

[<68> Section 2.3.23.14](#): The [pictureDblCrMod](#) property is used for compatibility with Microsoft® PowerPoint® for Windows® 95.

[<69> Section 2.3.23.22](#): Macintosh versions of Microsoft Office do not ignore this property.

[<70> Section 2.3.23.23](#): Macintosh versions of Microsoft Office do not ignore this property.

[<71> Section 2.3.24.1](#): Excel 97, PowerPoint 97 and Word 97 ignore this property.

[<72> Section 2.3.24.3](#): Excel 97, PowerPoint 97 and Word 97 ignore this property.

[<73> Section 2.3.24.5](#): Excel 97, PowerPoint 97 and Word 97 ignore this property.

[<74> Section 2.3.24.7](#): Excel 97, PowerPoint 97 and Word 97 ignore this property.

[<75> Section 2.3.24.9](#): Excel 97, PowerPoint 97 and Word 97 ignore this property.

[<76> Section 2.3.24.11](#): Excel 97, PowerPoint 97 and Word 97 ignore this property.

[<77> Section 2.3.24.13](#): Excel 97, PowerPoint 97 and Word 97 ignore this property.

[<78> Section 2.3.24.15](#): Excel 97, PowerPoint 97 and Word 97 ignore this property.

[<79> Section 2.3.24.17](#): Excel 97, PowerPoint 97 and Word 97 ignore this property.

[<80> Section 2.3.24.19](#): Excel 97, PowerPoint 97 and Word 97 ignore this property.

[<81> Section 2.3.24.21](#): Excel 97, PowerPoint 97 and Word 97 ignore this property.

[<82> Section 2.3.24.23](#): Excel 97, PowerPoint 97 and Word 97 ignore this property.

[<83> Section 2.3.24.25](#): Excel 97, PowerPoint 97 and Word 97 ignore this property.

[<84> Section 2.3.24.27](#): Excel 97, PowerPoint 97 and Word 97 ignore this property.

[<85> Section 2.3.25.1](#): Office 97 and Office 2000 ignore this property.

[<86> Section 2.3.25.3](#): Office 97 and Office 2000 ignore this property.

[<87> Section 2.3.25.5](#): Office 97 and Office 2000 ignore this property.

[<88> Section 2.3.25.7](#): Office 97 and Office 2000 ignore this property.

[<89> Section 2.3.27.1](#): Office Excel 2007, Office PowerPoint 2007 and Office Word 2007 do not ignore this property.

[<90> Section 2.3.27.3](#): Office Excel 2007, Office PowerPoint 2007 and Office Word 2007 do not ignore this property.

[<91> Section 2.3.27.5](#): Office Excel 2007, Office PowerPoint 2007 and Office Word 2007 do not ignore this property.

[<92> Section 2.3.27.7](#): Office Excel 2007, Office PowerPoint 2007 and Office Word 2007 do not ignore this property.

[<93> Section 2.3.27.9](#): Office Excel 2007, Office PowerPoint 2007 and Office Word 2007 do not ignore this property.

[<94> Section 2.3.27.11](#): Office Excel 2007, Office PowerPoint 2007 and Office Word 2007 do not ignore this property.

[<95> Section 2.3.27.13](#): Office Excel 2007, Office PowerPoint 2007 and Office Word 2007 do not ignore this property.

[<96> Section 2.3.27.15](#): Office Excel 2007, Office PowerPoint 2007 and Office Word 2007 do not ignore this property.

[<97> Section 2.3.27.17](#): Office Excel 2007, Office PowerPoint 2007 and Office Word 2007 do not ignore this property.

[<98> Section 2.4.3](#): Office Excel 2007, PowerPoint 97, PowerPoint 2000, PowerPoint 2002, Office PowerPoint 2003 and Office PowerPoint 2007 read and use this value properly, but do not write it.

[<99> Section 2.4.3](#): Excel 97, Excel 2000, Excel 2002, and Office Excel 2003 use this value.

[<100> Section 2.4.3](#): Excel 97, Word 97, Excel 2000, Word 2000, Excel 2002, and Office Excel 2003 do not use this value.

[<101> Section 2.4.4](#): PowerPoint 97, PowerPoint 2000, PowerPoint 2002, Office PowerPoint 2003 and Office PowerPoint 2007 use these values. Exceptions are specified for some individual values.

[<102> Section 2.4.4](#): PowerPoint 97, PowerPoint 2000, PowerPoint 2002 and Office PowerPoint 2003 use this value.

[<103> Section 2.4.4](#): PowerPoint 97, PowerPoint 2000, PowerPoint 2002 and Office PowerPoint 2003 use this value.

[<104> Section 2.4.4](#): PowerPoint 97, PowerPoint 2000, PowerPoint 2002 and Office PowerPoint 2003 use this value.

[<105> Section 2.4.4](#): PowerPoint 97, PowerPoint 2000, PowerPoint 2002 and Office PowerPoint 2003 use this value.

[<106> Section 2.4.5](#): PowerPoint 97, Word 97, PowerPoint 2000, Word 2000, PowerPoint 2002, Word 2002, Office PowerPoint 2003, Office Word 2003, Office PowerPoint 2007, and Office Word 2007 read and use this value properly, but do not write it. Excel 97, Excel 2000, Excel 2002 and Office Excel 2003 convert this value to msotxfVertN when reading it.

[<107> Section 2.4.5](#): Excel 97, Excel 2000, Excel 2002, Office Excel 2003, and Office Excel 2007 convert this value to msotxfVertN when reading it.

[<108> Section 2.4.5](#): Office PowerPoint 2007 does not use this value. PowerPoint 97, PowerPoint 2000, PowerPoint 2002 and Office PowerPoint 2003 interpret this value as msotxfHorzN.

[<109> Section 2.4.5](#): Office PowerPoint 2007 does not use this value. PowerPoint 97, PowerPoint 2000, PowerPoint 2002 and Office PowerPoint 2003 interpret this value as msotxfHorzN.

[<110> Section 2.4.5](#): Office PowerPoint 2007 does not use this value. PowerPoint 97, PowerPoint 2000, PowerPoint 2002 and Office PowerPoint 2003 interpret this value as msotxfITtoBA. Excel 97, Excel 2000, Excel 2002, Office Excel 2003 and Office Excel 2007 remove this value upon reading it.

[<111> Section 2.4.5](#): Office PowerPoint 2007 does not use this value. PowerPoint 97, PowerPoint 2000, PowerPoint 2002 and Office PowerPoint 2003 interpret this value as msotxfHorzN. Office Word 2007 instead places subsequent lines of text to the right of antecedent lines of text. Excel 97, Excel 2000, Excel 2002, Office Excel 2003 and Office Excel 2007 instead orient character glyphs such that their ascenders are closest to the top of the text body container; subsequent character glyphs are placed below antecedent character glyphs; subsequent lines of text are placed to the right of antecedent lines of text.

[<112> Section 2.4.7](#): Office Excel 2007 uses this value but does not save it.

[<113> Section 2.4.7](#): Office Excel 2007 uses this value but does not save it.

[<114> Section 2.4.7](#): Office 97, Office 2000, Office XP, Office 2003 and the 2007 Office system, assume [left-to-right](#) if there is no associated text string.

[<115> Section 2.4.24](#): the 2007 Office system converts shapes of type msosptTextSimple into textboxes with unstyled text.

[<116> Section 2.4.24](#): the 2007 Office system converts shapes of type msosptTextOctagon into textboxes with unstyled text.

[<117> Section 2.4.24](#): the 2007 Office system converts shapes of type msosptTextHexagon into textboxes with unstyled text.

[<118> Section 2.4.24](#): the 2007 Office system converts shapes of type msosptTextCurve into textboxes with unstyled text.

[<119> Section 2.4.24](#): the 2007 Office system converts shapes of type msosptTextWave into textboxes with unstyled text.

[<120> Section 2.4.24](#): the 2007 Office system converts shapes of type msosptTextRing into textboxes with unstyled text.

[<121> Section 2.4.24](#): the 2007 Office system converts shapes of type msosptTextOnCurve into textboxes with unstyled text.

[<122> Section 2.4.24](#): the 2007 Office system converts shapes of type msosptTextOnRing into textboxes with unstyled text.

[<123> Section 2.4.31](#): If the rendering algorithm that is used permits rendering without a fill present, the shape MUST be rendered without a fill.

[<124> Section 2.4.31](#): If the rendering algorithm that is used permits rendering without drawing a path, the shape MUST be rendered without a path.

6 Index

A

Applicability, 27

E

Examples, overview, 516

F

Fields: vendor-extensible, 30

G

Glossary, 19

I

Informative references, 23

Introduction, 19

L

Localization, 27

N

Normative references, 22

O

Overview, 23

P

Product behavior, overview, 560

R

References: informative, 23; normative, 22;
overview, 22

Relationship to protocols and other structures, 26

S

Security considerations, overview, 559

Structures: algorithms, 515; custom officeart types,
31; enumerations, 447; officeart record types, 31;
properties, 95

Structures, overview, 31

V

Vendor-extensible fields, 30

Versioning, 27