[MS-ODRAW]:

Office Drawing Binary File Format

Revision Summary

Date	Revision History	Revision Class	Comments
6/27/2008	1.0	New	First release
1/16/2009	1.01	Minor	Updated the Intellectual Property Rights Notice
7/13/2009	1.02	Major	Revised and edited the technical content
8/28/2009	1.03	Editorial	Revised and edited the technical content
11/6/2009	1.04	Editorial	Revised and edited the technical content
2/19/2010	2.0	Major	Updated and revised the technical content
3/31/2010	2.01	Editorial	Revised and edited the technical content
4/30/2010	2.02	Editorial	Revised and edited the technical content
6/7/2010	2.03	Editorial	Revised and edited the technical content
6/29/2010	2.04	Editorial	Changed language and formatting in the technical content.
7/23/2010	2.04	None	No changes to the meaning, language, or formatting of the technical content.
9/27/2010	2.05	Editorial	Changed language and formatting in the technical content.
11/15/2010	2.05	None	No changes to the meaning, language, or formatting of the technical content.
12/17/2010	2.05	None	No changes to the meaning, language, or formatting of the technical content.
3/18/2011	2.05	None	No changes to the meaning, language, or formatting of the technical content.
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1/20/2012	3.0	Major	Significantly changed the technical content.
4/11/2012	3.0	None	No changes to the meaning, language, or formatting of the technical content.
7/16/2012	3.0	None	No changes to the meaning, language, or formatting of the technical content.
10/8/2012	3.0	None	No changes to the meaning, language, or formatting of the technical content.
2/11/2013	3.0	None	No changes to the meaning, language, or formatting of the technical content.
7/30/2013	3.0	None	No changes to the meaning, language, or formatting of the technical content.
11/18/2013	3.0	None	No changes to the meaning, language, or formatting of the technical content.
2/10/2014	3.0	None	No changes to the meaning, language, or formatting of the technical content.

Date	Revision History	Revision Class	Comments
4/30/2014	3.1	Minor	Clarified the meaning of the technical content.
7/31/2014	3.2	Minor	Clarified the meaning of the technical content.
10/30/2014	3.3	Minor	Clarified the meaning of the technical content.
3/16/2015	4.0	Major	Significantly changed the technical content.
9/4/2015	5.0	Major	Significantly changed the technical content.
7/15/2016	5.0	None	No changes to the meaning, language, or formatting of the technical content.
9/14/2016	5.0	None	No changes to the meaning, language, or formatting of the technical content.
10/17/2016	5.0	None	No changes to the meaning, language, or formatting of the technical content.
4/18/2017	5.0	None	No changes to the meaning, language, or formatting of the technical content.
9/19/2017	5.0	None	No changes to the meaning, language, or formatting of the technical content.
4/27/2018	6.0	Major	Significantly changed the technical content.
8/28/2018	7.0	Major	Significantly changed the technical content.
8/18/2020	7.1	Minor	Clarified the meaning of the technical content.
11/17/2020	8.0	Major	Significantly changed the technical content.
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8/17/2021	10.0	Major	Significantly changed the technical content.
5/17/2022	10.0	None	No changes to the meaning, language, or formatting of the technical content.
2/20/2024	10.1	Minor	Clarified the meaning of the technical content.
4/16/2024	11.0	Major	Significantly changed the technical content.

Table of Contents

1 Introduction

This document specifies the Office Drawing Binary File Format Structure, which enables the use of graphical elements in certain applications.

Sections 1.7 and 2 of this specification are normative. All other sections and examples in this specification are informative.

1.1 Glossary

This document uses the following terms:

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.

Active Server Pages (ASP): A server-side scripting engine that was developed by Microsoft and is designed to dynamically generate a webpage.

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.

anchor: A set of qualifiers and quantifiers that specifies the location of an element or object within a document. These values are typically relative to another element or known location in the document, such as the edge of a page or margin.

atom: A unit of information that cannot be divided into smaller parts, and is accepted or rejected in its entirety. See also Atom Publishing Protocol (AtomPub).

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

binary large image or picture (BLIP): A binary data structure that stores information about a metafile image or bitmap picture.

bounding rectangle: A frame that encompasses an object. A bounding rectangle is not rotated and, therefore, always aligns along the x and y axes.

callout: A set of characters that describes or emphasizes an element of a drawing or image and is connected to that drawing or image by a line.

child: An object that is immediately below the current object in a hierarchy.

CMYK: A color space used for commercial printing and most color computer printers. In theory, cyan, magenta, and yellow (CMY) can print all colors, but inks are not pure and black comes out muddy. The black (K) ink is required for quality black-and-white printing.

color scheme: A table of color values that enables colors to be referenced by an index value in the table instead of a color value. See also color palette.

comment: An annotation that is associated with a cell, text, or other object to provide context-specific information or reviewer feedback.

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.

content management system: A system that manages the collaboration, creation, modification, archiving, restoration, and removal of objects from a formal repository on behalf of a web server.

crop: In graphics editing, the process of trimming the vertical or horizontal edges of a specified object.

device-independent bitmap (DIB): A file format that was designed to help ensure that bitmap graphics that were created by using one application can be loaded and displayed in another application exactly as they appeared in the originating application.

diagram: A drawing that is used to present relationships between abstract ideas and data, such as an organizational chart or a Venn diagram.

dialog sheet: A single logical container that is used to create a custom dialog box.

digital signature: A message authenticator that is typically derived from a cryptographic operation by using an asymmetric algorithm and private key. When a symmetric algorithm is used for this purpose, the authenticator is typically referred to as a Message Authentication Code (MAC).

drawing: A collection of drawing objects, such as shapes, curves, or WordArt, that are viewed together as a single image.

drawing group: A collection of images that are designated by the user as a single group of images and manipulated as a single **drawing object**.

drawing object: A shape, curve, line, WordArt, or other type of graphical object that can be inserted into a document.

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

drawing space: An area of the **absolute space** that is being drawn, after all of 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.

English Metric Unit (EMU): A measurement in computer typography. There are 635 EMUs per twip, 6,350 EMUs per half-point, 12,700 EMUs per point, and 914,400 EMUs per inch. These units are used to translate on-screen layouts to printed layouts for specified printer hardware.

enhanced metafile format (EMF): A file format that supports the device-independent definitions of images.

gamma correction: In digital imaging, the process of changing the brightness, contrast, or color balance of an image by assigning new values (different colors) to gray or color tones.

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.

gradient vector: A vector that indicates the direction of a gradient fill. The gradient vector is perpendicular to the bands of color.

group: A process of combining similar elements into a set in accordance with logical criteria. It is frequently used to combine sets of data from Online Analytical Processing (OLAP) databases or PivotTable reports.

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

horizontal rule: A line that is printed above or below an element to set off that item from the remainder of the page or to improve the appearance of the page.

hyperlink: A relationship between two **anchors**, as described in [RFC1866].

Hypertext Markup Language (HTML): An application of the Standard Generalized Markup Language (SGML) that uses tags to mark elements in a document, as described in [HTML].

ink: A process of entering text in handwritten form. Instead of converting handwritten text to typed text, ink is converted to an object and displayed exactly as it was written.

ink shape: A shape that contains strokes of ink.

inside margin: A side or top margin of a document on which the document is bound.

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

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

Joint Photographic Experts Group (JPEG): A raster graphics file format for displaying high-resolution color graphics. JPEG graphics apply a user-specified compression scheme that can significantly reduce the file sizes of photo-realistic color graphics. A higher level of compression results in lower quality, whereas a lower level of compression results in higher quality. JPEG-format files have a .jpg or .jpeg file name extension.

labeling policy: A policy that supports the addition of labels to a list item.

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

little-endian: Multiple-byte values that are byte-ordered with the least significant byte stored in the memory location with the lowest address.

Macintosh PICT: An abbreviated term for Macintosh Picture format, a graphics file format that is associated with Macintosh applications.

master: A slide view, page, or shape that defines the formatting for all slides, pages, or shapes in a presentation. 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 that shape within a document.

master unit: A unit of linear measurement that is equal to 1/576 inch.

Object Linking and Embedding (OLE): A technology for transferring and sharing information between applications by inserting a file or part of a file into a compound document. The inserted file can be either embedded or linked. See also embedded object and linked object.

OLE object: An object that supports the **Object Linking and Embedding (OLE)** protocol.

outside margin: A side or top margin of a document that is opposite the side where the document is bound.

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.

placeholder: A character or symbol that is used in place of an actual value, text, or object. The actual value that the placeholder represents is unknown or unavailable at the current time, or is not displayed for security reasons.

point: A unit of measurement for fonts and spacing. A point is equal to 1/72 of an inch.

Portable Network Graphics (PNG): A bitmap graphics file format that uses lossless data compression and supports variable transparency of images (alpha channels) and control of image brightness on different computers (gamma correction). PNG-format files have a .png file name extension.

red-green-blue (RGB): A color model that describes color information in terms of the red (R), green (G), and blue (B) intensities in a color.

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

right-to-left: A reading and display order that is optimized for right-to-left languages.

rule: A condition or action, or a set of conditions or actions, that performs tasks automatically based on events and values.

scheme color: One of the colors that is defined in a set of specified colors for a document. If an object is filled with a scheme color, its color changes when another color scheme is selected for that document.

script anchor: The visual representation of a script on a webpage that is open in a Microsoft Office application. Different script anchors are used to represent scripts that are written in different scripting languages. By default, script anchors are not displayed.

shape: A collection of qualifiers, such as names, and quantifiers, such as coordinates, that is used to represent a geometric object. A shape can be contained in a document, file structure, run-time structure, or other medium.

sigma transfer function: A mathematical process which improves the signal-to-noise ratio of a data series.

signature line: A location in a document where a visible digital signature can be inserted.

slide: A frame that contains text, shapes, pictures, or other content. A slide is a digital equivalent to a traditional film slide.

Tagged Image File Format (TIFF): A high-resolution, tag-based graphics format. TIFF is used for the universal interchange of digital graphics.

text run: A string of characters that represents a discrete span of text with the same formatting properties.

toolbar control identifier (TCID): An integer that identifies a specific control on a toolbar.

tooltip: A window displaying text that is created when the mouse is moved over a window or notification icon.

Unicode: A character encoding standard developed by the Unicode Consortium that represents almost all of the written languages of the world. The **Unicode** standard [UNICODE5.0.0/2007] provides three forms (UTF-8, UTF-16, and UTF-32) and seven schemes (UTF-8, UTF-16, UTF-16 BE, UTF-16 LE, UTF-32, UTF-32 LE, and UTF-32 BE).

Uniform Resource Locator (URL): A string of characters in a standardized format that identifies a document or resource on the World Wide Web. The format is as specified in [RFC1738].

UTF-8: A byte-oriented standard for encoding Unicode characters, defined in the Unicode standard. Unless specified otherwise, this term refers to the UTF-8 encoding form specified in [UNICODE5.0.0/2007] section 3.9.

Vector Markup Language (VML): A system of marking up or tagging two-dimensional vector graphics for publication on the World Wide Web. VML graphics are scalable and editable, and typically require less disk space and less time to download.

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

Windows metafile format (WMF): A file format used by Windows that supports the definition of images, including a format for clip art in word-processing documents.

wrap polygon: A shape that is built from a pattern of points and segments, and delineates an area that is associated with a graphic. A wrap polygon enables a word processing or other type of application to break lines of text automatically to stay outside of the boundaries set by the polygon, or to display text behind or in front of the polygon.

XML: The Extensible Markup Language, as described in [XML1.0].

YCCK: A variant of the [YCbCr color space] containing an additional K channel (black), which is required for quality black-and-white printing.

z-order: The rendering order of an object on a z axis.

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

1.2   References

Links to a document in the Microsoft Open Specifications library point to the correct section in the most recently published version of the referenced document. However, because individual documents in the library are not updated at the same time, the section numbers in the documents may not match. You can confirm the correct section numbering by checking the Errata.

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.

[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/

[ISO/IEC29500-2:2012] ISO/IEC, "Information technology -- Document description and processing languages -- Office Open XML File Formats -- Part 2: Open Packaging Conventions", ISO/IEC 29500-2:2012, http://www.iso.org/iso/home/store/catalogue_ics/catalogue_detail_ics.htm?csnumber=61796

[ISO/IEC29500-4:2011] ISO/IEC, "Information technology -- Document description and processing languages -- Office Open XML File Formats -- Part 4: Transitional Migration Features", ISO/IEC 29500-4:2011, 2011, http://www.iso.org/iso/home/store/catalogue_ics/catalogue_detail_ics.htm?csnumber=59578

[ISO/IEC29500-4:2012] ISO/IEC, "Information technology -- Document description and processing languages -- Office Open XML File Formats -- Part 4: Transitional Migration Features", ISO/IEC 29500-4:2012, http://www.iso.org/iso/home/store/catalogue_ics/catalogue_detail_ics.htm?csnumber=61798

[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

[MS-DOC] Microsoft Corporation, "Word (.doc) Binary File Format".

[MS-OSHARED] Microsoft Corporation, "Office Common Data Types and Objects Structures".

[MS-PPT] Microsoft Corporation, "PowerPoint (.ppt) Binary File Format".

[MS-XLS] Microsoft Corporation, "Excel Binary File Format (.xls) Structure".

[RFC1320] Rivest, R., "The MD4 Message-Digest Algorithm", RFC 1320, April 1992, https://www.rfc-editor.org/info/rfc1320

[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, https://www.rfc-editor.org/info/rfc2119

1.2.2   Informative References

[MS-OGRAPH] Microsoft Corporation, "Office Graph Binary File Format".

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

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

1.3   Structure Overview (Synopsis)

Certain applications use the Office Drawing Binary File Format Structure to represent **drawing** elements and their associated formatting. Typically, these elements are represented as **shapes** that are contained within drawings or **diagrams**, but the elements can also include form controls and tables. This file format is also known as OfficeArt.

The host application stores the OfficeArt data as a series of records, many of which contain additional records. The host application, which determines where to store the OfficeArt data, can also define and store additional records—to provide the details that are needed to position the drawing elements in the host document or to render any associated text. To allow the OfficeArt records to be parsed without detailed knowledge of each record type, each record has a common header that contains the record type and additional data.

OfficeArt uses an object container hierarchy, which is illustrated by the following figure.
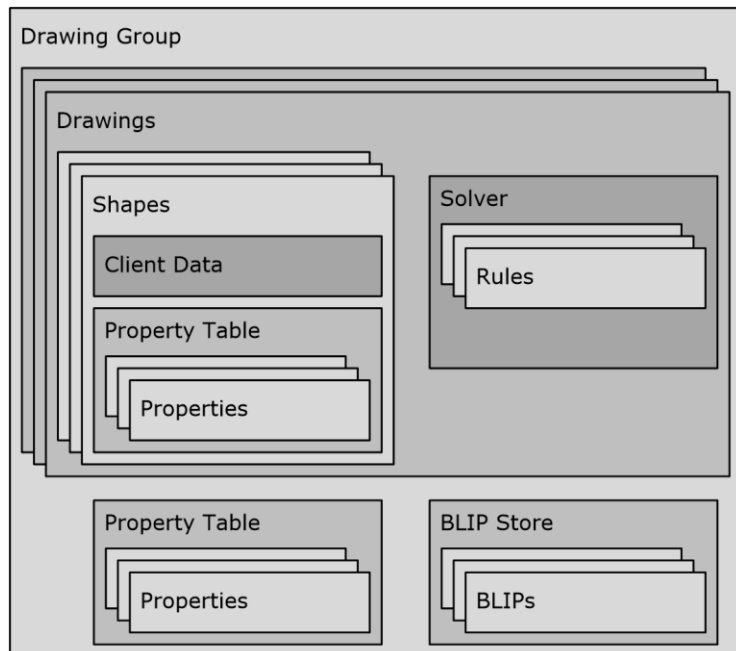
Figure 1: Object container hierarchy

At the root of the hierarchy is a **drawing group** object. Each client document has one drawing group. A drawing group contains drawings. A drawing contains shapes, which are the objects that populate a page. Adjacent to the drawings in a drawing group is a collection that contains the **binary large images or pictures (BLIPs)** that are used by the drawings. OfficeArt stores pictures in a separate collection so that they can be incrementally loaded and saved and so that the duplication of picture data will be reduced.

Associated with each shape is a piece of client data that stores the **anchor**, text, and **Object Linking and Embedding (OLE)** data of the shape as well as host-specific properties. The host application specifies the format of this structure. A separate structure, called a property table, stores the properties of the shape. A property table consists of a list of identifier-value pairs, where each identifier represents a property.

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.

Note that drawings are not saved inside drawing groups but in separate, top-level containers. This scheme enables host applications to save drawing group information with per-document information and to save drawing information with per-sheet, per-**slide**, or per-page information.

The remainder of this section describes the Office Drawing Binary File Format Structure in more detail.

1.3.1 Records

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

An atom is a record that contains information about an OfficeArt object and is kept inside a container.

A container is a record that contains atoms and other containers in a logical and organized way.

Each record, whether atom or container, has a common header. A container consists of just the common header, whereas an atom consists of the common header followed by record-specific data.

A group of records that each end in the word *FileBlock* indicates an abstract form of concrete records that might be in a collection. The containing record stores an array of *FileBlock* records that each represent an instance of a different record type, as determined by a field within the record header of the *FileBlock* record.

1.3.2 Record Headers

All records share a common header that describes the record data. This header contains the record type, the record length, and if the record is an atom, a version identifier. Although every record type has an instance property, not every record type uses this field. When used, the instance property specifies either the number of objects in the container record or a specific identifier that is used by the record.

Because the header specifies the record length, it is possible to parse an OfficeArt record stream without knowledge of the actual contents of each record. It is expected that parsers of the Office Drawing Binary File Format Structure will skip over record types that are unknown to the reader. In addition, parsers need to expect that records can come in any order in a container. On the other hand, parsers can expect that the container hierarchy will not change. For example, it is unnecessary to consider a **shape** record that contains a **drawing** record.

When the data is written to a client file, the host application stores client-specific records in the OfficeArt stream to preserve the client features and behaviors. For more information, see section 1.4.

1.3.3 Containers

A container consists of a record header, which is followed by the contained records. A container needs to precede all atoms because the container specifies how the contained atoms are to be applied to the **drawing** data. For example, a **shape** container and a **drawing group** container each contain a collection of properties. The container designates that the properties are either individual shape properties or document default properties.

1.3.4 Properties

Because the Office Drawing Binary File Format Structure contains **drawing** data, it is heavily populated with properties that are specific to **shapes**. These shape properties are contained in a set of sparsely populated arrays. Each array contains a specific block of properties and contains only those properties for which the value differs from the default. If a property is specified to be ignored or is omitted from the file, it is assumed to have the default value.

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 overrides any previously set value.

1.3.5 Bit Format

Records are tightly packed without alignment. OfficeArt data is stored in **little-endian** format.

1.3.6 Extended Colors

Each property that is related to color has two associated extended-color properties, which can be used to define the main color more precisely. If neither extended-color property is set, the main color property contains the full color definition. Otherwise, the first extended-color property specifies the base color, and the second extended-color property specifies a tint or shade modification that is applied to the first extended-color property. In this case, the main color property contains the

flattened **red-green-blue (RGB)** color that is computed by applying specified tint or shade modification to the specified base color. If the values of the main color property and the extended-color properties are inconsistent, the value of the main color property can be used and those of the extended-color properties discarded. For more information, see section 2.2.2.

1.4   Relationship to Protocols and Other Structures

The Office Drawing Binary File Format Structure is dependent on the structures that are defined in the following references:

- [MS-DOC]

- [MS-XLS]

- [MS-PPT]

- [MS-OGRAPH]

These structures determine how the OfficeArt data is saved to disk and where that data will reside. Additionally, images are stored within the file in standard raster formats. The **OfficeArtBStoreContainerFileBlock** record, which is defined in section 2.2.22, specifies which image types are supported within the **BLIP** store.

The host application defines a certain group of records within the OfficeArt stream as client records. These records hold information that the host application needs to position the **diagram** in the host document or to contain the host text.

The host application supplies OfficeArt text to provide the same functionality as the application's native text. Some host applications also apply rules to the **shapes** or diagrams to assist with positioning those shapes or diagrams or to store additional data for other host-specific needs.

For more information, see [MS-DOC], [MS-XLS], [MS-PPT], and [MS-OGRAPH].

1.5   Applicability Statement

This document specifies a persistence format for **drawings**. These drawings typically contain geometric primitives, also known as **shapes**, that might contain formatting elements such as fills, line styles, pictures, and three-dimensional (3-D) transformations. These shapes also support text as specified by the host application.

This persistence format provides interoperability with applications that create or read documents conforming to this structure.

1.6   Versioning and Localization

This document covers versioning issues in the following areas:

Structure versions: All of the custom OfficeArt types, as defined in section 2.1, and OfficeArt record types, as defined in section 2.2, are supported by all versions of the OfficeArt file format, but this is not true for all of the properties. For more information, see section 2.3.

Localization: The OfficeArt file format does not use localized user text strings. This file format does use properties to represent text orientation and flow, as needed. For more information, see sections 2.3.21.9, 2.3.21.10, and 2.3.21.12. All the units of measure that are described in this document are either application defined, explicitly specified, or consistent across all locales. The OfficeArt file 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 file format by defining a new record that has a record header for which the record type is outside the range 0xF000 through 0xFFFF. When a record type is encountered outside this range, the record MAY be skipped. For the record to be skipped, the record length field also needs to represent the size of the record so that 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 the **OfficeArtRecordHeader** structure, as defined in section 2.2.1, for the record to be skipped as an unknown record type. Similarly, if a vendor or third party needs to add additional properties, a new record type needs to be defined to contain these properties. The existing OPT tables are as follows:

- **OfficeArtFOPT**, as defined in section 2.2.9.

- **OfficeArtSecondaryFOPT**, as defined in section 2.2.10.

- **OfficeArtTertiaryFOPT**, as defined in section 2.2.11.

Avoid adding new properties to one of these existing OPT tables with a previously unused value in the **opid** field. These values might be claimed by a later version of OfficeArt and would then cause collisions with the vendor data. If a property has an unrecognized **opid.opid** field, a vendor can ignore the property.

A vendor cannot acquire a record number that is guaranteed to be uniquely its own. Therefore, vendor-defined records risk causing conflicts with records that are defined by other vendors or third parties.

A vendor can choose to infer the text orientation and flow either from the character context (by inspecting the characters and determining the correct orientation and flow from the **Unicode** character set) or from the system locale settings.

2 Structures

2.1 Custom OfficeArt Types

2.1.1 MSODGID

Referenced by: OfficeArtIDCL

The **MSODGID** data type designates an unsigned integer that specifies the identifier of a **drawing**.

2.1.2 MSOSPID

Referenced by: hspMaster, hspNext, OfficeArtFArcRule, OfficeArtFCalloutRule, OfficeArtFConnectorRule, OfficeArtFDG, OfficeArtFDGG, OfficeArtFDGSL, OfficeArtFPSPL, OfficeArtFSP

The **MSOSPID** data type designates an unsigned integer that specifies the identifier of a **shape**.

2.1.3 FRID

Referenced by: OfficeArtFRIT

The **FRID** data type designates an unsigned integer that specifies the identifier of a **group shape** that has been ungrouped.

2.1.4 MSOFO

Referenced by: OfficeArtFBSE

The **MSOFO** data type designates 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

The **OfficeArtRecordHeader** record specifies the common record header for all the OfficeArt records.

0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
recVer				recInstance											recType																
recLen																															

recVer (4 bits): An unsigned integer that specifies the version if the record is an **atom**. If the record is a container, this field MUST contain 0xF.

recInstance (12 bits): An unsigned integer that differentiates an atom from the other atoms that are contained in the record.

recType (2 bytes): An unsigned integer that specifies the type of the record. This value MUST be from 0xF000 through 0xFFFF, inclusive.

recLen (4 bytes): An unsigned integer that specifies the length, in bytes, of the record. If the record is an atom, this value specifies the length of the atom, excluding the header. If the record is a container, this value specifies the sum of the lengths of the atoms that the record contains, plus the length of the record header for each atom.

2.2.2 OfficeArtCOLORREF

Referenced by: borderBottomColor, borderLeftColor, borderRightColor, borderTopColor, c3DCrMod, c3DExtrusionColor, c3DExtrusionColorExt, fillBackColor, fillBackColorExt, fillColor, fillColorExt, fillCrMod, lineBackColor, lineBackColorExt, lineBottomBackColor, lineBottomBackColorExt, lineBottomColor, lineBottomColorExt, lineBottomCrMod, lineColor, lineColorExt, lineCrMod, lineLeftBackColor, lineLeftBackColorExt, lineLeftColor, lineLeftColorExt, lineLeftCrMod, lineRightBackColor, lineRightBackColorExt, lineRightColor, lineRightColorExt, lineRightCrMod, lineTopBackColor, lineTopBackColorExt, lineTopColor, lineTopColorExt, lineTopCrMod, MSOSHADECOLOR, pictureDblCrMod, pictureFillCrMod, pictureLineCrMod, pictureRecolor, pictureRecolorExt, pictureTransparent, pictureTransparentExt, reserved1370, reserved1374, reserved1377, reserved1378, reserved1434, reserved1438, reserved1441, reserved1442, reserved1498, reserved1502, reserved1505, reserved1506, reserved1562, reserved1566, reserved1569, reserved1570, reserved278, reserved281, reserved284, reserved287, reserved415, reserved419, reserved422, reserved423, reserved474, reserved478, reserved481, reserved482, reserved531, reserved535, reserved538, reserved539, reserved650, reserved653, shadowColor, shadowColorExt, shadowCrMod, shadowHighlight, shadowHighlightExt

The **OfficeArtCOLORREF** structure specifies a color. The high 8 bits MAY be set to 0xFF, in which case the color MUST be ignored.

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

color	colorExt	colorExtMod
fillColor (section 2.3.7.2)	**fillColorExt** (section 2.3.7.33)	**fillColorExtMod** (section 2.3.7.35)
fillBackColor (section 2.3.7.4)	**fillBackColorExt** (section 2.3.7.37)	**fillBackColorExtMod** (section 2.3.7.39)
lineColor (section 2.3.8.1)	**lineColorExt** (section 2.3.8.28)	**lineColorExtMod** (section 2.3.8.30)
lineBackColor (section 2.3.8.3)	**lineBackColorExt** (section 2.3.8.32)	**lineBackColorExtMod** (section 2.3.8.34)
lineLeftColor (section 2.3.9.1)	**lineLeftColorExt** (section 2.3.9.28)	**lineLeftColorExtMod** (section 2.3.9.30)
lineLeftBackColor (section 2.3.9.3)	**lineLeftBackColorExt** (section 2.3.9.32)	**lineLeftBackColorExtMod** (section 2.3.9.34)
lineRightColor (section 2.3.11.1)	**lineRightColorExt** (section 2.3.11.28)	**lineRightColorExtMod** (section 2.3.11.30)
lineRightBackColor (section 2.3.11.3)	**lineRightBackColorExt** (section 2.3.11.32)	**lineRightBackColorExtMod** (section 2.3.11.34)
lineTopColor (section 2.3.10.1)	**lineTopColorExt** (section 2.3.10.28)	**lineTopColorExtMod** (section 2.3.10.30)
lineTopBackColor (section 2.3.10.3)	**lineTopBackColorExt** (section 2.3.10.32)	**lineTopBackColorExtMod** (section 2.3.10.34)

color	colorExt	colorExtMod
lineBottomColor (section 2.3.12.1)	**lineBottomColorExt** (section 2.3.12.28)	**lineBottomColorExtMod** (section 2.3.12.30)
lineBottomBackColor (section 2.3.12.3)	**lineBottomBackColorExt** (section 2.3.12.32)	**lineBottomBackColorExtMod** (section 2.3.12.34)
shadowColor (section 2.3.13.2)	**shadowColorExt** (section 2.3.13.12)	**shadowColorExtMod** (section 2.3.13.14)
shadowHighlight (section 2.3.13.3)	**shadowHighlightExt** (section 2.3.13.16)	**shadowHighlightExtMod** (section 2.3.13.18)
c3DExtrusionColor (section 2.3.15.8)	**c3DExtrusionColorExt** (section 2.3.15.10)	**c3DExtrusionColorExtMod** (section 2.3.15.12)
pictureRecolor (section 2.3.23.29)	**pictureRecolorExt** (section 2.3.23.30)	**pictureRecolorExtMod** (section 2.3.23.32)
pictureTransparent (section 2.3.23.10)	**pictureTransparentExt** (section 2.3.23.24)	**pictureTransparentExtMod** (section 2.3.23.26)

If neither extended-color property is set, the main **color** property contains the full color definition. Otherwise, the **colorExt** property specifies the base color, and the **colorExtMod** property specifies a tint or shade modification that is applied to the **colorExt** property. In this case, the main **color** property contains the flattened **RGB** color that is computed by applying the specified tint or shade modification to the specified base color.

0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
A	B	C	D	E	F	G	H					blue								green									red		

A - unused1 (1 bit): A bit that is undefined and MUST be ignored.

B - unused2 (1 bit): A bit that is undefined and MUST be ignored.

C - unused3 (1 bit): A bit that is undefined and MUST be ignored.

D - 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** will be treated as an unsigned 16-bit index into the system color table. Values less than 0x00F0 map directly to system colors. For more information, see [MSDN-GetSysColor].

The following table specifies values that have special meaning.

Value	Meaning
0x00F0	Use the fill color of the **shape**.
0x00F1	If the shape contains a line, use the line color of the shape. Otherwise, use the fill color.
0x00F2	Use the line color of the shape.
0x00F3	Use the shadow color of the shape.
0x00F4	Use the current, or last-used, color.
0x00F5	Use the fill background color of the shape.
0x00F6	Use the line background color of the shape.
0x00F7	If the shape contains a fill, use the fill color of the shape. Otherwise, use the line color.

The following table specifies values that indicate special procedural properties that are used to modify the color components of another color. These values are combined with those in 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 that is specified in the **blue** field. A **blue**

Value	Meaning
	value of 0xFF specifies that the color is to be left unchanged, whereas a **blue** value of 0x00 specifies that the color is to be completely darkened.
0x0200	Lighten the color by the value that is specified in the **blue** field. A **blue** value of 0xFF specifies that the color is to be left unchanged, whereas a **blue** value of 0x00 specifies that the color is to be completely lightened.
0x0300	Add a gray level RGB value. The **blue** field contains the gray level to add: NewColor = SourceColor + gray
0x0400	Subtract a gray level RGB value. The **blue** field contains the gray level to subtract: NewColor = SourceColor - gray
0x0500	Reverse-subtract a gray level RGB value. The **blue** field contains the gray level from which to subtract: NewColor = gray - SourceColor
0x0600	If the color component being modified is less than the parameter contained in the **blue** field, set it to the minimum intensity. If the color component being modified is greater than or equal to the parameter, set it to the maximum intensity.
0x2000	After making other modifications, invert the color.
0x4000	After making other modifications, invert the color by toggling just the high bit of each color channel.
0x8000	Before making other modifications, convert the color to grayscale.

E - 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** will be treated as an index into the current color scheme table. If this value is 0x1, **green** and **blue** MUST be 0x00.

F - fSystemRGB (1 bit): A bit that specifies whether the color is a standard RGB color. The following table specifies the meaning of each value for this field.

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

G - fPaletteRGB (1 bit): A bit that specifies whether the current palette will be used to determine the color. A value of 0x1 specifies that **red, green**, and **blue** contain an RGB value that will be matched in the current color palette. This color MUST be solid.

H - fPaletteIndex (1 bit): A bit that specifies whether the current palette will be used to determine the color. A value of 0x1 specifies that **green** and **red** will be treated as an unsigned 16-bit index into the current color palette. This color MAY<1> be dithered. If this value is 0x1, **blue** MUST be 0x00.

blue (1 byte): An unsigned integer that specifies the intensity of the blue color channel. A value of 0x00 has the minimum blue intensity. A value of 0xFF has the maximum blue intensity.

green (1 byte): An unsigned integer that specifies the intensity of the green color channel. A value of 0x00 has the minimum green intensity. A value of 0xFF has the maximum green intensity.

red (1 byte): An unsigned integer that specifies the intensity of the red color channel. A value of 0x00 has the minimum red intensity. A value of 0xFF has the maximum red intensity.

2.2.3 MSOSHADE

Referenced by: MSOTINTSHADE

The **MSOSHADE** record specifies a shade color modification that can be used to darken a color.

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

reserved1 (16 bits): A value that MUST be 0x01F4 and MUST be ignored.

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

reserved2 (8 bits): A value that MUST be 0x10 and MUST be ignored.

2.2.4 MSOTINT

Referenced by: MSOTINTSHADE

The **MSOTINT** record specifies a tint color modification that can be used to lighten a color.

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

reserved1 (16 bits): A value that MUST be 0x02F4 and MUST be ignored.

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

reserved2 (8 bits): A value that MUST be 0x10 and MUST be ignored.

2.2.5 MSOCOLORMODUNDEFINED

Referenced by: MSOTINTSHADE

The **MSOCOLORMODUNDEFINED** record MUST be ignored.

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

reserved1 (4 bytes): A value that 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

The **MSOTINTSHADE** record specifies an **MSOCOLORMODUNDEFINED**, as defined in section 2.2.5, an **MSOSHADE**, as defined in section 2.2.3, or an **MSOTINT**, as defined in section 2.2.4, record. The type and meaning are dictated by the value of the following code snippet:

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

The following table specifies the valid values.

Value	Type
0x00000000	**MSOCOLORMODUNDEFINED**
0x00000001	**MSOSHADE**
0x00000002	**MSOTINT**

2.2.7 OfficeArtFOPTE

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, 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*, *lineRightColorExt*, *lineRightColorExtMod*, *lineRightCrMod*, *lineRightDashing*, *lineRightDashStyle*, *lineRightEndArrowhead*, *lineRightEndArrowLength*, *lineRightEndArrowWidth*, *lineRightEndCapStyle*, *lineRightFillBlip*, *lineRightFillBlipFlags*, *lineRightFillBlipName*, *lineRightFillDztype*, *lineRightFillHeight*, *lineRightFillWidth*, *lineRightJoinStyle*, *lineRightMiterLimit*, *lineRightOpacity*, *lineRightStartArrowhead*, *lineRightStartArrowLength*, *lineRightStartArrowWidth*, *lineRightStyle*, *lineRightType*, *lineRightWidth*, *lineStartArrowhead*, *lineStartArrowLength*, *lineStartArrowWidth*, *lineStyle*, *lineTopBackColor*, *lineTopBackColorExt*, *lineTopBackColorExtMod*, *lineTopColor*, *lineTopColorExt*, *lineTopColorExtMod*, *lineTopCrMod*, *lineTopDashing*, *lineTopDashStyle*, *lineTopEndArrowhead*, *lineTopEndArrowLength*, *lineTopEndArrowWidth*, *lineTopEndCapStyle*, *lineTopFillBlip*, *lineTopFillBlipFlags*, *lineTopFillBlipName*, *lineTopFillDztype*, *lineTopFillHeight*, *lineTopFillWidth*, *lineTopJoinStyle*, *lineTopMiterLimit*, *lineTopOpacity*, *lineTopStartArrowhead*, *lineTopStartArrowLength*, *lineTopStartArrowWidth*, *lineTopStyle*, *lineTopType*, *lineTopWidth*, *lineType*, *lineWidth*, *lTxid*, *metroBlob*, *movie*, *OfficeArtFOPTE*, *pAdjustHandles*, *pConnectionSites*, *pConnectionSitesDir*, *pctHoriz*, *pctHorizPos*, *pctHR*, *pctVert*, *pctVertPos*, *Perspective Style Boolean Properties*, *perspectiveOffsetX*, *perspectiveOffsetY*, *perspectiveOriginX*, *perspectiveOriginY*, *perspectivePerspectiveX*, *perspectivePerspectiveY*, *perspectiveScaleXToX*, *perspectiveScaleXToY*, *perspectiveScaleYToX*, *perspectiveScaleYToY*, *perspectiveType*, *perspectiveWeight*, *pGuides*, *pib*, *pibFlags*, *pibName*, *pibPrint*, *pibPrintFlags*, *pibPrintName*, *pictureBrightness*, *pictureContrast*, *pictureDblCrMod*, *pictureFillCrMod*, *pictureId*, *pictureLineCrMod*, *pictureRecolor*, *pictureRecolorExt*, *pictureRecolorExtMod*, *pictureTransparent*, *pictureTransparentExt*, *pictureTransparentExtMod*, *pihlShape*, *pInkData*, *pInscribe*, *posh*, *posrelh*, *posrelv*, *posv*, *pRelationTbl*, *Protection Boolean Properties*, *pSegmentInfo*, *pVertices*, *pWrapPolygonVertices*, *Relative Transform Boolean Properties*, *relBottom*, *relLeft*, *relRight*, *relRotation*, *relTop*, *reserved1370*, *reserved1372*, *reserved1374*, *reserved1376*, *reserved1377*, *reserved1378*, *reserved1434*, *reserved1436*, *reserved1438*, *reserved1440*, *reserved1441*, *reserved1442*, *reserved1498*, *reserved1500*, *reserved1502*, *reserved1504*, *reserved1505*, *reserved1506*, *reserved1562*, *reserved1564*, *reserved1566*, *reserved1568*, *reserved1569*, *reserved1570*, *reserved278*, *reserved280*, *reserved281*, *reserved284*, *reserved286*, *reserved287*, *reserved415*, *reserved417*, *reserved419*, *reserved421*, *reserved422*, *reserved423*, *reserved474*, *reserved476*, *reserved478*, *reserved480*, *reserved481*, *reserved482*, *reserved531*, *reserved533*, *reserved535*, *reserved537*, *reserved538*, *reserved539*, *reserved646*, *reserved650*, *reserved652*, *reserved653*, *right*, *Right Line Style Boolean Properties*, *rotation*, *scriptLang*, *Shadow Style Boolean Properties*, *shadowColor*, *shadowColorExt*, *shadowColorExtMod*, *shadowCrMod*, *shadowHighlight*,

shadowHighlightExt, shadowHighlightExtMod, shadowOffsetX, shadowOffsetY, shadowOpacity, shadowOriginX, shadowOriginY, shadowSecondOffsetX, shadowSecondOffsetY, shadowSoftness, shadowType, Shape Boolean Properties, shapePath, Signature Line Boolean Properties, sizerelh, sizerelv, spcoa, spcod, tableProperties, tableRowProperties, Text Boolean Properties, top, Top Line Style Boolean Properties, Transform Boolean Properties, txdir, txflTextFlow, Unknown HTML Boolean Properties, unused134, unused140, unused141, unused832, unused906, Web Component Boolean Properties, webComponentWzHtml, webComponentWzName, webComponentWzUrl, WrapText, wzCalloutId, wzDescription, wzFillId, wzFormulaeId, wzGtextId, wzHandlesId, wzLineId, wzLockId, wzName, wzPathId, wzPerspectiveId, wzPictureId, wzScript, wzScriptExtAttr, wzScriptLangAttr, wzShadowId, wzSigSetupAddlXml, wzSigSetupId, wzSigSetupProvId, wzSigSetupProvUrl, wzSigSetupSignInst, wzSigSetupSuggSigner, wzSigSetupSuggSigner2, wzSigSetupSuggSignerEmail, wzTextId, wzThreeDId, wzTooltip, wzWebBot, xLimo, yLimo

The **OfficeArtFOPTEOPID** record specifies the header for an entry in a property table.

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

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 equals 0x1, the value in the **op** field specifies the BLIP identifier in the **OfficeArtBStoreContainer** record, as defined in section 2.2.20. If **fComplex** equals 0x1, this bit MUST be ignored.

B - fComplex (1 bit): A bit that specifies whether this property is a complex property. If this value equals 0x1, the **op** field specifies the size of the data for this property, rather than the property data itself.

2.2.9 OfficeArtFOPT

Referenced by: OfficeArtDggContainer, OfficeArtSpContainer

The **OfficeArtFOPT** record specifies a table of **OfficeArtRGFOPTE** records, as defined in section 2.3.1. The following properties SHOULD be specified in this table:

- Blip:Blip Boolean Properties

- Blip:cropFromBottom

- Blip:cropFromLeft

- Blip:cropFromRight

- Blip:cropFromTop

- Blip:pib

- Blip:pibFlags

- Blip:pibName

- Blip:pibPrint

- Blip:pibPrintFlags

- Blip:pibPrintName

- Blip:pictureBrightness

- Blip:pictureContrast

- Blip:pictureDblCrMod

- Blip:pictureFillCrMod

- Blip:pictureId

- Blip:pictureLineCrMod

- Blip:pictureTransparent

- Callout:Callout Boolean Properties

- Callout:dxyCalloutDropSpecified

- Callout:dxyCalloutGap

- Callout:dxyCalloutLengthSpecified

- Callout:spcoa

- Callout:spcod

- FillStyle:Fill Style Boolean Properties

- FillStyle:fillAngle

- FillStyle:fillBackColor

- FillStyle:fillBackOpacity

- FillStyle:fillBlip

- FillStyle:fillBlipFlags

- FillStyle:fillBlipName

- FillStyle:fillColor

- FillStyle:fillCrMod

- FillStyle:fillDztype

- FillStyle:fillFocus

- FillStyle:fillHeight

- FillStyle:fillOpacity

- FillStyle:fillOriginX

- FillStyle:fillOriginY

- FillStyle:fillRectBottom

- FillStyle:fillRectLeft

- FillStyle:fillRectRight

- FillStyle:fillRectTop

- FillStyle:fillShadeColors

- FillStyle:fillShadePreset

- FillStyle:fillShadeType

- FillStyle:fillShapeOriginX

- FillStyle:fillShapeOriginY

- FillStyle:fillToBottom

- FillStyle:fillToLeft

- FillStyle:fillToRight

- FillStyle:fillToTop

- FillStyle:fillType

- FillStyle:fillWidth

- Geometry:adjust2Value

- Geometry:adjust3Value

- Geometry:adjust4Value

- Geometry:adjust5Value

- Geometry:adjust6Value

- Geometry:adjust7Value

- Geometry:adjust8Value

- Geometry:adjustValue

- Geometry:cxk

- Geometry:geoBottom

- Geometry:geoLeft

- Geometry:Geometry Boolean Properties

- Geometry:geoRight

- Geometry:geoTop

- Geometry:pAdjustHandles

- Geometry:pConnectionSites

- Geometry:pConnectionSitesDir

- Geometry:pGuides

- Geometry:pInscribe

- Geometry:pSegmentInfo

- Geometry:pVertices

- Geometry:shapePath

- Geometry:xLimo

- Geometry:yLimo

- GeoText:Geometry Text Boolean Properties

- GeoText:gtextAlign

- GeoText:gtextFont

- GeoText:gtextSize

- GeoText:gtextSpacing

- GeoText:gtextUNICODE

- GroupShape:dyWrapDistBottom

- GroupShape:dxWrapDistLeft

- GroupShape:dxWrapDistRight

- GroupShape:dyWrapDistTop

- GroupShape:Group Shape Boolean Properties

- GroupShape:lidRegroup

- GroupShape:pihlShape

- GroupShape:pWrapPolygonVertices

- GroupShape:wzDescription

- GroupShape:wzName

- LineStyle:Line Style Boolean Properties

- LineStyle:lineBackColor

- LineStyle:lineColor

- LineStyle:lineCrMod

- LineStyle:lineDashing

- LineStyle:lineDashStyle

- LineStyle:lineEndCapStyle

- LineStyle:lineEndArrowhead

- LineStyle:lineEndArrowLength

- LineStyle:lineEndArrowWidth

- LineStyle:lineFillBlip

- LineStyle:lineFillBlipFlags

- LineStyle:lineFillBlipName

- LineStyle:lineFillDztype

- LineStyle:lineFillHeight

- LineStyle:lineOpacity

- LineStyle:lineFillWidth

- LineStyle:lineJoinStyle

- LineStyle:lineMiterLimit

- LineStyle:lineStartArrowhead

- LineStyle:lineStartArrowLength

- LineStyle:lineStartArrowWidth

- LineStyle:lineStyle

- LineStyle:lineWidth

- LineStyle:lineType

- PerspectiveStyle:Perspective Style Boolean Properties

- PerspectiveStyle:perspectiveOffsetX

- PerspectiveStyle:perspectiveOffsetY

- PerspectiveStyle:perspectiveOriginX

- PerspectiveStyle:perspectiveOriginY

- PerspectiveStyle:perspectivePerspectiveX

- PerspectiveStyle:perspectivePerspectiveY

- PerspectiveStyle:perspectiveScaleXToX

- PerspectiveStyle:perspectiveScaleXToY

- PerspectiveStyle:perspectiveScaleYToX

- PerspectiveStyle:perspectiveScaleYToY

- PerspectiveStyle:perspectiveType

- PerspectiveStyle:perspectiveWeight

- Protection:Protection Boolean Properties

- RelXfrm:gvRelPage

- RelXfrm:Relative Transform Boolean Properties

- RelXfrm:relBottom

- RelXfrm:relLeft

- RelXfrm:relRight

- RelXfrm:relRotation

- [RelXfrm:relTop](#)

- [ShadowStyle:Shadow Style Boolean Properties](#)

- [ShadowStyle:shadowColor](#)

- [ShadowStyle:shadowCrMod](#)

- [ShadowStyle:shadowHighlight](#)

- [ShadowStyle:shadowOffsetX](#)

- [ShadowStyle:shadowOffsetY](#)

- [ShadowStyle:shadowOpacity](#)

- [ShadowStyle:shadowOriginX](#)

- [ShadowStyle:shadowOriginY](#)

- [ShadowStyle:shadowSecondOffsetX](#)

- [ShadowStyle:shadowSecondOffsetY](#)

- [ShadowStyle:shadowType](#)

- [Shape:bWMode](#)

- [Shape:bWModeBW](#)

- [Shape:bWModePureBW](#)

- [Shape:hspMaster](#)

- [Shape:cxstyle](#)

- [Shape:Shape Boolean Properties](#)

- [Text:anchorText](#)

- [Text:dyTextBottom](#)

- [Text:dxTextLeft](#)

- [Text:dxTextRight](#)

- [Text:dyTextTop](#)

- [Text:lTxid](#)

- [Text:WrapText](#)

- [Text:txflTextFlow](#)

- [Text:cdirFont](#)

- [Text:hspNext](#)

- [Text:Text Boolean Properties](#)

- [Text:txdir](#)

- [3DObject:c3DCrMod](#)

- 3DObject:c3DDiffuseAmt

- 3DObject:c3DEdgeThickness

- 3DObject:c3DExtrudeBackward

- 3DObject:c3DExtrudeForward

- 3DObject:c3DExtrusionColor

- 3DObject:c3DShininess

- 3DObject:c3DSpecularAmt

- 3DObject:3D-Object Boolean Properties

- 3DStyle:c3DAmbientIntensity

- 3DStyle:c3DFillIntensity

- 3DStyle:c3DFillX

- 3DStyle:c3DFillY

- 3DStyle:c3DFillZ

- 3DStyle:c3DKeyIntensity

- 3DStyle:c3DKeyX

- 3DStyle:c3DKeyY

- 3DStyle:c3DKeyZ

- 3DStyle:c3DOriginX

- 3DStyle:c3DOriginY

- 3DStyle:c3DRenderMode

- 3DStyle:c3DRotationAngle

- 3DStyle:c3DRotationAxisX

- 3DStyle:c3DRotationAxisY

- 3DStyle:c3DRotationAxisZ

- 3DStyle:c3DYRotationAngle

- 3DStyle:c3DXRotationAngle

- 3DStyle:c3DRotationCenterX

- 3DStyle:c3DRotationCenterY

- 3DStyle:c3DRotationCenterZ

- 3DStyle:c3DSkewAmount

- 3DStyle:c3DSkewAngle

- 3DStyle:c3DTolerance

- 3DStyle:c3DXViewpoint

- 3DStyle:c3DYViewpoint

- 3DStyle:c3DZViewpoint

- 3DStyle: 3D-Style Boolean Properties

- Xfrm:bottom

- Xfrm:gvPage

- Xfrm:left

- Xfrm:right

- Xfrm:rotation

- Xfrm:top

- Xfrm:Transform Boolean Properties

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

rh (8 bytes): An **OfficeArtRecordHeader** structure, as defined in section 2.2.1, that specifies the header for this record. The following table specifies the subfields.

Field	Meaning
rh.recVer	A value that MUST be 0x3.
rh.recInstance	An unsigned integer that specifies the number of properties in the table.
rh.recType	A value that MUST be 0xF00B.
rh.recLen	An unsigned integer that specifies the number of bytes following the header that contain property records. This value equals the number of properties multiplied by the size of the **OfficeArtFOPTE** type, as defined in section 2.2.7, plus the size of the complex property data.

fopt (variable): The **OfficeArtRGFOPTE** property, as defined in section 2.3.1, table that specifies the record data.

2.2.10 OfficeArtSecondaryFOPT

Referenced by: OfficeArtSpContainer

The **OfficeArtSecondaryFOPT** record specifies a table of **OfficeArtRGFOPTE** records, as defined in section 2.3.1. The Blip:movie property can be specified in this table.

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

rh (8 bytes): An **OfficeArtRecordHeader** structure, as defined in section 2.2.1, that specifies the header for this record. The following table specifies the subfields.:

Field	Meaning
rh.recVer	A value that MUST be 0x3.
rh.recInstance	An unsigned integer that specifies the number of properties in the table.
rh.recType	A value that MUST be 0xF121.
rh.recLen	An unsigned integer that specifies the number of bytes following the header that contain property records. This value equals the number of properties multiplied by the size of the **OfficeArtFOPTE** type, as defined in section 2.2.7, plus the size of the complex property data.

fopt (variable): The **OfficeArtRGFOPTE** record, as defined in section 2.3.1, table that specifies the property data.

2.2.11 OfficeArtTertiaryFOPT

Referenced by: OfficeArtDggContainer, OfficeArtSpContainer

The **OfficeArtTertiaryFOPT** record specifies a table of **OfficeArtRGFOPTE** records, as defined in section 2.3.1. This table SHOULD specify the following properties:

- Blip:Blip Boolean Properties

- Blip:pictureRecolor

- Blip:pictureRecolorExt

- Blip:pictureRecolorExtMod

- Blip:pictureTransparentExt

- Blip:pictureTransparentExtMod

- Diagram:dgmBaseTextScale

- Diagram:dgmConstrainBounds

- Diagram:dgmDefaultFontSize

- Diagram:dgmScaleX

- Diagram:dgmScaleY

- Diagram:dgmStyle

- Diagram:dgmt

- Diagram:Diagram Boolean Properties

- Diagram:pRelationTbl

- Geometry:Geometry Boolean Properties

- GeoText:gtextCSSFont

- GroupShape:alignHR

- GroupShape:borderBottomColor

- GroupShape:borderLeftColor

- GroupShape:borderRightColor

- GroupShape:borderTopColor

- GroupShape:dhgt

- GroupShape:dxHeightHR

- GroupShape:dxWidthHR

- GroupShape:Group Shape Boolean Properties

- GroupShape:metroBlob

- GroupShape:pctHR

- GroupShape:posh

- GroupShape:posrelh

- GroupShape:posrelv

- GroupShape:posv

- GroupShape:scriptLang

- GroupShape:tableProperties

- GroupShape:tableRowProperties

- GroupShape:wzScript

- GroupShape:wzScriptExtAttr

- GroupShape:wzScriptLangAttr

- GroupShape:wzTooltip

- GroupShape:wzWebBot

- GroupShape2:pctHoriz

- GroupShape2:pctHorizPos

- GroupShape2:pctVert

- GroupShape2:pctVertPos

- GroupShape2:sizerelh

- GroupShape2:sizerelv

- FillStyle:fillBackColorExt

- FillStyle:fillBackColorExtMod

- FillStyle:fillColorExt

- FillStyle:fillColorExtMod

- FillStyle:Fill Style Boolean Properties

- Ink:Ink Boolean Properties

- Ink:pInkData

- LineBottomStyle:Bottom Line Style Boolean Properties

- LineBottomStyle:lineBottomBackColor

- LineBottomStyle:lineBottomBackColorExt

- LineBottomStyle:lineBottomBackColorExtMod

- LineBottomStyle:lineBottomColor

- LineBottomStyle:lineBottomColorExt

- LineBottomStyle:lineBottomColorExtMod

- LineBottomStyle:lineBottomCrMod

- LineBottomStyle:lineBottomFillBlip

- LineBottomStyle:lineBottomFillBlipFlags

- LineBottomStyle:lineBottomFillBlipName

- LineBottomStyle:lineBottomFillDztype

- LineBottomStyle:lineBottomFillHeight

- LineBottomStyle:lineBottomDashing

- LineBottomStyle:lineBottomDashStyle

- LineBottomStyle:lineBottomEndArrowhead

- LineBottomStyle:lineBottomEndArrowLength

- LineBottomStyle:lineBottomEndArrowWidth

- LineBottomStyle:lineBottomEndCapStyle

- LineBottomStyle:lineBottomJoinStyle

- LineBottomStyle:lineBottomMiterLimit

- LineBottomStyle:lineBottomFillWidth

- LineBottomStyle:lineBottomOpacity

- LineBottomStyle:lineBottomStartArrowhead

- LineBottomStyle:lineBottomStartArrowLength

- LineBottomStyle:lineBottomStartArrowWidth

- LineBottomStyle:lineBottomStyle

- LineBottomStyle:lineBottomType

- LineBottomStyle:lineBottomWidth

- LineLeftStyle:Left Line Style Boolean Properties

- LineLeftStyle:lineLeftBackColor

- LineLeftStyle:lineLeftBackColorExt

- LineLeftStyle:lineLeftBackColorExtMod

- LineLeftStyle:lineLeftColor

- LineLeftStyle:lineLeftColorExt

- LineLeftStyle:lineLeftColorExtMod

- LineLeftStyle:lineLeftCrMod

- LineLeftStyle:lineLeftDashing

- LineLeftStyle:lineLeftDashStyle

- LineLeftStyle:lineLeftEndArrowhead

- LineLeftStyle:lineLeftEndArrowLength

- LineLeftStyle:lineLeftEndArrowWidth

- LineLeftStyle:lineLeftEndCapStyle

- LineLeftStyle:lineLeftFillBlip

- LineLeftStyle:lineLeftFillBlipFlags

- LineLeftStyle:lineLeftFillBlipName

- LineLeftStyle:lineLeftFillDztype

- LineLeftStyle:lineLeftFillHeight

- LineLeftStyle:lineLeftMiterLimit

- LineLeftStyle:lineLeftFillWidth

- LineLeftStyle:lineLeftJoinStyle

- LineLeftStyle:lineLeftOpacity

- LineLeftStyle:lineLeftStartArrowhead

- LineLeftStyle:lineLeftStartArrowLength

- LineLeftStyle:lineLeftStartArrowWidth

- LineLeftStyle:lineLeftStyle

- LineLeftStyle:lineLeftType

- LineLeftStyle:lineLeftWidth

- LineRightStyle:lineRightBackColor

- LineRightStyle:lineRightBackColorExt

- LineRightStyle:lineRightBackColorExtMod

- LineRightStyle:lineRightColor

- LineRightStyle:lineRightColorExt

- LineRightStyle:lineRightColorExtMod

- LineRightStyle:lineRightCrMod

- LineRightStyle:lineRightDashing

- LineRightStyle:lineRightDashStyle

- LineRightStyle:lineRightEndArrowhead

- LineRightStyle:lineRightEndArrowLength

- LineRightStyle:lineRightEndArrowWidth

- LineRightStyle:lineRightEndCapStyle

- LineRightStyle:lineRightFillBlip

- LineRightStyle:lineRightFillBlipFlags

- LineRightStyle:lineRightFillBlipName

- LineRightStyle:lineRightFillDztype

- LineRightStyle:lineRightFillHeight

- LineRightStyle:lineRightFillWidth

- LineRightStyle:lineRightJoinStyle

- LineRightStyle:lineRightMiterLimit

- LineRightStyle:lineRightOpacity

- LineRightStyle:lineRightStartArrowhead

- LineRightStyle:lineRightStartArrowLength

- LineRightStyle:lineRightStartArrowWidth

- LineRightStyle:lineRightStyle

- LineRightStyle:lineRightType

- LineRightStyle:lineRightWidth

- LineRightStyle:Right Line Style Boolean Properties

- LineStyle:lineBackColorExt

- LineStyle:lineBackColorExtMod

- LineStyle:lineColorExt

- LineStyle:lineColorExtMod

- LineStyle:Line Style Boolean Properties

- LineTopStyle:lineTopBackColor

- LineTopStyle:lineTopBackColorExt

- LineTopStyle:lineTopBackColorExtMod

- LineTopStyle:lineTopColor

- LineTopStyle:lineTopColorExt

- LineTopStyle:lineTopColorExtMod

- LineTopStyle:lineTopCrMod

- LineTopStyle:lineTopDashing

- LineTopStyle:lineTopDashStyle

- LineTopStyle:lineTopEndArrowhead

- LineTopStyle:lineTopEndArrowLength

- LineTopStyle:lineTopEndArrowWidth

- LineTopStyle:lineTopFillBlip

- LineTopStyle:lineTopFillBlipFlags

- LineTopStyle:lineTopFillBlipName

- LineTopStyle:lineTopFillDztype

- LineTopStyle:lineTopFillHeight

- LineTopStyle:lineTopFillWidth

- LineTopStyle:lineTopJoinStyle

- LineTopStyle:lineTopMiterLimit

- LineTopStyle:lineTopStartArrowhead

- LineTopStyle:lineTopStartArrowLength

- LineTopStyle:lineTopStartArrowWidth

- LineTopStyle:lineTopEndCapStyle

- LineTopStyle:lineTopOpacity

- LineTopStyle:lineTopStyle

- LineTopStyle:lineTopType

- LineTopStyle:lineTopWidth

- LineTopStyle:Top Line Style Boolean Properties

- Protection:Protection Boolean Properties

- ShadowStyle:shadowColorExt

- ShadowStyle:shadowColorExtMod

- ShadowStyle:shadowHighlightExt

- ShadowStyle:shadowHighlightExtMod

- Shape:dgmLayout

- Shape:dgmLayoutMRU

- Shape:dgmNodeKind

- Shape:equationXML

- Shape:idDiscussAnchor

- Shape:Shape Boolean Properties

- 3DObject:c3DExtrusionColorExt

- 3DObject:c3DExtrusionColorExtMod

- UnknownHTML:Unknown HTML Boolean Properties

- UnknownHTML:wzCalloutId

- UnknownHTML:wzFillId

- UnknownHTML:wzFormulaeId

- UnknownHTML:wzGtextId

- UnknownHTML:wzHandlesId

- UnknownHTML:wzLineId

- UnknownHTML:wzLockId

- UnknownHTML:wzPathId

- UnknownHTML:wzPerspectiveId

- UnknownHTML:wzPictureId

- UnknownHTML:wzShadowId

- UnknownHTML:wzTextId

- UnknownHTML:wzThreeDId

- WebComponent:webComponentWzHtml

- WebComponent:webComponentWzName

- WebComponent:webComponentWzUrl

- WebComponent:Web Component Boolean Properties

- SignatureLine:Signature Line Boolean Properties

- SignatureLine:wzSigSetupAddlXml

- SignatureLine:wzSigSetupProvUrl

- SignatureLine:wzSigSetupId

- SignatureLine:wzSigSetupProvId

- SignatureLine:wzSigSetupSignInst

- SignatureLine:wzSigSetupSuggSigner

- SignatureLine:wzSigSetupSuggSigner2

- SignatureLine:wzSigSetupSuggSignerEmail

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

rh (8 bytes): An **OfficeArtRecordHeader** structure, as defined in section 2.2.1, that specifies the header for this record. The following table specifies the subfields.

Field	Meaning
rh.recVer	A value that MUST be 0x3.
rh.recInstance	An unsigned integer that specifies the number of properties in the table.
rh.recType	A value that MUST be 0xF122.
rh.recLen	An unsigned integer that specifies the number of bytes following the header that contain property records. This value equals the number of properties multiplied by the size of the **OfficeArtFOPTE** type, as defined in section 2.2.7, plus the size of the complex property data.

fopt (variable): The **OfficeArtRGFOPTE** record, as defined in section 2.3.1, table that specifies the property data.

2.2.12 OfficeArtDggContainer

The **OfficeArtDggContainer** record type specifies the container for all the OfficeArt file records that contain document-wide data. <2>

0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
rh																															
...																															
drawingGroup (variable)																															
...																															
blipStore (variable)																															
...																															
drawingPrimaryOptions (variable)																															
...																															
drawingTertiaryOptions (variable)																															
...																															
colorMRU (variable)																															
...																															
splitColors (variable)																															
...																															

rh (8 bytes): An **OfficeArtRecordHeader** structure, as defined in section 2.2.1, that specifies the header for this record. The following table specifies the subfields.

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

drawingGroup (variable): An **OfficeArtFDGGBlock** record, as defined in section 2.2.48, that specifies document-wide information about all the **drawings** that are saved in the file.

blipStore (variable): An **OfficeArtBStoreContainer** record, as defined in section 2.2.20, that specifies the container for all the **BLIPs** that are used in all the drawings in the parent document.

drawingPrimaryOptions (variable): An **OfficeArtFOPT** record, as defined in section 2.2.9, that specifies the default properties for all **drawing objects** that are contained in all the drawings in the parent document.

drawingTertiaryOptions (variable): An **OfficeArtTertiaryFOPT** record, as defined in section 2.2.11, that specifies the default properties for all the drawing objects that are contained in all the drawings in the parent document.

colorMRU (variable): An **OfficeArtColorMRUContainer** record, as defined in section 2.2.43, that specifies the most recently used custom colors.

splitColors (variable): An **OfficeArtSplitMenuColorContainer** record, as defined in section 2.2.45, that specifies a container for the colors that were most recently used to format **shapes**.

2.2.13 OfficeArtDgContainer

The **OfficeArtDgContainer** record specifies the container for all the file records for the objects in a **drawing**.

0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
rh																															
...																															
drawingData (16 bytes)																															
...																															
...																															
regroupItems (variable)																															
...																															
groupShape (variable)																															
...																															
shape (variable)																															
...																															
solvers1 (variable)																															
...																															
deletedShapes (variable)																															

...
solvers2 (variable)
...

rh (8 bytes): An **OfficeArtRecordHeader** structure, as defined in section 2.2.1, that specifies the header for this record. The following table specifies the subfields.

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

drawingData (16 bytes): An **OfficeArtFDG** record, as defined in section 2.2.49, that specifies the **shape** count, drawing identifier, and shape identifier of the last shape in this drawing.

regroupItems (variable): An optional **OfficeArtFRITContainer** record, as defined in section 2.2.41, that specifies a container for the table of **group** identifiers for regrouping ungrouped shapes.

groupShape (variable): An **OfficeArtSpgrContainer** record, as defined in section 2.2.16, that specifies a container for groups of shapes.

shape (variable): An **OfficeArtSpContainer** record, as defined in section 2.2.14, that specifies a container for the shapes that are not contained in a group.

solvers1 (variable): An **OfficeArtSolverContainer** record, as defined in section 2.2.18, that specifies a container for the **rules** that are applicable to the shapes contained in this drawing.

deletedShapes (variable): An array of **OfficeArtSpgrContainerFileBlock** records, as defined in section 2.2.17, that specifies the deleted shapes. For more information, see section 2.2.37. The array continues if the **rh.recType** field of the **OfficeArtSpgrContainerFileBlock** record, as defined in section 2.2.17, equals 0xF003 or 0xF004. This array MAY<3> exist.

solvers2 (variable): An **OfficeArtSolverContainer** record, as defined in section 2.2.18, that specifies a container for additional rules that are applicable to the shapes contained in this drawing.

2.2.14 OfficeArtSpContainer

Referenced by: OfficeArtDgContainer, OfficeArtInlineSpContainer, OfficeArtSpgrContainerFileBlock

The **OfficeArtSpContainer** record specifies a **shape** container.

0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
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** structure, as defined in section 2.2.1 that specifies the header for this record. The following table specifies the subfields.

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

shapeGroup (24 bytes): An optional **OfficeArtFSPGR** record, as defined in section 2.2.38, that specifies the coordinate system of the **group shape**. The **anchors** of the **child** shape are expressed in this coordinate system. This record's container MUST be a group shape.

shapeProp (16 bytes): An **OfficeArtFSP** record, as defined in section 2.2.40, that specifies an instance of a shape.

deletedShape (12 bytes): An optional **OfficeArtFPSPL** record, as defined in section 2.2.37, that specifies the former hierarchical position of the containing object. This record's container MUST be a deleted shape. For more information, see **OfficeArtFPSPL**.

shapePrimaryOptions (variable): An **OfficeArtFOPT** record, as defined in section 2.2.9, that specifies the properties of this shape that do not contain default values.

shapeSecondaryOptions1 (variable): An optional **OfficeArtSecondaryFOPT** record, as defined in section 2.2.10, that specifies the properties of this shape that do not contain default values.

shapeTertiaryOptions1 (variable): An optional **OfficeArtTertiaryFOPT** record, as defined in section 2.2.11, that specifies the properties of this shape that do not contain default values.

childAnchor (24 bytes): An optional **OfficeArtChildAnchor** record, as defined in section 2.2.39, that specifies the anchor for this shape. This record's container MUST be a member of a **group** of shapes.

clientAnchor (variable): An optional **OfficeArtClientAnchor** ([MS-PPT] section 2.7.1 or [MS-DOC] section 2.9.168) record as specified by the host application.

clientData (variable): An **OfficeArtClientData** ([MS-PPT] section 2.7.3 or [MS-DOC] section 2.9.169) record as specified by the host application.

clientTextbox (variable): An **OfficeArtClientTextbox** ([MS-PPT] section 2.9.76 or [MS-DOC] section 2.9.170) record as specified by the host application.

shapeSecondaryOptions2 (variable): An optional **OfficeArtSecondaryFOPT** record that specifies the properties of this shape that do not contain default values. This field MUST NOT exist if **shapeSecondaryOptions1** exists.

shapeTertiaryOptions2 (variable): An optional **OfficeArtTertiaryFOPT** record, as defined in section 2.2.11, that specifies the properties of this shape that do not contain default values. This field MUST NOT exist if **shapeTertiaryOptions1** exists.

2.2.15 OfficeArtInlineSpContainer

The **OfficeArtInlineSpContainer** record specifies a container for inline **shapes**. This record SHOULD<4> be ignored.

0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
shape (variable)																															
...																															
rgfb (variable)																															
...																															

shape (variable): An **OfficeArtSpContainer** record, as defined in section 2.2.14, that specifies an instance of a shape.

rgfb (variable): An array of **OfficeArtBStoreContainerFileBlock** records, as defined in section 2.2.22, that specifies **BLIP** data. The array continues if the **rh.recType** field of the **OfficeArtBStoreContainerFileBlock** record equals either 0xF007 or a value from 0xF018 through 0xF117, inclusive.

BLIP properties contained in **shape.shapePrimaryOptions** or **shape.shapeTertiaryOptions1** are stored in this array in the order they are encountered, and the property values **OfficeArtFOPTE.opid.fBid**, **OfficeArtFOPTE.opid.fComplex**, and **OfficeArtFOPTE.op** MUST be ignored.

2.2.16 OfficeArtSpgrContainer

Referenced by: OfficeArtDgContainer, OfficeArtSpgrContainerFileBlock

The **OfficeArtSpgrContainer** 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, as defined in section 2.2.14, which MUST contain shape information for the group.

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

rh (8 bytes): An **OfficeArtRecordHeader** structure, as defined in section 2.2.1, that specifies the header for this record. The following table specifies the subfields.

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

rgfb (variable): An array of **OfficeArtSpgrContainerFileBlock** records, as defined in section 2.2.17, that specifies the groups or shapes that are contained within this group.

2.2.17 OfficeArtSpgrContainerFileBlock

Referenced by: OfficeArtDgContainer, OfficeArtSpgrContainer

The **OfficeArtSpgrContainerFileBlock** record specifies a file block that contains a record specifying **group** or **shape** data. The **OfficeArtRecordHeader** structure, as defined in section 2.2.1, of the contained record specifies the type of record. The following table lists the possible record types.

Value	Meaning
0xF004	**OfficeArtSpContainer** record, as defined in section 2.2.14.
0xF003	**OfficeArtSpgrContainer** record, as defined in section 2.2.16.

2.2.18 OfficeArtSolverContainer

Referenced by: OfficeArtDgContainer

The **OfficeArtSolverContainer** record specifies a container for the **rules** that are applicable to the **shapes** contained in an **OfficeArtDgContainer** record, as defined in section 2.2.13.

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

rh (8 bytes): An **OfficeArtRecordHeader** structure, as defined in section 2.2.1, that specifies the header for this record. The following table specifies the subfields.

Field	Meaning
rh.recVer	A value that MUST be 0xF.
rh.recInstance	An unsigned integer that specifies the number of contained **OfficeArtSolverContainerFileBlock** records, as defined in section 2.2.19.

Field	Meaning
rh.recType	A value that MUST be 0xF005.
rh.recLen	An unsigned integer that specifies the number of bytes following the header that contain **OfficeArtSolverContainerFileBlock** records, as defined in section 2.2.19. This value MUST be the size, in bytes, of **rgfb**.

rgfb (variable): An array of **OfficeArtSolverContainerFileBlock** records, as defined in section 2.2.19, specifying a collection of rules that are applicable to the shapes contained in an **OfficeArtDgContainer** record, as defined in section 2.2.13.

2.2.19 OfficeArtSolverContainerFileBlock

Referenced by: OfficeArtSolverContainer

The **OfficeArtSolverContainerFileBlock** record specifies a file block that contains a record specifying **rule** data. The **OfficeArtRecordHeader** structure, as defined in section 2.2.1, of the contained record specifies the type of record. The following table lists the possible record types.

Value	Meaning
0xF012	**OfficeArtFConnectorRule**, as defined in section 2.2.36.
0xF014	**OfficeArtFArcRule**, as defined in section 2.2.35.
0xF017	**OfficeArtFCalloutRule**, as defined in section 2.2.34.

2.2.20 OfficeArtBStoreContainer

Referenced by: OfficeArtDggContainer

The **OfficeArtBStoreContainer** record specifies the container for all the **BLIPs** that are used in all the **drawings** associated with the parent **OfficeArtDggContainer** record, as defined in section 2.2.12.

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

rh (8 bytes): An **OfficeArtRecordHeader** structure, as defined in section 2.2.1, that specifies the header for this record. The following table specifies the subfields.

Field	Meaning
rh.recVer	A value that MUST be 0xF.
rh.recInstance	An unsigned integer that specifies the number of contained

Field	Meaning
	OfficeArtBStoreContainerFileBlock records, as defined in section 2.2.22.
rh.recType	A value that MUST be 0xF001.
rh.recLen	An unsigned integer that specifies the number of bytes following the header that contain **OfficeArtBStoreContainerFileBlock** records. This value MUST be the size, in bytes, of **rgfb**.

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

2.2.21 OfficeArtBStoreDelay

The **OfficeArtBStoreDelay** record specifies the delay-loaded container of **BLIPs** in the host application. No **OfficeArtRecordHeader** structure, as defined in section 2.2.1, exists for this container.

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

rgfb (variable): An array of **OfficeArtBStoreContainerFileBlock** records, as defined in section 2.2.22, that specifies BLIP data. The array continues if the **rh.recType** field of the **OfficeArtBStoreContainerFileBlock** record equals either 0xF007 or a value from 0xF018 through 0xF117, inclusive.

2.2.22 OfficeArtBStoreContainerFileBlock

Referenced by: OfficeArtBStoreContainer, OfficeArtBStoreDelay, OfficeArtInlineSpContainer

The **OfficeArtBStoreContainerFileBlock** record specifies a file block that contains a record specifying **BLIP** data. The **OfficeArtRecordHeader** structure, as defined in section 2.2.1, of the contained record specifies the type of record. The following table lists the possible record types.

Value	Meaning
0xF007	**OfficeArtFBSE** record, as defined in section 2.2.32.
0xF018–0xF117	**OfficeArtBlip** record, as defined in section 2.2.23.

2.2.23 OfficeArtBlip

Referenced by: fillBlip_complex, lineBottomFillBlip_complex, lineFillBlip_complex, lineLeftFillBlip_complex, lineRightFillBlip_complex, lineTopFillBlip_complex, OfficeArtBStoreContainerFileBlock, OfficeArtFBSE, pib_complex, pibPrint_complex

The **OfficeArtBlip** record specifies **BLIP** file data. The **OfficeArtRecordHeader** structure, as defined in section 2.2.1, specifies the type of BLIP record that is contained. The following table lists the possible record types.

Value	Meaning
0xF01A	**OfficeArtBlipEMF**, as defined in section 2.2.24.
0xF01B	**OfficeArtBlipWMF**, as defined in section 2.2.25.
0xF01C	**OfficeArtBlipPICT**, as defined in section 2.2.26.
0xF01D	**OfficeArtBlipJPEG**, as defined in section 2.2.27.
0xF01E	**OfficeArtBlipPNG**, as defined in section 2.2.28.
0xF01F	**OfficeArtBlipDIB**, as defined in section 2.2.29.
0xF029	**OfficeArtBlipTIFF**, as defined in section 2.2.30.
0xF02A	**OfficeArtBlipJPEG**, as defined in section 2.2.27.<5>

2.2.24 OfficeArtBlipEMF

Referenced by: OfficeArtBlip

The **OfficeArtBlipEMF** record specifies **BLIP** file data for the **enhanced metafile format (EMF)**.

0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
rh																															
...																															
rgbUid1 (16 bytes)																															
...																															
...																															
rgbUid2 (16 bytes, optional)																															
...																															
...																															
metafileHeader (34 bytes)																															
...																															
...																															
...														BLIPFileData (variable)																	
...																															

rh (8 bytes): An **OfficeArtRecordHeader** structure, as defined in section 2.2.1, that specifies the header for this record. The following table specifies the subfields.

Field	Meaning
rh.recVer	A value that MUST be 0x0.
rh.recInstance	A value of 0x3D4 to specify one Unique ID (UID), or a value of 0x3D5 to specify two UIDs.
rh.recType	A value that MUST be 0xF01A.
rh.recLen	An unsigned integer that specifies the number of bytes following the header. This value MUST be the size of the **BLIPFileData** field plus 50 if **recInstance** equals 0x3D4, or the size of **BLIPFileData** plus 66 if **recInstance** equals 0x3D5.

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

rgbUid2 (16 bytes): An MD4 message digest, as specified in [RFC1320], that specifies the unique identifier of the uncompressed **BLIPFileData**. This field only exists if **recInstance** equals 0x3D5. If this value is not 0, **rgbUid1** MUST be ignored.

metafileHeader (34 bytes): An **OfficeArtMetafileHeader** record, as defined in section 2.2.31, that specifies how to process the metafile in **BLIPFileData**.

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

2.2.25 OfficeArtBlipWMF

Referenced by: OfficeArtBlip

The **OfficeArtBlipWMF** record specifies **BLIP** file data for the Windows Metafile Format (WMF).

0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
rh																															
...																															
rgbUid1 (16 bytes)																															
...																															
...																															
rgbUid2 (16 bytes, optional)																															
...																															
...																															
metafileHeader (34 bytes)																															
...																															

...	
...	BLIPFileData (variable)
...	

rh (8 bytes): An **OfficeArtRecordHeader** structure, as defined in section 2.2.1, that specifies the header for this record. The following table specifies the subfields.

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

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

rgbUid2 (16 bytes): An MD4 message digest, as specified in [RFC1320], that specifies the unique identifier of the uncompressed **BLIPFileData**. This field only exists if **recInstance** equals 0x217. If this value exists, **rgbUid1** MUST be ignored.

metafileHeader (34 bytes): An **OfficeArtMetafileHeader** record, as defined in section 2.2.31, that specifies how to process the metafile in **BLIPFileData**.

BLIPFileData (variable): A variable-length field that specifies the **WMF** data.

2.2.26 OfficeArtBlipPICT

Referenced by: OfficeArtBlip

The **OfficeArtBlipPICT** record specifies the **BLIP** file data for the **Macintosh PICT** format.

0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
rh																															
...																															
rgbUid1 (16 bytes)																															
...																															
...																															

rgbUid2 (16 bytes, optional)	
...	
...	
metafileHeader (34 bytes)	
...	
...	
...	BLIPFileData (variable)
...	

rh (8 bytes): An **OfficeArtRecordHeader** structure, as defined in section 2.2.1, that specifies the header for this record. The following table specifies the subfields.

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

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

rgbUid2 (16 bytes): An MD4 message digest, as specified in [RFC1320], that specifies the unique identifier of the uncompressed **BLIPFileData**. This field only exists if **recInstance** equals 0x543. If this value exists, **rgbUid1** MUST be ignored.

metafileHeader (34 bytes): An **OfficeArtMetafileHeader** record, as defined in section 2.2.31, that specifies how to process the metafile in **BLIPFileData**.

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

2.2.27 OfficeArtBlipJPEG

Referenced by: OfficeArtBlip

The **OfficeArtBlipJPEG** record specifies **BLIP** file data for the **Joint Photographic Experts Group (JPEG)** format.

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

rh (8 bytes): An **OfficeArtRecordHeader** structure, as defined in section 2.2.1, that specifies the header for this record. The following table specifies the subfields.

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

Value of recInstance	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 message digest, as specified in [RFC1320], that specifies the unique identifier of the uncompressed **BLIPFileData**.

rgbUid2 (16 bytes): An MD4 message digest, as specified in [RFC1320], that specifies the unique identifier of the uncompressed **BLIPFileData**. This field only exists if **recInstance** equals either 0x46B or 0x6E3. If this value is specified, **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): A variable-length field that specifies the JPEG data.

2.2.28 OfficeArtBlipPNG

Referenced by: OfficeArtBlip

The **OfficeArtBlipPNG** record specifies **BLIP** file data for the **Portable Network Graphics (PNG)** format.

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

rh (8 bytes): An **OfficeArtRecordHeader** structure, as defined in section 2.2.1, that specifies the header for this record. The following table specifies the subfields.

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

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

rgbUid2 (16 bytes): An MD4 message digest, as specified in [RFC1320], that specifies the unique identifier of the uncompressed **BLIPFileData**. This field only exists if **recInstance** equals 0x6E1. If this value exists, **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): A variable-length field that specifies the PNG data.

2.2.29 OfficeArtBlipDIB

Referenced by: OfficeArtBlip

The **OfficeArtBlipDIB** record specifies **BLIP** file data for the **device-independent bitmap (DIB)** format.

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

rh (8 bytes): An **OfficeArtRecordHeader** structure, as defined in section 2.2.1, that specifies the header for this record. The following table specifies the subfields.

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

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

rgbUid2 (16 bytes): An MD4 message digest, as specified in [RFC1320], that specifies the unique identifier of the uncompressed **BLIPFileData**. This field only exists if **recInstance** equals 0x7A9. If this value exists, **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): A variable-length field that specifies the DIB data.

2.2.30 OfficeArtBlipTIFF

Referenced by: OfficeArtBlip

The **OfficeArtBlipTIFF** record specifies **BLIP** file data for the **TIFF** format.

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

rh (8 bytes): An **OfficeArtRecordHeader** structure, as defined in section 2.2.1, that specifies the header for this record. The following table specifies the subfields.

Field	Meaning
rh.recVer	A value that MUST be 0x0.
rh.recInstance	A value of 0x6E4 to specify one UID, or a value of 0x6E5 to specify two UIDs.
rh.recType	A value that MUST be 0xF029.
rh.recLen	An unsigned integer that specifies the number of bytes following the header. This value MUST be the size of **BLIPFileData** plus 17 if **recInstance** equals 0x6E4, or the size of **BLIPFileData** plus 33 if **recInstance** equals 0x6E5.

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

rgbUid2 (16 bytes): An MD4 message digest, as specified in [RFC1320], that specifies the unique identifier of the uncompressed **BLIPFileData**. This field only exists if **recInstance** equals 0x6E5. If this value exists, **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): A variable-length field that specifies the TIFF data.

2.2.31 OfficeArtMetafileHeader

Referenced by: OfficeArtBlipEMF, OfficeArtBlipPICT, OfficeArtBlipWMF

The **OfficeArtMetafileHeader** record specifies how to process a metafile.

0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
cbSize																															
rcBounds (16 bytes)																															
...																															
...																															
ptSize																															
...																															
cbSave																															
compression								filter																							

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

rcBounds (16 bytes): A **RECT** structure, as defined in section 2.2.56, that specifies the clipping region of the metafile.

ptSize (8 bytes): A **POINT** structure, as defined in section 2.2.55, that specifies the size, in **English Metric Units (EMUs)**, in which to render the metafile.

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

compression (1 byte): An unsigned integer that specifies the compression method that was used. A value of 0x00 specifies the DEFLATE compression method, 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

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

0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
rh																														
...																														
btWin32							btMacOS							rgbUid (16 bytes)																	
...																														
...																														
...																	tag														
size																														
cRef																														
foDelay																														
unused1							cbName							unused2							unused3						
nameData (variable)																														
...																														
embeddedBlip (variable)																														
...																														

rh (8 bytes): An **OfficeArtRecordHeader** structure, as defined in section 2.2.1, that specifies the header for this record. The following table specifies the subfields.

Field	Meaning
rh.recVer	A value that MUST be 0x2.
rh.recInstance	An **MSOBLIPTYPE** enumeration value, as defined in section 2.4.1, that specifies the BLIP type and MUST match either **btWin32** or **btMacOS**.
rh.recType	A value that MUST be 0xF007.
rh.recLen	An unsigned integer that specifies the number of bytes following the header. This value MUST be the size of **nameData** plus 36 if the BLIP is not embedded in this record, or the size of **nameData** plus **size** plus 36 if the BLIP is

Field	Meaning
	embedded in this record.

btWin32 (1 byte): An **MSOBLIPTYPE** enumeration value, as defined in section 2.4.1, that specifies the Windows BLIP type. If the **btMacOS** value is supported by the Windows operating system, this value MUST match **btMacOS**. If the values of **btWin32** and **btMacOS** are different, the BLIP that matches **rh.recInstance** MUST be present and the other MAY be present.

btMacOS (1 byte): An **MSOBLIPTYPE** enumeration value, as defined in section 2.4.1, that specifies the Macintosh BLIP type. If the **btWin32** value is supported by the Macintosh operating system, this value MUST match **btWin32**. If the values of **btWin32** and **btMacOS** are different, the BLIP that matches **rh.recInstance** MUST be present and the other MAY be present.

rgbUid (16 bytes): An MD4 message 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, in bytes, of the BLIP 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** record, as defined in section 2.2.20.

foDelay (4 bytes): An **MSOFO** structure, as defined in section 2.1.4, that specifies the file offset into the associated **OfficeArtBStoreDelay** record, as defined in section 2.2.21, (delay stream). A value of 0xFFFFFFFF specifies that the file is not in the delay stream, and in this case, **cRef** MUST be 0x00000000.

unused1 (1 byte): A value that is undefined and MUST be ignored.

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

unused2 (1 byte): A value that is undefined and MUST be ignored.

unused3 (1 byte): A value that is undefined and MUST be ignored.

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

embeddedBlip (variable): An **OfficeArtBlip** record, as defined in section 2.2.23, specifying the BLIP file data that is embedded in this record. If this value is not 0, **foDelay** MUST be ignored.

2.2.33 OfficeArtFDGSL

The **OfficeArtFDGSL** record specifies both the selected **shapes** and the shape that is in focus in the **drawing**. This record SHOULD<6> be ignored.

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

cpsp
dgslk
spidFocus
shapeList (variable)
...

rh (8 bytes): An **OfficeArtRecordHeader** structure, as defined in section 2.2.1, that specifies the header for this record. The following table specifies the subfields.

Field	Meaning
rh.recVer	A value that MUST be 0x0.
rh.recInstance	A value that MUST be 0x000.
rh.recType	A value that MUST be 0xF119.
rh.recLen	A value that is undefined and MUST be ignored.

cpsp (4 bytes): A value that is undefined and MUST be ignored.

dgslk (4 bytes): An **MSODGSLK** enumeration value, as defined in section 2.4.28, that specifies the selection mode.

spidFocus (4 bytes): An **MSOSPID** structure, as defined in section 2.1.2, specifying the identifier of the shape that is in focus.

shapeList (variable): An array of **MSOSPID** elements, as defined in section 2.1.2, that specify the identifiers of the selected shapes. The number of elements is specified by the following formula:

(size of record data, as specified in [MS-XLS] section 2.1.4, - 20) / 4

2.2.34 OfficeArtFCalloutRule

Referenced by: OfficeArtSolverContainerFileBlock

The **OfficeArtFCalloutRule** record specifies a **callout rule**. One callout rule MUST exist per callout **shape**.

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

rh (8 bytes): An **OfficeArtRecordHeader** structure, as defined in section 2.2.1, that specifies the header for this record. The following table specifies the subfields.

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

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

spid (4 bytes): An **MSOSPID** structure, as defined in section 2.1.2, that specifies the identifier of the callout shape.

2.2.35 OfficeArtFArcRule

Referenced by: OfficeArtSolverContainerFileBlock

The **OfficeArtFArcRule** record specifies an arc **rule**. Each arc **shape** MUST correspond to a unique arc rule. This record SHOULD<7> be persisted.

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

rh (8 bytes): An **OfficeArtRecordHeader** structure, as defined in section 2.2.1, that specifies the header for this record. The following table specifies the subfields.

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

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

spid (4 bytes): An **MSOSPID** structure, as defined in section 2.1.2, that specifies the identifier of the arc shape.

2.2.36 OfficeArtFConnectorRule

Referenced by: OfficeArtSolverContainerFileBlock

The **OfficeArtFConnectorRule** record specifies the connection between two **shapes** that exists via a **connector** shape. This record MAY<8> be ignored.

0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
rh																															
...																															
ruid																															
spidA																															
spidB																															
spidC																															
cptiA																															
cptiB																															

rh (8 bytes): An **OfficeArtRecordHeader** structure, as defined in section 2.2.1, that specifies the header for this record. The following table specifies the subfields.

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

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

spidA (4 bytes): An **MSOSPID** structure, as defined in section 2.1.2, that specifies the identifier of the shape where the connector shape starts.

spidB (4 bytes): An **MSOSPID** structure, as defined in section 2.1.2, that specifies the identifier of the shape where the connector shape ends.

spidC (4 bytes): An **MSOSPID** structure, as defined in section 2.1.2, 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, this 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, this value MUST be within its range of valid connection site indexes. Otherwise, this value is ignored.

2.2.37 OfficeArtFPSPL

Referenced by: OfficeArtSpContainer

The **OfficeArtFPSPL** record specifies the former hierarchical position of the containing object that is either a **shape** or a **group** of shapes. This record MUST be present only if the **OfficeArtFSP** record, as defined in section 2.2.40, of the containing **OfficeArtSpContainer**, as defined in section 2.2.14, 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 that is referenced by **spid**, as a member of the container directly containing that object. This record MAY<9> be used in some documents. If **spid** equals zero or specifies the containing shape, this record MUST be ignored.

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

rh (8 bytes): An **OfficeArtRecordHeader** structure, as defined in section 2.2.1, that specifies the header for this record. The following table specifies the subfields.

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

spid (30 bits): An **MSOSPID** structure, as defined in section 2.1.2, that specifies another shape or group of shapes that is contained in the same **OfficeArtDgContainer** record, as defined in section 2.2.13. This other object contains an **OfficeArtFSP** record, as defined in section 2.2.40, with an equivalently valued **spid** field.

A - reserved1 (1 bit): A value that 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 that is specified by **spid**. The following table specifies the meaning of each value for this bit.

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

2.2.38 OfficeArtFSPGR

Referenced by: OfficeArtSpContainer

The **OfficeArtFSPGR** record specifies the coordinate system of the **group shape** that the **anchors** of the **child shape** are expressed in. This record is present only for group shapes.

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

rh (8 bytes): An **OfficeArtRecordHeader** structure, as defined in section 2.2.1, that specifies the header for this record. The following table specifies the subfields.

Field	Meaning
rh.recVer	A value that MUST be 0x1.
rh.recInstance	A value that MUST be 0x000.
rh.recType	A value that MUST be 0xF009.
rh.recLen	A value that MUST be 0x00000010.

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

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

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

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

2.2.39 OfficeArtChildAnchor

Referenced by: OfficeArtSpContainer

The **OfficeArtChildAnchor** 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. The four integers specify the offset from the origin of the coordinate system that is specified by the **OfficeArtFSPGR** record, as defined in section 2.2.38, contained in the same **OfficeArtSpgrContainer** record, as defined in section 2.2.16, that contains this record. The integers are in units of the coordinate system that is specified by the **OfficeArtFSPGR**.

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

...
xLeft
yTop
xRight
yBottom

rh (8 bytes): An **OfficeArtRecordHeader** structure, as defined in section 2.2.1, that specifies the header for this record. The following table specifies the subfields.

Field	Meaning
rh.recVer	A value that MUST be 0x0.
rh.recInstance	A value that MUST be 0x000.
rh.recType	A value that MUST be 0xF00F.
rh.recLen	A value that 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

The **OfficeArtFSP** 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	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
rh																															
...																															
spid																															
A	B	C	D	E	F	G	H	I	J	K	L	unused1																			

rh (8 bytes): An **OfficeArtRecordHeader** structure, as defined in section 2.2.1, that specifies the header for this record. The following table specifies the subfields.

Field	Meaning
rh.recVer	A value that MUST be 0x2.
rh.recInstance	A signed value that specifies the shape type and that MUST be an **MSOSPT** enumeration value, as defined in section 2.4.24.
rh.recType	A value that MUST be 0xF00A.
rh.recLen	A value that MUST be 0x00000008.

spid (4 bytes): An **MSOSPID** structure, as defined in section 2.1.2, 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, as defined in section 2.3.2.1.

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

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

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): A value that is undefined and MUST be ignored.

2.2.41 OfficeArtFRITContainer

Referenced by: OfficeArtDgContainer

The **OfficeArtFRITContainer** record specifies a container for the table of **group** identifiers that are used for regrouping ungrouped **shapes**.

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

rh (8 bytes): An **OfficeArtRecordHeader** structure, as defined in section 2.2.1, that specifies the header for this record. The following table specifies the subfields.

Field	Meaning
rh.recVer	A value that MUST be 0x0.
rh.recInstance	An unsigned integer that specifies the number of contained **OfficeArtFRIT** records, as defined in section 2.2.42.
rh.recType	A value that MUST be 0xF118.
rh.recLen	An unsigned integer that specifies the number of bytes following the header that contain **OfficeArtFRIT** records. This value MUST be the size, in bytes, of **rgfrit**.

rgfrit (variable): An array of **OfficeArtFRIT** records, as defined in section 2.2.42, that specifies the table of group identifiers. The size of the array MUST equal the value of **rh.recInstance**.

2.2.42 OfficeArtFRIT

Referenced by: OfficeArtFRITContainer

The **OfficeArtFRIT** record specifies the last two **group** identifiers that are used to facilitate regrouping ungrouped **shapes**.

0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
fridNew																fridOld															

fridNew (2 bytes): A **FRID** structure, as defined in section 2.1.3, specifying the last group identifier of the shape before ungrouping. The value of **fridNew** MUST be greater than the value of **fridOld**.

fridOld (2 bytes): A **FRID** structure, as defined in section 2.1.3, specifying the second-to-last group identifier of the shape before ungrouping. This value MUST be 0x0000 if a second-to-last group does not exist.

2.2.43 OfficeArtColorMRUContainer

Referenced by: OfficeArtDggContainer

The **OfficeArtColorMRUContainer** record specifies the most recently used custom colors.

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

rh (8 bytes): An **OfficeArtRecordHeader** structure, as defined in section 2.2.1, that specifies the header for this record. The following table specifies the subfields.

Field	Meaning
rh.recVer	A value that MUST be 0x0.
rh.recInstance	An unsigned integer that specifies the number of contained **MSOCR** records, as defined in section 2.2.44.
rh.recType	A value that MUST be 0xF11A.
rh.recLen	An unsigned integer that specifies the number of bytes following the header that contain **MSOCR** records. This value MUST be the size, in bytes, of **rgmsocr**.

rgmsocr (variable): An array of **MSOCR** elements, as defined in section 2.2.44, that specifies the most recently used custom colors.

2.2.44 MSOCR

Referenced by: OfficeArtColorMRUContainer, OfficeArtSplitMenuColorContainer

The **MSOCR** record specifies either the **RGB** color or the **scheme color** index.

0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 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 specifies no red color. A value of 0xFF specifies full red intensity.

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

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

A - unused1 (3 bits): A value that is 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): A value that is undefined and MUST be ignored.

2.2.45 OfficeArtSplitMenuColorContainer

Referenced by: OfficeArtDggContainer

The **OfficeArtSplitMenuColorContainer** record specifies a container for the colors that were most recently used to format **shapes**.

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

rh (8 bytes): An **OfficeArtRecordHeader** structure, as defined in section 2.2.1, that specifies the header for this record. The following table specifies the subfields.

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

smca (variable): An array of **MSOCR** records, as defined in section 2.2.44, that specifies the colors that were most recently used to format shapes. The number of elements in the array MUST be four. The elements specify, in order, the fill color, the line color, the shadow color, and the 3-D color.

2.2.46 OfficeArtIDCL

Referenced by: OfficeArtFDGGBlock

The **OfficeArtIDCL** record specifies a file identifier cluster, which is used to group **shape** identifiers within a **drawing**.

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

dgid (4 bytes): An **MSODGID** structure, as defined in section 2.1.1, specifying the drawing identifier that owns this identifier cluster.

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

2.2.47 OfficeArtFDGG

Referenced by: OfficeArtFDGGBlock

The **OfficeArtFDGG** record specifies document-wide information about all of the **drawings** that have been saved in the file.

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

spidMax (4 bytes): An **MSOSPID** structure, as defined in section 2.1.2, specifying the current maximum **shape** identifier that is used in any drawing. This value MUST be less than 0x03FFD7FF.

cidcl (4 bytes): An unsigned integer that specifies the number of **OfficeArtIDCL** records, as defined in section 2.2.46, + 1. This value MUST be less than 0x0FFFFFFF.

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

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

2.2.48 OfficeArtFDGGBlock

Referenced by: OfficeArtDggContainer

The **OfficeArtFDGGBlock** record specifies document-wide information about all of the **drawings** that have been saved in the file.

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

rh (8 bytes): An **OfficeArtRecordHeader** structure, as defined in section 2.2.1, that specifies the header for this record. The following table specifies the subfields.

Field	Meaning
rh.recVer	A value that MUST be 0x0.
rh.recInstance	A value that MUST be 0x000.

Field	Meaning
rh.recType	A value that MUST be 0xF006.
rh.recLen	A value that MUST be 0x00000010 + ((**head.cidcl** - 1) * 0x00000008)

head (16 bytes): An **OfficeArtFDGG** record, as defined in section 2.2.47, that specifies document-wide information.

Rgidcl (variable): An array of **OfficeArtIDCL** elements, as defined in section 2.2.46, specifying file identifier clusters that are used in the drawing. The number of elements in the array is specified by (**head.cidcl** – 1).

2.2.49 OfficeArtFDG

Referenced by: OfficeArtDgContainer

The **OfficeArtFDG** record specifies the number of **shapes**, the **drawing** identifier, and the shape identifier of the last shape in a drawing.

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

rh (8 bytes): An **OfficeArtRecordHeader** structure, as defined in section 2.2.1, that specifies the header for this record. The following table specifies the subfields.

Field	Meaning
rh.recVer	A value that MUST be 0x0.
rh.recInstance	A value that specifies the drawing identifier and that MUST be less than or equal to 0xFFE.
rh.recType	A value that MUST be 0xF008.
rh.recLen	A value that MUST be 0x00000008.

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

spidCur (4 bytes): An **MSOSPID** structure, as defined in section 2.1.2, that specifies the shape identifier of the last shape in this drawing.

2.2.50 MSOSHADETYPE

Referenced by: fillShadeType

The **MSOSHADETYPE** record specifies the interpolation of colors between the color/position values that are stated for the fill. The values can be combined to produce compound effects.

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

A - msoshadeNone (1 bit): A bit that specifies whether color correction will be performed after interpolation. A value of 0x1 specifies that no color correction will be performed 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 a **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): A value that is 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

The **IMsoArray** record specifies an array that contains elements of a specific size.

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

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

nElemsAlloc (2 bytes): An unsigned integer that specifies the maximum number of array elements that 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 the **data** array. If this value equals 0xFFF0, this record contains an array of truncated 8-byte elements. In this case, only the four low-order bytes of each element are recorded. The four high-order bytes equal 0x00000000, and the four low-order bytes of each element 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** thus equals (**cbElem** * **nElems**) bytes. If **cbElem** equals 0xFFF0, each element is 4 bytes in size, and the total size of **data** equals (4 * **nElems**) bytes.

2.2.52 IMsoInkData

Referenced by: pInkData_complex

The **IMsoInkData** record specifies the **ink** data for a **shape**.

0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
CLSID_InkDisp (16 bytes)																														
...																														
...																														
cbBlob																														
data (variable)																														
...																														

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

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

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

2.2.53 MSOPATHINFO

The **MSOPATHINFO** record specifies how a series of **POINT** values, as defined in section 2.2.55, are to be interpreted to construct a path.

0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
type			segments																										

type (3 bits): An **MSOPATHTYPE** enumeration value, as defined in section 2.4.30, that specifies how the path is to be drawn. If this field contains an escape value, this record is treated as an **MSOPATHESCAPEINFO** record, as defined in section 2.2.54.

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

2.2.54 MSOPATHESCAPEINFO

The **MSOPATHESCAPEINFO** record specifies how a path is constructed. This record is used in conjunction with **MSOPATHINFO** record, as defined in section 2.2.53, and an array of **POINT** data, as defined in section 2.2.55, to build a path.

0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
type			escape					segments																						

type (3 bits): An **MSOPATHTYPE** enumeration value, as defined in section 2.4.30, 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, as defined in section 2.2.53.

escape (5 bits): An **MSOPATHESCAPE** enumeration value, as defined in section 2.4.31, that specifies how path information is interpreted and segments joined.

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

2.2.55 POINT

Referenced by: OfficeArtMetafileHeader

The **POINT** record specifies a two-dimensional (2-D) point.

0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
x																															
y																															

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

2.2.56 RECT

Referenced by: OfficeArtMetafileHeader

The **RECT** record specifies a 2-D rectangle.

0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
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 that is 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 that is 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 that is 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 that is used for this value is dependent on the scenario in which it is used.

2.2.57 ADJH

The **ADJH** record specifies a single **adjust handle** that a user can employ to manipulate the geometry of a **shape**.

0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 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 the x-coordinate of this adjust handle is inverted according to the following formula:

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

where **right** means the right coordinate of the **bounding rectangle** of the **geometry space** as specified by the geoRight property of this shape. Note that all the values are specified in the geometry space.

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

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

where **bottom** means the bottom coordinate of the bounding rectangle of the geometry space as specified by the geoBottom property of this shape. Note that all the values are specified in the geometry space.

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

D - fahPolar (1 bit): A bit that specifies whether the coordinates of this adjust handle are polar coordinate values rather than Cartesian coordinate values. The following table specifies the meaning of each value for this bit.

Value	Meaning
0x0	The coordinates of this adjust handle are Cartesian coordinate values.
0x1	The x-coordinate of this adjust handle specifies the radius in geometry space units; the y-coordinate specifies the angle, in degrees, as a value of type **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. The value of **fahMap** MUST NOT equal 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 that is specified by the values of **xRange** and **yRange**. If this value equals 0x1, **fahPolar** MUST NOT equal 0x1.

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

G - fahUnused (1 bit): A value that is undefined and MUST be ignored.

H - fahxMin (1 bit): A bit that specifies whether **xMin** is interpreted as an index into the **pGuides_complex** array, as defined in section 2.3.6.27, for this shape rather than as a constant value.

I - fahxMax (1 bit): A bit that specifies whether **xMax** is interpreted as an index into the **pGuides_complex** array, as defined in section 2.3.6.27, for this shape rather than as a constant value.

J - fahyMin (1 bit): A bit that specifies whether **yMin** is interpreted as an index into the **pGuides_complex** array, as defined in section 2.3.6.27, for this shape rather than as a constant value.

K - fahyMax (1 bit): A bit that specifies whether **yMax** is interpreted as an index into the **pGuides_complex** array, as defined in section 2.3.6.27, for this shape rather than as a constant value.

L - fahxRange (1 bit): A bit that specifies whether **xRange** is interpreted as an index into the **pGuides_complex** array, as defined in section 2.3.6.27, for this shape rather than as a constant value.

M - fahyRange (1 bit): A bit that specifies whether **yRange** is interpreted as an index into the **pGuides_complex** array, as defined in section 2.3.6.27, for this shape rather than as a constant value.

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

unused1 (18 bits): A value that is undefined and MUST be ignored.

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

Value	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 along the horizontal center of this shape.
0x00000003–0x00000082	Position the x-coordinate of this adjust handle according to an entry in the **pGuides_complex** array, as defined in section 2.3.6.27, for this shape. The zero-based index into the **pGuides_complex** array is derived by

Value	Positioning
	subtracting 0x00000003 from the value.
0x00000100	Position the x-coordinate of this adjust handle according to the value of the **adjustValue** property, as defined in section 2.3.6.10, of this shape.
0x00000101	Position the x-coordinate of this adjust handle according to the value of the **adjust2Value** property, as defined in section 2.3.6.11, of this shape.
0x00000102	Position the x-coordinate of this adjust handle according to the value of the **adjust3Value** property, as defined in section 2.3.6.12, of this shape.
0x00000103	Position the x-coordinate of this adjust handle according to the value of the **adjust4Value** property, as defined in section 2.3.6.13, of this shape.
0x00000104	Position the x-coordinate of this adjust handle according to the value of the **adjust5Value** property, as defined in section 2.3.6.14, of this shape.
0x00000105	Position the x-coordinate of this adjust handle according to the value of the **adjust6Value** property, as defined in section 2.3.6.15, of this shape.
0x00000106	Position the x-coordinate of this adjust handle according to the value of the **adjust7Value** property, as defined in section 2.3.6.16, of this shape.
0x00000107	Position the x-coordinate of this adjust handle according to the value of the **adjust8Value** property, as defined in section 2.3.6.17, of this shape.

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

Value	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 along the vertical center of this shape.
0x00000003–0x00000082	Position the y-coordinate of this adjust handle according to an entry in the **pGuides_complex** array, as defined in section 2.3.6.27, for this shape. 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 the **adjustValue** property, as defined in section 2.3.6.10, of this shape.
0x00000101	Position the y-coordinate of this adjust handle according to the value of the **adjust2Value** property, as defined in section 2.3.6.11, of this shape.
0x00000102	Position the y-coordinate of this adjust handle according to the value of the **adjust3Value** property, as defined in section 2.3.6.12, of this shape.
0x00000103	Position the y-coordinate of this adjust handle according to the value of the **adjust4Value** property, as defined in section 2.3.6.13, of this shape.
0x00000104	Position the y-coordinate of this adjust handle according to the value of the **adjust5Value** property, as defined in section 2.3.6.14, of this shape.
0x00000105	Position the y-coordinate of this adjust handle according to the value of the **adjust6Value** property, as defined in section 2.3.6.15, of this shape.
0x00000106	Position the y-coordinate of this adjust handle according to the value of the **adjust7Value** property, as defined in section 2.3.6.16, of this shape.
0x00000107	Position the y-coordinate of this adjust handle according to the value of the **adjust8Value** property, as defined in section 2.3.6.17, of this shape.

xRange (4 bytes): A signed integer that specifies the x-coordinate of a value that is used to control the position of this adjust handle. If **fahxRange** equals 0x0, the value is used directly. If

fahxRange equals 0x1, 0x00000003 is subtracted from the value, and the result is used as a zero-based index into the **pGuides_complex** array, as defined in section 2.3.6.27, for this shape to calculate the actual value.

yRange (4 bytes): A signed integer that specifies the y-coordinate of a value that is used to control the position of this adjust handle. If **fahyRange** equals 0x0, the value is used directly. If **fahyRange** equals 0x1, 0x00000003 is subtracted from the value, and the result is used as a zero-based index into the **pGuides_complex** array, as defined in section 2.3.6.27, for this shape to calculate the actual value.

xMin (4 bytes): A signed integer that specifies the x-coordinate of a value that is used to control the position of this adjust handle. If **fahxMin** equals 0x0, the value is used directly. If **fahxMin** equals 0x1, 0x00000003 is subtracted from the value, and the result is used as a zero-based index into the **pGuides_complex** array, as defined in section 2.3.6.27, for this shape to calculate the actual value.

xMax (4 bytes): A signed integer that specifies the x-coordinate of a value that is used to control the position of this adjust handle. If **fahxMax** equals 0x0, the value is used directly. If **fahxMax** equals 0x1, 0x00000003 is subtracted from the value, and the result is used as a zero-based index into the **pGuides_complex** array, as defined in section 2.3.6.27, for this shape to calculate the actual value.

yMin (4 bytes): A signed integer that specifies the y-coordinate of a value that is used to control the position of this adjust handle. If **fahyMin** equals 0x0, the value is used directly. If **fahyMin** equals 0x1, 0x00000003 is subtracted from the value, and the result is used as a zero-based index into the **pGuides_complex** array, as defined in section 2.3.6.27, for this shape to calculate the actual value.

yMax (4 bytes): A signed integer that specifies the y-coordinate of a value that is used to control the position of this adjust handle. If **fahyMax** equals 0x0, the value is used directly. If **fahyMax** equals 0x1, 0x00000003 is subtracted from the value, and the result is used as a zero-based index into the **pGuides_complex** array, as defined in section 2.3.6.27, for this shape to calculate the actual value.

2.2.58 SG

Referenced by: pGuides_complex

The **SG** record specifies a formula that is used to calculate a value for use in the **pGuides_complex** property, as defined in section 2.3.6.27, of this **shape**. Formulas are used to calculate values involved in the geometry of a shape so that a user can adjust some of those values and so that the entire geometry of the shape can adjust appropriately as a result.

0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
sgf													A	B	C	param1															
param2																param3															

sgf (13 bits): A set of bits that specifies the formula to use to calculate the value for the guide represented by this record. The formulas specify a combination of **param1**, **param2**, and **param3** values, although not every formula uses all three of the parameters. The following table lists the values for this field along with the formulas that they represent.

Formula name	Value	Calculation
sgfSum	0x0000	Addition and subtraction:

Formula name	Value	Calculation
		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	Lesser of two values: min(**param1**, **param2**)
sgfMax	0x0005	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	Arctangent, where the result equals the angles, in degrees, and is of type **FixedPoint** as specified in [MS-OSHARED] section 2.2.1.6: atan2(**param2**, **param1**)
sgfSin	0x0009	Sine, where **param2** equals the angles, in degrees, and is of type **FixedPoint** as specified in [MS-OSHARED] section 2.2.1.6: **param1** * sin(**param2**)
sgfCos	0x000A	Cosine, where **param2** equals the angles, in degrees, and is of type **FixedPoint** as specified in [MS-OSHARED] section 2.2.1.6: **param1** * cos(**param2**)
sgfCosATan2	0x000B	Cosine and arctangent in one formula: **param1** * cos(atan2(**param3**, **param2**))
sgfSinATan2	0x000C	Sine and arctangent in one formula: **param1** * sin(atan2(**param3**, **param2**))
sgfSqrt	0x000D	Square root: sqrt(**param1**)
sgfSumAngle	0x000E	Addition of an angle, in degrees, of type **FixedPoint** as specified in [MS-OSHARED] section 2.2.1.6, to two other angles, in degrees, where **param2** and **param3** are scaled by 2^16: **param1** + **param2***2^16 + **param3***2^16
sgfEllipse	0x000F	Eccentricity formula for an ellipse, where **param1** is the length of the semi-minor axis and **param2** is the length of the semi-major axis: **param3** * sqrt(1 - (**param1** / **param2**)^2)
sgfTan	0x0010	Tangent, where **param2** equals the angles, in degrees, and is of type **FixedPoint** as specified in [MS-OSHARED] section 2.2.1.6: **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. The following table specifies the meaning of each value for this bit.

Value	Meaning
0x0	**param1** is a constant.
0x1	**param1** is calculated from another property or formula.

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. The following table specifies the meaning of each value for this bit.

Value	Meaning
0x0	**param2** is a constant.
0x1	**param2** is calculated from another property or formula.

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. The following table specifies the meaning of each value for this bit.

Value	Meaning
0x0	**param3** is a constant.
0x1	**param3** is calculated from another property or formula.

param1 (16 bits): A value that is used to calculate the result of this formula. If **fCalculatedParam1** equals 0x0, this value is an unsigned integer constant. If **fCalculatedParam1** equals 0x1, this value specifies a property or formula to use when calculating the result. The following table specifies the allowed values.

Value	Calculation
0x0140	The x-coordinate of the center of the **geometry space** of this shape.
0x0141	The y-coordinate of the center of the geometry space of this shape.
0x0142	The width of the geometry space of this shape.
0x0143	The height of the geometry space of this shape.
0x0147	The value of the **adjustValue** property, as defined in section 2.3.6.10, of this shape.
0x0148	The value of the **adjust2Value** property, as defined in section 2.3.6.11, of this shape.
0x0149	The value of the **adjust3Value** property, as defined in section 2.3.6.12, of this shape.
0x014A	The value of the **adjust4Value** property, as defined in section 2.3.6.13, of this shape.
0x014B	The value of the **adjust5Value** property, as defined in section 2.3.6.14, of this shape.
0x014C	The value of the **adjust6Value** property, as defined in section 2.3.6.15, of this shape.
0x014D	The value of the **adjust7Value** property, as defined in section 2.3.6.16, of this shape.
0x014E	The value of the **adjust8Value** property, as defined in section 2.3.6.17, of this shape.

Value	Calculation
0x0153	The value of the **xLimo** property, as defined in section 2.3.6.22.
0x0154	The value of the **yLimo** property, as defined in section 2.3.6.23.
0x01FC	The value of the **fLine** bit from the Line Style Boolean Properties of this shape.
0x0400–0x047F	A value that is calculated from another **SG** entry in the **pGuides_complex** array, as defined in section 2.3.6.27, for this shape. The index into the array equals the value minus 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, in pixels, of a line in this shape.
0x04F8	The width, in pixels, of this shape.
0x04F9	The height, in pixels, of this shape.
0x04FC	The width, in **EMUs**, of this shape.
0x04FD	The height, in EMUs, of this shape.
0x04FE	The width, in EMUs, of this shape divided by 2.
0x04FF	The height, in EMUs, of this shape divided by 2.

param2 (16 bits): A value that is used to calculate the result of this formula. If **fCalculatedParam2** equals 0, this value is an unsigned integer constant. If **fCalculatedParam2** equals 1, this value specifies a property or formula according to the table that is documented for **param1**.

param3 (16 bits): A value that is used to calculate the result of this formula. If **fCalculatedParam3** equals 0, this value is an unsigned integer constant. If **fCalculatedParam3** equals 1, this value specifies a property or formula according to the table that is documented for **param1**.

2.2.59 TABLEFLAGS

The **TABLEFLAGS** 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	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 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 equals 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 equals 0x0.

unused1 (29 bits): A value that is undefined and MUST be ignored.

2.2.60 IHlink

Referenced by: pihlShape_complex

The **IHlink** record specifies a **hyperlink**.

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

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

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

2.2.61 MSOSHADECOLOR

The **MSOSHADECOLOR** record specifies an intermediate color in the gradient fill and its relative position along the **gradient vector**.

0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
color																															
position																															

color (4 bytes): An **OfficeArtCOLORREF** record, as defined in section 2.2.2, that specifies what color to use in this point. The color in the specified position is pure. Before and after this position the color can be in transition (or pure, depending on whether this is the last position or not).

position (4 bytes): A value of type **FixedPoint**, as specified in [MS-OSHARED] section 2.2.1.6, that specifies the relative position along the gradient. The value MUST be from 0.0 through 1.0, inclusive. A value of 0.0 specifies the start of the gradient. A value of 1.0 specifies the end of the gradient.

2.3 Properties

Three property blocks— **OfficeArtFOPT** record, as defined in section 2.2.9, **OfficeArtSecondaryFOPT** record, as defined in section 2.2.10, and **OfficeArtTertiaryFOPT** record, as defined in section 2.2.11, are associated with each **shape** instance. The **OfficeArtSpContainer** record, as defined in section 2.2.14, contains each of these property blocks. The **OfficeArtFOPT** and **OfficeArtTertiaryFOPT** property blocks, which are saved with the **drawing group OfficeArtDggContainer**, as defined in section 2.2.12, establish new defaults for every shape in the file. For example, if the fill color for the drawing group is set to red, any shape in any **diagram** that persists in the file without its own fill color will use red. If no fill color exists in either the document properties or the shape, the default fill color will be used.

If the **fComplex** flag of a property equals 0x1, that property has 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 that follow the **OfficeArtRGFOPTE** records, as defined in section 2.3.1, and that contain the property data.

The structures that are specified in this section are supported at the file level by the applications, but not every application writes every property to the binary file. An application that does not fully support a property can load and save that property unchanged, which is the case for any property introduced in a later version of an application that is opened by an earlier version of the same application. Scenarios also exist in which a later version of an application supports a deprecated property or value by converting it to another property or value and then removing the deprecated one.

The following properties SHOULD<10> be supported:

- GeometryText:gtextCSSFont

- Blip:movie

- The following Blip Boolean Properties:

    - **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

- The following Group Shape Boolean Properties:

    - **GroupShape:fLayoutInCell**

- ▪ **GroupShape:fIsBullet**

- ▪ **GroupShape:fStandardHR**

- ▪ **GroupShape:fNoshadeHR**

- ▪ **GroupShape:fHorizRule**

- ▪ **GroupShape:fUserDrawn**

- ▪ **GroupShape:fAllowOverlap**

- ▪ **GroupShape:fReallyHidden**

- ▪ **GroupShape:fScriptAnchor**

- ▪ UnknownHTML

The following property SHOULD<11> be supported:

- ▪ Line Style:fLineOpaqueBackColor

The following properties SHOULD<12> be supported:

- ▪ The following Shape Boolean Properties:

  - ▪ Shape:fFlipHOverride

  - ▪ Shape:fFlipVOverride

- ▪ Diagram:dgmBaseTextScale

- ▪ Ink:pInkData

- ▪ The following Ink Boolean Properties:

  - ▪ Ink:fInkAnnotation

  - ▪ Ink:fHitTestInk

  - ▪ Ink:fRenderShape

  - ▪ Ink:fRenderInk

The following properties SHOULD<13> be supported:

- ▪ Shape:equationXML

- ▪ The following **Shape Boolean Properties**:

  - ▪ Shape:fPolicyLabel

  - ▪ Shape:fPolicyBarcode

- ▪ GroupShape:metroBlob

- ▪ GroupShape:dhgt

- ▪ SignatureLine:wzSigSetupId

- ▪ SignatureLine:wzSigSetupProvId

- ▪ SignatureLine:wzSigSetupSuggSigner

- SignatureLine:wzSigSetupSuggSigner2

- SignatureLine:wzSigSetupSuggSignerEmail

- SignatureLine:wzSigSetupSignInst

- SignatureLine:wzSigSetupAddlXml

- SignatureLine:wzSigSetupProvUrl

- The following Signature Line Boolean Properties:

  - SignatureLine:fSigSetupShowSignDate

  - SignatureLine:fSigSetupAllowComments

  - SignatureLine:fSigSetupSignInstSet

  - SignatureLine:fIsSignatureLine

- GroupShape2:pctHoriz

- GroupShape2:pctVert

- GroupShape2:pctHorizPos

- GroupShape2:pctVertPos

- GroupShape2:sizerelh

- GroupShape2:sizerelv

The following property SHOULD<14> be supported:

- ShadowStyle:shadowSoftness

2.3.1 OfficeArtRGFOPTE

Referenced by: OfficeArtFOPT, OfficeArtSecondaryFOPT, OfficeArtTertiaryFOPT

The **OfficeArtRGFOPTE** record specifies a property table, which consists of 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	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
rgfopte (variable)																															
...																															
complexData (variable)																															
...																															

rgfopte (variable): An array of **OfficeArtFOPTE** records, as defined in section 2.2.7, that specifies property table entries.

complexData (variable): A field of complex data for properties that have the fComplex bit set to 0x1. The complex data is stored immediately following **rgfopte**.

2.3.2 Shape

The **Shape** property set specifies attributes that apply to a **shape** but not to a **group** of shapes.

2.3.2.1 hspMaster

The **hspMaster** property specifies the **master shape** for a **shape**.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0301.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

hspMaster (4 bytes): An **MSOSPID** structure, as defined in section 2.1.2, that specifies the identifier of the master shape for the shape. The default value for this property is 0x00000000.

2.3.2.2 cxstyle

The **cxstyle** property specifies the **connector** style for this **shape**.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0303.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

cxstyle (4 bytes): An **MSOCXSTYLE** enumeration value, as defined in section 2.4.25, that specifies the connector style for this shape. This property SHOULD be ignored if the **fConnector** bit of the **OfficeArtFSP** record, as defined in section 2.2.40, for this shape equals 0x0.The default value for this property is **msocxstyleNone**.

2.3.2.3 bWMode

The **bWMode** property specifies how a **shape** will render in black-and-white display mode.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0304.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

bWMode (4 bytes): An **MSOBWMODE** enumeration value, as defined in section 2.4.26, that specifies how the shape will render in black-and-white display mode. If the value is **msobwAutomatic**, the **bWModePureBW** property, as defined in section 2.3.2.4, SHOULD be used when rendering in pure black-and-white display mode, and the **bWModeBW** property, as defined in section 2.3.2.5, SHOULD be used when rendering in grey scale black-and-white display mode. The default value for this property is **msobwAutomatic**.

2.3.2.4 bWModePureBW

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

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0305.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

bWModePureBW (4 bytes): An **MSOBWMODE** enumeration value, as defined in section 2.4.26, that specifies how the shape will render in pure black-and-white display mode. If the value of the **bWMode** property, as defined in section 2.3.2.3, is not **msobwAutomatic**, this property SHOULD be ignored. The default value for this property is **msobwAutomatic**.

2.3.2.5 bWModeBW

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

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0306.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

bWModeBW (4 bytes): An **MSOBWMODE** enumeration value, as defined in section 2.4.26, that specifies how the shape will render in normal black-and-white display mode. If the value of the **bWMode** property, as defined in section 2.3.2.3, is not **msobwAutomatic**, this property SHOULD be ignored. The default value for this property is **msobwAutomatic**.

2.3.2.6 idDiscussAnchor

The **idDiscussAnchor** property specifies whether a **shape** is an **anchor** for discussion **comments**.

0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																idDiscussAnchor															

...	

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0307.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

idDiscussAnchor (4 bytes): An integer that MAY<15> be used to specify that this shape is an anchor for discussion comments. If the value is 0x00000001, the shape is an anchor for discussion comments. If it is any other value, it SHOULD be ignored. The default value for this property is 0x00000000.

2.3.2.7 dgmLayout

The **dgmLayout** property specifies the **diagram** node layout for a **shape**.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0309.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

dgmLayout (4 bytes): An **MSODGMLO** enumeration value, as defined in section 2.4.29, 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

The **dgmNodeKind** property specifies a **diagram** node type for the **shape**.
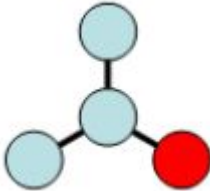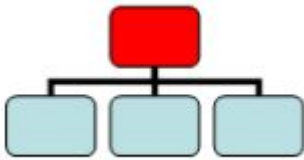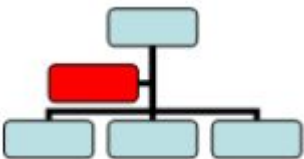
0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																dgmNodeKind															
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x030A.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

dgmNodeKind (4 bytes): An integer specifying the type of node that the shape represents in a diagram. This property SHOULD be ignored if the shape is not a node in a diagram. The default value for this property is 0xFFFFFFFF.

The following table lists the possible values and shows the nodes that they represent.

Name of node type	Value	Description
dgmnkNode	0x00000000	A regular diagram node of no particular type:
dgmnkRoot	0x00000001	The root node in an organizational chart:
dgmnkAssistant	0x00000002	An assistant in an organizational chart:
dgmnkCoWorker	0x00000003	A coworker in an organizational chart:

Name of node type	Value	Description
dgmnkSubordinate	0x00000004	A subordinate in an organizational chart:
dgmnkAuxNode	0x00000005	An auxiliary node that displays text associated with another diagram node:
dgmnkNil	0x0000FFFF	A **connector** node that connects other diagram nodes:

2.3.2.9 dgmLayoutMRU

The **dgmLayoutMRU** 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	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																dgmLayoutMRU															
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x030B.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

dgmLayoutMRU (4 bytes): An **MSODGMLO** enumeration value, as defined in section 2.4.29, that specifies the most recently used diagram layout for the child shapes of this 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

The **equationXML** property specifies alternative mathematical content for an image.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x030C.
opid.fBid	A value that is undefined and MUST be ignored.
opid.fComplex	A bit that indicates whether the **equationXML_complex** property, as defined in section 2.3.2.11, exists. If the value equals 0x1, **equationXML_complex** MUST exist.

equationXML (4 bytes): The number of bytes of data in the **equationXML_complex** property, as defined in section 2.3.2.11. If **opid.fComplex** equals 0x0, this value MUST be 0x00000000. The default value for this property is 0x00000000.

2.3.2.11   equationXML_complex

The **equationXML_complex** property specifies additional data for the **equationXML** property, as defined in section 2.3.2.10. If the **opid.fComplex** bit of **equationXML** equals 0x1, this property MUST exist.

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

equationXML_complex (variable): An **XML** string encoded with **UTF-8** in the Office Open XML Math format, as specified in [ISO/IEC29500-4:2012], that MAY<16> be used as alternative content for an image.

2.3.2.12   Shape Boolean Properties

The **Shape Boolean Properties** specify a 32-bit field of Boolean properties for a **shape**.

0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid														unused1				A	B	C	D	E	F	G	H	I	J	K	L
unused5					M	N	O	P	Q	R	S	T	U	V	W	X														

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for these properties. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x033F.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

unused1 (4 bits): A value that is undefined and MUST be ignored.

A - unused2 (1 bit): A value that is undefined and MUST be ignored.

B - unused3 (1 bit): A value that is undefined and MUST be ignored.

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

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

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

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

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

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

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

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

K - unused4 (1 bit): A value that is undefined and MUST be ignored.

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

unused5 (4 bits): A value that is undefined and MUST be ignored.

M - unused6 (1 bit): A value that is undefined and MUST be ignored.

N - unused7 (1 bit): A value that is undefined and MUST be ignored.

O - fPolicyLabel (1 bit): A bit that MAY[17] be used to specify whether this object is an image of a label that identifies the containing document as part of a **labeling policy** in a **content management system**. If **fUsefPolicyLabel** equals 0x0, this value MUST be ignored. The default value for this property is 0x0.

P - fPolicyBarcode (1 bit): A bit that MAY[18] be used to specify whether this object is a barcode image that identifies the containing document as part of a content management system. If **fUsefPolicyBarcode** equals 0x0, this value MUST be ignored. The default value for this property is 0x0.

Q - fFlipHOverride (1 bit): A bit that acts as an override for the **fFlipH** bit of the **Transform Boolean Properties** in the **OfficeArtFSP** of the containing **OfficeArtSpContainer**. If this value equals 0x1, it SHOULD[19] be used instead of **fFlipH**. If **fUsefFlipHOverride** equals 0x0, this value MUST be ignored. The default value for this property is 0x0.

R - fFlipVOverride (1 bit): A bit that acts as an override for the **fFlipV** bit of the Transform Boolean Properties in the **OfficeArtFSP** of the containing **OfficeArtSpContainer**. If this value equals 0x1, it SHOULD[20] be used instead of **fFlipV**. If **fUsefFlipVOverride** equals 0x0, this value MUST be ignored. The default value for this property is 0x0.

S - fOleIcon (1 bit): A bit that specifies whether this **OLE object** will be displayed as an icon. If the **fOleShape** bit in the **OfficeArtFSP** record, as defined in section 2.2.40, of the containing **OfficeArtSpContainer** record, as defined in section 2.2.14, equals 0x0, this bit MUST be ignored. If **fUsefOleIcon** equals 0x0, this value MUST be ignored. The default value for this property is 0x0.

T - fPreferRelativeResize (1 bit): A bit that specifies whether the application's user interface for resizing this shape SHOULD express the size relative to the original size rather than to the current

size. If **fUsefPreferRelativeResize** equals 0x0, this value MUST be ignored. The default value for this property is 0x0.

U - fLockShapeType (1 bit): A bit that specifies whether the shape type is locked. If **fUsefLockShapeType** equals 0x0, this value MUST be ignored. The default value for this property is 0x0.

V - fInitiator (1 bit): A bit that specifies whether this shape SHOULD be processed by a **rules** engine. If **fUsefInitiator** equals 0x0, this value MUST be ignored. The default value for this property is 0x0.

W - reserved1 (1 bit): A value that is undefined and MUST be ignored.

X - fBackground (1 bit): A bit that specifies whether this shape is the **background shape** of a **drawing**. If **fUsefBackground** equals 0x0, this value MUST be ignored. The default value for this property is 0x0.

2.3.3 Callout

The **Callout** property set specifies the visual attributes of a **callout shape**.

2.3.3.1 unused832

The **unused832** property is undefined and MUST be ignored.

0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																unused832															
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0340.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

unused832 (4 bytes): A value that is undefined and MUST be ignored.

2.3.3.2 dxyCalloutGap

The **dxyCalloutGap** property specifies the distance from the box of this **callout** to the first point of this callout.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table further specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0341.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

dxyCalloutGap (4 bytes): A signed integer that specifies the distance, in **EMUs**, from the callout box to the first vertex of the callout, as shown in the following figure. This value SHOULD be in the range from 0x00000000 through 0x0132F53F. The default value for this property is 0x00001DB0.
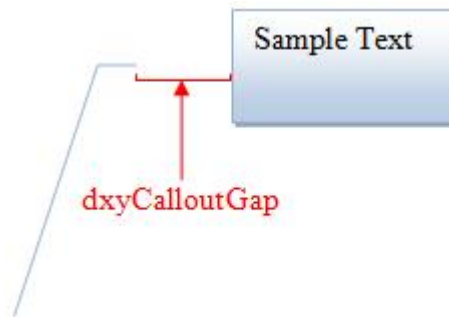
Figure 2: The gap between the callout box and the first vertex of the callout

2.3.3.3 spcoa

The **spcoa** property specifies the connection angle of this **callout**.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0342.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that 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** field in the **OfficeArtFSP** record, as defined in section 2.2.40, for this callout **shape** is set to msosptCallout90, msosptAccentCallout90, msosptBorderCallout90, or msosptAccentBorderCallout90, this value MUST equal **msospcoaAny**. The default value for this property is **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.

2.3.3.4 spcod

The **spcod** property specifies where this **callout** connects to the callout box.

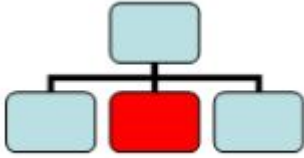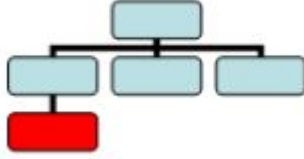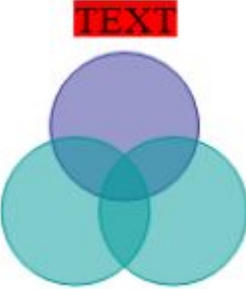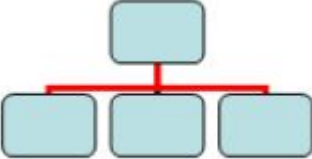| 0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																spcod															
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0343.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that 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, as defined in section 2.3.3.5.

If the **rh.recInstance** field of the **OfficeArtFSP** record, as defined in section 2.2.40, for this callout **shape** is set to msosptCallout90, msosptAccentCallout90, msosptBorderCallout90, or msosptAccentBorderCallout90, the top and bottom of the callout box are defined along the same dimensions as the line segment of the callout. The bottom of the callout is the end with a variable position, as shown in the following figure. The default value for this property is **msospcodSpecified**.
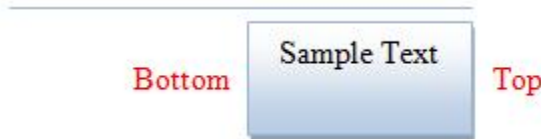
Figure 3: The bottom and the top of the callout

2.3.3.5 dxyCalloutDropSpecified

The **dxyCalloutDropSpecified** property specifies the distance between this **callout** and the callout box.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0344.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

dxyCalloutDropSpecified (4 bytes): A signed integer that specifies the distance, in **EMUs**, between the callout and the top of the callout box. This value SHOULD be in the range from 0x00000000 through 0x0132F53F and MUST be ignored unless the **spcod** property, as defined in section 2.3.3.4, equals **msospcodSpecified**. The default value for this property is 0x0001BE7C.

2.3.3.6 dxyCalloutLengthSpecified

The **dxyCalloutLengthSpecified** property specifies the length of this **callout**.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0345.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

dxyCalloutLengthSpecified (4 bytes): A signed integer that specifies the length, in **EMUs**, of the first callout segment, as shown in the following figure. This value SHOULD be in the range from 0x00000000 through 0x0132F53F and MUST be ignored unless the **fCalloutLengthSpecified** bit of Callout Boolean Properties equals 0x1. The default value for this property is 0x00000000.
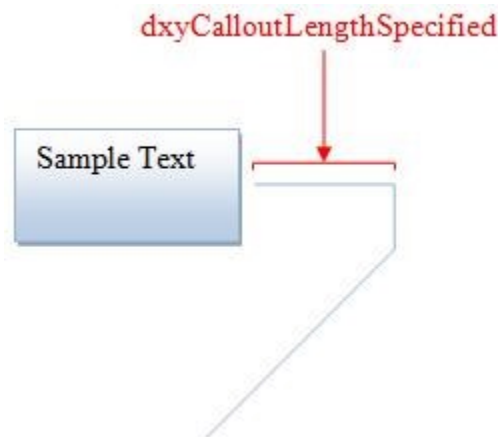
Figure 4: The first segment of the callout

2.3.3.7 Callout Boolean Properties

The **Callout Boolean Properties** specify a 32-bit field of Boolean properties for a **callout shape**.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x037F.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

unused1 (9 bits): A value that is undefined and MUST be ignored.

A - 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 used instead. The default value for this property is 0x0.

B - 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 used instead. The default value for this property is 0x0.

C - 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 used instead. The default value for this property is 0x0.

D - 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 used instead. The default value for this property is 0x0.

E - 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 used instead. The default value for this property is 0x0.

F - 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 used instead. The default value for this property is 0x0.

G - 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 used instead. The default value for this property is 0x0.

unused2 (9 bits): A value that is undefined and MUST be ignored.

H - fCallout (1 bit): A bit that specifies whether the shape is a callout shape. This value MUST be ignored if **fUsefCallout** equals 0x0. The default value for this property is 0x0.

I - fCalloutAccentBar (1 bit): A bit that specifies whether the callout shape has an accent bar. This value MUST be ignored if **fUsefCalloutAccentBar** equals 0x0. The default value for this property is 0x0.

J - fCalloutTextBorder (1 bit): A bit that specifies whether the callout shape has a text border. This value MUST be ignored if **fUsefCalloutTextBorder** equals 0x0. The default value for this property is 0x1.

K - fCalloutMinusX (1 bit): A bit that specifies whether the callout shape is flipped on the x-axis. This value MUST be ignored if **fUsefCalloutMinusX** equals 0x0. The default value for this property is 0x0.

L - fCalloutMinusY (1 bit): A bit that specifies whether the callout shape is flipped on the y-axis. This value MUST be ignored if **fUsefCalloutMinusY** equals 0x0. The default value for this property is 0x0.

M - fCalloutDropAuto (1 bit): A bit that specifies whether the location of the callout shape is calculated based on the endpoint of the object being called out. If this value equals 0x1, the callout SHOULD be located at the **dxyCalloutGap** property, as defined in section 2.3.3.2, value distance above or below the shape. This value MUST be ignored if **fUsefCalloutDropAuto** equals 0x0. The default value for this property is 0x0.

N - fCalloutLengthSpecified (1 bit): A bit that specifies whether the **dxyCalloutLengthSpecified** property, as defined in section 2.3.3.6, SHOULD be used. This value MUST be ignored if **fUsefCalloutLengthSpecified** equals 0x0. The default value for this property is 0x0.

2.3.4 Group Shape

The **Group Shape** property set specifies properties that are applicable to a **group** or a **shape**.

2.3.4.1 wzName

The **wzName** property specifies the name of a **shape**.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0380.
opid.fBid	A value that is undefined and MUST be ignored.
opid.fComplex	A bit that indicates whether the **wzName_complex** property, as defined in section 2.3.4.2, exists. If the value equals 0x1, **wzName_complex** MUST exist.

wzName (4 bytes): The number of bytes of data in the **wzName_complex** property, as defined in section 2.3.4.2. If **opid.fComplex** equals 0x0, this value MUST equal 0x00000000. The default value for this property is 0x00000000.

2.3.4.2 wzName_complex

The **wzName_complex** property specifies additional data for the **wzName** property, as defined in section 2.3.4.1. If the **opid.fComplex** bit of **wzName** equals 0x1, this property MUST exist.

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

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

2.3.4.3 wzDescription

The **wzDescription** property specifies a textual description for a **shape**.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0381.
opid.fBid	A value that is undefined and MUST be ignored.
opid.fComplex	A bit that indicates whether the **wzDescription_complex** property, as defined in section 2.3.4.4, exists. If the value equals 0x1, **wzDescription_complex** MUST exist.

wzDescription (4 bytes): The number of bytes of data in the **wzDescription_complex** property, as defined in section 2.3.4.4. If **opid.fComplex** equals 0x0, this value MUST be 0x00000000. The default value for this property is 0x00000000.

2.3.4.4 wzDescription_complex

The **wzDescription_complex** property specifies additional data for the **wzDescription** property, as defined in section 2.3.4.3. If the **opid.fComplex** bit of **wzDescription** equals 0x1, this property MUST exist.

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

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

2.3.4.5 pihlShape

The **pihlShape** property specifies a **hyperlink** for a **shape**.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0382.
opid.fBid	A value that is undefined and MUST be ignored.
opid.fComplex	A bit that indicates whether the **pihlShape_complex** property, as defined in section 2.3.4.6, exists. If the value equals 0x1, **pihlShape_complex** MUST exist.

pihlShape (4 bytes): The number of bytes of data in the **pihlShape_complex** property. If **opid.fComplex** equals 0x0, this value MUST be 0x00000000. The default value for this property is 0x00000000.

2.3.4.6 pihlShape_complex

The **pihlShape_complex** property specifies additional data for the **pihlShape** property, as defined in section 2.3.4.5. If the **opid.fComplex** bit of **pihlShape** equals 0x1, this property MUST exist.

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

pihlShape_complex (variable): An **IHlink** record, as defined in section 2.2.60, that specifies the **hyperlink** for this **shape**.

2.3.4.7 pWrapPolygonVertices

The **pWrapPolygonVertices** property specifies a list of points that is used to define a **wrap polygon** for a **shape**.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0383.
opid.fBid	A value that is undefined and MUST be ignored.
opid.fComplex	A bit that indicates whether the **pWrapPolygonVertices_complex** property, as defined in section 2.3.4.8, exists. If the value equals 0x1, **pWrapPolygonVertices_complex** MUST exist.

pWrapPolygonVertices (4 bytes): The number of bytes of data in the **pWrapPolygonVertices_complex** property, as defined in section 2.3.4.8. If **opid.fComplex** equals 0x0, this value MUST be 0x00000000. The default value for this property is 0x00000000.

2.3.4.8 pWrapPolygonVertices_complex
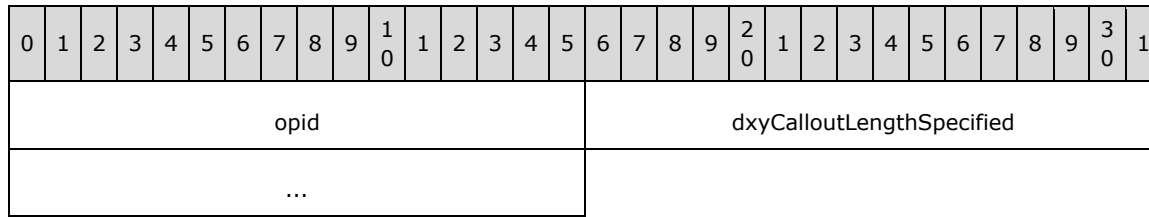
The **pWrapPolygonVertices_complex** property specifies additional data for the **pWrapPolygonVertices** property, as defined in section 2.3.4.7. If the **opid.fComplex** bit of **pWrapPolygonVertices** equals 0x1, this property MUST exist.

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

pWrapPolygonVertices_complex (variable): An **IMsoArray** record, as defined in section 2.2.51, of **POINT** structures, as defined in section 2.2.55, that defines the **wrap polygon**. The **POINT** structures exist in the same coordinate space as the **shape**. The coordinate space is specified by the **geoLeft**, as defined in section 2.3.6.1, **geoRight**, as defined in section 2.3.6.3, **geoTop**, as defined in section 2.3.6.2, and **geoBottom**, as defined in section 2.3.6.4, properties.

2.3.4.9 dxWrapDistLeft

The **dxWrapDistLeft** property specifies how close other document content can come to the left edge of this **shape**.
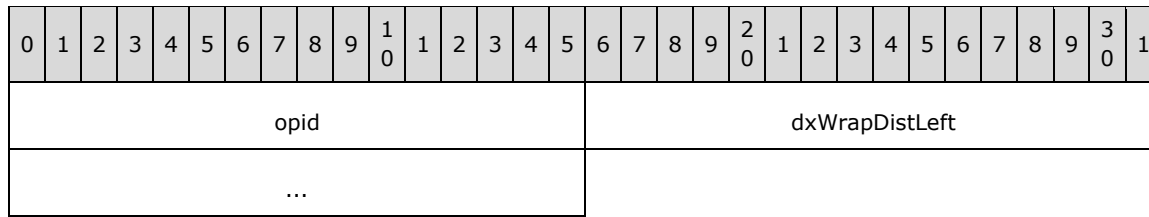
0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																dxWrapDistLeft															
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0384.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

dxWrapDistLeft (4 bytes): A signed integer specifying the minimum distance, in application-defined units, that an object can be placed next to the left edge of the shape. The default value for this property is 0x0001BE7C.

2.3.4.10   dyWrapDistTop

The **dyWrapDistTop** property specifies how close other document content can come to the top edge of this **shape**.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0385.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

dyWrapDistTop (4 bytes): A signed integer that specifies the minimum distance, in application-defined units, that an object can be placed next to the top edge of the shape. The default value for this property is 0x00000000.

2.3.4.11   dxWrapDistRight

The **dxWrapDistRight** property specifies how close other document content can come to the right edge of this **shape**.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0386.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

dxWrapDistRight (4 bytes): A signed integer that specifies the minimum distance, in application-defined units, that an object can be placed next to the right edge of the shape. The default value for this property is 0x0001BE7C.

2.3.4.12   dyWrapDistBottom

The **dyWrapDistBottom** property specifies how close other document content can come to the bottom edge of this **shape**.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0387.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

dyWrapDistBottom (4 bytes): A signed integer that specifies the minimum distance, in application-defined units, that an object can be placed next to the bottom edge of the shape. The default value for this property is 0x00000000.

2.3.4.13 lidRegroup

The **lidRegroup** property specifies the **regroup identifier** for this **shape**.
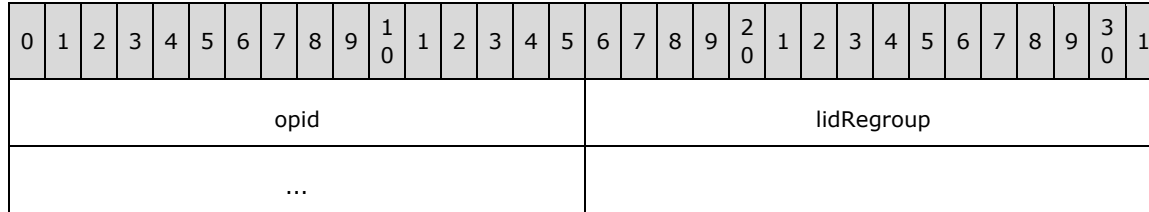
0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																lidRegroup															
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0388.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

lidRegroup (4 bytes): An unsigned integer that specifies the **FRID** data type, as defined in section 2.1.3, of this shape. The default value for this property is 0x00000000.

2.3.4.14 unused906

The **unused906** property is undefined and MUST be ignored.
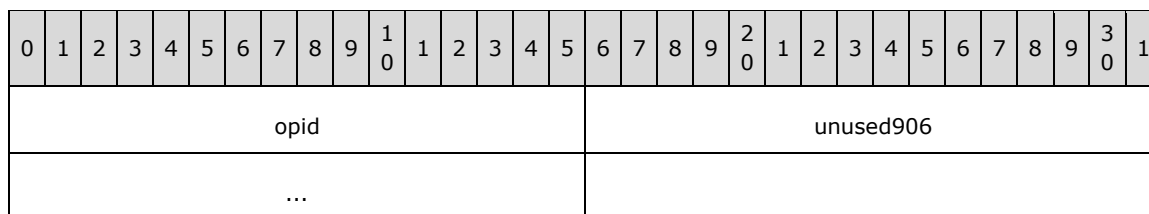
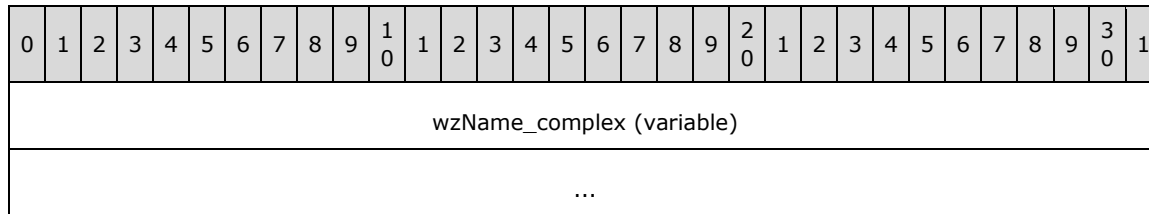| 0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																unused906															
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x038A.
opid.fBid	A value that MUST be 0x0.

opid.fComplex	A value that MUST be 0x0.

unused906 (4 bytes): A value that is undefined and MUST be ignored.

2.3.4.15   wzTooltip

The **wzTooltip** property specifies a **ToolTip** for a **hyperlink** on a **shape**.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x038D.
opid.fBid	A value that is undefined and MUST be ignored.
opid.fComplex	A bit that indicates whether the **wzTooltip_complex** property, as defined in section 2.3.4.16, exists. If the value equals 0x1, **wzTooltip_complex** MUST exist.

wzTooltip (4 bytes): The number of bytes of data in the **wzTooltip_complex** property, as defined in section 2.3.4.16. If **opid.fComplex** equals 0x0, this value MUST be 0x00000000. The default value for this property is 0x00000000.
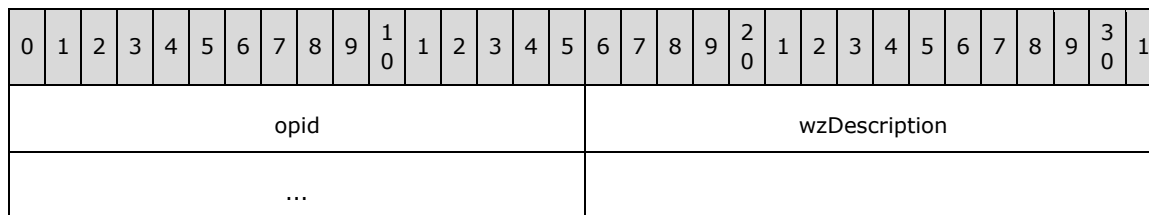
2.3.4.16   wzTooltip_complex

The **wzTooltip_complex** property specifies additional data for the **wzTooltip** property, as defined in section 2.3.4.15. If the **opid.fComplex** bit of **wzTooltip** equals 0x1, this property MUST exist.

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

wzTooltip_complex (variable): A **Unicode** null-terminated string that specifies the text of the **ToolTip**.

2.3.4.17   wzScript

The **wzScript** property specifies a script that is attached to a **shape**.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x038E.
opid.fBid	A value that is undefined and MUST be ignored.
opid.fComplex	A bit that indicates whether the **wzScript_complex**, as defined in section 2.3.4.18, property exists. If the value equals 0x1, **wzScript_complex** MUST exist.

wzScript (4 bytes): The number of bytes of data in the **wzScript_complex**, as defined in section 2.3.4.18, property. If **opid.fComplex** equals 0x0, this value MUST be 0x00000000. The default value for this property is 0x00000000.

2.3.4.18   wzScript_complex

The **wzScript_complex** property specifies additional data for the **wzScript** property, as defined in section 2.3.4.17. If the **opid.fComplex** bit of the **wzScript** property equals 0x1, this property MUST exist.

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

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

2.3.4.19   posh

The **posh** property specifies the type of horizontal positioning to use for a **shape**.

0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
					opid														posh												

...

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x038F.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

posh (4 bytes): An enumeration value that MAY<21> be used to determine how a shape is horizontally positioned, relative to the **page element** that is specified in the **posrelh** property, as defined in section 2.3.4.20. This value MUST be one of the values in the following table. The default value for this property is **msophAbs**.

Name	Value	Description
msophAbs	0x00000000	The shape is horizontally offset by an absolute distance from the page element.
msophLeft	0x00000001	The shape is horizontally positioned at the left side of the page element.
msophCenter	0x00000002	The shape is horizontally positioned at the center of the page element.
msophRight	0x00000003	The shape is horizontally positioned at the right side of the page element.
msophInside	0x00000004	The shape is horizontally positioned like **msophLeft** on odd-numbered pages and like **msophRight** on even-numbered pages.
msophOutside	0x00000005	The shape is horizontally positioned like **msophRight** on odd-numbered pages and like **msophLeft** on even-numbered pages.

2.3.4.20   posrelh

The **posrelh** property specifies a **page element** relative to which a **shape** is horizontally positioned.

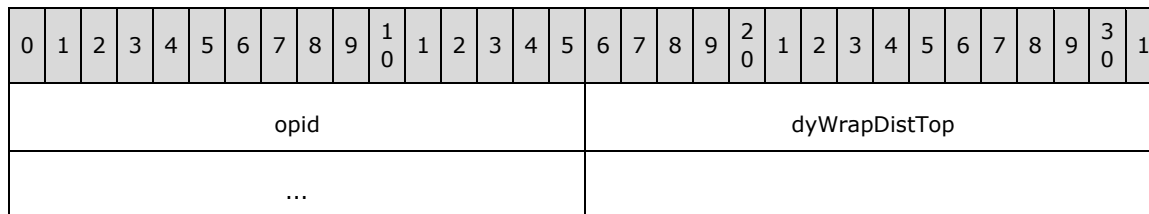| 0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																posrelh															
...																															
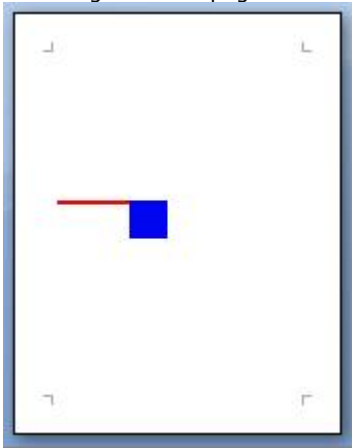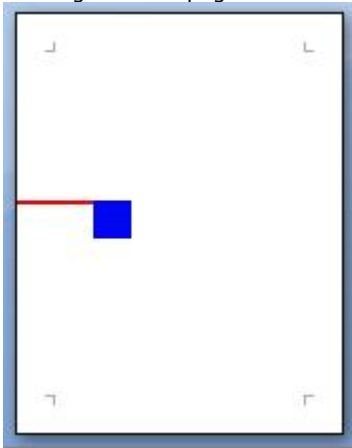
opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0390.

opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

posrelh (4 bytes): An enumeration value that MAY<22> be used to determine the page element that the horizontal position of a shape is relative to. This value MUST be one of the values that are listed in the following tables. The default value for this property is **msoprhText**.

If the value of the **posh** property, as defined in section 2.3.4.19, equals **msophAbs**, 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:
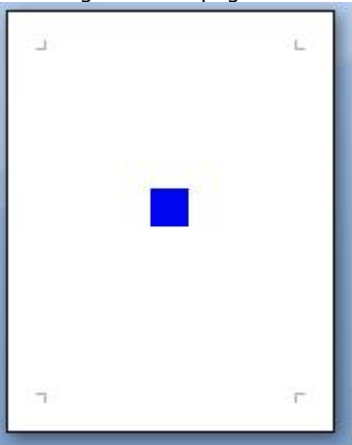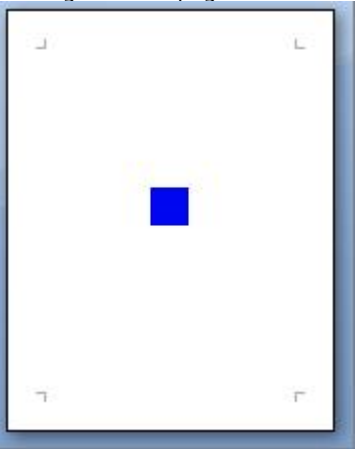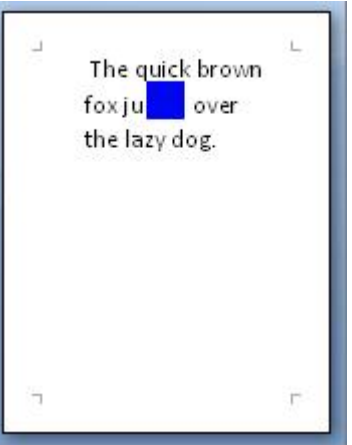
Name	Value	Meaning
msoprhChar	0x00000004	The shape is horizontally positioned relative to the character of text underneath it:

If the value of the **posh** property, as defined in section 2.3.4.19, equals **msophLeft**, 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
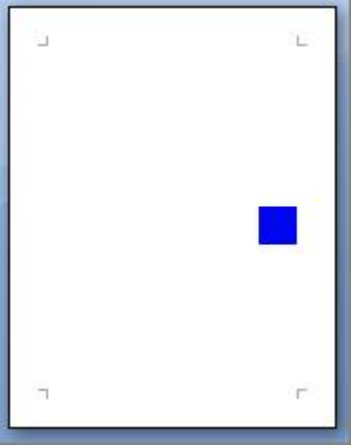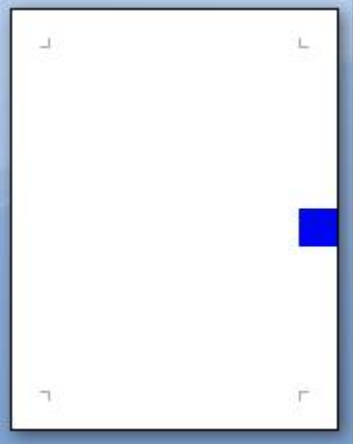
Name	Value	Meaning
		the edges of the page:
msoprhText	0x00000003	The shape is horizontally positioned relative to the column of text underneath it:
msoprhChar	0x00000004	The shape is horizontally positioned relative to the character of text underneath it:

If the value of the **posh** property, as defined in section 2.3.4.19, equals **msophCenter**, 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 relative to the character of text underneath it:

Name	Value	Meaning

If the value of the **posh** property, as defined in section 2.3.4.19, equals **msophRight**, the possible values for this property position the shape as shown in the following table.
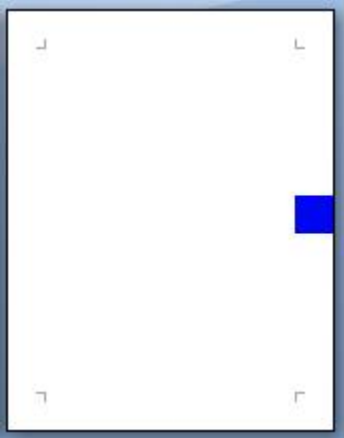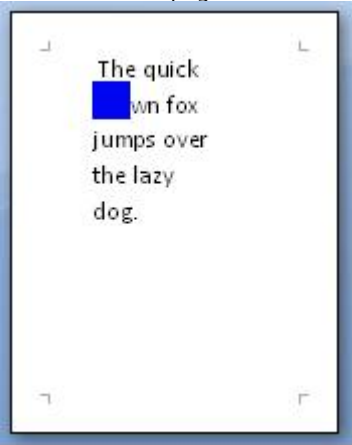
Name	Value	Meaning
msoprhMargin	0x00000001	The shape is horizontally positioned relative to the margins of the page:
msoprhPage	0x00000002	The shape is horizontally positioned relative to the edges of the page:
msoprhText	0x00000003	The shape is horizontally positioned relative to
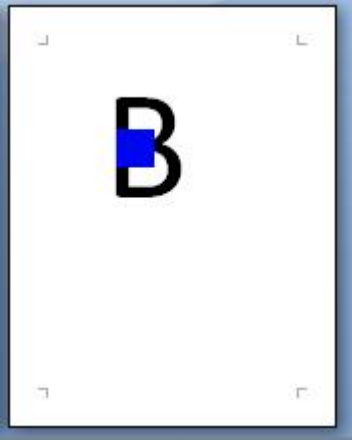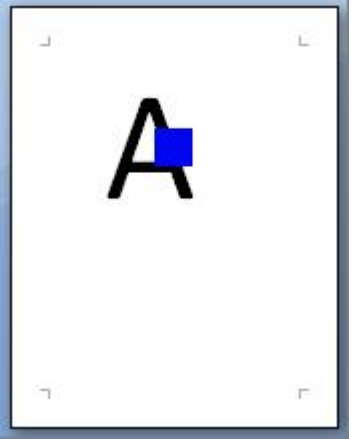
Name	Value	Meaning
		the column of text underneath it:
msoprhChar	0x00000004	The shape is horizontally positioned relative to the character of text underneath it:

If the value of the **posh** property, as defined in section 2.3.4.19, equals **msophInside**, 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. Odd-numbered pages:

Name	Value	Meaning
		Even-numbered pages:
msoprhPage	0x00000002	The shape is horizontally positioned relative to the edges of the page. Odd-numbered pages: Even-numbered pages:

Name	Value	Meaning
msoprhText	0x00000003	The shape is horizontally positioned relative to the column of text underneath it. Odd-numbered pages: Even-numbered pages:
msoprhChar	0x00000004	The shape is horizontally positioned relative to the character of text underneath it. Odd-numbered pages:

Name	Value	Meaning
		Even-numbered pages:

If the value of the **posh** property, as defined in section 2.3.4.19, equals **msophOutside**, 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. Odd-numbered pages:

Name	Value	Meaning
		Even-numbered pages:
msoprhPage	0x00000002	The shape is horizontally positioned relative to the edges of the page.

Odd-numbered pages:

Even-numbered pages: |

Name	Value	Meaning
msoprhText	0x00000003	The shape is horizontally positioned relative to the column of text underneath it. Odd-numbered pages: Even-numbered pages:
msoprhChar	0x00000004	The shape is horizontally positioned relative to the character of text underneath it. Odd-numbered pages:

Name	Value	Meaning
		Even-numbered pages:

2.3.4.21   posv

The **posv** property specifies the type of vertical positioning to use for a **shape**.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0391.
opid.fBid	A value that MUST be 0x0.

opid.fComplex	A value that MUST be 0x0.

posv (4 bytes): An enumeration value that MAY<23> be used to determine how a shape is vertically positioned, relative to the **page element** that is specified in the **posrelv** property, as defined in section 2.3.4.22. This value MUST be one of the values in the following table. The default value for this property is **msopvAbs**.

Name	Value	Description
msopvAbs	0x00000000	The shape is vertically offset by an absolute distance from the page element.
msopvTop	0x00000001	The shape is vertically positioned at the top of the page element.
msopvCenter	0x00000002	The shape is vertically positioned in the center of the page element.
msopvBottom	0x00000003	The shape is vertically positioned at the bottom of the page element.
msopvInside	0x00000004	The shape is vertically positioned like **msopvTop** on odd-numbered pages and like **msopvBottom** on even-numbered pages.
msopvOutside	0x00000005	The shape is vertically positioned like **msopvBottom** on odd-numbered pages and like **msopvTop** on even-numbered pages.

2.3.4.22 posrelv

The **posrelv** property specifies a **page element** relative to which a **shape** is vertically positioned.
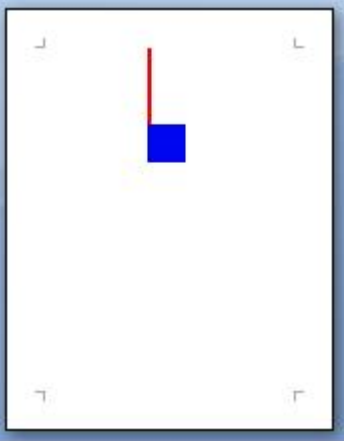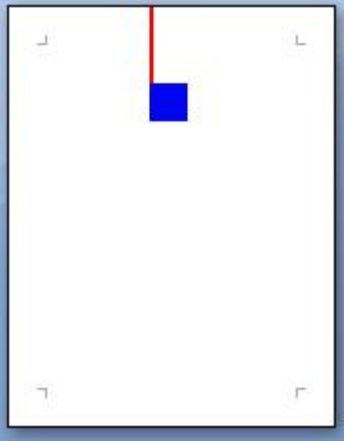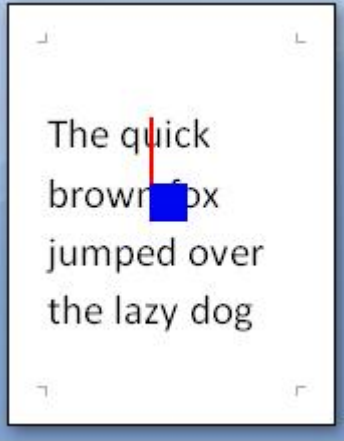
0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid															posrelv																
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0392.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.
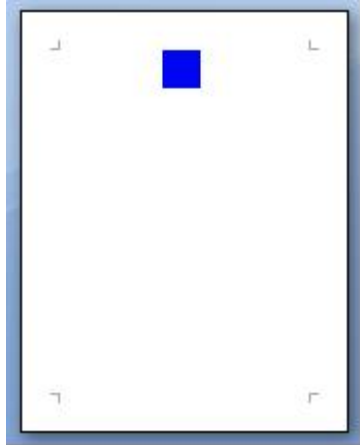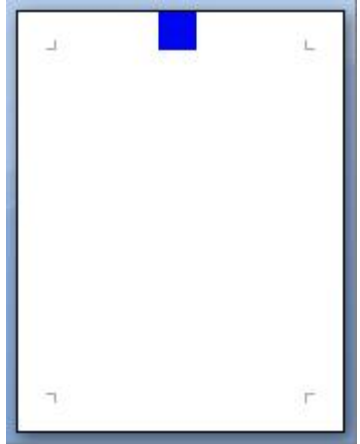
posrelv (4 bytes): An enumeration value that MAY<24> be used to determine the page element that the horizontal position of a shape is relative to. This value MUST be one of the values that are listed in the following tables. The default value for this property is **msoprvText**.
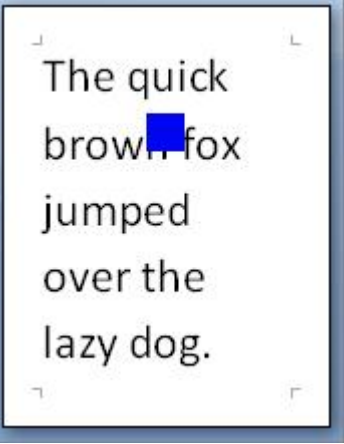
If the value of the **posv** property, as defined in section 2.3.4.21, equals **msopvAbs**, the possible values for this property position the shape as shown in the following table.

Name	Value	Meaning
msoprvMargin	0x00000001	The shape is vertically positioned relative to the margins of the page:
msoprvPage	0x00000002	The shape is vertically positioned relative to the edges of the page:
msoprvText	0x00000003	The shape is vertically positioned relative to the paragraph of text underneath it:
msoprvLine	0x00000004	The shape is vertically positioned relative to the line of text underneath it:
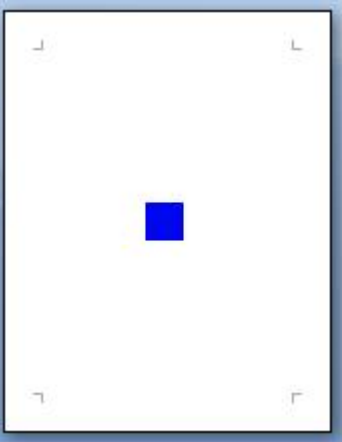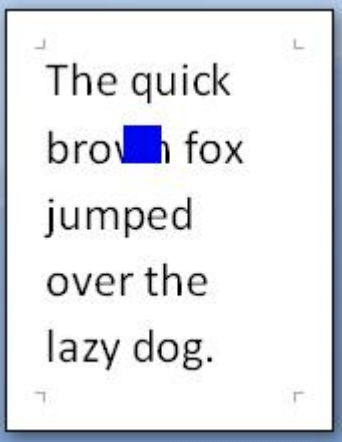
Name	Value	Meaning

If the value of the **posv** property, as defined in section 2.3.4.21, equals **msopvTop**, 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:
msoprvPage	0x00000002	The shape is vertically positioned relative to the edges of the page:
msoprvText	0x00000003	The shape is vertically positioned relative
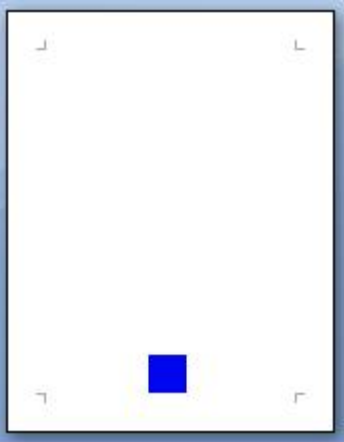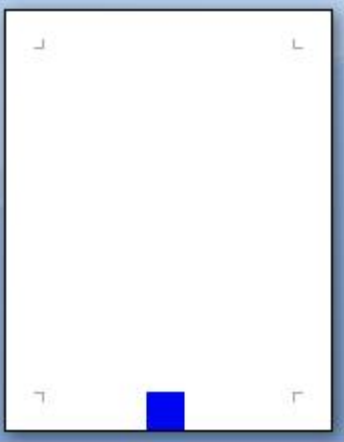
Name	Value	Meaning
		to the paragraph of text underneath it:
msoprvLine	0x00000004	The shape is vertically positioned relative to the line of text underneath it:
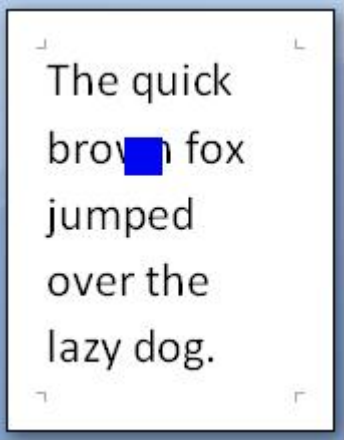
If the value of the **posv** property, as defined in section 2.3.4.21, equals **msopvCenter**, the possible values for this property position the shape as shown in the following table.

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

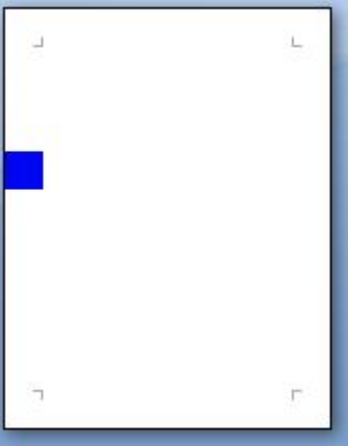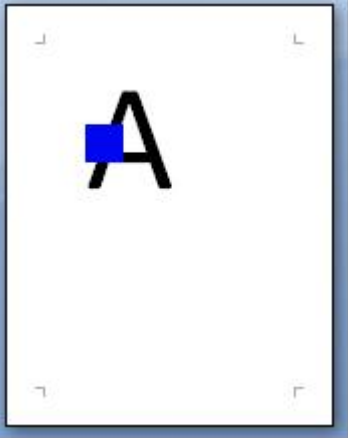| Name	Value	Meaning
msoprvPage	0x00000002	The shape is vertically positioned relative to the edges of the page:
msoprvText	0x00000003	The shape is vertically positioned relative to the paragraph of text underneath it:
msoprvLine	0x00000004	The shape is vertically positioned relative to the line of text underneath it:
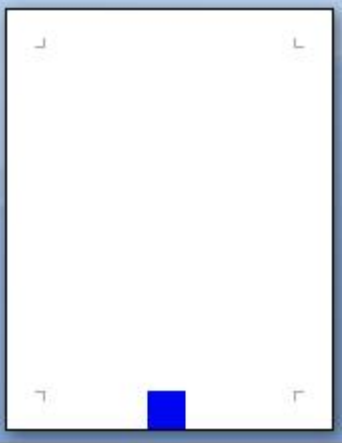
If the value of the **posv** property, as defined in section 2.3.4.21, equals **msopvBottom**, the possible values for this property position the shape as shown in the following table.
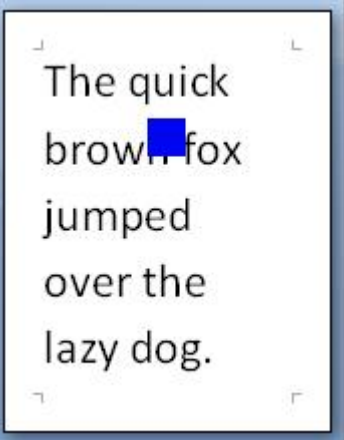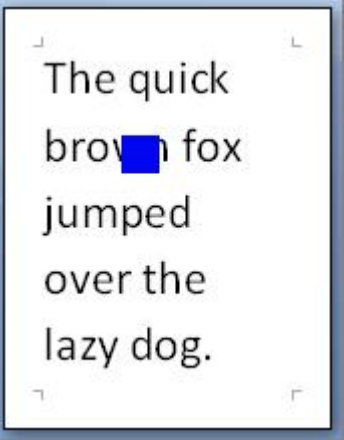
Name	Value	Meaning
msoprvMargin	0x00000001	The shape is vertically positioned relative to the margins of the page:
msoprvPage	0x00000002	The shape is vertically positioned relative to the edges of the page:
msoprvText	0x00000003	The shape is vertically positioned relative to the paragraph of text underneath it:
msoprvLine	0x00000004	The shape is vertically positioned relative to the line of text underneath it:
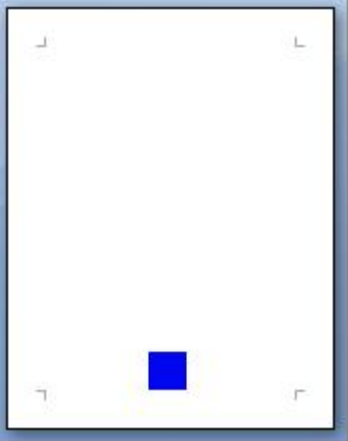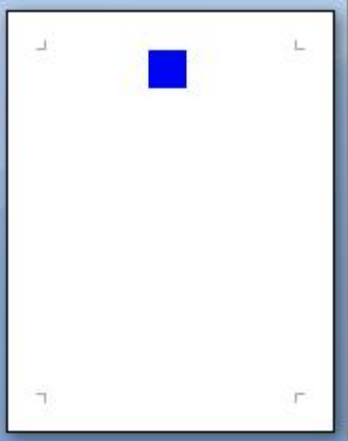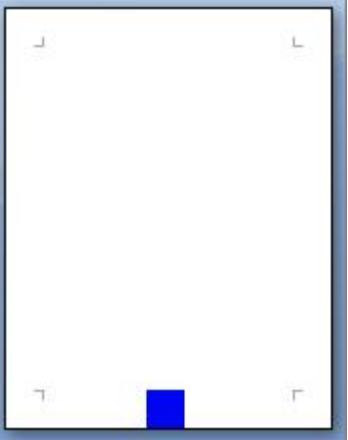
Name	Value	Meaning

If the value of the **posv** property, as defined in section 2.3.4.21, equals **msopvInside**, 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. Odd-numbered pages: Even-numbered pages:

Name	Value	Meaning
msoprvPage	0x00000002	The shape is vertically positioned relative to the edges of the page. Odd-numbered pages: Even-numbered pages:
msoprvText	0x00000003	The shape is vertically positioned relative to the paragraph of text underneath it. Odd-numbered pages:

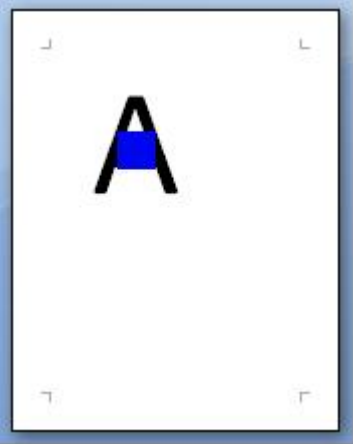| Name	Value	Meaning
		Even-numbered pages:
msoprvLine	0x00000004	The shape is vertically positioned relative to the line of text underneath it. Odd-numbered pages: Even-numbered pages:

If the value of the **posv** property, as defined in section 2.3.4.21, equals **msopvOutside**, 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. Odd-numbered pages: Even-numbered pages:
msoprvPage	0x00000002	The shape is vertically positioned relative to the edges of the page. Odd-numbered pages:

Name	Value	Meaning
		Even-numbered pages:
msoprvText	0x00000003	The shape is vertically positioned relative to the paragraph of text underneath it. Odd-numbered pages: Even-numbered pages:
msoprvLine	0x00000004	The shape is vertically positioned relative to the line of text underneath it. Odd-numbered pages:

Name	Value	Meaning
		  Even-numbered pages:

2.3.4.23   pctHR

The **pctHR** property specifies the width of a **horizontal rule**, as a percentage of the page width. This property SHOULD<25> be ignored.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0393.

opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

pctHR (4 bytes): An unsigned integer that specifies the width of a horizontal rule 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 used only 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

The **alignHR** property specifies the alignment of a **horizontal rule**. This property SHOULD<26> be ignored.
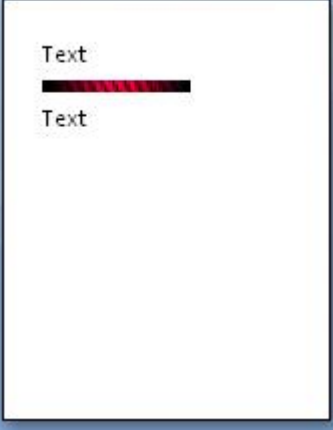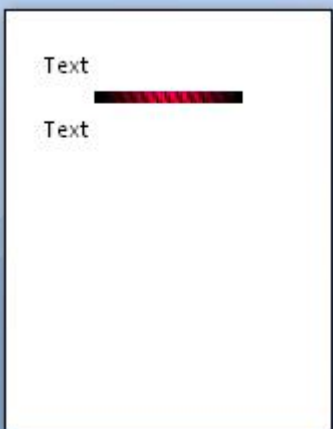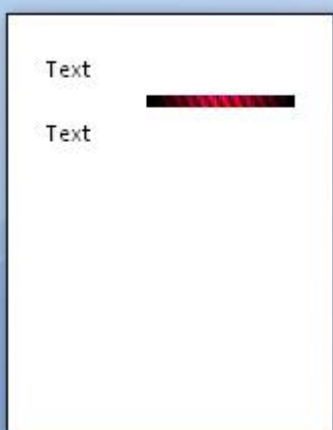
0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
							opid																alignHR								
						...																									

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0394.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

alignHR (4 bytes): An enumeration value that specifies the alignment of a horizontal rule. This property is used only if the **fHorizRule** bit of the Group Shape Boolean Properties is set. The value MUST be one of the values in the following table. The default value for this property is 0x00000000.

Value	Description
0x00000000	The horizontal rule is left-aligned:

Value	Description
0x00000001	The horizontal rule is centered:
0x00000002	The horizontal rule is right-aligned:

2.3.4.25 dxHeightHR

The **dxHeightHR** property specifies the height of a **horizontal rule**. This property SHOULD<27> be ignored.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0395.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

dxHeightHR (4 bytes): A signed integer that specifies the height, in 1440ths of an inch, of a horizontal rule. The value MUST be greater than or equal to 0x00000000. This property is used only 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

The **dxWidthHR** property specifies the width of a **horizontal rule**. This property SHOULD<28> be ignored.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0396.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

dxWidthHR (4 bytes): A signed integer that specifies the width, in 1440ths of an inch, of a horizontal rule. The value MUST be greater than or equal to 0x00000000. If the **pctHR** property, as defined in section 2.3.4.23, is also set, it SHOULD be used instead and this property ignored. This property is used only 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

The **wzScriptExtAttr** property specifies an extra **HTML** attribute that is 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	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																wzScriptExtAttr															
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0397.
opid.fBid	A value that is undefined and MUST be ignored.
opid.fComplex	A bit that indicates whether the **wzScriptExtAttr_complex** property, as defined in section 2.3.4.28, exists. If the value equals 0x1, **wzScriptExtAttr_complex** MUST exist.

wzScriptExtAttr (4 bytes): The number of bytes of data in the **wzScriptExtAttr_complex** property. If **opid.fComplex** equals 0x0, this value MUST be 0x00000000. The default value for this property is 0x00000000.

2.3.4.28 wzScriptExtAttr_complex

The **wzScriptExtAttr_complex** property specifies additional data for the **wzScriptExtAttr** property, as defined in section 2.3.4.27. If the **opid.fComplex** bit of **wzScriptExtAttr** equals 0x1, this property MUST exist.

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

wzScriptExtAttr_complex (variable): A null-terminated **Unicode** string that specifies the extra attribute.

2.3.4.29   scriptLang

The **scriptLang** property specifies the language of the script on a **shape**.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0398.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

scriptLang (4 bytes): A signed integer that specifies the scripting language. The value MUST be one of the values in the following table. The default value for this property is 0x00000001.

Value	Meaning
0x00000001	JavaScript
0x00000002	VBScript
0x00000003	**Active Server Pages (ASP)**
0x00000004	Other language, which MUST be specified in the wzScriptLangAttr_complex property

2.3.4.30   wzScriptLangAttr

The **wzScriptLangAttr** property specifies the scripting language on a **shape**. If the **scriptLang** property, as defined in section 2.3.4.29, equals any value other than 0x00000004, this property MUST be ignored.

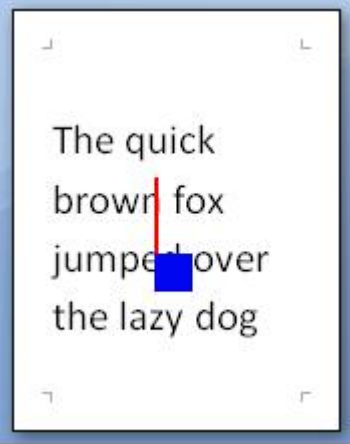| 0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																wzScriptLangAttr															
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x039A.
opid.fBid	A value that is undefined and MUST be ignored.
opid.fComplex	A bit that indicates whether the **wzScriptLangAttr_complex** property, as defined in section 2.3.4.31, exists. If the value equals 0x1, **wzScriptLangAttr_complex** MUST exist.

wzScriptLangAttr (4 bytes): The number of bytes of data in the **wzScriptLangAttr_complex** property. If **opid.fComplex** equals 0x0, this value MUST be 0x00000000. The default value for this property is 0x00000000.

2.3.4.31 wzScriptLangAttr_complex

The **wzScriptLangAttr_complex** property specifies additional data for the **wzScriptLangAttr** property, as defined in section 2.3.4.30. If the **opid.fComplex** bit of **wzScriptLangAttr** equals 0x1, this property MUST exist.

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

wzScriptLangAttr_complex (variable): A null-terminated **Unicode** string containing the name of the scripting language that is used for the script on a **shape**.

2.3.4.32 borderTopColor

The **borderTopColor** property specifies the color for the top border of a picture **shape**.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x039B.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

borderTopColor (4 bytes): An **OfficeArtCOLORREF** record, as defined in section 2.2.2, that specifies the color. The default value for this property is 0xFFFFFFFF.

2.3.4.33   borderLeftColor

The **borderLeftColor** property specifies the color for the left border of a picture **shape**.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x039C.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

borderLeftColor (4 bytes): An **OfficeArtCOLORREF** record, as defined in section 2.2.2, that specifies the color. The default value for this property is 0xFFFFFFFF.

2.3.4.34   borderBottomColor

The **borderBottomColor** property specifies the color for the bottom border of a picture **shape**.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x039D.
opid.fBid	A value that MUST be 0x0.

opid.fComplex	A value that MUST be 0x0.

borderBottomColor (4 bytes): An **OfficeArtCOLORREF** record, as defined in section 2.2.2, that specifies the color. The default value for this property is 0xFFFFFFFF.

2.3.4.35   borderRightColor

The **borderRightColor** property specifies the color for the right border of a picture **shape**.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x039E.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

borderRightColor (4 bytes): An **OfficeArtCOLORREF** record, as defined in section 2.2.2, that specifies the color. The default value for this property is 0xFFFFFFFF.

2.3.4.36   tableProperties

The **tableProperties** property specifies flags for a **group** that represents a table. This property SHOULD<29> be ignored.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x039F.

opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

tableProperties (4 bytes): A **TABLEFLAGS** record, as defined in section 2.2.59, that specifies the table-related flags for the group. The default value for this property is 0x00000000.

2.3.4.37 tableRowProperties

The **tableRowProperties** property specifies the minimum sizes of the rows in a table. This property SHOULD<30> be ignored.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x03A0.
opid.fBid	A value that is undefined and MUST be ignored.
opid.fComplex	A bit that indicates whether the **tableRowProperties_complex** property, as defined in section 2.3.4.38, exists. If the value equals 0x1, **tableRowProperties_complex** MUST exist.

tableRowProperties (4 bytes): The number of bytes of data in the **tableRowProperties_complex** property. If **opid.fComplex** equals 0x0, this value MUST be 0x00000000. The default value for this property is 0x00000000.

2.3.4.38 tableRowProperties_complex

The **tableRowProperties_complex** property specifies additional data for the **tableRowProperties** property, as defined in section 2.3.4.37. If the **opid.fComplex** bit of **tableRowProperties** equals 0x1, this property MUST exist.

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

tableRowProperties_complex (variable): An **IMsoArray** record, as defined in section 2.2.51, of 32-bit signed integers that specify the minimum heights, in **master units**, of the rows in a table. 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. If the **fIsTable** bit in the **tableProperties** property, as defined in section 2.3.4.36, equals 0x00000000, this property SHOULD be ignored.

2.3.4.39   wzWebBot

The **wzWebBot** property specifies content for a **Web component**, as described in [MSDN-WebComp], that is associated with a **shape** if this document is saved as **HTML**.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x03A5.
opid.fBid	A value that is undefined and MUST be ignored.
opid.fComplex	A bit that indicates whether the **wzWebBot_complex** property, as defined in section 2.3.4.40, exists. If the value equals 0x1, **wzWebBot_complex** MUST exist

wzWebBot (4 bytes): The number of bytes of data in the **wzWebBot_complex** property. If **opid.fComplex** equals 0x0, this value MUST be 0x00000000. The default value for this property is 0x00000000.

2.3.4.40   wzWebBot_complex

The **wzWebBot_complex** property specifies additional data for the **wzWebBot** property, as defined in section 2.3.4.39. If the **opid.fComplex** bit of **wzWebBot** equals 0x1, this property MUST exist.

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

wzWebBot_complex (variable): A null-terminated **Unicode** string that specifies the content for the **Web component**.

2.3.4.41 metroBlob

The **metroBlob** property specifies alternative **XML** content for a **shape** that SHOULD<31> be ignored. This property specifies a binary serialization of an Open Packaging Conventions container, as specified in [ISO/IEC29500-2:2012]. The package contains an Office Open XML DrawingML document, as specified in [ISO/IEC29500-4:2011], Section 5.

If the shape is modified after it is loaded, Office will delete this information.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x03A9.
opid.fBid	A value that is undefined and MUST be ignored.
opid.fComplex	A bit that indicates whether the **metroBlob_complex** property, as defined in section 2.3.4.42, exists. If the value equals 0x1, the **metroBlob_complex** property MUST exist.

metroBlob (4 bytes): The number of bytes of data in the **metroBlob_complex** property. If **opid.fComplex** equals 0x0, this value MUST be 0x00000000. The default value for this property is 0x00000000.

2.3.4.42 metroBlob_complex

The **metroBlob_complex** property specifies additional data for the **metroBlob** property, as defined in section 2.3.4.41. If the **opid.fComplex** bit of **metroBlob** equals 0x1, this property MUST exist.
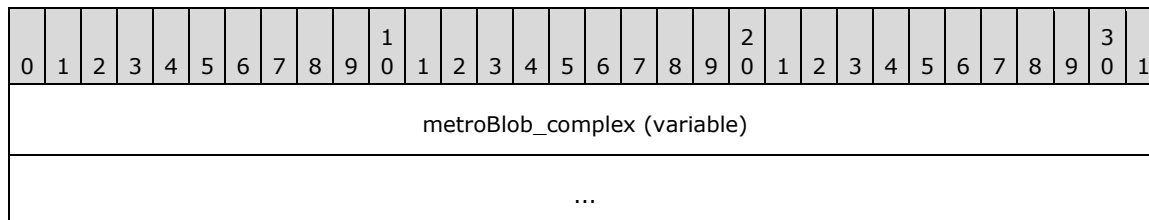
0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
metroBlob_complex (variable)																															
...																															

metroBlob_complex (variable): A binary serialization of an Open Packaging Conventions container, as specified in [ISO/IEC29500-2:2012], that specifies the alternative **XML** content.

2.3.4.43 dhgt

The **dhgt** property specifies the relative **z-order** of a **shape**. This property SHOULD<32> be ignored.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x03AA.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that 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 that have the same value in the **fBehindDocument** bit of the Group Shape Boolean Properties are compared to one another. 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

The **Group Shape Boolean Properties** specify a 32-bit field of Boolean properties for either a **shape** or a **group**.

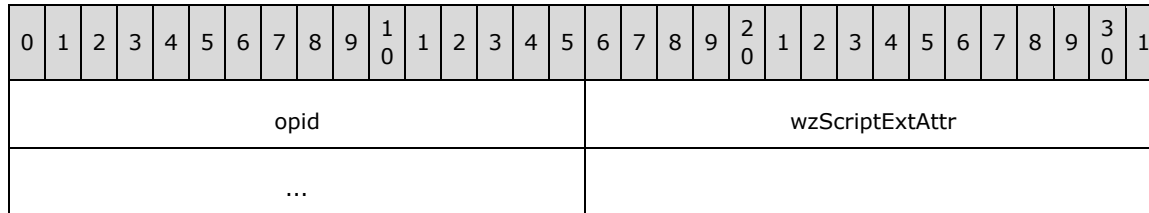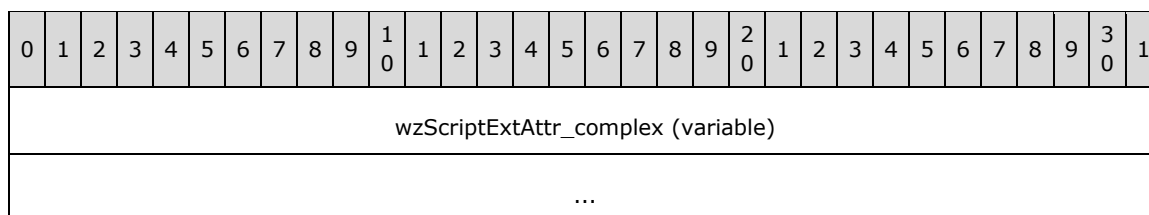| 0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
Q	R	S	T	U	V	W	X	Y	Z	a	b	c	d	e	f																

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x03BF.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

A - 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 used instead. The default value for this property is 0x0.

B - 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 used instead. The default value for this property is 0x0.

C - 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 used instead. The default value for this property is 0x0.

D - 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 used instead. The default value for this property is 0x0.

E - 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 used instead. The default value for this property is 0x0.

F - 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 used instead. The default value for this property is 0x0.

G - 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 used instead. The default value for this property is 0x0.

H - 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 used instead. The default value for this property is 0x0.

I - 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 used instead. The default value for this property is 0x0.

J - 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 used instead. The default value for this property is 0x0.

K - 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 used instead. The default value for this property is 0x0.

L - fUsefOnDblClickNotify (1 bit): A bit that specifies whether the **fOnDblClickNotify** bit is set. A value of 0x0 specifies that the **fOnDblClickNotify** bit MUST be ignored and the default value used instead. The default value for this property is 0x0.

M - 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 used instead. The default value for this property is 0x0.

N - 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 used instead. The default value for this property is 0x0.

O - 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 used instead. The default value for this property is 0x0.

P - 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 used instead. The default value for this property is 0x0.

Q - fLayoutInCell (1 bit): A bit that specifies whether this shape is displayed inside a table cell. If **fUsefLayoutInCell** equals 0x0, this value MUST be ignored. The default value for this property is 0x1.

R - fIsBullet (1 bit): A bit that specifies whether this shape is being used as a **picture bullet**. If **fUsefIsBullet** equals 0x0, this value MUST be ignored. The default value for this property is 0x0.

S - fStandardHR (1 bit): A bit that specifies whether this **horizontal rule** is one that does not contain a picture. If **fUsefStandardHR** equals 0x0, this value MUST be ignored. The default value for this property is 0x0.

T - fNoshadeHR (1 bit): A bit that specifies whether this horizontal rule uses a solid color fill without shading. If **fUsefNoshadeHR** equals 0x0, this value MUST be ignored. The default value for this property is 0x0.

U - fHorizRule (1 bit): A bit that specifies whether this shape is a horizontal rule. If **fUsefHorizRule** equals 0x0, this value MUST be ignored. The default value for this property is 0x0.

V - fUserDrawn (1 bit): A bit that specifies whether this shape has been added to a document **master** by the user. If **fUsefUserDrawn** equals 0x0, this value MUST be ignored. The default value for this property is 0x0.

W - fAllowOverlap (1 bit): A bit that specifies whether this shape is allowed to overlap another shape. If **fUsefAllowOverlap** equals 0x0, this value MUST be ignored. The default value for this property is 0x1.

X - fReallyHidden (1 bit): A bit that specifies whether this shape will be prevented from displaying. This property applies only to **script anchors**. The **fScriptAnchor** property MUST be set to 0x1 for the value of this property to be used. If **fUsefReallyHidden** equals 0x0, this value MUST be ignored. The default value for this property is 0x0.

Y - fScriptAnchor (1 bit): A bit that specifies whether this shape is a script anchor. If **fUsefScriptAnchor** equals 0x0, this value MUST be ignored. The default value for this property is 0x0.

Z - fEditedWrap (1 bit): A bit that specifies whether the **wrap polygon** for this shape has been edited by the user. If **fUsefEditedWrap** equals 0x0, this value MUST be ignored. The default value for this property is 0x0.

a - fBehindDocument (1 bit): A bit that specifies whether this shape is set to display behind other document content. If **fUsefBehindDocument** equals 0x0, this value MUST be ignored. The default value for this property is 0x0.

b - fOnDblClickNotify (1 bit): A bit that specifies whether the host application is to be notified when a double-click mouse event occurs for the shape. If **fUsefOnDblClickNotify** equals 0x0, this value MUST be ignored. The default value for this property is 0x0.

c - fIsButton (1 bit): A bit that specifies whether this shape is treated as a button that contains navigation information. If **fUsefIsButton** equals 0x0, this value MUST be ignored. The default value for this property is 0x0.

d - fOneD (1 bit): A bit that is unused and MUST be set to 0x0. If **fUsefOneD** equals 0x0, this value MUST be ignored. The default value for this property is 0x0.

e - fHidden (1 bit): A bit that specifies whether this shape will be prevented from displaying. If **fUsefHidden** equals 0x0, this value MUST be ignored. The default value for this property is 0x0.

f - fPrint (1 bit): A bit that specifies whether this shape will be rendered if the document is printed. If **fUsefPrint** equals 0x0, this value MUST be ignored. The default value for this property is 0x1.

2.3.5 Group Shape 2

The **Group Shape 2** property set specifies the relative position and size attributes of a **shape**.

2.3.5.1 pctHoriz

The **pctHoriz** property specifies the width of a **shape** as a percentage relative to the width of a **page element**. This property SHOULD<33> be ignored.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x07C0.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

pctHoriz (4 bytes): An unsigned integer that specifies the width of a shape as a percentage relative to the width of a page element. The **sizerelh** property, as defined in section 2.3.5.5, specifies the page element. 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

The **pctVert** property specifies the height of a **shape** as a percentage relative to the height of a **page element**. This property SHOULD<34> be ignored.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x07C1.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

pctVert (4 bytes): An unsigned integer that specifies the height of a shape as a percentage relative to the height of a page element. The **sizerelh** property, as defined in section 2.3.5.5, specifies the page element. 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.

2.3.5.3 pctHorizPos

The **pctHorizPos** property specifies the horizontal position of a shape as a percentage offset relative to the layout of a **page element**. The **posrelh** property, as defined in section 2.3.4.20, specifies the page element. This property SHOULD<35> be ignored.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x07C2.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

pctHorizPos (4 bytes): A signed integer that specifies the horizontal position of a **shape** 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 equals the left edge of the page element; a value of 0x00002710 specifies that the horizontal position equals the right edge of the page element. A value of 0xFFFFD8EF specifies that the horizontal position of the shape is not a relative percentage offset and not specified by this field. The default value for this property is 0xFFFFD8EF.

2.3.5.4 pctVertPos

The **pctVertPos** property specifies the vertical position of a **shape** as a percentage offset relative to the layout of a **page element**. The **posrelv** property, as defined in section 2.3.4.22, specifies the page element. This property SHOULD<36> be ignored.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x07C3.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

pctVertPos (4 bytes): A signed integer that specifies the vertical position of a shape 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 equals the top edge of the page element; a value of 0x00002710 specifies that the vertical position equals the bottom edge of the page element. A value of 0xFFFFD8EF specifies that the vertical position of the shape is not a relative percentage offset and not specified by this field. The default value for this property is 0xFFFFD8EF.

2.3.5.5 sizerelh

The **sizerelh** property specifies the **page element** that has a width equal to 100% for the **pctHoriz** property, as defined in section 2.3.5.1. The page element specifies either the page or a part of the page on which the **shape** is located. This property SHOULD<37> be ignored.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x07C4.

opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

sizerelh (4 bytes): An enumeration specifying the page element that has a width equal to 100% for the **pctHoriz** property, as defined in section 2.3.5.1. The page element specifies either the page or a part of the page on which the shape is located. This value MUST be one of the values in the following table. The default value for this property is **msosrhPage**.

Name	Value	Description
msosrhMargin	0x00000000	The page, excluding the margins.
msosrhPage	0x00000001	The page.
msosrhLeftMargin	0x00000002	The left margin.
msosrhRightMargin	0x00000003	The right margin.
msosrhInsideMargin	0x00000004	The **inside margin**.
msosrhOutsideMargin	0x00000005	The **outside margin**.

2.3.5.6 sizerelv

The **sizerelv** property specifies the **page element** that has a height equal to 100% for the **pctVert** property, as defined in section 2.3.5.2. This property SHOULD<38> be ignored.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x07C5.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

sizerelv (4 bytes): An unsigned integer specifying the page element that has a height equal to 100% for the **pctVert** property, as defined in section 2.3.5.2**.** The page element specifies either the page or a part of the page on which the **shape** is located. This value MUST be one of the values in the following table. The default value for this property is **msosrvPage**.

Name	Value	Description
msosrvMargin	0x00000000	The page, excluding the margins.
msosrvPage	0x00000001	The page.
msosrvTopMargin	0x00000002	The top margin.
msosrvBottomMargin	0x00000003	The bottom margin.
msosrvInsideMargin	0x00000004	The **inside margin**.
msosrvOutsideMargin	0x00000005	The **outside margin**.

2.3.6 Geometry

The **Geometry** 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 can manipulate the scaling.

2.3.6.1 geoLeft

The **geoLeft** property specifies the left coordinate of the **geometry space** for this **shape**.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0140.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

geoLeft (4 bytes): A signed integer that specifies the left coordinate of the geometry space for this shape. The **geoLeft**, **geoTop**, as defined in section 2.3.6.2, **geoRight**, as defined in section 2.3.6.3, and **geoBottom**, as defined in section 2.3.6.4, properties combine to define a rectangle that specifies an arbitrary coordinate system, called a geometry space, that geometry coordinates are specified in. When a shape is rendered, any points that are specified in the 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

The **geoTop** property specifies the top coordinate of the **geometry space** for this **shape**.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0141.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

geoTop (4 bytes): A signed integer that specifies the top coordinate of the geometry space for this shape. The **geoLeft**, as defined in section 2.3.6.1, **geoTop**, **geoRight**, as defined in section 2.3.6.3, and **geoBottom**, as defined in section 2.3.6.4, properties combine to define a rectangle that specifies an arbitrary coordinate system, called a geometry space, that geometry coordinates are specified in. When a shape is rendered, any points that are specified in the 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

The **geoRight** property specifies the right coordinate of the **geometry space** for this **shape**.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0142.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

geoRight (4 bytes): A signed integer that specifies the right coordinate of the geometry space for this shape. The **geoLeft**, as defined in section 2.3.6.1, **geoTop**, as defined in section 2.3.6.2, **geoRight**, and **geoBottom**, as defined in section 2.3.6.4, properties combine to define a rectangle that specifies an arbitrary coordinate system, called a geometry space, that geometry coordinates are specified in. When a shape is rendered, any points that are specified in the 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

The **geoBottom** property specifies the bottom coordinate of the **geometry space** for this **shape**.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0143.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

geoBottom (4 bytes): A signed integer that specifies the bottom coordinate of the geometry space for this shape. The **geoLeft**, as defined in section 2.3.6.1, **geoTop**, as defined in section 2.3.6.2, **geoRight**, as defined in section 2.3.6.3, and **geoBottom** properties combine to define a rectangle that specifies an arbitrary coordinate system, called a geometry space, that geometry coordinates are specified in. When a shape is rendered, any points that are specified in the 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

The **shapePath** property specifies the way that lines in this **shape** are to be drawn.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0144.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

shapePath (4 bytes): An **MSOSHAPEPATH** enumeration value, as defined in section 2.4.9, that specifies how vertices in this shape, as specified in the **pVertices_complex** property, as defined in section 2.3.6.7, are connected. If the value is **msoshapeComplex**, the **pSegmentInfo_complex** property, as defined in section 2.3.6.9, MUST exist and contain more-detailed instructions about how to connect the vertices in this shape. If **pSegmentInfo_complex** is neither NULL nor empty, this property MUST be ignored and the connections between vertices specified by **pSegmentInfo_complex**. The default value for this property is **msoshapeLinesClosed**.

2.3.6.6 pVertices

The **pVertices** property specifies the set of points that make up this **shape**.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0145.
opid.fBid	A value that is undefined and MUST be ignored.
opid.fComplex	A bit that indicates whether the **pVertices_complex** property, as defined in section 2.3.6.7, exists. If the value equals 0x1, the **pVertices_complex** property MUST exist.

pVertices (4 bytes): The number of bytes of data in the **pVertices_complex** property. If **opid.fComplex** equals 0x0, this value MUST be 0x00000000. The default value for this property is 0x00000000.

2.3.6.7 pVertices_complex

The **pVertices_complex** property specifies additional data for the **pVertices** property, as defined in section 2.3.6.6. If the **opid.fComplex** bit of **pVertices** equals 0x1, this property MUST exist.

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

pVertices_complex (variable): An **IMsoArray** record, as defined in section 2.2.51, of **POINT** structures, as defined in section 2.2.55, that represent the points comprising the geometry of this **shape**. The point coordinates are specified in **geometry space** units, unless a coordinate exists in the range from 0x80000000 through 0x8000007F. In that case, the value is not used directly. Instead, the final value is calculated by subtracting 0x8000000 from the original value, and then using that value as the zero-based index into the **pGuides_complex** array, as defined in section 2.3.6.27, to specify the value that controls the position of that coordinate. The way that the points are connected is specified by a combination of the **shapePath**, as defined in section 2.3.6.5, and **pSegmentInfo_complex** properties, as defined in section 2.3.6.9.

2.3.6.8 pSegmentInfo

The **pSegmentInfo** property specifies how the vertices that are specified by the **pVertices_complex** property, as defined in section 2.3.6.7, of this **shape** are connected.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0146.
opid.fBid	A value that is undefined and MUST be ignored.
opid.fComplex	A bit that indicates whether the **pSegmentInfo_complex** property, as defined in section 2.3.6.9, exists. If the value equals 0x1, **pSegmentInfo_complex** MUST exist.

pSegmentInfo (4 bytes): The number of bytes of data in the **pSegmentInfo_complex** property, as defined in section 2.3.6.9. If **opid.fComplex** equals 0x0, this value MUST be 0x00000000. The default value for this property is 0x00000000.

2.3.6.9 pSegmentInfo_complex

The **pSegmentInfo_complex** property specifies additional data for the **pSegmentInfo** property, as defined in section 2.3.6.8. If the **opid.fComplex** bit of **pSegmentInfo** equals 0x1, this property MUST exist.

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

pSegmentInfo_complex (variable): An **IMsoArray** record, as defined in section 2.2.51, of **MSOPATHINFO** records, as defined in section 2.2.53, that specify how the vertices of this **shape**, as specified in the **pVertices_complex** property, as defined in section 2.3.6.7, are connected.

2.3.6.10   adjustValue

The **adjustValue** property specifies a value that a user can change to adjust the geometry of the **shape**. Such an adjustment is accomplished through the interaction of several properties of this shape. An **adjust handle**, as specified in the **pAdjustHandles_complex** property, as defined in section 2.3.6.25, controls how the user's input is translated into a value in the **geometry space** to store in this property. That value is used as a parameter in the formulas of the **pGuides_complex** array, as defined in section 2.3.6.27. The results of the formulas comprise 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** array, as defined in section 2.3.6.7, refers to these values to specify where the vertices exist in the geometry space. Because of these interactions, the meaning of the value of the **adjustValue** property depends on the individual shape type and on the formulas that are specified for that shape type.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0147.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

adjustValue (4 bytes): A signed integer that is used to adjust the geometry of this shape. The default value for this property is 0x00000000.

2.3.6.11 adjust2Value

The **adjust2Value** property specifies a value that a user can change to adjust the geometry of the **shape**. Such an adjustment is accomplished through the interaction of several properties of this shape. An **adjust handle**, as specified in the **pAdjustHandles_complex** property, as defined in section 2.3.6.25, controls how the user's input is translated into a value in the **geometry space** to store in this property. That value is used as a parameter in the formulas of the **pGuides_complex** array, as defined in section 2.3.6.27. The results of the formulas comprise 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** array, as defined in section 2.3.6.7, refers to these values to specify where the vertices exist in the geometry space. Because of these interactions, the meaning of the value of the **adjust2Value** property depends on the individual shape type and on the formulas that are specified for that shape type.

0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																adjust2Value															
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0148.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

adjust2Value (4 bytes): A signed integer that is used to adjust the geometry of this shape. The default value for this property is 0x00000000.

2.3.6.12 adjust3Value

The **adjust3Value** property specifies a value that a user can change to adjust the geometry of the **shape**. Such an adjustment is accomplished through the interaction of several properties of this shape. An **adjust handle**, as specified in the **pAdjustHandles_complex** property, as defined in section 2.3.6.25, controls how the user's input is translated into a value in the **geometry space** to store in this property. That value is used as a parameter in the formulas of the **pGuides_complex** array, as defined in section 2.3.6.27. The results of the formulas comprise 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** array, as defined in section 2.3.6.7, refers to these values to specify where the vertices exist in the geometry space. Because of these interactions, the meaning of the value of the **adjust3Value** property depends on the individual shape type and on the formulas that are specified for that shape type.

0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																adjust3Value															
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0149.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

adjust3Value (4 bytes): A signed integer that is used to adjust the geometry of this shape. The default value for this property is 0x00000000.

2.3.6.13 adjust4Value

The **adjust4Value** property specifies a value that a user can change to adjust the geometry of the **shape**. Such an adjustment is accomplished through the interaction of several properties of this shape. An **adjust handle**, as specified in the **pAdjustHandles_complex** property, as defined in section 2.3.6.25, controls how the user's input is translated into a value in the **geometry space** to store in this property. That value is used as a parameter in the formulas of the **pGuides_complex** array, as defined in section 2.3.6.27. The results of the formulas comprise 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 array refers to these values to specify where the vertices exist in the geometry space. Because of these interactions, the meaning of the value of the **adjust4Value** property depends on the individual shape type and on the formulas that are specified for that shape type.

0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																adjust4Value															
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x014A.
opid.fBid	A value that MUST be 0x0.

opid.fComplex	A value that MUST be 0x0.

adjust4Value (4 bytes): A signed integer that is used to adjust the geometry of this shape. The default value for this property is 0x00000000.

2.3.6.14 adjust5Value

The **adjust5Value** property specifies a value that a user can change to adjust the geometry of the **shape**. Such an adjustment is accomplished through the interaction of several properties of this shape. An **adjust handle**, as specified in the **pAdjustHandles_complex** property, as defined in section 2.3.6.25, controls how the user's input is translated into a value in the **geometry space** to store in this property. That value is used as a parameter in the formulas of the **pGuides_complex** array, as defined in section 2.3.6.27. The results of the formulas comprise 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 array refers to these values to specify where the vertices exist in the geometry space. Because of these interactions, the meaning of the value of the **adjust5Value** property depends on the individual shape type and on the formulas that are specified for that shape type.

0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																adjust5Value															
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x014B.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

adjust5Value (4 bytes): A signed integer used to adjust the geometry of this shape. The default value for this property is 0x00000000.

2.3.6.15 adjust6Value

The **adjust6Value** property specifies a value that a user can change to adjust the geometry of the **shape**. Such an adjustment is accomplished through the interaction of several properties of this shape. An **adjust handle**, as specified in the **pAdjustHandles_complex** property, as defined in section 2.3.6.25, controls how the user's input is translated into a value in the **geometry space** to store in this property. That value is used as a parameter in the formulas of the **pGuides_complex** array, as defined in section 2.3.6.27. The results of the formulas comprise 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 array refers to these values to specify where the vertices exist in the geometry

space. Because of these interactions, the meaning of the value of the **adjust6Value** property depends on the individual shape type and on the formulas that are specified for that shape type.

0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																adjust6Value															
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x014C.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

adjust6Value (4 bytes): A signed integer that is used to adjust the geometry of this shape. The default value for this property is 0x00000000.

2.3.6.16   adjust7Value

The **adjust7Value** property specifies a value that a user can change to adjust the geometry of the **shape**. Such an adjustment is accomplished through the interaction of several properties of this shape. An **adjust handle**, as specified in the **pAdjustHandles_complex** property, as defined in section 2.3.6.25, controls how the user's input is translated into a value in the **geometry space** to store in this property. That value is used as a parameter in the formulas of the **pGuides_complex** array, as defined in section 2.3.6.27. The results of the formulas comprise 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 array refers to these values to specify where the vertices exist in the geometry space. Because of these interactions, the meaning of the value of the **adjust7Value** property depends on the individual shape type and on the formulas that are specified for that shape type.

0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																adjust7Value															
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x014D.

opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

adjust7Value (4 bytes): A signed integer that is used to adjust the geometry of this shape. The default value for this property is 0x00000000.

2.3.6.17 adjust8Value

The **adjust8Value** property specifies a value that a user can change to adjust the geometry of the **shape**. Such an adjustment is accomplished through the interaction of several properties of this shape. An **adjust handle**, as specified in the **pAdjustHandles_complex** property, as defined in section 2.3.6.25, controls how the user's input is translated into a value in the **geometry space** to store in this property. That value is used as a parameter in the formulas of the **pGuides_complex** array, as defined in section 2.3.6.27. The results of the formulas comprise 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 array refers to these values to specify where the vertices exist in the geometry space. Because of these interactions, the meaning of the value of the **adjust8Value** property depends on the individual shape type and on the formulas that are specified for that shape type.

0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																adjust8Value															
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x014E.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

adjust8Value (4 bytes): A signed integer that is used to adjust the geometry of this shape. The default value for this property is 0x00000000.

2.3.6.18 pConnectionSites

The **pConnectionSites** property specifies an array of connection sites that a user can employ to create a link between **shapes**.

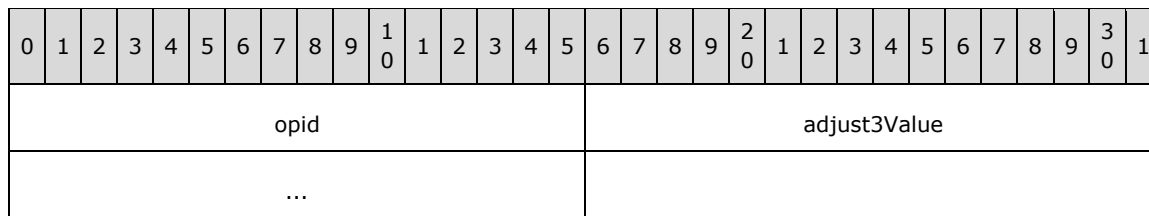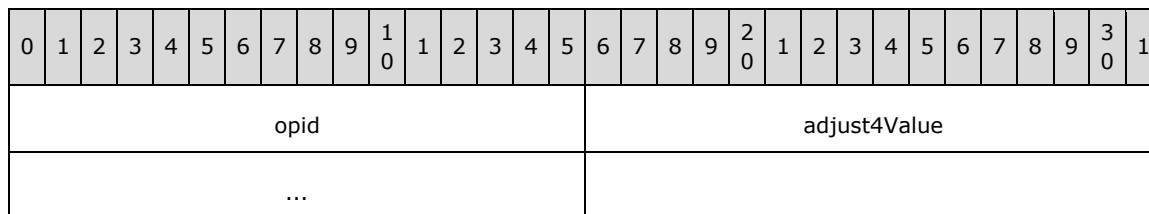| 0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																pConnectionSites															
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0151.
opid.fBid	A value that is undefined and MUST be ignored.
opid.fComplex	A bit that indicates whether the **pConnectionSites_complex** property, as defined in section 2.3.6.19, exists. If the value equals 0x1, **pConnectionSites_complex** MUST exist.

pConnectionSites (4 bytes): The number of bytes of data in the **pConnectionSites_complex** property. If **opid.fComplex** equals 0x0, this value MUST be 0x00000000. The default value for this property is 0x00000000.

2.3.6.19   pConnectionSites_complex

The **pConnectionSites_complex** property specifies additional data for the **pConnectionSites** property, as defined in section 2.3.6.18. If the **opid.fComplex** bit of **pConnectionSites** equals 0x1, this property MUST exist.

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

pConnectionSites_complex (variable): An **IMsoArray** record, as defined in section 2.2.51, of **POINT** structures, as defined in section 2.2.55, that specify where connection sites are located on this **shape**. If the **cxk** property, as defined in section 2.3.6.30, does not equal **msocxkCustom**, this property MUST be ignored. The point coordinates are specified in **geometry space** units, unless a coordinate exists in the range from 0x80000000 through 0x8000007F. In that case, the value is not used directly. Instead, the final value is calculated by subtracting 0x8000000 from the original value, and then using that value as the zero-based index into the **pGuides_complex** array, as defined in section 2.3.6.27, to specify the value that controls the position of that coordinate.

2.3.6.20   pConnectionSitesDir

The **pConnectionSitesDir** property specifies an array of angles, which correspond to the connection sites in the **pConnectionSites_complex** property, as defined in section 2.3.6.19, that are used to determine the direction in which each connector links to its corresponding connection site.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0152.
opid.fBid	A value that is undefined and MUST be ignored.
opid.fComplex	A bit that indicates whether the pConnectionSitesDir_complex property exists. If the value equals 0x1, **pConnectionSitesDir_complex** MUST exist.

pConnectionSitesDir (4 bytes): The number of bytes of data in the **pConnectionSitesDir_complex** property, as defined in section 2.3.6.21. If **opid.fComplex** equals 0x0, this value MUST be 0x00000000. The default value for this property is 0x00000000.

2.3.6.21   pConnectionSitesDir_complex

The **pConnectionSitesDir_complex** property specifies additional data for the **pConnectionSitesDir** property, as defined in section 2.3.6.20. If the **opid.fComplex** bit of **pConnectionSitesDir** equals 0x1, this property MUST exist.
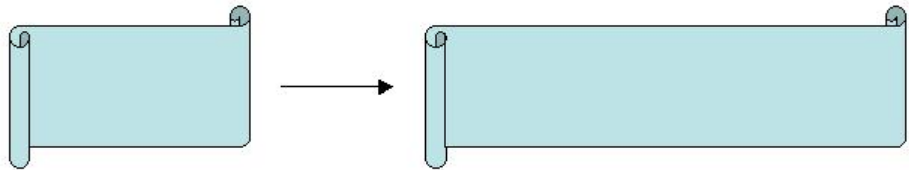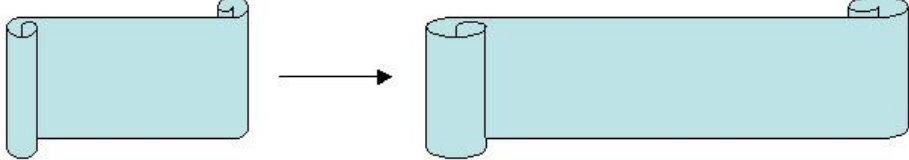
0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
pConnectionSitesDir_complex (variable)																															
...																															

pConnectionSitesDir_complex (variable): An **IMsoArray** record, as defined in section 2.2.51, of **FixedPoint** structures, as specified in [MS-OSHARED] section 2.2.1.6, that represent the angles, in degrees, at which each connector SHOULD connect to its corresponding connection site in the **pConnectionSites_complex** array, as defined in section 2.3.6.19. If this property is specified, it MUST contain the same number of elements as the **pConnectionSites_complex** array.

2.3.6.22   xLimo

The **xLimo** property specifies the x-coordinate above which limousine scaling will be used in the horizontal direction. Such limousine scaling means that the points with an x-coordinate greater than **xLimo** will have their x-coordinates incremented rather than linearly scaled. The net effect is that area will be added to the interior of the shape without any modifications to the geometry on the sides.

The following table shows what resizing a shape looks like when **xLimo** is specified and when it is not.

xLimo specified?	Meaning
Yes	Resizing the shape in the horizontal direction causes the points with an x-coordinate greater than **xLimo** to be incremented rather than scaled:
No	Resizing the shape in the horizontal direction causes the x–coordinate of all the points to be linearly scaled:

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0153.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

xLimo (4 bytes): A signed integer that represents the x-coordinate in the **geometry space** above which limousine scaling will be used. The default value for this property is 0x80000000.

2.3.6.23   yLimo

The **yLimo** property specifies the y-coordinate above which limousine scaling will be used in the vertical direction. Such limousine scaling means that the points with a y-coordinate greater than **yLimo** will have their y-coordinates incremented rather than linearly scaled. The net effect is that area will be added to the interior of the **shape** without any modifications to the geometry on the sides.

The following table shows what resizing a shape looks like when **yLimo** is specified and when it is not.

yLimo specified?	Meaning
Yes	Resizing the shape in the vertical direction causes the points with a y-coordinate

greater than **yLimo** to be incremented rather than scaled: |
| No | Resizing the shape in the vertical direction causes the y–coordinate of all the points to be linearly scaled: |

0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																yLimo															

...	

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0154.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

yLimo (4 bytes): A signed integer that represents the y-coordinate in the **geometry space** above which limousine scaling will be used. The default value for this property is 0x80000000.

2.3.6.24   pAdjustHandles

The **pAdjustHandles** property specifies an array of **adjust handles** that allow a user to manipulate the geometry of this **shape**.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0155.
opid.fBid	A value that is undefined and MUST be ignored.
opid.fComplex	A bit that indicates whether the **pAdjustHandles_complex** property, as defined in section 2.3.6.25, exists. If the value equals 0x1, **pAdjustHandles_complex** MUST exist.

pAdjustHandles (4 bytes): The number of bytes of data in the **pAdjustHandles_complex** property. If **opid.fComplex** equals 0x0, this value MUST be 0x00000000. The default value for this property is 0x00000000.

2.3.6.25 pAdjustHandles_complex

The **pAdjustHandles_complex** property specifies additional data for the **pAdjustHandles** property, as defined in section 2.3.6.24. If the **opid.fComplex** bit of **pAdjustHandles** equals 0x1, this property MUST exist.

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

pAdjustHandles_complex (variable): An **IMsoArray** record, as defined in section 2.2.51, of **ADJH** records, as defined in section 2.2.57, specifying a set of **adjust handles** that SHOULD<39> be used to allow a user to manipulate the geometry of this **shape**.

2.3.6.26 pGuides

The **pGuides** property specifies a set of formulas that are used to calculate values for defining the geometry of this **shape**.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0156.
opid.fBid	A value that is undefined and MUST be ignored.
opid.fComplex	A bit that indicates whether the **pGuides_complex** property, as defined in section 2.3.6.27, exists. If the value equals 0x1, **pGuides_complex** MUST exist.

pGuides (4 bytes): The number of bytes of data in the **pGuides_complex** property, as defined in section 2.3.6.27. If **opid.fComplex** equals 0x0, this value MUST be 0x00000000. The default value for this property is 0x00000000.

2.3.6.27 pGuides_complex

The **pGuides_complex** property specifies additional data for the **pGuides** property, as defined in section 2.3.6.26. If the **opid.fComplex** bit of **pGuides** equals 0x1, this property MUST exist.

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

pGuides_complex (variable): An **IMsoArray** record, as defined in section 2.2.51 of **SG** records, as defined in section 2.2.58, specifying 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

The **pInscribe** property specifies an array of rectangles that specify how text is inscribed within this **shape**.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0157.
opid.fBid	A value that is undefined and MUST be ignored.
opid.fComplex	A bit that indicates whether the **pInscribe_complex** property, as defined in section 2.3.6.29, exists. If the value equals 0x1, **pInscribe_complex** MUST exist.

pInscribe (4 bytes): The number of bytes of data in the **pInscribe_complex** property, as defined in section 2.3.6.29. If **opid.fComplex** equals 0x0, this value MUST be 0x00000000. The default value for this property is 0x00000000.

2.3.6.29   pInscribe_complex

The **pInscribe_complex** property specifies additional data for the **pInscribe** property, as defined in section 2.3.6.28. If the **opid.fComplex** bit of **pInscribe** equals 0x1, this property MUST exist.

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

pInscribe_complex (variable): An **IMsoArray** record, as defined in section 2.2.51, of **RECT** records, as defined in section 2.2.56, that specify the rectangle within this **shape** in which text is inscribed. The coordinates in the **RECT** records are specified in the **geometry space**, unless a coordinate exists in the range from 0x80000000 through 0x8000007F. In that case, the value is not used directly. Instead, the final value is calculated by subtracting 0x8000000 from the original value, and then using that value as the zero-based index into the **pGuides_complex** array, as defined in section 2.3.6.27, to specify the value that is used.

The algorithm for calculating the inscribed rectangle varies based on the number of rectangles that are provided and on whether the text exists in a horizontal or a vertical layout. The text is laid out vertically if the txflTextFlow property of this shape equals **msotxflTtoBA**, **msotxflBtoT**, **msotxflTtoBN**, or **msotxflVertN**. Otherwise, the text is laid out horizontally. The number of rectangles that are provided MUST be zero, one, two, three, or six. The following table describes the meaning of each of these numbers of rectangles.

Number of rectangles	Meaning
Zero	The text is inscribed in the rectangle within the shape.
One	The text is inscribed in the single rectangle that is provided.
Two	If the text exists in a horizontal layout, it is inscribed in the first rectangle that is provided. If the text exists in a vertical layout, it is inscribed in the second rectangle that is provided.
Three	The three rectangles specify the minimum, middle, and maximum rectangles to use for both vertical and horizontal layouts. If the **pAdjustHandles_complex** property, as defined in section 2.3.6.25, is either not specified or empty, the minimum rectangle is used. Otherwise, the **adjustValue** property, as defined in section 2.3.6.10, and the first **ADJH** record, as defined in section 2.2.57, in the **pAdjustHandles_complex** property are used to determine how to interpolate among the three rectangles. If the **apX** value of the first **ADJH** record is controlling the **adjustValue** property because it equals 0x00000100, the **adjustValue** property is compared with **xMin** and **xMax**. Otherwise, the **adjustValue** property is compared with **yMin** and **yMax**. If the value of the **adjustValue** property is less than the midway point between these values, the inscribed rectangle is calculated by a linear interpolation between the minimum and middle rectangles. If the value of the **adjustValue** property is greater than the midway point between these values, the inscribed rectangle is calculated by a linear interpolation between the middle and maximum rectangles.
Six	The first three rectangles specify the minimum, middle, and maximum rectangles to use if the text exists in a horizontal layout. The last three rectangles specify the minimum, middle, and maximum rectangles to use if the text exists in a vertical layout. The same algorithm as the one for the case of three rectangles is used.

2.3.6.30   cxk

The **cxk** property specifies where **connection points** exist on the **shape**.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.
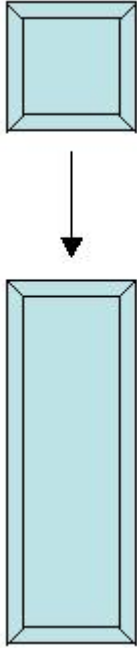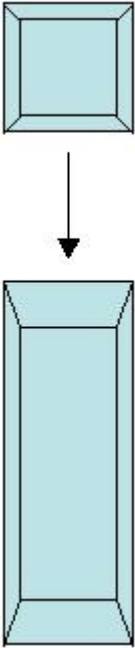
Field	Meaning
opid.opid	A value that MUST be 0x0158.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

cxk (4 bytes): An **MSOCXK** enumeration value, as defined in section 2.4.10, that specifies where connection points exist on the shape. If this value is **msocxkCustom**, the **pConnectionSites_complex** property, as defined in section 2.3.6.19, specifies where the custom connection points are located. The default value for this property is **msocxkSegments**.

2.3.6.31 Geometry Boolean Properties

The **Geometry Boolean Properties** specify a 32-bit field of Boolean properties for the geometry properties of the **shape**.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x017F.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

unused1 (6 bits): A value that is undefined and MUST be ignored.

A - fUsefReflectionOK (1 bit): This bit is not used and MUST be ignored.

B - fUsefGlowOK (1 bit): This bit is not used and MUST be ignored.

C - fUsefSoftEdgeOK (1 bit): This bit is not used and MUST be ignored.

D - unused2 (1 bit): A value that is undefined and MUST be ignored.

E - 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 used instead. The default value for this property is 0x0.

F - 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 used instead. The default value for this property is 0x0.

G - 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 used instead. The default value for this property is 0x0.

H - 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 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 0x0 specifies that the **fFillShadeShapeOK** bit MUST be ignored and the default value used instead. The default value for this property is 0x0.

J - 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 used instead. The default value for this property is 0x0.

unused3 (6 bits): A value that is undefined and MUST be ignored.

K - fReflectionOK (1 bit): This bit is not used and MUST be ignored.

L - fGlowOK (1 bit): This bit is not used and MUST be ignored.

M - fSoftEdgeOK (1 bit): This bit is not used and MUST be ignored.

N - unused4 (1 bit): A value that is undefined and MUST be ignored.

O - fShadowOK (1 bit): A bit that specifies whether to display the shadow of this shape. This value SHOULD<40> be ignored. If **fUsefShadowOK** equals 0x0, this value MUST be ignored. The default value for this property is 0x1.

P - f3DOK (1 bit): A bit that specifies whether to display the extrusion effect of this shape. If **fUsef3DOK** equals 0x0, this value MUST be ignored. The default value for this property is 0x1.

Q - fLineOK (1 bit): A bit that specifies whether to display the line of this shape. If **fUsefLineOK** equals 0x0, this value MUST be ignored. The default value for this property is 0x1.

R - fGtextOK (1 bit): A bit that specifies whether to display the text aligned to this shape. If **fUsefGtextOK** equals 0x0, this value MUST be ignored. The default value for this property is 0x0.

S - 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. If **fUsefFillShadeShapeOK** equals 0x0, this value MUST be ignored. The default value for this property is 0x0.

T - fFillOK (1 bit): A bit that specifies whether to display the fill of this shape. If **fUsefFillOK** equals 0x0, this value MUST be ignored. The default value for this property is 0x1.

2.3.7 Fill Style

The **Fill Style** property set specifies the fill attributes of either the **shape** or the background of the **slide**.

2.3.7.1 fillType

The **fillType** property specifies the type of fill to display with the **shape** or the background of the **slide**.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0180.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

fillType (4 bytes): An **MSOFILLTYPE** enumeration value, as defined in section 2.4.11, that specifies the type of fill. The default value for this property is **msofillSolid**.

2.3.7.2 fillColor

The **fillColor** property specifies the foreground color of the fill.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0181.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

fillColor (4 bytes): An **OfficeArtCOLORREF** record, as defined in section 2.2.2, that specifies the foreground color of the fill. The **fillColor** property and the **fillBackColor** property, as defined in section 2.3.7.4, are interpreted according to the value of the **fillType** property, as defined in section 2.3.7.1, as specified by the following table. The default value for this property is 0x00FFFFFF.

fillType	fillColor	fillBackColor
msofillSolid	The foreground color.	Unused.
msofillPattern	The foreground color of the pattern.	The background color of the pattern.
msofillTexture	Unused.	Unused.
msofillPicture	Unused.	Unused.
msofillShade	The first color of the shade if the **fillShadeColors_complex** property, as defined in section 2.3.7.27, 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.

2.3.7.3 fillOpacity

The **fillOpacity** property specifies the foreground opacity level of the fill.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0182.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

fillOpacity (4 bytes): A value of type **FixedPoint**, as specified in [MS-OSHARED] section 2.2.1.6, that specifies the foreground opacity level of the fill. The value MUST be from 0.0 through 1.0, inclusive. A value of 0.0 specifies a completely transparent fill. A value of 1.0 specifies a completely opaque fill. The default value for this property is 0x00010000.

2.3.7.4 fillBackColor

The **fillBackColor** property specifies the background color of the fill.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0183.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

fillBackColor (4 bytes): An **OfficeArtCOLORREF** record, as defined in section 2.2.2, that specifies the background color of the fill. This value is interpreted in the same manner as that of the **fillColor** property, as defined in section 2.3.7.2. The default value for this property is 0x00FFFFFF.

2.3.7.5 fillBackOpacity

The **fillBackOpacity** property specifies the background opacity level of the fill.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0184.
opid.fBid	A value that MUST be 0x0.

opid.fComplex	A value that MUST be 0x0.

fillBackOpacity (4 bytes): A value of type **FixedPoint**, as specified in [MS-OSHARED] section 2.2.1.6, that specifies the background opacity level of the fill. The value MUST be from 0.0 through 1.0, inclusive. A value of 0.0 specifies a completely transparent fill. A value of 1.0 specifies a completely opaque fill. The default value for this property is 0x00010000.

2.3.7.6 fillCrMod

The **fillCrMod** property specifies the foreground color of the fill for black-and-white display mode.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0185.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

fillCrMod (4 bytes): An **OfficeArtCOLORREF** record, as defined in section 2.2.2, 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

The **fillBlip** property specifies the **BLIP** that is used for pattern, texture, or picture fills.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0186.
opid.fBid	A value that MUST be 0x0 if **fComplex** equals 0x1 or 0x1 if **fComplex** equals 0x0. If this record is contained in an **OfficeArtInlineSpContainer** record, as defined in section 2.2.15, then the value MUST be ignored.
opid.fComplex	A bit that indicates whether the **fillBlip_complex** property, as defined in section 2.3.7.8, exists. If the value equals 0x1, **fillBlip_complex** MUST exist. If this record is contained in an **OfficeArtInlineSpContainer** record, as defined in section 2.2.15, then the value MUST be ignored.

fillBlip (4 bytes): An unsigned integer specifying the BLIP that is used for pattern, texture, or picture fills. The value of **opid.fComplex** determines the meaning of this field, as specified in the following table. The default value for this property is 0x00000000. If this record is contained in an **OfficeArtInlineSpContainer** record, as defined in section 2.2.15, then the value MUST be ignored.

Value of opid.fComplex	Meaning of fillBlip field
0x0	Specifies a one-based index into the **rgfb** array of the **OfficeArtBStoreContainer** record, as defined in section 2.2.20. A value of 0x00000000 MUST be ignored.
0x1	Specifies the number of bytes of data in the **fillBlip_complex** property, as defined in section 2.3.7.8.

2.3.7.8 fillBlip_complex

The **fillBlip_complex** property specifies additional data for the **fillBlip** record, as defined in section 2.3.7.7. If the **opid.fComplex** bit of **fillBlip** equals 0x1, this property MUST exist. This property SHOULD<41> be ignored.

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

fillBlip_complex (variable): An **OfficeArtBlip** record, as defined in section 2.2.23, specifying the **BLIP** that is used for pattern, texture, or picture fills.

2.3.7.9 fillBlipName

The **fillBlipName** property specifies the comment, the file name, or the full **Uniform Resource Locator (URL)** of the **BLIP** that is used as fill.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0187.
opid.fBid	A value that is undefined and MUST be ignored.
opid.fComplex	A bit that indicates whether the **fillBlipName_complex** property, as defined in section 2.3.7.10, exists. If the value equals 0x1, **fillBlipName_complex** MUST exist.

fillBlipName (4 bytes): The number of bytes of data in the **fillBlipName_complex** property, as defined in section 2.3.7.10. If **opid.fComplex** equals 0x0, this value MUST be 0x00000000. The default value for this property is 0x00000000.

2.3.7.10 fillBlipName_complex

The **fillBlipName_complex** property specifies additional data for the **fillBlipName** property, as defined in section 2.3.7.9. If the **opid.fComplex** bit of **fillBlipName** equals 0x1, this property MUST exist.

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

fillBlipName_complex (variable): A null-terminated **Unicode** string that specifies the comment, file name, or full **URL**, as specified by the **fillBlipFlags** property, as defined in section 2.3.7.11, for the **BLIP**.

2.3.7.11 fillBlipFlags

The **fillBlipFlags** property specifies how to interpret the **fillBlipName_complex** property, as defined in section 2.3.7.10.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0188.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

fillBlipFlags (4 bytes): A **MSOBLIPFLAGS** enumeration value, as defined in section 2.4.8, that specifies how to interpret the **fillBlipName_complex** property, as defined in section 2.3.7.10. The default value for this property is **msoblipflagComment**.

2.3.7.12   fillWidth

The **fillWidth** property specifies the width of the fill. This property applies only to texture, picture, and pattern fills.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0189.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

fillWidth (4 bytes): A signed integer that specifies the width of the fill in units that are specified by the **fillDztype** property, as defined in section 2.3.7.24. If **fillDztype** equals **msodztypeDefault**, this value MUST be ignored. The default value for this property is 0x00000000.

2.3.7.13   fillHeight

The **fillHeight** property specifies the height of the fill. This property applies only to texture, picture, and pattern fills.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x018A.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

fillHeight (4 bytes): A signed integer that specifies the height of the fill in units that are specified by the **fillDztype** property, as defined in section 2.3.7.24. If **fillDztype** equals **msodztypeDefault**, this value MUST be ignored. The default value for this property is 0x00000000.

2.3.7.14 fillAngle

The **fillAngle** property specifies the angle of the shaded fill that rotates the **gradient vector** in a counterclockwise direction.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x018B.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

fillAngle (4 bytes): A value of type **FixedPoint**, as specified in [MS-OSHARED] section 2.2.1.6, that specifies the angle of the gradient fill. Zero degrees represents a vertical vector from bottom to top. The default value for this property is 0x00000000.

2.3.7.15   fillFocus

The **fillFocus** property specifies the relative position of the last color in the shaded fill.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x018C.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that 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 from 0xFFFFFF9C through 0x00000064, inclusive. The default value for this property is 0x00000000.

The following figure demonstrates how the **fillFocus** affects the shaded fill.
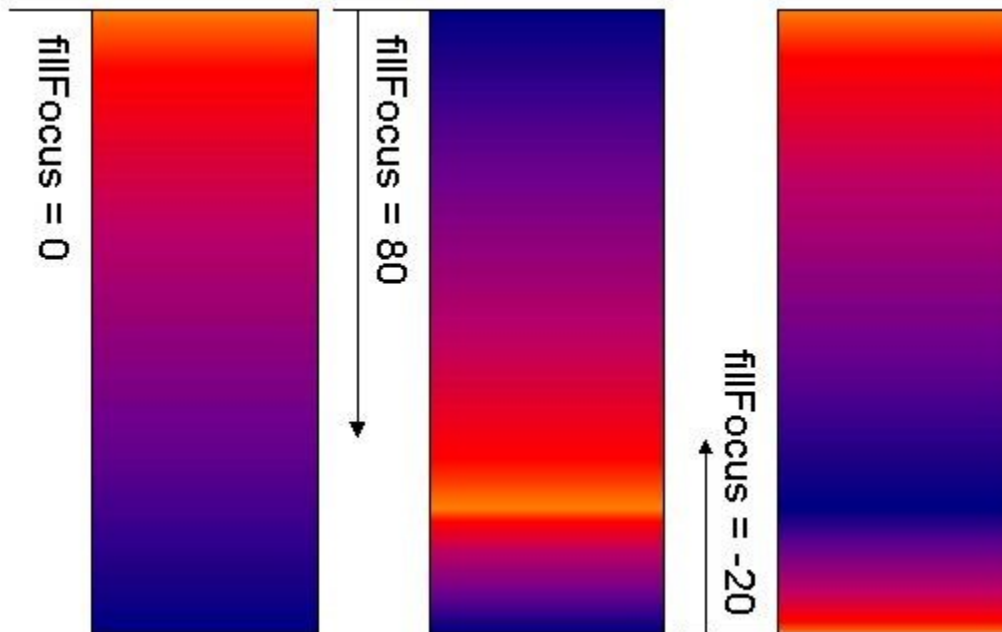
Figure 5: Comparison of fillFocus effects

The first color of the shaded fill is blue, and 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.

2.3.7.16   fillToLeft

The **fillToLeft** property specifies the relative position of the left boundary of the center rectangle in a concentric shaded fill, as shown in the following figure.
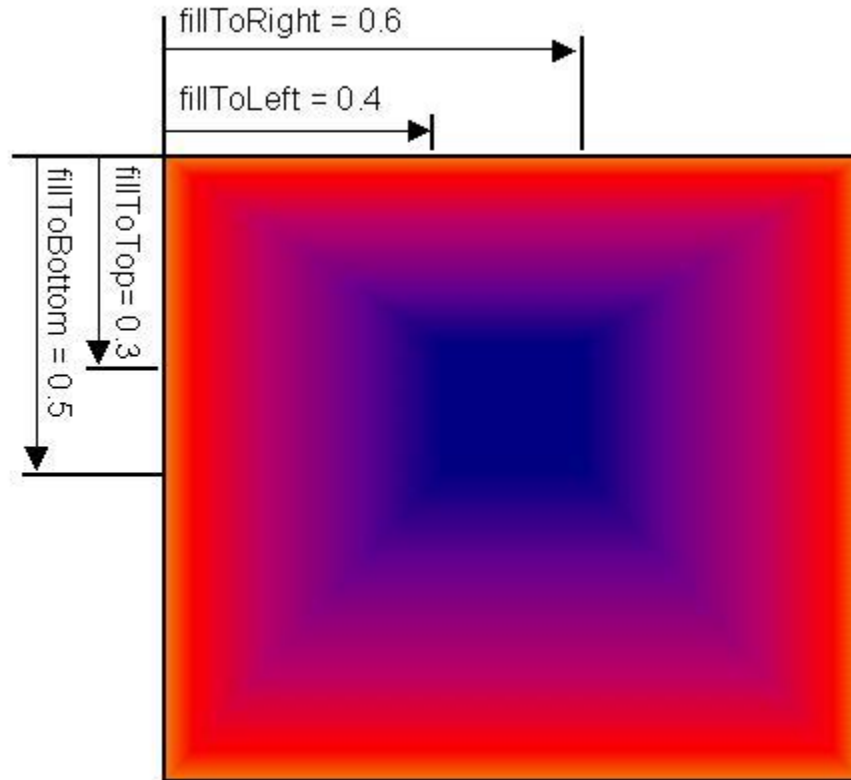
Figure 6: The fillToLeft, fillToTop, fillToRight, and fillToBottom properties in the shaded fill

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x018D.

opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

fillToLeft (4 bytes): A value of type **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 **bounding rectangle** of the **shape** in horizontal. The default value for this property is 0x00000000.

2.3.7.17 fillToTop

The **fillToTop** property specifies the relative position of the top boundary of the center rectangle in a concentric shaded fill, as shown in the figure of the **fillToLeft** property, as defined in section 2.3.7.16.

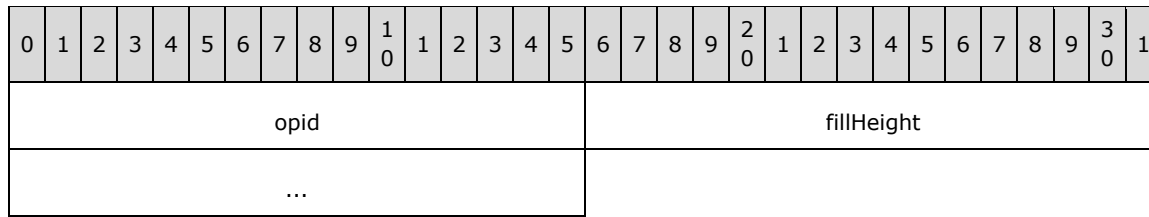| 0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																fillToTop															
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x018E.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

fillToTop (4 bytes): A value of type **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 **bounding rectangle** of the **shape** in vertical. The default value for this property is 0x00000000.

2.3.7.18 fillToRight

The **fillToRight** property specifies the relative position of the right boundary of the center rectangle in a concentric shaded fill, as shown in the figure of the **fillToLeft** property, as defined in section 2.3.7.16.

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

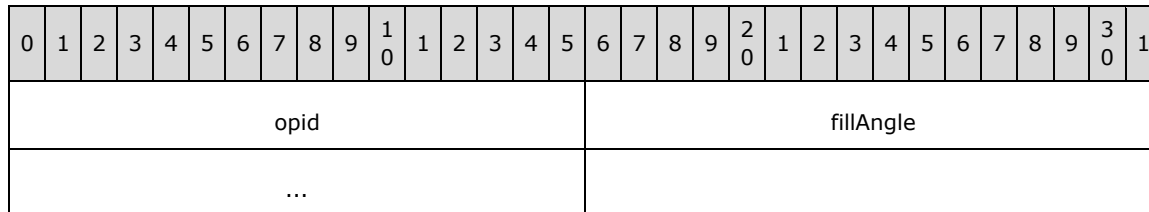**opid (2 bytes):** An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x018F.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

fillToRight (4 bytes): A value of type **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 **bounding rectangle** of the **shape** in horizontal. The default value for this property is 0x00000000.

2.3.7.19   fillToBottom

The **fillToBottom** property specifies the relative position of the bottom boundary of the center rectangle in a concentric shaded fill, as shown in the figure of the **fillToLeft** property, as defined in section 2.3.7.16.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0190.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

fillToBottom (4 bytes): A value of type **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 **bounding rectangle** of the **shape** in vertical. The default value for this property is 0x00000000.

2.3.7.20   fillRectLeft

The **fillRectLeft** property specifies the left boundary, in **EMUs**, of the **bounding rectangle** of the shaded fill.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0191.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

fillRectLeft (4 bytes): A signed integer that specifies the left boundary, in EMUs, of the bounding rectangle of the shaded fill. If the **fillUseRect** bit of **Fill Style Boolean fillUseRect** property, as defined in section 2.3.7.43, equals 0x0, this value MUST be ignored. The default value for this property is 0x00000000.

2.3.7.21   fillRectTop

The **fillRectTop** property specifies the top boundary, in **EMUs**, of the **bounding rectangle** of the shaded fill.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0192.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

fillRectTop (4 bytes): A signed integer that specifies the top boundary, in EMUs, of the bounding rectangle of the shaded fill. If the **fillUseRect** bit of **Fill Style Boolean fillUseRect** property, as

defined in section 2.3.7.43, equals 0x0, this value MUST be ignored. The default value for this property is 0x00000000.

2.3.7.22 fillRectRight

The **fillRectRight** property specifies the right boundary, in **EMUs**, of the **bounding rectangle** of the shaded fill.

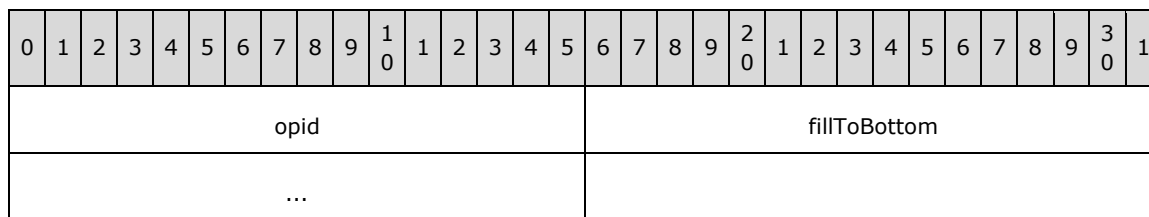| 0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																fillRectRight															
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0193.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

fillRectRight (4 bytes): A signed integer that specifies the right boundary, in EMUs, of the bounding rectangle of the shaded fill. If the **fillUseRect** bit of **Fill Style Boolean fillUseRect** property, as defined in section 2.3.7.43, equals 0x0, this value MUST be ignored. The default value for this property is 0x00000000.

2.3.7.23 fillRectBottom

The **fillRectBottom** property specifies the bottom boundary, in **EMUs**, of the **bounding rectangle** of the shaded fill.

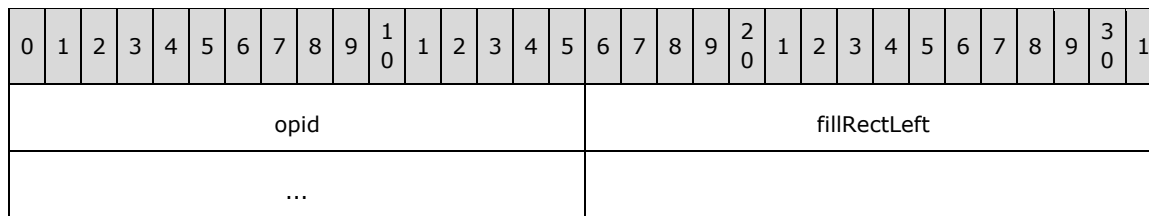| 0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																fillRectBottom															
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0194.

opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

fillRectBottom (4 bytes): A signed integer that specifies the bottom boundary, in EMUs, of the bounding rectangle of the shaded fill. If the **fillUseRect** bit of **Fill Style Boolean fillUseRect** property, as defined in section 2.3.7.43, equals 0x0, this value MUST be ignored. The default value for this property is 0x00000000.

2.3.7.24   fillDztype

The **fillDztype** property specifies how the **fillWidth**, as defined in section 2.3.7.12, and **fillHeight**, as defined in section 2.3.7.13, properties are interpreted.

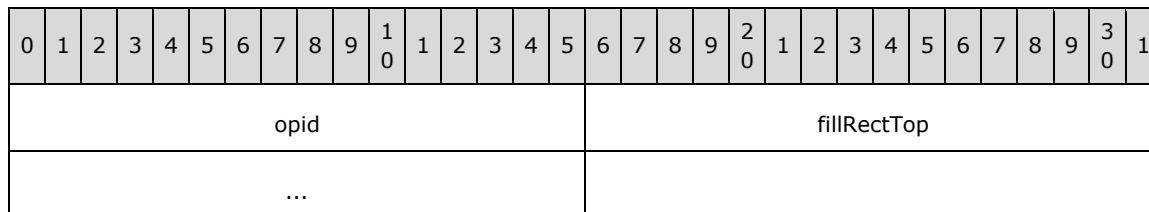| 0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																fillDztype															
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0195.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

fillDztype (4 bytes): An **MSODZTYPE** enumeration value, as defined in section 2.4.12, that specifies how the **fillWidth**, as defined in section 2.3.7.12, and **fillHeight**, as defined in section 2.3.7.13, properties are interpreted. The default value for this property is **msodztypeDefault**.

2.3.7.25   fillShadePreset

The **fillShadePreset** property specifies the preset colors of the gradient fill.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0196.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

fillShadePreset (4 bytes): A signed integer that specifies the preset colors of the gradient fill. This value MUST be from 0x00000088 through 0x0000009F, inclusive. if the **fillShadeColors_complex** property, as defined in section 2.3.7.27, exists, this value MUST be ignored. The default value for this property is 0x00000000.

2.3.7.26 fillShadeColors

The **fillShadeColors** property specifies the colors and their relative positions along the shade of the fill.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0197.
opid.fBid	A value that is undefined and MUST be ignored.
opid.fComplex	A bit that indicates whether the **fillShadeColors_complex** property, as defined in section 2.3.7.27, exists. If the value equals 0x1, **fillShadeColors_complex** MUST exist.

fillShadeColors (4 bytes): The number of bytes of data in the **fillShadeColors_complex** property. If **opid.fComplex** equals 0x0, this value MUST be 0x00000000. The default value for this property is 0x00000000.

2.3.7.27 fillShadeColors_complex

The **fillShadeColors_complex** property specifies additional data for the **fillShadeColors** property, as defined in section 2.3.7.26. If the **opid.fComplex** bit of **fillShadeColors** equals 0x1, this property MUST exist.

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

fillShadeColors_complex (variable): An **IMsoArray** record, as defined in section 2.2.51, that specifies the colors and their relative positions. Each element of the array is an **MSOSHADECOLOR** record, as defined in section 2.2.61. The values of position MUST be in ascending order.

2.3.7.28   fillOriginX

The **fillOriginX** 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	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																fillOriginX															
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0198.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

fillOriginX (4 bytes): A value of type **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. This value MUST be from -1.5 through 0.5, inclusive, for the picture fill to be visible, but values outside the range do not lead to any errors. The default value for this property is 0x00000000.

2.3.7.29   fillOriginY

The **fillOriginY** 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	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																fillOriginY															

Field	Meaning
	...

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0199.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

fillOriginY (4 bytes): A value of type **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. This value MUST be from -1.5 through 0.5, inclusive, for the picture fill to be visible, but values outside the range do not lead to any errors. The default value for this property is 0x00000000.

2.3.7.30   fillShapeOriginX

The **fillShapeOriginX** 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	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																fillShapeOriginX															
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x019A.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

fillShapeOriginX (4 bytes): A value of type **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. This value MUST be from -0.5 through 0.5, inclusive, for the picture fill to be visible, but values outside the range do not lead to any errors. The default value for this property is 0x00000000.

2.3.7.31 fillShapeOriginY

The **fillShapeOriginY** 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	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid															fillShapeOriginY																
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x019B.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

fillShapeOriginY (4 bytes): A value of type **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. This value MUST be from -0.5 through 0.5, inclusive, for the picture fill to be visible, but values outside the range do not lead to any errors. The default value for this property is 0x00000000.

2.3.7.32 fillShadeType

The **fillShadeType** property specifies how the shaded fill is computed.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x019C.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

fillShadeType (4 bytes): An **MSOSHADETYPE** record, as defined in section 2.2.50, that specifies how the shaded fill is computed. The default value for this property is 0x40000003.

2.3.7.33 fillColorExt

The **fillColorExt** property specifies the extended foreground color.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x019E.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

fillColorExt (4 bytes): An **OfficeArtCOLORREF** record, as defined in section 2.2.2, that specifies the extended foreground color. The default value for this property is 0xFFFFFFFF.

2.3.7.34 reserved415

The **reserved415** property MUST equal 0xFFFFFFFF and MUST be ignored.

0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																reserved415															
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x019F.
opid.fBid	A value that MUST be 0x0.

opid.fComplex	A value that MUST be 0x0.

reserved415 (4 bytes): A value that MUST equal 0xFFFFFFFF and MUST be ignored. The default value for this property is 0xFFFFFFFF.

2.3.7.35 fillColorExtMod

The **fillColorExtMod** property specifies the color modification of the extended foreground color.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x01A0.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

fillColorExtMod (4 bytes): An MSOTINTSHADE record that specifies the extended foreground color modification. For more information, see the **OfficeArtCOLORREF** structure, as defined in section 2.2.2. The default value for this property is 0x20000000.

2.3.7.36 reserved417

This property is reserved and MUST be ignored.

0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
						opid													reserved417												
					...																										

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x01A1.

opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

reserved417 (4 bytes): A value that MUST equal zero and MUST be ignored. The default value for this property is 0x00000000.

2.3.7.37 fillBackColorExt

The **fillBackColorExt** property specifies the extended background color.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x01A2.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

fillBackColorExt (4 bytes): An **OfficeArtCOLORREF** record, as defined in section 2.2.2, that specifies the extended background color. The default value for this property is 0xFFFFFFFF.

2.3.7.38 reserved419

The **reserved419** property MUST equal 0xFFFFFFFF and MUST be ignored.

0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																reserved419															
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x01A3.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

reserved419 (4 bytes): A value that MUST equal 0xFFFFFFFF and MUST be ignored. The default value for this property is 0xFFFFFFFF.

2.3.7.39 fillBackColorExtMod

The **fillBackColorExtMod** property specifies the color modification of the extended background color.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x01A4.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

fillBackColorExtMod (4 bytes): An MSOTINTSHADE record that specifies the extended background color modification. For more information, see the **OfficeArtCOLORREF** structure, as defined in section 2.2.2. The default value for this property is 0x20000000.

2.3.7.40 reserved421

This property is reserved and MUST be ignored.

0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																reserved421															
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section [2.2.8](#), that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	MUST be 0x01A5.
opid.fBid	MUST be 0x0.
opid.fComplex	MUST be 0x0.

reserved421 (4 bytes): A value that MUST equal zero and MUST be ignored. The default value for this property is 0x00000000.

2.3.7.41   reserved422

The **reserved422** property MUST equal 0xFFFFFFFF and MUST be ignored.

0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																reserved422															
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section [2.2.8](#), that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x01A6.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

reserved422 (4 bytes): A value that MUST equal 0xFFFFFFFF and MUST be ignored. The default value for this property is 0xFFFFFFFF.

2.3.7.42   reserved423

The **reserved423** property MUST equal 0xFFFFFFFF and MUST be ignored.

0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																reserved423															

...	

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x01A7.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

reserved423 (4 bytes): A value that MUST equal 0xFFFFFFFF and MUST be ignored. The default value for this property is 0xFFFFFFFF.

2.3.7.43   Fill Style Boolean Properties

The **Fill Style Boolean Properties** specify a 32-bit field of Boolean properties for the fill style.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x01BF.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

unused1 (9 bits): A value that is undefined and MUST be ignored.

A - fUsefRecolorFillAsPicture (1 bit): A bit that specifies whether the **fRecolorFillAsPicture** bit is set. A value of 0x0 specifies that the **fRecolorFillAsPicture** MUST be ignored. The default value for this property is 0x0.

B - fUsefUseShapeAnchor (1 bit): A bit that specifies whether the **fUseShapeAnchor** bit is set. A value of 0x0 specifies that the **fUseShapeAnchor** MUST be ignored. The default value for this property is 0x0.
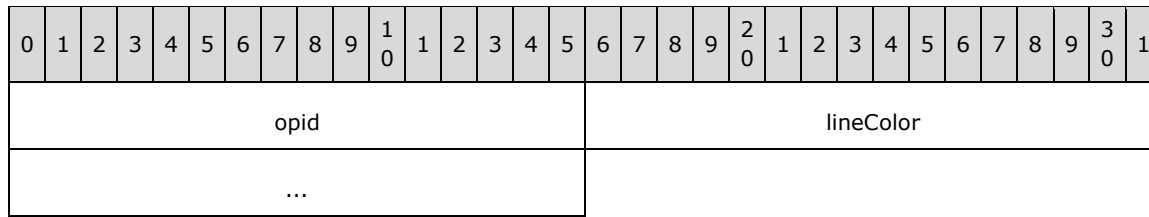
C - fUsefFilled (1 bit): A bit that specifies whether the **fFilled** bit is set. A value of 0x0 specifies that the **fFilled** MUST be ignored. The default value for this property is 0x0.

D - fUsefHitTestFill (1 bit): A bit that specifies whether the **fHitTestFill** bit is set. A value of 0x0 specifies that the **fHitTestFill** MUST be ignored. The default value for this property is 0x0.

E - fUsefillShape (1 bit): A bit that specifies whether the **fillShape** bit is set. A value of 0x0 specifies that the **fillShape** MUST be ignored. The default value for this property is 0x0.

F - fUsefillUseRect (1 bit): A bit that specifies whether the **fillUseRect** bit is set. A value of 0x0 specifies that the **fillUseRect** MUST be ignored. The default value for this property is 0x0.

G - fUsefNoFillHitTest (1 bit): A bit that specifies whether the **fNoFillHitTest** bit is set. A value of 0x0 specifies that the **fNoFillHitTest** MUST be ignored. The default value for this property is 0x0.

unused2 (9 bits): A value that is undefined and MUST be ignored.

H - fRecolorFillAsPicture (1 bit): A bit that specifies how to recolor a picture fill. If this bit is set to 0x1, the pictureFillCrMod property of the picture fill is used for recoloring. If this bit is set to 0x0, the **fillCrMod** property, as defined in section 2.3.7.6, is used for recoloring. If **fUsefRecolorFillAsPicture** equals 0x0, this value MUST be ignored. The default value for this property is 0x0.

I - fUseShapeAnchor (1 bit): A bit that specifies whether the fill is rotated with the **shape**. If **fUsefUseShapeAnchor** equals 0x0, this value MUST be ignored. The default value for this property is 0x0.

J - fFilled (1 bit): A bit that specifies whether the fill is rendered if the shape is a 2-D shape. If this bit is set to 0x1, the fill of this shape is rendered based on the properties of the Fill Style property set. If this bit is set to 0x0, the fill of this shape is not rendered. If **fUsefFilled** is 0x0, this value MUST be ignored. The default value for this property is 0x1.

K - fHitTestFill (1 bit): A bit that specifies whether this fill will be hit tested. If **fUsefHitTestFill** equals 0x0, this value MUST be ignored. The default value for this property is 0x1.

L - 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. If **fUsefillShape** equals 0x0, this value MUST be ignored. The default value for this property is 0x1.

M - fillUseRect (1 bit): A bit that specifies whether to use the rectangle specified by the fillRectLeft, fillRectRight, fillRectTop, and fillRectBottom properties, rather than the **bounding rectangle** of the shape, as the filled area. If **fUsefillUseRect** equals 0x0, this value MUST be ignored. The default value for this property is 0x0.

N - fNoFillHitTest (1 bit): A bit that specifies whether this shape will be hit tested as though it were filled. If **fUsefNoFillHitTest** equals 0x0, this value MUST be ignored. The default value for this property is 0x0.

2.3.8   Line Style

The **Line Style** property set specifies the line attributes of the **shape**.

2.3.8.1   lineColor

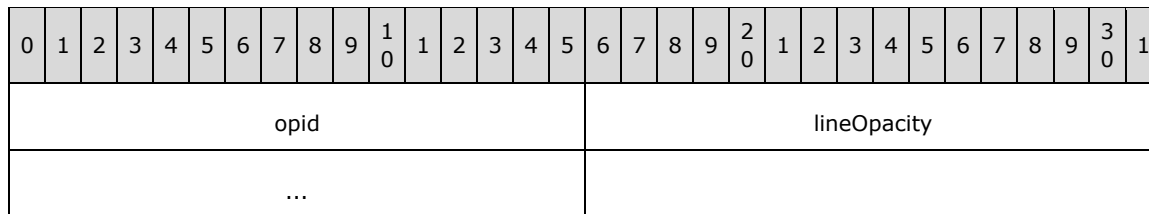The **lineColor** property specifies the foreground color of the line.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x01C0.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

lineColor (4 bytes): An **OfficeArtCOLORREF** record, as defined in section 2.2.2, that specifies the foreground color of the line. The default value for this property is 0x00000000.

2.3.8.2 lineOpacity

The **lineOpacity** property specifies the opacity level of the foreground color.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x01C1.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

lineOpacity (4 bytes): A signed integer that specifies the opacity level of the foreground color. This property MUST be from 0x00000000 through 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

The **lineBackColor** property specifies the background color of the line.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x01C2.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

lineBackColor (4 bytes): An **OfficeArtCOLORREF** record, as defined in section 2.2.2, that specifies the background color of the line. The default value for this property is 0x00FFFFFF.

2.3.8.4 lineCrMod

The **lineCrMod** property specifies the foreground color of the line for black-and-white display mode.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x01C3.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

lineCrMod (4 bytes): An **OfficeArtCOLORREF** record, as defined in section 2.2.2, 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

The **lineType** property specifies the type of line.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x01C4.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

lineType (4 bytes): An **MSOLINETYPE** enumeration value, as defined in section 2.4.13, that specifies the type of line. The default value for this property is **msolineSolidType**.

2.3.8.6 lineFillBlip

The **lineFillBlip** property specifies the BLIP that is used to fill this line.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x01C5.
opid.fBid	A value that MUST be 0x0 if **fComplex** equals 0x1 or 0x1 if **fComplex** equals 0x0. If this record is contained in an **OfficeArtInlineSpContainer** record, as defined in section 2.2.15, then the value MUST be ignored.

opid.fComplex	A bit that indicates whether the **lineFillBlip_complex** property, as defined in section 2.3.8.7, exists. If the value equals 0x1, **lineFillBlip_complex** MUST exist. If this record is contained in an **OfficeArtInlineSpContainer** record, as defined in section 2.2.15, then the value MUST be ignored.

lineFillBlip (4 bytes): An unsigned integer specifying the BLIP that is used to fill this line when the **lineType** property, as defined in section 2.3.8.5, is set to **msolinePattern** or **msolineTexture**. The value of **opid.fComplex** determines the meaning of this field, as specified in the following table. The default value for this property is 0x00000000. If this record is contained in an **OfficeArtInlineSpContainer** record, as defined in section 2.2.15, then the value MUST be ignored.

Value of opid.fComplex	Meaning of lineFillBlip field
0x0	Specifies a one-based index into the **rgfb** array of the **OfficeArtBStoreContainer** record, as defined in section 2.2.20. A value of 0x00000000 MUST be ignored.
0x1	Specifies the number of bytes of data in the **lineFillBlip_complex** property.

2.3.8.7 lineFillBlip_complex

The **lineFillBlip_complex** property specifies additional data for the **lineFillBlip** property, as defined in section 2.3.8.6. If the **opid.fComplex** bit of **lineFillBlip** equals 0x1, this property MUST exist.

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

lineFillBlip_complex (variable): An **OfficeArtBlip** record, as defined in section 2.2.23, that specifies the **BLIP** used to fill this line when the **lineType** property, as defined in section 2.3.8.5, is set to msolinePattern or msolineTexture.

2.3.8.8 lineFillBlipName

The **lineFillBlipName** property specifies a comment about the **lineFillBlip** property, as defined in section 2.3.8.6.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x01C6.
opid.fBid	A value that is undefined and MUST be ignored.
opid.fComplex	A bit that indicates whether the **lineFillBlipName_complex** property, as defined in section 2.3.8.9, exists. If the value equals 0x1, **lineFillBlipName_complex** MUST exist.

lineFillBlipName (4 bytes): The number of bytes of data in the **lineFillBlipName_complex** property. If **opid.fComplex** equals 0x0, this value MUST be 0x00000000. The default value for this property is 0x00000000.

2.3.8.9 lineFillBlipName_complex

The **lineFillBlipName_complex** property specifies additional data for the lineFillBlipName property. If the **opid.fComplex** bit of **lineFillBlipName** equals 0x1, this property MUST exist.

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

lineFillBlipName_complex (variable): A null-terminated **Unicode** string that specifies a comment about the **lineFillBlip** property, as defined in section 2.3.8.6, as specified by the **lineFillBlipFlags** property, as defined in section 2.3.8.10.

2.3.8.10   lineFillBlipFlags

The **lineFillBlipFlags** property specifies how to interpret the **lineFillBlipName_complex** property, as defined in section 2.3.8.9.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x01C7.

opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

lineFillBlipFlags (4 bytes): An **MSOBLIPFLAGS** enumeration value, as defined in section 2.4.8, 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

The **lineFillWidth** property specifies the width of a pattern or texture that is used to fill this line. The **lineFillDztype** property, as defined in section 2.3.8.13, specifies how to interpret this value.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x01C8.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

lineFillWidth (4 bytes): A signed integer specifying the width of a pattern or texture that is used to fill this line. If this value is 0x00000000, the width of the pixel data contained in the pattern or texture is to be used, and the appearance of the line fill will depend on the settings of the device on which it is rendered. The default value for this property is 0x00000000.

2.3.8.12   lineFillHeight

The **lineFillHeight** property specifies the height of a pattern or texture that is used to fill this line. The **lineFillDztype** property, as defined in section 2.3.8.13, specifies how to interpret this value.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x01C9.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

lineFillHeight (4 bytes): A signed integer specifying the height of a pattern or texture that is used to fill this line. If this value is 0x00000000, the height of the pixel data contained in the pattern or texture is to be used, and the appearance of the line fill will depend on the settings of the device on which it is rendered. The default value for this property is 0x00000000.

2.3.8.13 lineFillDztype

The **lineFillDztype** property specifies how the **lineFillWidth**, as defined in section 2.3.8.11, and **lineFillHeight**, as defined in section 2.3.8.12, properties MUST be interpreted.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x01CA.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

lineFillDztype (4 bytes): An **MSODZTYPE** enumeration value, as defined in section 2.4.12, that specifies how the **lineFillWidth**, as defined in section 2.3.8.11, and **lineFillHeight**, as defined in section 2.3.8.12, properties MUST be interpreted. The default value for this property is **msodztypeDefault**.

2.3.8.14 lineWidth

The **lineWidth** property specifies the width of the line.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x01CB.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

lineWidth (4 bytes): A signed integer that specifies the width, in **EMUs**, of the line. This value MUST be from 0x00000000 through 0x0132F540, inclusive. The default value for this property is 0x00002535.

2.3.8.15   lineMiterLimit

The **lineMiterLimit** property specifies the maximum allowed ratio of miter length to 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. The following figure illustrates the miter length.
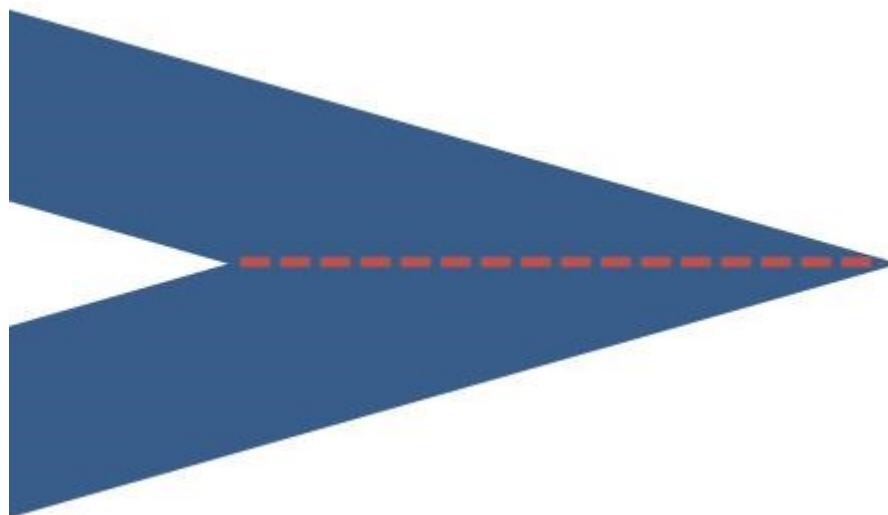
Figure 7: The miter length represented by a dashed line

If the miter length extends beyond the line miter limit, the line SHOULD be clipped, as shown in the following figure.

Figure 8: A line that was clipped because the miter length extended beyond the line miter limit

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x01CC.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

lineMiterLimit (4 bytes): A value of type **FixedPoint**, as specified in [MS-OSHARED] section 2.2.1.6, that specifies the maximum allowed ratio of miter length to line width. The default value for this property is 0x00080000.

2.3.8.16   lineStyle

The **lineStyle** property specifies the style of the line.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x01CD.

opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

lineStyle (4 bytes): An **MSOLINESTYLE** enumeration value, as defined in section 2.4.14, that specifies the style of the line. The default value for this property is **msolineSimple**.

2.3.8.17 lineDashing

The **lineDashing** property specifies the dash style of the line.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x01CE.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

lineDashing (4 bytes): An **MSOLINEDASHING** enumeration value, as defined in section 2.4.15, that specifies the dash style of the line. The default value for this property is **msolineSolid**.

2.3.8.18 lineDashStyle

The **lineDashStyle** property specifies the custom dash style of the line.

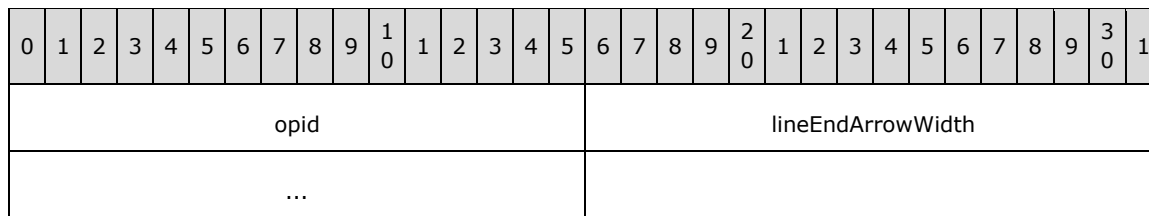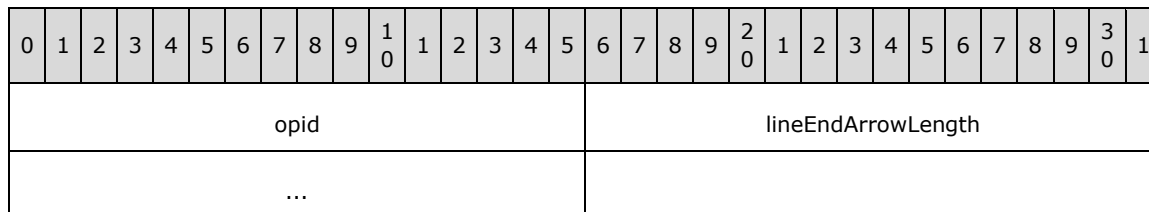| 0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
					opid														lineDashStyle												
					...																										

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x01CF.
opid.fBid	A value that is undefined and MUST be ignored.
opid.fComplex	A bit that indicates whether the **lineDashStyle_complex** property, as defined in section 2.3.8.19, exists. If the value equals 0x1, **lineDashStyle_complex** MUST exist.

lineDashStyle (4 bytes): The number of bytes of data in the **lineDashStyle_complex** property. If **opid.fComplex** equals 0x0, this value MUST be 0x00000000. The default value for this property is 0x00000000.

2.3.8.19   lineDashStyle_complex

The **lineDashStyle_complex** property specifies additional data for the **lineDashStyle** property, as defined in section 2.3.8.18. If the **opid.fComplex** bit of **lineDashStyle** equals 0x1, this property MUST exist.

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

lineDashStyle_complex (variable): An **IMsoArray** record, as defined in section 2.2.51, of 32-bit unsigned integers that specifies a custom dash style for the line. The length of each dash and space in the dash style of the line is the product of a multiplier and the line width. The first element specifies the multiplier of the first dash, the second element specifies the multiplier of the first space, the third element specifies the multiplier of the second dash, and so on—alternating between spaces and dashes. This value SHOULD be used only if the **lineDashing** property, as defined in section 2.3.8.17, is either not present or equal to **msolineSolid**.

2.3.8.20   lineStartArrowhead

The **lineStartArrowhead** 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	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																		lineStartArrowhead																
...																																		

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x01D0.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

lineStartArrowhead (4 bytes): An **MSOLINEEND** enumeration value, as defined in section 2.4.16, specifying the line end decoration that is used at the start of the line. The default value for this property is **msolineNoEnd**.

2.3.8.21   lineEndArrowhead

The **lineEndArrowhead** 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	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																lineEndArrowhead															
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x01D1.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

lineEndArrowhead (4 bytes): An **MSOLINEEND** enumeration value, as defined in section 2.4.16, specifying the line end decoration that is used at the end of the line. The default value for this property is **msolineNoEnd**.

2.3.8.22   lineStartArrowWidth

The **lineStartArrowWidth** 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	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																lineStartArrowWidth															

...	

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x01D2.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

lineStartArrowWidth (4 bytes): An **MSOLINEENDWIDTH** enumeration value, as defined in section 2.4.17, specifying the width of the line end decoration that is used at the start of the line. The default value for this property is **msolineMediumWidthArrow**.

2.3.8.23   lineStartArrowLength

The **lineStartArrowLength** property specifies the length of the **line end decoration** that is used at the start of the line.

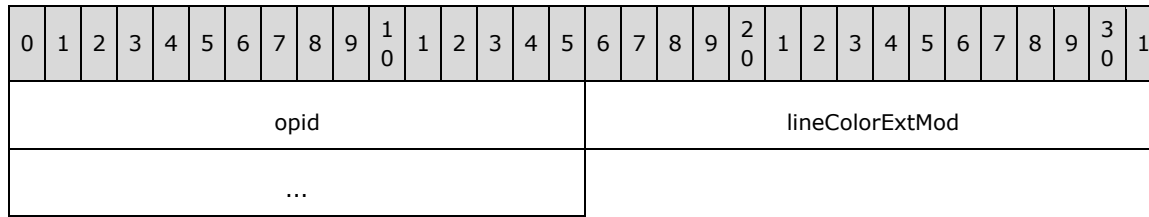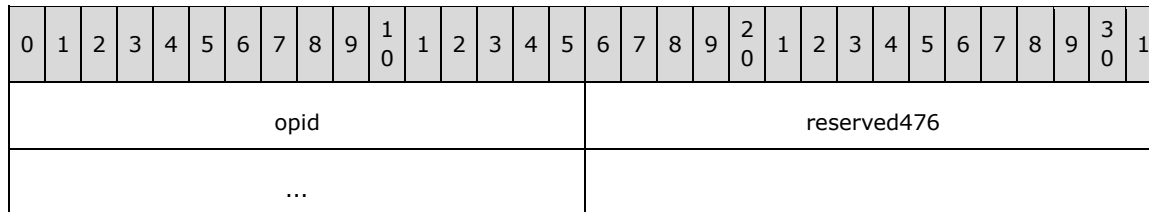| 0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																lineStartArrowLength															
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x01D3.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

lineStartArrowLength (4 bytes): An **MSOLINEENDLENGTH** enumeration value, as defined in section 2.4.18, specifying the length of the line end decoration that is used at the start of the line. The default value for this property is **msolineMediumLenArrow**.

2.3.8.24   lineEndArrowWidth

The **lineEndArrowWidth** 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	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																lineEndArrowWidth															
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x01D4.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

lineEndArrowWidth (4 bytes): An **MSOLINEENDWIDTH** enumeration value, as defined in section 2.4.17, specifying the width of the line end decoration that is used at the end of the line. The default value for this property is **msolineMediumWidthArrow**.

2.3.8.25 lineEndArrowLength

The **lineEndArrowLength** property specifies the length of the **line end decoration** that is used at the end of the line.

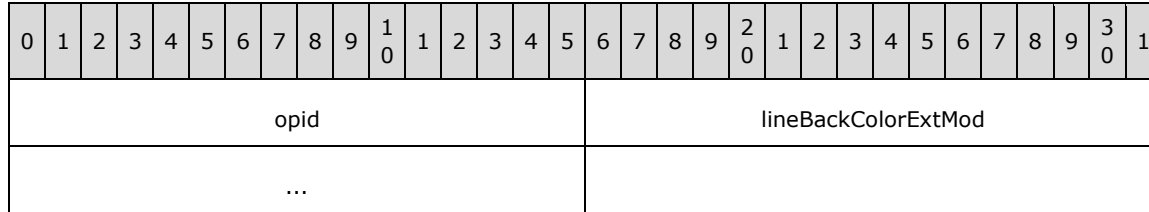| 0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																lineEndArrowLength															
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x01D5.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

lineEndArrowLength (4 bytes): An **MSOLINEENDLENGTH** enumeration value, as defined in section 2.4.18, specifying the length of the line end decoration that is used at the end of the line. The default value for this property is **msolineMediumLenArrow**.

2.3.8.26   lineJoinStyle

The **lineJoinStyle** property specifies the style of the line joins.

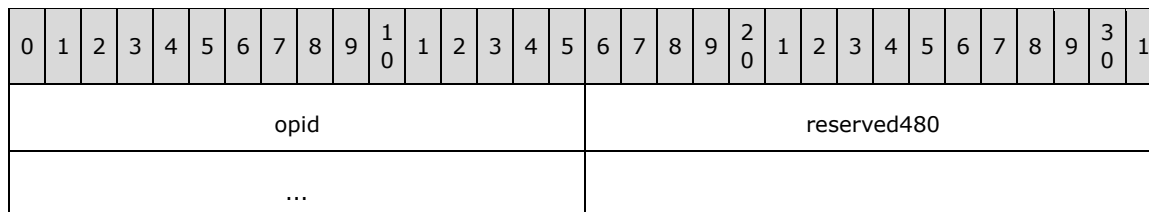| 0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
						opid														lineJoinStyle											
					...																										

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x01D6.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

lineJoinStyle (4 bytes): An **MSOLINEJOIN** enumeration value, as defined in section 2.4.19, that specifies the style of the line joins. The default value for this property is **msolineJoinRound**.

2.3.8.27   lineEndCapStyle

The **lineEndCapStyle** property specifies the style of the line end caps.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x01D7.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

lineEndCapStyle (4 bytes): An **MSOLINECAP** enumeration value, as defined in section 2.4.20, that specifies the style of the line end caps. The default value for this property is **msolineEndCapFlat**.

2.3.8.28   lineColorExt

The **lineColorExt** property specifies the extended foreground color.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x01D9.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

lineColorExt (4 bytes): An **OfficeArtCOLORREF** record, as defined in section 2.2.2, that specifies the extended foreground color. The default value for this property is 0xFFFFFFFF.

2.3.8.29   reserved474

The **reserved474** property MUST equal 0xFFFFFFFF and MUST be ignored.

0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																reserved474															
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x01DA.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

reserved474 (4 bytes): A value that MUST equal 0xFFFFFFFF and MUST be ignored. The default value for this property is 0xFFFFFFFF.

2.3.8.30 lineColorExtMod

The **lineColorExtMod** property specifies the color modification of the extended foreground color.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x01DB.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

lineColorExtMod (4 bytes): An MSOTINTSHADE record that specifies the extended foreground color modification. For more information, see the **OfficeArtCOLORREF** structure, as defined in section 2.2.2. The default value for this property is 0x20000000.

2.3.8.31 reserved476

This property is reserved and MUST be ignored.

0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																reserved476															
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x01DC.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

reserved476 (4 bytes): A value that MUST equal zero and MUST be ignored. The default value for this property is 0x00000000.

2.3.8.32 lineBackColorExt

The **lineBackColorExt** property specifies the extended background color.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x01DD.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

lineBackColorExt (4 bytes): An **OfficeArtCOLORREF** record, as defined in section 2.2.2, that specifies the extended background color. The default value for this property is 0xFFFFFFFF.

2.3.8.33 reserved478

The **reserved478** property MUST be 0xFFFFFFFF and MUST be ignored.

0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																reserved478															
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x01DE.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

reserved478 (4 bytes): A value that MUST equal 0xFFFFFFFF and MUST be ignored. The default value for this property is 0xFFFFFFFF.

2.3.8.34   lineBackColorExtMod

The **lineBackColorExtMod** property specifies the color modification of the extended background color.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x01DF.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

lineBackColorExtMod (4 bytes): An MSOTINTSHADE record that specifies the extended background color modification. For more information, see the **OfficeArtCOLORREF** structure, as defined in section 2.2.2. The default value for this property is 0x20000000.

2.3.8.35   reserved480

This property is reserved and MUST be ignored.

0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																reserved480															
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x01E0.
opid.fBid	A value that MUST be 0x0.

opid.fComplex	A value that MUST be 0x0.

reserved480 (4 bytes): A value that MUST equal zero and MUST be ignored. The default value for this property is 0x00000000.

2.3.8.36 reserved481

The **reserved481** property MUST equal 0xFFFFFFFF and MUST be ignored.

0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																reserved481															
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x01E1.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

reserved481 (4 bytes): A value that MUST equal 0xFFFFFFFF and MUST be ignored. The default value for this property is 0xFFFFFFFF.

2.3.8.37 reserved482

The **reserved482** property MUST equal 0xFFFFFFFF and MUST be ignored.

0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																reserved482															
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x01E2.

opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

reserved482 (4 bytes): A value that MUST equal 0xFFFFFFFF and MUST be ignored. The default value for this property is 0xFFFFFFFF.

2.3.8.38 Line Style Boolean Properties

The **Line Style Boolean Properties** specify a 32-bit field of Boolean properties for the line style.

0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																unused1						A	B	C	D	E	F	G	H	I	J
unused4												K	L	M	N	O	P	Q	R	S	T										

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x01FF.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

unused1 (6 bits): A value that is undefined and MUST be ignored.

A - 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 used instead. The default value of this property is 0x0.

B - unused2 (1 bit): A value that is undefined and MUST be ignored.

C - unused3 (1 bit): A value that is undefined and MUST be ignored.

D - 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 used instead.   The default value of this property is 0x0.

E - 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 used instead.   The default value of this property is 0x0.

F - 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 used instead.   The default value of this property is 0x0.

G - 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 used instead. The default value of this property is 0x0.

H - 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 used instead. The default value of this property is 0x0.

I - 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 used instead. The default value of this property is 0x0.

J - 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 used instead. The default value of this property is 0x0.

unused4 (6 bits): A value that is undefined and MUST be ignored.

K - fLineOpaqueBackColor (1 bit): A bit that specifies whether an extra line will be rendered underneath the line that is specified by this property set. The extra line MUST be equivalent to the line that is specified by the current property set, except that the **lineColor** property, as defined in section 2.3.8.1, MUST be set to the value of the current property set's **lineBackColor** property, as defined in section 2.3.8.3, and the **lineDashing** property, as defined in section 2.3.8.17, MUST be **msolineSolid**. If **fUsefLineOpaqueBackColor** equals 0x0, this value MUST be ignored. The default value for this property is 0x0.

L - reserved1 (1 bit): A value that MUST be zero and MUST be ignored.

M - reserved2 (1 bit): A value that MUST be zero and MUST be ignored.

N - fInsetPen (1 bit): A bit that specifies whether to draw the line inside the **shape**. If **fInsetPenOK** equals 0x0, this value MUST be ignored. If **fUsefInsetPen** equals 0x0, this value MUST be ignored. The default value for this property is 0x0.

O - fInsetPenOK (1 bit): A bit that specifies whether insetting the pen is allowed. If **fUsefInsetPenOK** equals 0x0, this value MUST be ignored. The default value for this property is 0x1.

P - fArrowheadsOK (1 bit): A bit that specifies whether the **line end decoration** properties are editable. This value SHOULD NOT<42> affect the rendering of the line end decorations. If **fUsefArrowheadsOK** equals 0x0, this value MUST be ignored. The default value for this property is 0x0.

Q - fLine (1 bit): A bit that specifies whether to display the other line properties in this line style if the shape is a 2-D shape. If **fLeftLine** bit of Left Line Style Boolean Properties (as defined in section 2.3.9.38), **fTopLine** bit of Top Line Style Boolean Properties (as defined in section 2.3.10.38), **fBottomLine** bit of Bottom Line Style Boolean Properties (as defined in section 2.3.12.38), or **fRightLine** bit of Right Line Style Boolean Properties (as defined in section 2.3.11.38) is set to 0x1, the other properties in this property set MUST NOT be displayed. If **fUsefLine** equals 0x0, this value MUST be ignored. The default value for this property is 0x1.

R - fHitTestLine (1 bit): A bit that specifies whether this line will be hit tested. If **fUsefHitTestLine** equals 0x0, this value MUST be ignored. The default value for this property is 0x1.

S - fLineFillShape (1 bit): A bit that specifies how the fill is aligned. The following table specifies the meaning of each value for this field. If **fUsefLineFillShape** equals 0x0, this value MUST be ignored. The default value for this property is 0x1.

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 the fill will move with the shape.

T - fNoLineDrawDash (1 bit): A bit that specifies whether a dashed line will be drawn if the other properties specify that no line exists. If **fUsefNoLineDrawDash** equals0x0, this value MUST be ignored. The default value for this property is 0x0.

2.3.9 Left Line Style

The **Left Line Style** property set specifies the line attributes that are applied to the left side of a rectangular **shape**.

2.3.9.1 lineLeftColor

The **lineLeftColor** property specifies the foreground color of the line.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0540.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

lineLeftColor (4 bytes): An **OfficeArtCOLORREF** record, as defined in section 2.2.2, that specifies the foreground color of the line. The default value for this property is 0x00000000.

2.3.9.2 lineLeftOpacity

The **lineLeftOpacity** property specifies the opacity level of the foreground color.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0541.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

lineLeftOpacity (4 bytes): A signed integer that specifies the opacity level of the foreground color. This property MUST be from 0x00000000 through 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

The **lineLeftBackColor** property specifies the background color of the line.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0542.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

lineLeftBackColor (4 bytes): An **OfficeArtCOLORREF** record, as defined in section 2.2.2, that specifies the background color of the line. The default value for this property is 0x00FFFFFF.

2.3.9.4 lineLeftCrMod

The **lineLeftCrMod** property specifies the foreground color of the line for black-and-white display mode.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0543.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

lineLeftCrMod (4 bytes): An **OfficeArtCOLORREF** record, as defined in section 2.2.2, 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

The **lineLeftType** property specifies the type of line.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0544.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

lineLeftType (4 bytes): An **MSOLINETYPE** enumeration value, as defined in section 2.4.13, that specifies the type of line. The default value for this property is **msolineSolidType**.

2.3.9.6 lineLeftFillBlip

The **lineLeftFillBlip** property specifies the **BLIP** that is used to fill this line.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0545.
opid.fBid	A value that MUST be 0x0 if **fComplex** equals 0x1 or 0x1 if **fComplex** equals 0x0. If this record is contained in an **OfficeArtInlineSpContainer** record, as defined in section 2.2.15, then the value MUST be ignored.
opid.fComplex	A bit that indicates whether the **lineLeftFillBlip_complex** property, as defined in section 2.3.9.7, exists. If the value equals 0x1, **lineLeftFillBlip_complex** MUST exist. If this record is contained in an **OfficeArtInlineSpContainer** then the value MUST be ignored.

lineLeftFillBlip (4 bytes): An unsigned integer specifying the BLIP that is used to fill this line when the **lineLeftType** property, as defined in section 2.3.9.5, is set to **msolinePattern** or **msolineTexture**. The value of **opid.fComplex** determines the meaning of this field, as specified in the following table. The default value for this property is 0x00000000. If this record is contained in an **OfficeArtInlineSpContainer** record then the value MUST be ignored.

Value of opid.fComplex	Meaning of lineLeftFillBlip field
0x0	Specifies a one-based index into the **rgfb** array of the **OfficeArtBStoreContainer** record, as defined in section 2.2.20. A value of 0x00000000 MUST be ignored.
0x1	Specifies the number of bytes of data in the **lineLeftFillBlip_complex** property, as defined in section 2.3.9.7.

2.3.9.7 lineLeftFillBlip_complex

The **lineLeftFillBlip_complex** property specifies additional data for the **lineLeftFillBlip** property, as defined in section 2.3.9.6. If the **opid.fComplex** bit of **lineLeftFillBlip** equals 0x1, this property MUST exist.

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

lineLeftFillBlip_complex (variable): An **OfficeArtBlip** record, as defined in section 2.2.23, specifying the **BLIP** that is used to fill this line if the **lineLeftType** property, as defined in section 2.3.9.5, is set to **msolinePattern** or **msolineTexture**.

2.3.9.8 lineLeftFillBlipName

The **lineLeftFillBlipName** property specifies a comment about the **lineLeftFillBlip** property, as defined in section 2.3.9.6.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0546.
opid.fBid	A value that is undefined and MUST be ignored.
opid.fComplex	A bit that indicates whether the **lineLeftFillBlipName_complex** property, as defined in section 2.3.9.9, exists. If the value equals 0x1, **lineLeftFillBlipName_complex** MUST exist.

lineLeftFillBlipName (4 bytes): The number of bytes of data in the **lineLeftFillBlipName_complex** property. If **opid.fComplex** equals 0x0, this value MUST be 0x00000000. The default value for this property is 0x00000000.

2.3.9.9 lineLeftFillBlipName_complex

The **lineLeftFillBlipName_complex** property specifies additional data for the **lineLeftFillBlipName** property, as defined in section 2.3.9.8. If the **opid.fComplex** bit of **lineLeftFillBlipName** equals 0x1, this property MUST exist.

0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
lineLeftFillBlipName_complex (variable)																															

...

lineLeftFillBlipName_complex (variable): A null-terminated **Unicode** string that specifies a comment about the **lineLeftFillBlip** property, as defined in section 2.3.9.6, as specified by the **lineLeftFillBlipFlags** property, as defined in section 2.3.9.10.

2.3.9.10   lineLeftFillBlipFlags

The **lineLeftFillBlipFlags** property specifies how to interpret the **lineLeftFillBlipName_complex** property, as defined in section 2.3.9.9.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0547.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

lineLeftFillBlipFlags (4 bytes): An **MSOBLIPFLAGS** enumeration value, as defined in section 2.4.8, that specifies how to interpret the **lineLeftFillBlipName_complex** property, as defined in section 2.3.9.9. This value MUST be **msoblipflagComment**. The default value for this property is **msoblipflagComment**.

2.3.9.11   lineLeftFillWidth

The **lineLeftFillWidth** property specifies the width of a pattern or texture that is used to fill this line. The **lineLeftFillDztype** property, as defined in section 2.3.9.13, specifies how to interpret this value.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0548.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

lineLeftFillWidth (4 bytes): A signed integer specifying the width of a pattern or texture that is used to fill this line. If this value is 0x00000000, the width of the pixel data contained in the pattern or texture is to be used, and the appearance of the line fill will depend on the settings of the device on which it is rendered. The default value for this property is 0x00000000.

2.3.9.12 lineLeftFillHeight

The **lineLeftFillHeight** property specifies the height of a pattern or texture that is used to fill this line. The **lineLeftFillDztype** property, as defined in section 2.3.9.13, specifies how to interpret this value.

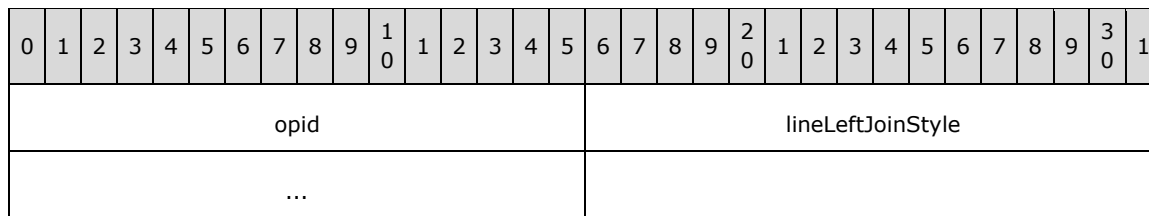| 0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																lineLeftFillHeight															
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0549.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

lineLeftFillHeight (4 bytes): A signed integer specifying the height of a pattern or texture that is used to fill this line. If this value is 0x00000000, the height of the pixel data contained in the pattern or texture is to be used, and the appearance of the line fill will depend on the settings of the device on which it is rendered. The default value for this property is 0x00000000.

2.3.9.13 lineLeftFillDztype

The **lineLeftFillDztype** property specifies how the **lineLeftFillWidth**, as defined in section 2.3.9.11, and **lineLeftFillHeight**, as defined in section 2.3.9.12, properties MUST be interpreted.

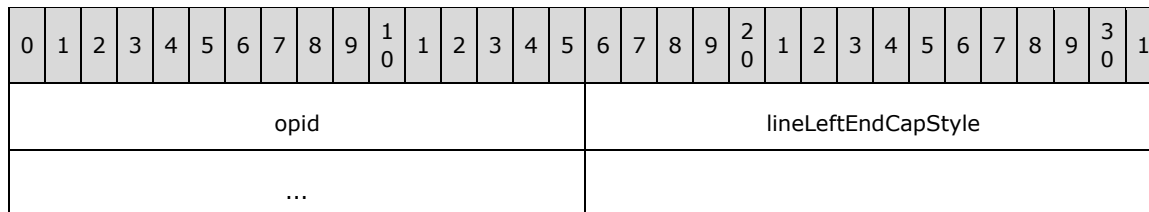| 0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																lineLeftFillDztype															
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x054A.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

lineLeftFillDztype (4 bytes): An **MSODZTYPE** enumeration value, as defined in section 2.4.12, that specifies how the **lineLeftFillWidth**, as defined in section 2.3.9.11, and **lineLeftFillHeight**, as defined in section 2.3.9.12, properties MUST be interpreted. The default value for this property is **msodztypeDefault**.

2.3.9.14   lineLeftWidth

The **lineLeftWidth** property specifies the width of the line.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x054B.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

lineLeftWidth (4 bytes): A signed integer that specifies the width, in **EMUs**, of the line. This value MUST be from 0x00000000 through 0x0132F540, inclusive. The default value for this property is 0x00002535.

2.3.9.15 lineLeftMiterLimit

The **lineLeftMiterLimit** property specifies the maximum allowed ratio of miter length to 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. For an explanation of miter length, see section 2.3.8.15.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x054C.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

lineLeftMiterLimit (4 bytes): A value of type **FixedPoint**, as specified in [MS-OSHARED] section 2.2.1.6, that specifies the maximum allowed ratio of miter length to line width. The default value for this property is 0x00080000.

2.3.9.16 lineLeftStyle

The **lineLeftStyle** property specifies the style of the line.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x054D.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

lineLeftStyle (4 bytes): An **MSOLINESTYLE** enumeration value, as defined in section 2.4.14, that specifies the style of the line. The default value for this property is msolineSimple.

2.3.9.17 lineLeftDashing

The **lineLeftDashing** property specifies the dash style of the line.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x054E.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

lineLeftDashing (4 bytes): An **MSOLINEDASHING** enumeration value, as defined in section 2.4.15, that specifies the dash style of the line. The default value for this property is **msolineSolid**.

2.3.9.18 lineLeftDashStyle

The **lineLeftDashStyle** property specifies the custom dash style of the line.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x054F.
opid.fBid	A value that is undefined and MUST be ignored.

opid.fComplex	A bit that indicates whether the lineLeftDashStyle_complex property exists. If the value equals 0x1, **lineLeftDashStyle_complex** MUST exist.

lineLeftDashStyle (4 bytes): The number of bytes of data in the **lineLeftDashStyle_complex** property. If **opid.fComplex** equals 0x0, this value MUST be 0x00000000. The default value for this property is 0x00000000.

2.3.9.19   lineLeftDashStyle_complex

The **lineLeftDashStyle_complex** property specifies additional data for the lineLeftDashStyle property. If the **opid.fComplex** bit of **lineLeftDashStyle** equals 0x1, this property MUST exist.

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

lineLeftDashStyle_complex (variable): An **IMsoArray** record, as defined in section 2.2.51, of 32-bit unsigned integers that specifies a custom dash style for the line. The length of each dash and space in the dash style of the line is the product of a multiplier and the line width. The first element specifies the multiplier of the first dash, the second element specifies the multiplier of the first space, the third element specifies the multiplier of the second dash, and so on—alternating between spaces and dashes. This value SHOULD be used only if the lineLeftDashing property is either not present or equal to **msolineSolid**.

2.3.9.20   lineLeftStartArrowhead

The **lineLeftStartArrowhead** 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	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
						opid												lineLeftStartArrowhead													
						...																									

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0550.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

lineLeftStartArrowhead (4 bytes): An **MSOLINEEND** enumeration value, as defined in section 2.4.16, specifying the line end decoration that is used at the start of the line. The default value for this property is **msolineNoEnd**.

2.3.9.21 lineLeftEndArrowhead

The **lineLeftEndArrowhead** 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	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																lineLeftEndArrowhead															
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0551.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

lineLeftEndArrowhead (4 bytes): An **MSOLINEEND** enumeration value, as defined in section 2.4.16, specifying the line end decoration that is used at the end of the line. The default value for this property is **msolineNoEnd**.

2.3.9.22 lineLeftStartArrowWidth

The **lineLeftStartArrowWidth** 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	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																lineLeftStartArrowWidth															
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0552.

opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

lineLeftStartArrowWidth (4 bytes): An **MSOLINEENDWIDTH** enumeration value, as defined in section 2.4.17, specifying the width of the line end decoration that is used at the start of the line. The default value for this property is **msolineMediumWidthArrow**.

2.3.9.23 lineLeftStartArrowLength

The **lineLeftStartArrowLength** 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	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																lineLeftStartArrowLength															
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0553.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

lineLeftStartArrowLength (4 bytes): An **MSOLINEENDLENGTH** enumeration value, as defined in section 2.4.18, specifying the length of the line end decoration that is used at the start of the line. The default value for this property is **msolineMediumLenArrow**.

2.3.9.24 lineLeftEndArrowWidth

The **lineLeftEndArrowWidth** 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	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																lineLeftEndArrowWidth															
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0554.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

lineLeftEndArrowWidth (4 bytes): An **MSOLINEENDWIDTH** enumeration value, as defined in section 2.4.17, specifying the width of the line end decoration that is used at the end of the line. The default value for this property is **msolineMediumWidthArrow**.

2.3.9.25 lineLeftEndArrowLength

The **lineLeftEndArrowLength** 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	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																lineLeftEndArrowLength															
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0555.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

lineLeftEndArrowLength (4 bytes): An **MSOLINEENDLENGTH** enumeration value, as defined in section 2.4.18, specifying the length of the line end decoration that is used at the end of the line. The default value for this property is **msolineMediumLenArrow**.

2.3.9.26 lineLeftJoinStyle

The **lineLeftJoinStyle** property specifies the style of the line joins.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0556.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

lineLeftJoinStyle (4 bytes): An **MSOLINEJOIN** enumeration value, as defined in section 2.4.19, that specifies the style of the line joins. The default value for this property is **msolineJoinRound**.

2.3.9.27   lineLeftEndCapStyle

The **lineLeftEndCapStyle** property specifies the style of the line end caps.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0557.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

lineLeftEndCapStyle (4 bytes): An **MSOLINECAP** enumeration value, as defined in section 2.4.20, that specifies the style of the line end caps. The default value for this property is **msolineEndCapFlat**.

2.3.9.28   lineLeftColorExt

The **lineLeftColorExt** property specifies the extended foreground color.

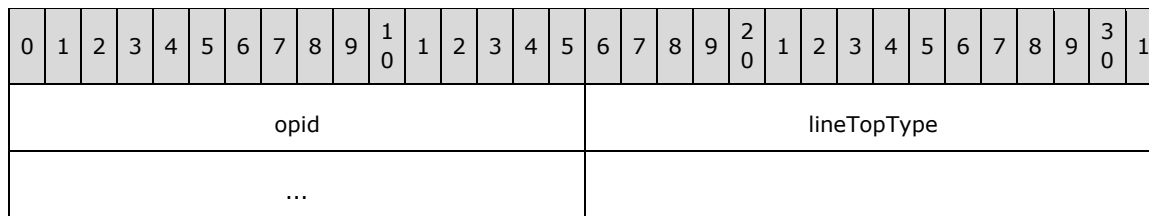| 0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																lineLeftColorExt															
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0559.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

lineLeftColorExt (4 bytes): An **OfficeArtCOLORREF** record, as defined in section 2.2.2, that specifies the extended foreground color. The default value for this property is 0xFFFFFFFF.

2.3.9.29   reserved1370

The **reserved1370** property MUST equal 0xFFFFFFFF and MUST be ignored.

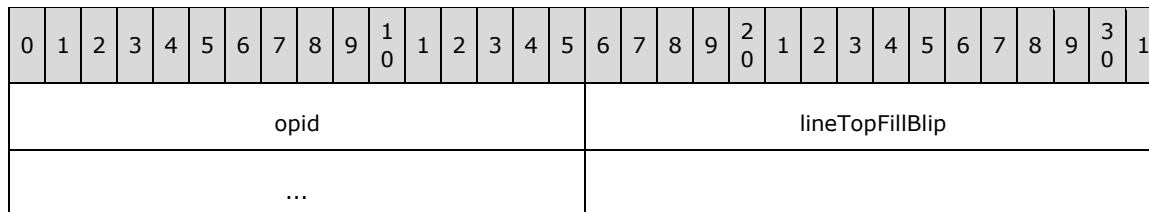| 0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																reserved1370															
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x055A.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

reserved1370 (4 bytes): A value that MUST equal 0xFFFFFFFF and MUST be ignored. The default value for this property is 0xFFFFFFFF.

2.3.9.30 lineLeftColorExtMod

The **lineLeftColorExtMod** property specifies the color modification of the extended foreground color.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x055B.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

lineLeftColorExtMod (4 bytes): An MSOTINTSHADE record that specifies the extended foreground color modification. For more information, see the **OfficeArtCOLORREF** structure, as defined in section 2.2.2. The default value for this property is 0x20000000.

2.3.9.31 reserved1372

This property is reserved and MUST be ignored.

0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																reserved1372															
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x055C.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

reserved1372 (4 bytes): A value that MUST equal zero and MUST be ignored. The default value for this property is 0x00000000.

2.3.9.32 lineLeftBackColorExt

The **lineLeftBackColorExt** property specifies the extended background color.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x055D.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

lineLeftBackColorExt (4 bytes): An **OfficeArtCOLORREF** record, as defined in section 2.2.2, that specifies the extended background color. The default value for this property is 0xFFFFFFFF.

2.3.9.33 reserved1374

The **reserved1374** property MUST equal 0xFFFFFFFF and MUST be ignored.

0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																reserved1374															
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x055E.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

reserved1374 (4 bytes): A value that MUST equal 0xFFFFFFFF and MUST be ignored. The default value for this property is 0xFFFFFFFF.

2.3.9.34 lineLeftBackColorExtMod

The **lineLeftBackColorExtMod** property specifies the color modification of the extended background color.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x055F.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

lineLeftBackColorExtMod (4 bytes): An MSOTINTSHADE record that specifies the extended background color modification. For more information, see the **OfficeArtCOLORREF** structure, as defined in section 2.2.2. The default value for this property is 0x20000000.

2.3.9.35 reserved1376

This property is reserved and MUST be ignored.

0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
					opid														reserved1376												
					...																										

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0560.
opid.fBid	A value that MUST be 0x0.

opid.fComplex	A value that MUST be 0x0.

reserved1376 (4 bytes): A value that MUST equal zero and MUST be ignored. The default value for this property is 0x00000000.

2.3.9.36 reserved1377

The **reserved1377** property MUST be 0xFFFFFFFF and MUST be ignored.

0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																reserved1377															
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0561.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

reserved1377 (4 bytes): A value that MUST equal 0xFFFFFFFF and MUST be ignored. The default value for this property is 0xFFFFFFFF.

2.3.9.37 reserved1378

The **reserved1378** property MUST equal 0xFFFFFFFF and MUST be ignored.

0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																reserved1378															
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0562.

opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

reserved1378 (4 bytes): A value that MUST equal 0xFFFFFFFF and MUST be ignored. The default value for this property is 0xFFFFFFFF.

2.3.9.38 Left Line Style Boolean Properties

The **Left Line Style Boolean Properties** specify a 32-bit field of Boolean properties for the left line style.

0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																unused1						A	B	C	D	E	F	G	H	I	J
unused6								K	L	M	N	O	P	Q	R	S	T														

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x057F.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

unused1 (6 bits): A value that is undefined and MUST be ignored.

A - unused2 (1 bit): A value that is undefined and MUST be ignored.

B - unused3 (1 bit): A value that is undefined and MUST be ignored.

C - unused4 (1 bit): A value that is undefined and MUST be ignored.

D - 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 used instead. The default value for this property is 0x0.

E - 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 used instead. The default value for this property is 0x0.

F - unused5 (1 bit): A value that is undefined and MUST be ignored.

G - 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 used instead. The default value for this property is 0x0.

H - 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 used instead. The default value for this property is 0x0.

I - 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 used instead. The default value for this property is 0x0.

J - 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 used instead. The default value for this property is 0x0.

unused6 (6 bits): A value that is undefined and MUST be ignored.

K - unused7 (1 bit): A value that is undefined and MUST be ignored.

L - reserved1 (1 bit): A value that MUST be zero and MUST be ignored.

M - reserved2 (1 bit): A value that MUST be zero and MUST be ignored.

N - fLeftInsetPen (1 bit): A bit that specifies whether to draw the line inside the **shape**. If **fLeftInsetPenOK** equals 0x0, this bit MUST be ignored. If **fUsefLeftInsetPen** equals 0x0, this value MUST be ignored. The default value for this property is 0x0.

O - fLeftInsetPenOK (1 bit): A bit that specifies whether insetting the pen is allowed. If **fUsefLeftInsetPenOK** equals 0x0, this value MUST be ignored. The default value for this property is 0x1.

P - reserved3 (1 bit): A value that MUST be zero and MUST be ignored.

Q - fLeftLine (1 bit): A bit that specifies whether to display the other line properties in this line style when handling the left side of a rectangular 2-D shape. If **fUsefLeftLine** equals 0x0, this value MUST be ignored. The default value for this property is 0x0. If the **rh.recInstance** field in the **OfficeArtFSP** record, as defined in section 2.2.40, for the shape is not set to one of the **MSOSPT** enumeration values, as defined in section 2.4.24, in the following list, 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**

R - fLeftHitTestLine (1 bit): A bit that specifies whether this line will be hit tested. If **fUsefLeftHitTestLine** equals 0x0, this value MUST be ignored. The default value for this property is 0x1.

S - fLineLeftFillShape (1 bit): A bit that specifies how the fill is aligned. The following table specifies the meaning of each value for this field. If **fUsefLineLeftFillShape** equals 0x0, this value MUST be ignored. The default value for this property is 0x1.

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 will move with the shape.

T - fLeftNoLineDrawDash (1 bit): A bit that specifies whether a dashed line will be drawn if the other properties specify that no line exists. If **fUsefLeftNoLineDrawDash** equals 0x0, this value MUST be ignored. The default value for this property is 0x0.

2.3.10 Top Line Style

The **Top Line Style** property set specifies the line attributes that are applied to the top side of a rectangular **shape**.

2.3.10.1 lineTopColor

The **lineTopColor** property specifies the foreground color of the line.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. Sub-fields are further specified in the following table:

Field	Meaning
opid.opid	A value that MUST be 0x0580.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

lineTopColor (4 bytes): An **OfficeArtCOLORREF** record, as defined in section 2.2.2, that specifies the foreground color of the line. The default value for this property is 0x00000000.

2.3.10.2 lineTopOpacity

The **lineTopOpacity** property specifies the opacity level of the foreground color.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0581.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

lineTopOpacity (4 bytes): A signed integer that specifies the opacity level of the foreground color. This property MUST be from 0x00000000 through 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

The **lineTopBackColor** property specifies the background color of the line.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0582.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

lineTopBackColor (4 bytes): An **OfficeArtCOLORREF** record, as defined in section 2.2.2, that specifies the background color of the line. The default value for this property is 0x00FFFFFF.

2.3.10.4 lineTopCrMod

The **lineTopCrMod** property specifies the foreground color of the line for black-and-white display mode.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0583.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

lineTopCrMod (4 bytes): An **OfficeArtCOLORREF** record, as defined in section 2.2.2, 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

The **lineTopType** property specifies the type of line.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0584.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

lineTopType (4 bytes): An **MSOLINETYPE** enumeration value, as defined in section 2.4.13, that specifies the type of line. The default value for this property is **msolineSolid**.

2.3.10.6 lineTopFillBlip

The **lineTopFillBlip** property specifies the **BLIP** that is used to fill this line.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0585.
opid.fBid	A value that MUST be ignored if **fComplex** equals 0x1. If this record is contained in an **OfficeArtInlineSpContainer** record, as defined in section 2.2.15, then the value MUST be ignored.
opid.fComplex	A bit that indicates whether the **lineTopFillBlip_complex** property, as defined in section 2.3.10.7, exists. If the value equals 0x1, **lineTopFillBlip_complex** MUST exist. If this record is contained in an **OfficeArtInlineSpContainer** record then the value MUST be ignored.

lineTopFillBlip (4 bytes): An unsigned integer specifying the BLIP that is used to fill this line when the **lineTopType** property, as defined in section 2.3.10.5, is set to **msolinePattern** or **msolineTexture**. The value of **opid.fComplex** determines the meaning of this field, as specified in the following table. The default value for this property is 0x00000000. If this record is contained in an **OfficeArtInlineSpContainer** record then the value MUST be ignored.

Value of opid.fComplex	Meaning of lineTopFillBlip field
0x0	Specifies a one-based index into the **rgfb** array of the **OfficeArtBStoreContainer** record, as defined in section 2.2.20. A value of 0x00000000 MUST be ignored.
0x1	Specifies the number of bytes of data in the **lineTopFillBlip_complex** property.

2.3.10.7 lineTopFillBlip_complex

The **lineTopFillBlip_complex** property specifies additional data for the **lineTopFillBlip** property, as defined in section 2.3.10.6. If the **opid.fComplex** bit of **lineTopFillBlip** equals 0x1, this property MUST exist.

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

lineTopFillBlip_complex (variable): An **OfficeArtBlip** record, as defined in section 2.2.23, specifying the BLIP that is used to fill this line if the **lineTopType** property, as defined in section 2.3.10.5, is set to **msolinePattern** or **msolineTexture**.

2.3.10.8 lineTopFillBlipName

The **lineTopFillBlipName** property specifies a comment about the **lineTopFillBlip** property, as defined in section 2.3.10.6.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0586.
opid.fBid	A value that is undefined and MUST be ignored.

opid.fComplex	A bit that indicates whether the **lineTopFillBlipName_complex** property, as defined in section 2.3.10.9, exists. If the value equals 0x1, **lineTopFillBlipName_complex** MUST exist.

lineTopFillBlipName (4 bytes): The number of bytes of data in the **lineTopFillBlipName_complex** property. If **opid.fComplex** equals 0x0, this value MUST be 0x00000000. The default value for this property is 0x00000000.

2.3.10.9   lineTopFillBlipName_complex

The **lineTopFillBlipName_complex** property specifies additional data for the **lineTopFillBlipName** property, as defined in section 2.3.10.8. If the **opid.fComplex** bit of **lineTopFillBlipName** equals 0x1, this property MUST exist.

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

lineTopFillBlipName_complex (variable): A null-terminated **Unicode** string that specifies a comment about the **lineTopFillBlip** property, as defined in section 2.3.10.6, as specified by the **lineTopFillBlipFlags** property, as defined in section 2.3.10.10.

2.3.10.10   lineTopFillBlipFlags

The **lineTopFillBlipFlags** property specifies how to interpret the **lineTopFillBlipName_complex** property, as defined in section 2.3.10.9.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0587.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

lineTopFillBlipFlags (4 bytes): An **MSOBLIPFLAGS** enumeration value, as defined in section 2.4.8, 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

The **lineTopFillWidth** property specifies the width of a pattern or texture that is used to fill this line. The **lineTopFillDztype** property, as defined in section 2.3.10.13, specifies how to interpret this value.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0588.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

lineTopFillWidth (4 bytes): A signed integer specifying the width of a pattern or texture that is used to fill this line. If this value is 0x00000000, the width of the pixel data contained in the pattern or texture is to be used, and the appearance of the line fill will depend on the settings of the device on which it is rendered. The default value for this property is 0x00000000.

2.3.10.12 lineTopFillHeight

The **lineTopFillHeight** property specifies the height of a pattern or texture that is used to fill this line. The **lineTopFillDztype** property, as defined in section 2.3.10.13, specifies how to interpret this value.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0589.

opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

lineTopFillHeight (4 bytes): A signed integer specifying the height of a pattern or texture that is used to fill this line. If this value is 0x00000000, the height of the pixel data contained in the pattern or texture is to be used, and the appearance of the line fill will depend on the settings of the device on which it is rendered. The default value for this property is 0x00000000.

2.3.10.13   lineTopFillDztype

The **lineTopFillDztype** property specifies how the **lineTopFillWidth**, as defined in section 2.3.10.11, and **lineTopFillHeight**, as defined in section 2.3.10.12, properties MUST be interpreted.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x058A.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

lineTopFillDztype (4 bytes): An **MSODZTYPE** enumeration value, as defined in section 2.4.12, that specifies how the **lineTopFillWidth**, as defined in section 2.3.10.11, and **lineTopFillHeight**, as defined in section 2.3.10.12, properties MUST be interpreted. The default value for this property is **msodztypeDefault**.

2.3.10.14   lineTopWidth

The **lineTopWidth** property specifies the width of the line.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x058B.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

lineTopWidth (4 bytes): A signed integer that specifies the width, in **EMUs**, of the line. This value MUST be from 0x00000000 through 0x0132F540, inclusive. The default value for this property is 0x00002535.

2.3.10.15   lineTopMiterLimit

The **lineTopMiterLimit** property specifies the maximum allowed ratio of miter length to 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. For an explanation of miter length, see section 2.3.8.15.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x058C.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

lineTopMiterLimit (4 bytes): A value of type **FixedPoint**, as specified in [MS-OSHARED] section 2.2.1.6, that specifies the maximum allowed ratio of miter length to line width. The default value for this property is 0x00080000.

2.3.10.16   lineTopStyle

The **lineTopStyle** property specifies the style of the line.
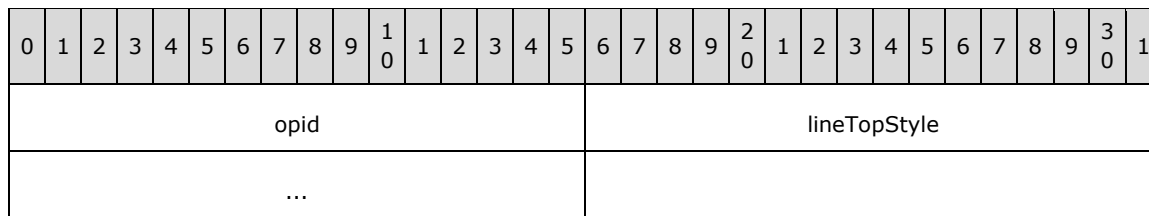
0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid															lineTopStyle																
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x058D.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

lineTopStyle (4 bytes): An **MSOLINESTYLE** enumeration value, as defined in section 2.4.14, that specifies the style of the line. The default value for this property is **msolineSimple**.

2.3.10.17   lineTopDashing

The **lineTopDashing** property specifies the dash style of the line.
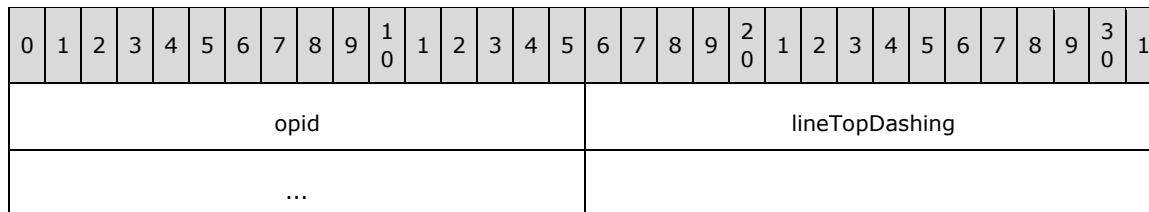
0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid															lineTopDashing																
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x058E.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

lineTopDashing (4 bytes): An **MSOLINEDASHING** enumeration value, as defined in section 2.4.15, that specifies the dash style of the line. The default value for this property is **msolineSolid**.

2.3.10.18 lineTopDashStyle

The **lineTopDashStyle** property specifies the custom dash style of the line.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x058F.
opid.fBid	A value that is undefined and MUST be ignored.
opid.fComplex	A bit that indicates whether the **lineTopDashStyle_complex** property, as defined in section 2.3.10.19, exists. If the value equals 0x1, **lineTopDashStyle_complex** MUST exist.

lineTopDashStyle (4 bytes): The number of bytes of data in the **lineTopDashStyle_complex** property, as defined in section 2.3.10.19. If **opid.fComplex** equals 0x0, this value MUST be 0x00000000. The default value for this property is 0x00000000.

2.3.10.19 lineTopDashStyle_complex

The **lineTopDashStyle_complex** property, as defined in section 2.3.10.19, specifies additional data for the **lineTopDashStyle** property, as defined in section 2.3.10.18. If the **opid.fComplex** bit of **lineTopDashStyle** equals 0x1, this property MUST exist.

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

lineTopDashStyle_complex (variable): An **IMsoArray** record, as defined in section 2.2.51, of 32-bit unsigned integers that specifies a custom dash style for the line. The length of each dash and space in the dash style of the line is the product of a multiplier and the line width. The first element of the array specifies the multiplier of the first dash, the second element of the array specifies the multiplier of the first space, the third element of the array specifies the multiplier of the second dash, and so on—alternating between spaces and dashes. This value SHOULD be used only if the **lineTopDashing** property, as defined in section 2.3.10.17, is either not present or equal to **msolineSolid**.

2.3.10.20   lineTopStartArrowhead

The **lineTopStartArrowhead** 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	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																lineTopStartArrowhead															
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0590.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

lineTopStartArrowhead (4 bytes): An **MSOLINEEND** enumeration value, as defined in section 2.4.16, specifying the line end decoration that is used at the start of the line. The default value for this property is **msolineNoEnd**.

2.3.10.21   lineTopEndArrowhead

The **lineTopEndArrowhead** 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	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																lineTopEndArrowhead															
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0591.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

lineTopEndArrowhead (4 bytes): An **MSOLINEEND** enumeration value, as defined in section 2.4.16, specifying the line end decoration that is used at the end of the line. The default value for this property is **msolineNoEnd**.

2.3.10.22   lineTopStartArrowWidth

The **lineTopStartArrowWidth** 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	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																lineTopStartArrowWidth															
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0592.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

lineTopStartArrowWidth (4 bytes): An **MSOLINEENDWIDTH** enumeration value, as defined in section 2.4.17, specifying the width of the line end decoration that is used at the start of the line. The default value for this property is **msolineMediumWidthArrow**.

2.3.10.23   lineTopStartArrowLength

The **lineTopStartArrowLength** 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	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																lineTopStartArrowLength															
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0593.

opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

lineTopStartArrowLength (4 bytes): An **MSOLINEENDLENGTH** enumeration value, as defined in section 2.4.18, specifying the length of the line end decoration that is used at the start of the line. The default value for this property is **msolineMediumLenArrow**.

2.3.10.24   lineTopEndArrowWidth

The **lineTopEndArrowWidth** 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	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																lineTopEndArrowWidth															
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0594.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

lineTopEndArrowWidth (4 bytes): An **MSOLINEENDWIDTH** enumeration value, as defined in section 2.4.17, specifying the width of the line end decoration that is used at the end of the line. The default value for this property is **msolineMediumWidthArrow**.

2.3.10.25   lineTopEndArrowLength

The **lineTopEndArrowLength** 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	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																lineTopEndArrowLength															
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0595.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

lineTopEndArrowLength (4 bytes): An **MSOLINEENDLENGTH** enumeration value, as defined in section 2.4.18, specifying the length of the line end decoration that is used at the end of the line. The default value for this property is **msolineMediumLenArrow**.

2.3.10.26   lineTopJoinStyle

The **lineTopJoinStyle** property specifies the style of the line joins.

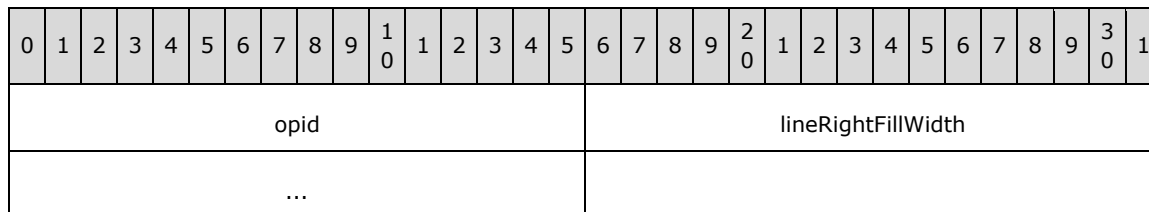| 0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																lineTopJoinStyle															
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0596.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

lineTopJoinStyle (4 bytes): An **MSOLINEJOIN** enumeration value, as defined in section 2.4.19, that specifies the style of the line joins. The default value for this property is **msolineJoinRound**.

2.3.10.27   lineTopEndCapStyle

The **lineTopEndCapStyle** property specifies the style of the line end caps.

0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																lineTopEndCapStyle															

...	

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0597.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

lineTopEndCapStyle (4 bytes): An **MSOLINECAP** enumeration value, as defined in section 2.4.20, that specifies the style of the line end caps. The default value for this property is **msolineEndCapFlat**.

2.3.10.28 lineTopColorExt

The **lineTopColorExt** property specifies the extended foreground color.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0599.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

lineTopColorExt (4 bytes): An **OfficeArtCOLORREF** record, as defined in section 2.2.2, that specifies the extended foreground color. The default value for this property is 0xFFFFFFFF.

2.3.10.29 reserved1434

This property is reserved and MUST be ignored.

0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid															reserved1434																
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x059A.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

reserved1434 (4 bytes): A value that MUST equal 0xFFFFFFFF and MUST be ignored. The default value for this property is 0xFFFFFFFF.

2.3.10.30   lineTopColorExtMod

The **lineTopColorExtMod** property specifies the color modification of the extended foreground color.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x059B.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

lineTopColorExtMod (4 bytes): An MSOTINTSHADE record that specifies the extended foreground color modification. For more information, see the **OfficeArtCOLORREF** structure, as defined in section 2.2.2. The default value for this property is 0x20000000.

2.3.10.31 reserved1436

This property is reserved and MUST be ignored.

0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																reserved1436															
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x059C.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

reserved1436 (4 bytes): A value that MUST equal zero and MUST be ignored. The default value for this property is 0x00000000.

2.3.10.32 lineTopBackColorExt

The **lineTopBackColorExt** property specifies the extended background color.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x059D.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

lineTopBackColorExt (4 bytes): An **OfficeArtCOLORREF** record, as defined in section 2.2.2, that specifies the extended background color. The default value for this property is 0xFFFFFFFF.

2.3.10.33 reserved1438

This property is reserved and MUST be ignored.

0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																reserved1438															
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x059E.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

reserved1438 (4 bytes): A value that MUST equal 0xFFFFFFFF and MUST be ignored. The default value for this property is 0xFFFFFFFF.

2.3.10.34 lineTopBackColorExtMod

The **lineTopBackColorExtMod** property specifies the color modification of the extended background color.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x059F.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

lineTopBackColorExtMod (4 bytes): An MSOTINTSHADE record that specifies the extended background color modification. For more information, see the **OfficeArtCOLORREF** structure, as defined in section 2.2.2. The default value for this property is 0x20000000.

2.3.10.35   reserved1440

This property is reserved and MUST be ignored.

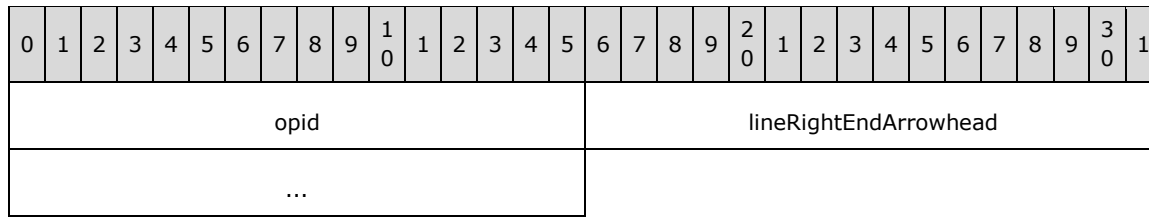| 0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																reserved1440															
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x05A0.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

reserved1440 (4 bytes): A value that MUST equal zero and MUST be ignored. The default value for this property is 0x00000000.

2.3.10.36   reserved1441

This property is reserved and MUST be ignored.

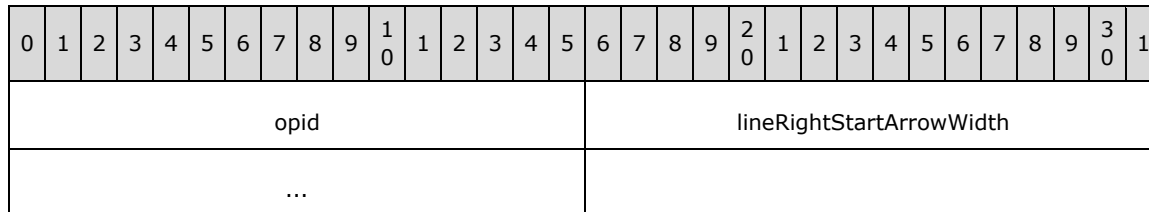| 0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																reserved1441															
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x05A1.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

reserved1441 (4 bytes): A value that MUST equal 0xFFFFFFFF and MUST be ignored. The default value for this property is 0xFFFFFFFF.

2.3.10.37 reserved1442

This property is reserved and MUST be ignored.

0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																reserved1442															
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x05A2.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

reserved1442 (4 bytes): A value that MUST equal 0xFFFFFFFF and MUST be ignored. The default value for this property is 0xFFFFFFFF.

2.3.10.38 Top Line Style Boolean Properties

The **Top Line Style Boolean Properties** specify a 32-bit field of Boolean properties for the top line style.

0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																unused1					A	B	C	D	E	F	G	H	I	J
unused6							K	L	M	N	O	P	Q	R	S	T															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x05BF.
opid.fBid	A value that MUST be 0x0.

opid.fComplex	A value that MUST be 0x0.

unused1 (6 bits): A value that is undefined and MUST be ignored.

A - unused2 (1 bit): A value that is undefined and MUST be ignored.

B - unused3 (1 bit): A value that is undefined and MUST be ignored.

C - unused4 (1 bit): A value that is undefined and MUST be ignored.

D - 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 used instead. The default value for this property is 0x0.

E - 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 used instead. The default value for this property is 0x0.

F - unused5 (1 bit): A value that is undefined and MUST be ignored.

G - 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 used instead. The default value for this property is 0x0.

H - 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 used instead. The default value for this property is 0x0.

I - 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 used instead. The default value for this property is 0x0.

J - 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 used instead. The default value for this property is 0x0.

unused6 (6 bits): A value that is undefined and MUST be ignored.

K - unused7 (1 bit): A value that is undefined and MUST be ignored.

L - reserved1 (1 bit): A value that MUST be zero and MUST be ignored.

M - reserved2 (1 bit): A value that MUST be zero and MUST be ignored.

N - fTopInsetPen (1 bit): A bit that specifies whether to draw the line inside the **shape**. If **fTopInsetPenOK** equals 0x0, this bit MUST be ignored. If **fUsefTopInsetPen** equals 0x0, his value MUST be ignored. The default value for this property is 0x0.

O - fTopInsetPenOK (1 bit): A bit that specifies whether insetting the pen is allowed. If **fUsefTopInsetPenOK** equals 0x0, this value MUST be ignored. The default value for this property is 0x1.

P - reserved3 (1 bit): A value that MUST be zero and MUST be ignored.

Q - fTopLine (1 bit): A bit that specifies whether to display the other line properties in this line style when handling the top side of a rectangular 2-D shape. If **fUsefTopLine** equals 0x0, this value MUST be ignored. The default value for this property is 0x0. If the **rh.recInstance** field in the **OfficeArtFSP** record, as defined in section 2.2.40, for the shape is not set to one of the **MSOSPT**

enumeration values, as defined in section 2.4.24, in the following list, 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**

R - fTopHitTestLine (1 bit): A bit that specifies whether this line will be hit tested. If **fUsefTopHitTestLine** equals 0x0, this value MUST be ignored. The default value for this property is 0x1.

S - fLineTopFillShape (1 bit): A bit that specifies how the fill is aligned. The following table specifies the meaning of each value for this field. If **fUsefLineTopFillShape** equals 0x0, this value MUST be ignored. The default value for this property is 0x1.

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 will move with the shape.

T - fTopNoLineDrawDash (1 bit): A bit that specifies whether a dashed line will be drawn if the other properties specify that no line exists. If **fUsefTopNoLineDrawDash** equals 0x0, this value MUST be ignored. The default value for this property is 0x0.

2.3.11 Right Line Style

The **Right Line Style** property set specifies the line attributes that are applied to the right side of a rectangular **shape**.

2.3.11.1 lineRightColor

The **lineRightColor** property specifies the foreground color of the line.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x05C0.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

lineRightColor (4 bytes): An **OfficeArtCOLORREF** record, as defined in section 2.2.2, that specifies the foreground color of the line. The default value for this property is 0x00000000.

2.3.11.2 lineRightOpacity

The **lineRightOpacity** property specifies the opacity level of the foreground color.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x05C1.
opid.fBid	A value that MUST be 0x0.

opid.fComplex	A value that MUST be 0x0.

lineRightOpacity (4 bytes): A signed integer that specifies the opacity level of the foreground color. This property MUST be from 0x00000000 through 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

The **lineRightBackColor** property specifies the background color of the line.

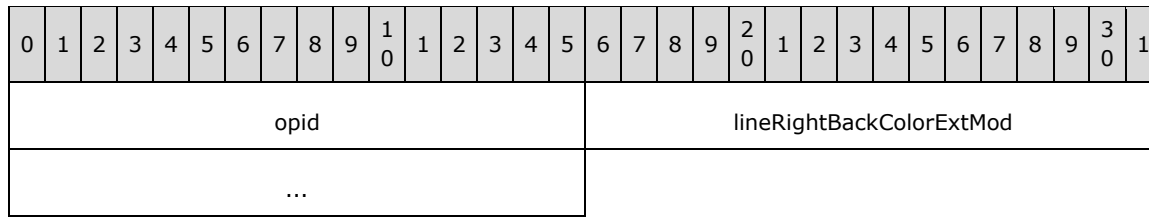| 0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																lineRightBackColor															
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x05C2.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

lineRightBackColor (4 bytes): An **OfficeArtCOLORREF** record, as defined in section 2.2.2, that specifies the background color of the line. The default value for this property is 0x00FFFFFF.

2.3.11.4   lineRightCrMod

The **lineRightCrMod** property specifies the foreground color of the line for black-and-white display mode.

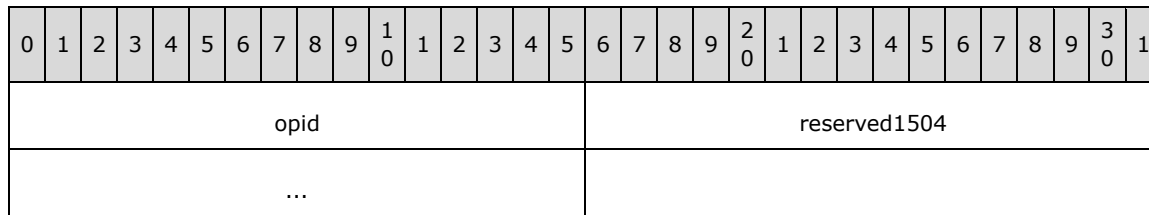| 0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																lineRightCrMod															
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x05C3.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

lineRightCrMod (4 bytes): An **OfficeArtCOLORREF** record, as defined in section 2.2.2, 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

The **lineRightType** property specifies the type of line.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x05C4.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

lineRightType (4 bytes): An **MSOLINETYPE** enumeration value, as defined in section 2.4.13, that specifies the type of line. The default value for this property is **msolineSolid**.

2.3.11.6 lineRightFillBlip

The **lineRightFillBlip** property specifies the **BLIP** that is used to fill this line.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x05C5.
opid.fBid	A value that MUST be 0x0 if **fComplex** equals 0x1 or 0x1 if **fComplex** equals 0x0. If this record is contained in an **OfficeArtInlineSpContainer** record, as defined in section 2.2.15, the value MUST be ignored.
opid.fComplex	A bit that indicates whether the **lineRightFillBlip_complex** property, as defined in section 2.3.11.7, exists. If the value equals 0x1, **lineRightFillBlip_complex** MUST exist. If this record is contained in an **OfficeArtInlineSpContainer** record then the value MUST be ignored.

lineRightFillBlip (4 bytes): An unsigned integer specifying the BLIP that is used to fill this line when the **lineRightType** property, as defined in section 2.3.11.5, is set to **msolinePattern** or **msolineTexture**. The value of **opid.fComplex** determines the meaning of this field, as specified in the following table. The default value for this property is 0x00000000. If this record is contained in an **OfficeArtInlineSpContainer** record then the value MUST be ignored.

Value of opid.fComplex	Meaning of lineRightFillBlip field
0x0	Specifies a one-based index into the **rgfb** array of the **OfficeArtBStoreContainer** record, as defined in section 2.2.20. A value of 0x00000000 MUST be ignored.
0x1	Specifies the number of bytes of data in the **lineRightFillBlip_complex** property, as defined in section 2.3.11.7.

2.3.11.7 lineRightFillBlip_complex

The **lineRightFillBlip_complex** property specifies additional data for the **lineRightFillBlip** property, as defined in section 2.3.11.6. If the **opid.fComplex** bit of **lineRightFillBlip** equals 0x1, this property MUST exist.

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

lineRightFillBlip_complex (variable): An **OfficeArtBlip** record, as defined in section 2.2.23, specifying the BLIP that is used to fill this line if the **lineRightType** property, as defined in section 2.3.11.5, is set to **msolinePattern** or **msolineTexture**.

2.3.11.8 lineRightFillBlipName

The **lineRightFillBlipName** property specifies a comment about the **lineRightFillBlip** property, as defined in section 2.3.11.6.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x05C6.
opid.fBid	A value that is undefined and MUST be ignored.
opid.fComplex	A bit that indicates whether the **lineRightFillBlipName_complex** property, as defined in section 2.3.11.9, exists. If the value equals 0x1, **lineRightFillBlipName_complex** MUST exist.

lineRightFillBlipName (4 bytes): The number of bytes of data in the **lineRightFillBlipName_complex** property. If **opid.fComplex** equal 0x0, this value MUST be 0x00000000. The default value for this property is 0x00000000.

2.3.11.9 lineRightFillBlipName_complex

The **lineRightFillBlipName_complex** property specifies additional data for the **lineRightFillBlipName** property, as defined in section 2.3.11.8. If the **opid.fComplex** bit of **lineRightFillBlipName** equals 0x1, this property MUST exist.

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

lineRightFillBlipName_complex (variable): A null-terminated **Unicode** string that specifies a comment about the **lineRightFillBlip** property, as defined in section 2.3.11.6, as specified by the **lineRightFillBlipFlags** property, as defined in section 2.3.11.10.

2.3.11.10 lineRightFillBlipFlags

The **lineRightFillBlipFlags** property specifies how to interpret the **lineRightFillBlipName_complex** property, as defined in section 2.3.11.9.

0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid															lineRightFillBlipFlags																
...																															
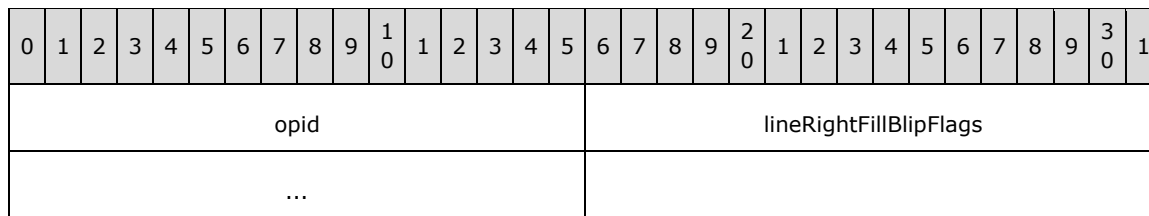
opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x05C7.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

lineRightFillBlipFlags (4 bytes): An **MSOBLIPFLAGS** enumeration value, as defined in section 2.4.8, 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

The **lineRightFillWidth** property specifies the width of a pattern or texture that is used to fill this line. The **lineRightFillDztype** property, as defined in section 2.3.11.13, specifies how to interpret this value.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x05C8.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

lineRightFillWidth (4 bytes): A signed integer specifying the width of a pattern or texture that is used to fill this line. If this value is 0x00000000, the width of the pixel data contained in the

pattern or texture is to be used, and the appearance of the line fill will depend on the settings of the device on which it is rendered. The default value for this property is 0x00000000.

2.3.11.12 lineRightFillHeight

The **lineRightFillHeight** property specifies the height of a pattern or texture that is used to fill this line. The **lineRightFillDztype** property, as defined in section 2.3.11.13, specifies how to interpret this value.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x05C9.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

lineRightFillHeight (4 bytes): A signed integer specifying the height of a pattern or texture that is used to fill this line. If this value is 0x00000000, the height of the pixel data contained in the pattern or texture is to be used, and the appearance of the line fill will depend on the settings of the device on which it is rendered. The default value for this property is 0x00000000.

2.3.11.13 lineRightFillDztype

The **lineRightFillDztype** property specifies how the **lineRightFillWidth**, as defined in section 2.3.11.11, and **lineRightFillHeight**, as defined in section 2.3.11.12, properties MUST be interpreted.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x05CA.

opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

lineRightFillDztype (4 bytes): An **MSODZTYPE** enumeration value, as defined in section 2.4.12, that specifies how the **lineRightFillWidth**, as defined in section 2.3.11.11, and **lineRightFillHeight**, as defined in section 2.3.11.12, properties MUST be interpreted. The default value for this property is **msodztypeDefault**.

2.3.11.14   lineRightWidth

The **lineRightWidth** property specifies the width of the line.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x05CB.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

lineRightWidth (4 bytes): A signed integer that specifies the width, in **EMUs**, of the line. This value MUST be from 0x00000000 through 0x0132F540, inclusive. The default value for this property is 0x00002535.

2.3.11.15   lineRightMiterLimit

The **lineRightMiterLimit** property specifies the maximum allowed ratio of miter length to 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. For an explanation of miter length, see section 2.3.8.15.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x05CC.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

lineRightMiterLimit (4 bytes): A value of type **FixedPoint**, as specified in [MS-OSHARED] section 2.2.1.6, that specifies the maximum allowed ratio of miter length to line width. The default value for this property is 0x00080000.

2.3.11.16 lineRightStyle

The **lineRightStyle** property specifies the style of the line.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x05CD.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

lineRightStyle (4 bytes): An **MSOLINESTYLE** enumeration value, as defined in section 2.4.14, that specifies the style of the line. The default value for this property is **msolineSimple**.

2.3.11.17 lineRightDashing

The **lineRightDashing** property specifies the dash style of the line.

0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																lineRightDashing															

...	

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x05CE.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

lineRightDashing (4 bytes): An **MSOLINEDASHING** enumeration value, as defined in section 2.4.15, that specifies the dash style of the line. The default value for this property is **msolineSolid**.

2.3.11.18   lineRightDashStyle

The **lineRightDashStyle** property specifies the custom dash style of the line.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x05CF.
opid.fBid	A value that is undefined and MUST be ignored.
opid.fComplex	A bit that indicates whether the **lineRightDashStyle_complex** property, as defined in section 2.3.11.19, exists. If the value equals 0x1, **lineRightDashStyle_complex** MUST exist.

lineRightDashStyle (4 bytes): The number of bytes of data in the **lineRightDashStyle_complex** property, as defined in section 2.3.11.19. If **opid.fComplex** equals 0x0, this value MUST be 0x00000000. The default value for this property is 0x00000000.

2.3.11.19 lineRightDashStyle_complex

The **lineRightDashStyle_complex** property specifies additional data for the **lineRightDashStyle** property, as defined in section 2.3.11.18. If the **opid.fComplex** bit of **lineRightDashStyle** equals 0x1, this property MUST exist.

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

lineRightDashStyle_complex (variable): An **IMsoArray** record, as defined in section 2.2.51, of 32-bit unsigned integers that specifies a custom dash style for the line. The length of each dash and space in the dash style of the line is the product of a multiplier and the line width. The first element specifies the multiplier of the first dash, the second element specifies the multiplier of the first space, the third element specifies the multiplier of the second dash, and so on—alternating between spaces and dashes. This value SHOULD be used only if the **lineRightDashing** property, as defined in section 2.3.11.17, is either not present or equal to **msolineSolid**.

2.3.11.20 lineRightStartArrowhead

The **lineRightStartArrowhead** 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	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																lineRightStartArrowhead															
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x05D0.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

lineRightStartArrowhead (4 bytes): An **MSOLINEEND** enumeration value, as defined in section 2.4.16, specifying the line end decoration that is used at the start of the line. The default value for this property is **msolineNoEnd**.

2.3.11.21 lineRightEndArrowhead

The **lineRightEndArrowhead** 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	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																lineRightEndArrowhead															
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x05D1.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

lineRightEndArrowhead (4 bytes): An **MSOLINEEND** enumeration value, as defined in section 2.4.16, specifying the line end decoration that is used at the end of the line. The default value for this property is **msolineNoEnd**.

2.3.11.22   lineRightStartArrowWidth

The **lineRightStartArrowWidth** 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	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																lineRightStartArrowWidth															
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x05D2.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

lineRightStartArrowWidth (4 bytes): An **MSOLINEENDWIDTH** enumeration value, as defined in section 2.4.17, specifying the width of the line end decoration that is used at the start of the line. The default value for this property is **msolineMediumWidthArrow**.

2.3.11.23 lineRightStartArrowLength

The **lineRightStartArrowLength** 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	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																lineRightStartArrowLength															
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x05D3.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

lineRightStartArrowLength (4 bytes): An **MSOLINEENDLENGTH** enumeration value, as defined in section 2.4.18, specifying the length of the line end decoration that is used at the start of the line. The default value for this property is **msolineMediumLenArrow**.

2.3.11.24 lineRightEndArrowWidth

The **lineRightEndArrowWidth** 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	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																lineRightEndArrowWidth															
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x05D4.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

lineRightEndArrowWidth (4 bytes): An **MSOLINEENDWIDTH** enumeration value, as defined in section 2.4.17, specifying the width of the line end decoration that is used at the end of the line. The default value for this property is **msolineMediumWidthArrow**.

2.3.11.25 lineRightEndArrowLength

The **lineRightEndArrowLength** 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	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																lineRightEndArrowLength															
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x05D5.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

lineRightEndArrowLength (4 bytes): An **MSOLINEENDLENGTH** enumeration value, as defined in section 2.4.18, specifying the length of the line end decoration that is used at the end of the line. The default value for this property is **msolineMediumLenArrow**.

2.3.11.26 lineRightJoinStyle

The **lineRightJoinStyle** property specifies the style of the line joins.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x05D6.

opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

lineRightJoinStyle (4 bytes): An **MSOLINEJOIN** enumeration value, as defined in section 2.4.19, that specifies the style of the line joins. The default value for this property is **msolineJoinRound**.

2.3.11.27   lineRightEndCapStyle

The **lineRightEndCapStyle** property specifies the style of the line end caps.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x05D7.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

lineRightEndCapStyle (4 bytes): An **MSOLINECAP** enumeration value, as defined in section 2.4.20, that specifies the style of the line end caps. The default value for this property is **msolineEndCapFlat**.

2.3.11.28   lineRightColorExt

The **lineRightColorExt** property specifies the extended foreground color.

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

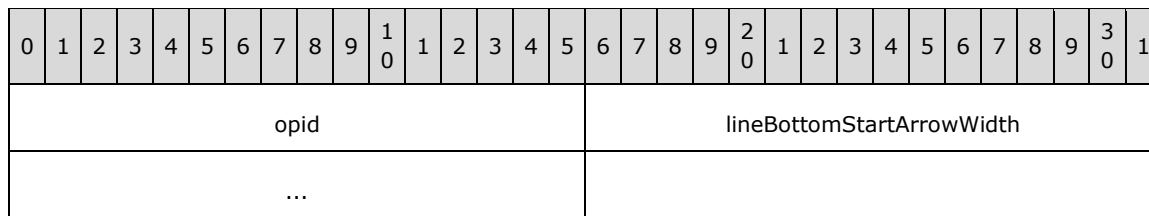**opid (2 bytes):** An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x05D9.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

lineRightColorExt (4 bytes): An **OfficeArtCOLORREF** record, as defined in section 2.2.2, that specifies the extended foreground color. The default value for this property is 0xFFFFFFFF.

2.3.11.29   reserved1498

This property is reserved and MUST be ignored.

0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																reserved1498															
...																															

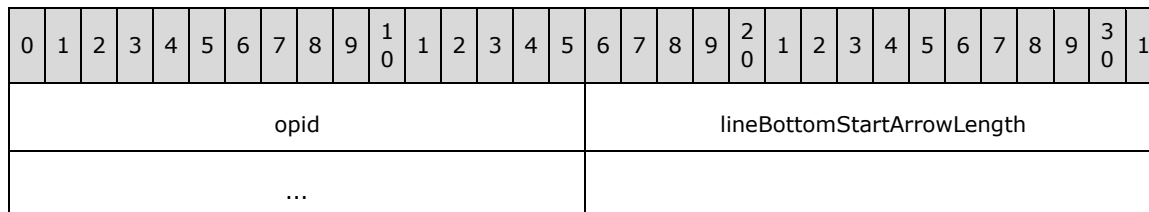**opid (2 bytes):** An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x05DA.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

reserved1498 (4 bytes): A value that MUST equal 0xFFFFFFFF and MUST be ignored. The default value for this property is 0xFFFFFFFF.

2.3.11.30   lineRightColorExtMod

The **lineRightColorExtMod** property specifies the color modification of the extended foreground color.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x05DB.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

lineRightColorExtMod (4 bytes): An MSOTINTSHADE record that specifies the extended foreground color modification. For more information, see the **OfficeArtCOLORREF** structure, as defined in section 2.2.2. The default value for this property is 0x20000000.

2.3.11.31   reserved1500

This property is reserved and MUST be ignored.

0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
						opid														reserved1500											
						...																									

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x05DC.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

reserved1500 (4 bytes): A value that MUST equal zero and MUST be ignored. The default value for this property is 0x00000000.

2.3.11.32   lineRightBackColorExt

The **lineRightBackColorExt** property specifies the extended background color.

0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
						opid														lineRightBackColorExt											

...	

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x05DD.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

lineRightBackColorExt (4 bytes): An **OfficeArtCOLORREF** record, as defined in section 2.2.2, that specifies the extended background color. The default value for this property is 0xFFFFFFFF.

2.3.11.33   reserved1502

The **reserved1502** property MUST equal 0xFFFFFFFF and MUST be ignored.

0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																reserved1502															
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x05DE.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

reserved1502 (4 bytes): A value that MUST equal 0xFFFFFFFF and MUST be ignored. The default value for this property is 0xFFFFFFFF.

2.3.11.34   lineRightBackColorExtMod

The **lineRightBackColorExtMod** property specifies the color modification of the extended background color.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x05DF.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

lineRightBackColorExtMod (4 bytes): An MSOTINTSHADE record that specifies the extended background color modification. For more information, see the **OfficeArtCOLORREF** structure, as defined in section 2.2.2. The default value for this property is 0x20000000.

2.3.11.35   reserved1504

This property is reserved and MUST be ignored.

0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																reserved1504															
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x05E0.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

reserved1504 (4 bytes): A value that MUST equal zero and MUST be ignored. The default value for this property is 0x00000000.

2.3.11.36 reserved1505

The **reserved1505** property MUST equal 0xFFFFFFFF and MUST be ignored.

0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																reserved1505															
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section [2.2.8](#), that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x05E1.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

reserved1505 (4 bytes): A value that MUST equal 0xFFFFFFFF and MUST be ignored. The default value for this property is 0xFFFFFFFF.

2.3.11.37 reserved1506

The **reserved1506** property MUST equal 0xFFFFFFFF and MUST be ignored.

0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																reserved1506															
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section [2.2.8](#), that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x05E2.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

reserved1506 (4 bytes): A value that MUST equal 0xFFFFFFFF and MUST be ignored. The default value for this property is 0xFFFFFFFF.

2.3.11.38 Right Line Style Boolean Properties

The **Right Line Style Boolean Properties** specify a 32-bit field of Boolean properties for the right line style.

0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																unused1						A	B	C	D	E	F	G	H	I	J
unused6						K	L	M	N	O	P	Q	R	S	T																

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x05FF.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

unused1 (6 bits): A value that is undefined and MUST be ignored.

A - unused2 (1 bit): A value that is undefined and MUST be ignored.

B - unused3 (1 bit): A value that is undefined and MUST be ignored.

C - unused4 (1 bit): A value that is undefined and MUST be ignored.

D - 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 used instead. The default value for this property is 0x0.

E - 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 used instead. The default value for this property is 0x0.

F - unused5 (1 bit): A value that is undefined and MUST be ignored.

G - 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 used instead. The default value for this property is 0x0.

H - 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 used instead. The default value for this property is 0x0.

I - 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 used instead. The default value for this property is 0x0.

J - 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 used instead. The default value for this property is 0x0.

unused6 (6 bits): A value that is undefined and MUST be ignored.

K - unused7 (1 bit): A value that is undefined and MUST be ignored.

L - reserved1 (1 bit): A value that MUST be zero and MUST be ignored.

M - reserved2 (1 bit): A value that MUST be zero and MUST be ignored.

N - fRightInsetPen (1 bit): A bit that specifies whether to draw the line inside the **shape**. If **fRightInsetPenOK** equals 0x0, this bit MUST be ignored. If **fUsefRightInsetPen** equals 0x0, this value MUST be ignored. The default value for this property is 0x0.

O - fRightInsetPenOK (1 bit): A bit that specifies whether insetting the pen is allowed. If **fUsefRightInsetPenOK** equals 0x0, this value MUST be ignored. The default value for this property is 0x1.

P - reserved3 (1 bit): A value that MUST be zero and MUST be ignored.

Q - fRightLine (1 bit): A bit that specifies whether to display the other line properties in this line style when handling the right side of a rectangular 2-D shape. If **fUsefRightLine** equals 0x0, this value MUST be ignored. The default value for this property is 0x0. If the **rh.recInstance** field in the **OfficeArtFSP** record, as defined in section 2.2.40, for the shape is not set to one of the **MSOSPT** enumeration values, as defined in section 2.4.24, in the following list, 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**

R - fRightHitTestLine (1 bit): A bit that specifies whether this line will be hit tested. If **fUsefRightHitTestLine** equal 0x0, this value MUST be ignored. The default value for this property is 0x1.

S - fLineRightFillShape (1 bit): A bit that specifies how the fill is aligned. The following table specifies the meaning of each value for this field. If **fUsefLineRightFillShape** equals 0x0, this value MUST be ignored. The default value for this property is 0x1.

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 will move with the shape.

T - fRightNoLineDrawDash (1 bit): A bit that specifies whether a dashed line will be drawn if the other properties specify that no line exists. If **fUsefRightNoLineDrawDash** equals 0x0, this value MUST be ignored. The default value for this property is 0x0.

2.3.12 Bottom Line Style

The **Bottom Line Style** property set specifies the line attributes that are applied to the bottom side of a rectangular **shape**.

2.3.12.1 lineBottomColor

The **lineBottomColor** property specifies the foreground color of the line.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0600.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

lineBottomColor (4 bytes): An **OfficeArtCOLORREF** record, as defined in section 2.2.2, that specifies the foreground color of the line. The default value for this property is 0x00000000.

2.3.12.2 lineBottomOpacity

The **lineBottomOpacity** property specifies the opacity level of the foreground color.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0601.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

lineBottomOpacity (4 bytes): A signed integer that specifies the opacity level of the foreground color. This property MUST be from 0x00000000 through 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	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
				opid													lineBottomBackColor														
				...																											

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0602.
opid.fBid	A value that MUST be 0x0.

opid.fComplex	A value that MUST be 0x0.

lineBottomBackColor (4 bytes): An **OfficeArtCOLORREF** record, as defined in section 2.2.2, that specifies the background color of the line. The default value for this property is 0x00FFFFFF.

2.3.12.4 lineBottomCrMod

The **lineBottomCrMod** property specifies the foreground color of the line for black-and-white display mode.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0603.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

lineBottomCrMod (4 bytes): An **OfficeArtCOLORREF** record, as defined in section 2.2.2, 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

The **lineBottomType** property specifies the type of line.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0604.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

lineBottomType (4 bytes): An **MSOLINETYPE** enumeration value, as defined in section 2.4.13, that specifies the type of line. The default value for this property is **msolineSolid**.

2.3.12.6 lineBottomFillBlip

The **lineBottomFillBlip** property specifies the **BLIP** that is used to fill this line.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0605.
opid.fBid	A value that MUST be 0x0 if **fComplex** equals 0x1 or 0x1 if **fComplex** equals 0x0. If this record is contained in an **OfficeArtInlineSpContainer** record, as defined in section 2.2.15, the value MUST be ignored.
opid.fComplex	A bit that indicates whether the **lineBottomFillBlip_complex** property, as defined in section 2.3.12.7, exists. If the value equals 0x1, **lineBottomFillBlip_complex** MUST exist. If this record is contained in an **OfficeArtInlineSpContainer** record then the value MUST be ignored.

lineBottomFillBlip (4 bytes): An unsigned integer specifying the BLIP that is used to fill this line when the **lineBottomType** property, as defined in section 2.3.12.5, is set to **msolinePattern** or **msolineTexture**. The value of **opid.fComplex** determines the meaning of this field, as specified in the following table. The default value for this property is 0x00000000. If this record is contained in an **OfficeArtInlineSpContainer** record then the value MUST be ignored.

Value of opid.fComplex	Meaning of lineBottomFillBlip field
0x0	Specifies a one-based index into the **rgfb** array of the **OfficeArtBStoreContainer** record, as defined in section 2.2.20. A value of 0x00000000 MUST be ignored.

0x1	Specifies the number of bytes of data in the **lineBottomFillBlip_complex** property.

2.3.12.7   lineBottomFillBlip_complex

The **lineBottomFillBlip_complex** property specifies additional data for the **lineBottomFillBlip** property, as defined in section 2.3.12.6. If the **opid.fComplex** bit of **lineBottomFillBlip** equals 0x1, this property MUST exist.

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

lineBottomFillBlip_complex (variable): An **OfficeArtBlip** record, as defined in section 2.2.23, specifying the **BLIP** that is used to fill this line if the **lineBottomType** property, as defined in section 2.3.12.5, is set to **msolinePattern** or **msolineTexture**.

2.3.12.8   lineBottomFillBlipName

The **lineBottomFillBlipName** property specifies a comment about the **lineBottomFillBlip** property, as defined in section 2.3.12.6.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0606.
opid.fBid	A value that is undefined and MUST be ignored.
opid.fComplex	A bit that indicates whether the **lineBottomFillBlipName_complex** property, as defined in section 2.3.12.9, exists. If the value equals 0x1, **lineBottomFillBlipName_complex** MUST exist.

lineBottomFillBlipName (4 bytes): The number of bytes of data in the **lineBottomFillBlipName_complex** property. If **opid.fComplex** equals 0x0, this value MUST be 0x00000000. The default value for this property is 0x00000000.

2.3.12.9 lineBottomFillBlipName_complex

The **lineBottomFillBlipName_complex** property specifies additional data for the **lineBottomFillBlipName** property, as defined in section 2.3.12.8. If the **opid.fComplex** bit of **lineBottomFillBlipName** equals 0x1, this property MUST exist.

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

lineBottomFillBlipName_complex (variable): A null-terminated **Unicode** string that specifies a comment about the **lineBottomFillBlip** property, as specified by the **lineBottomFillBlipFlags** property, as defined in section 2.3.12.10.

2.3.12.10 lineBottomFillBlipFlags

The **lineBottomFillBlipFlags** property specifies how to interpret the **lineBottomFillBlipName_complex** property, as defined in section 2.3.12.9.

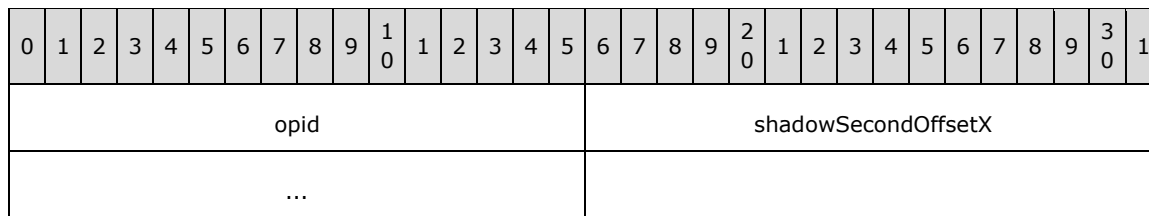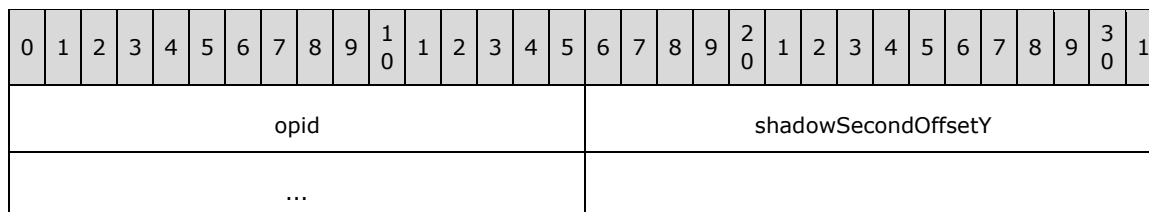| 0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																lineBottomFillBlipFlags															
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0607.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

lineBottomFillBlipFlags (4 bytes): An **MSOBLIPFLAGS** enumeration value, as defined in section 2.4.8, that specifies how to interpret the **lineBottomFillBlipName_complex** property, as defined in section 2.3.12.9. This value MUST be **msoblipflagComment**. The default value for this property is **msoblipflagComment**.

2.3.12.11 lineBottomFillWidth

The **lineBottomFillWidth** property specifies the width of a pattern or texture that is used to fill this line. The **lineBottomFillDztype** property, as defined in section 2.3.12.13, specifies how to interpret this value.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0608.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

lineBottomFillWidth (4 bytes): A signed integer specifying the width of a pattern or texture that is used to fill this line. If this value is 0x00000000, the width of the pixel data contained in the pattern or texture is to be used, and the appearance of the line fill will depend on the settings of the device on which it is rendered. The default value for this property is 0x00000000.

2.3.12.12   lineBottomFillHeight

The **lineBottomFillHeight** property specifies the height of a pattern or texture that is used to fill this line. The **lineBottomFillDztype** property, as defined in section 2.3.12.13, specifies how to interpret this value.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0609.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

lineBottomFillHeight (4 bytes): A signed integer specifying the height of a pattern or texture that is used to fill this line. If this value is 0x00000000, the height of the pixel data contained in the pattern or texture is to be used, and the appearance of the line fill will depend on the settings of the device on which it is rendered. The default value for this property is 0x00000000.

2.3.12.13   lineBottomFillDztype

The **lineBottomFillDztype** property specifies how the **lineBottomFillWidth**, as defined in section 2.3.12.11, and **lineBottomFillHeight**, as defined in section 2.3.12.12, properties MUST be interpreted.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x060A.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

lineBottomFillDztype (4 bytes): An **MSODZTYPE** enumeration value, as defined in section 2.4.12, that specifies how the **lineBottomFillWidth**, as defined in section 2.3.12.11, and **lineBottomFillHeight**, as defined in section 2.3.12.12, properties MUST be interpreted. The default value for this property is **msodztypeDefault**.

2.3.12.14   lineBottomWidth

The **lineBottomWidth** property specifies the width of the line.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x060B.

opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

lineBottomWidth (4 bytes): A signed integer that specifies the width, in **EMUs**, of the line. This value MUST be from 0x00000000 through 0x0132F540, inclusive. The default value for this property is 0x00002535.

2.3.12.15   lineBottomMiterLimit

The **lineBottomMiterLimit** property specifies the maximum allowed ratio of miter length to 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. For an explanation of miter length, see section 2.3.8.15.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x060C.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

lineBottomMiterLimit (4 bytes): A value of type **FixedPoint**, as specified in [MS-OSHARED] section 2.2.1.6, that specifies the maximum allowed ratio of miter length to line width. The default value for this property is 0x00080000.

2.3.12.16   lineBottomStyle

The **lineBottomStyle** property specifies the style of the line.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x060D.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

lineBottomStyle (4 bytes): An **MSOLINESTYLE** enumeration value, as defined in section 2.4.14, that specifies the style of the line. The default value for this property is **msolineSimple**.

2.3.12.17   lineBottomDashing

The **lineBottomDashing** property specifies the dash style of the line.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x060E.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

lineBottomDashing (4 bytes): An **MSOLINEDASHING** enumeration value, as defined in section 2.4.15, that specifies the dash style of the line. The default value for this property is **msolineSolid**.

2.3.12.18   lineBottomDashStyle

The **lineBottomDashStyle** property specifies the custom dash style of the line.

0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																lineBottomDashStyle															

...

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x060F.
opid.fBid	A value that is undefined and MUST be ignored.
opid.fComplex	A bit that indicates whether the **lineBottomDashStyle_complex** property, as defined in section 2.3.12.19, exists. If the value equals 0x1, **lineBottomDashStyle_complex** MUST exist.

lineBottomDashStyle (4 bytes): The number of bytes of data in the **lineBottomDashStyle_complex** property. If **opid.fComplex** equals 0x0, this value MUST be 0x00000000. The default value for this property is 0x00000000.

2.3.12.19   lineBottomDashStyle_complex

The **lineBottomDashStyle_complex** property specifies additional data for the **lineBottomDashStyle** property, as defined in section 2.3.12.18. If the **opid.fComplex** bit of **lineBottomDashStyle** equals 0x1, this property MUST exist.

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

lineBottomDashStyle_complex (variable): An **IMsoArray** record, as defined in section 2.2.51, of 32-bit unsigned integers that specifies a custom dash style for the line. The length of each dash and space in the dash style of the line is the product of a multiplier and the line width. The first element specifies the multiplier of the first dash, the second element specifies the multiplier of the first space, the third element specifies the multiplier of the second dash, and so on—alternating between spaces and dashes. This value SHOULD be used only if the **lineBottomDashing** property, as defined in section 2.3.12.17, is either not present or equal to **msolineSolid**.

2.3.12.20   lineBottomStartArrowhead

The **lineBottomStartArrowhead** 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	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																lineBottomStartArrowhead															
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0610.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

lineBottomStartArrowhead (4 bytes): An **MSOLINEEND** enumeration value, as defined in section 2.4.16, specifying 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

The **lineBottomEndArrowhead** 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	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
					opid															lineBottomEndArrowhead											
					...																										

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0611.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

lineBottomEndArrowhead (4 bytes): An **MSOLINEEND** enumeration value, as defined in section 2.4.16, specifying 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

The **lineBottomStartArrowWidth** 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	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																lineBottomStartArrowWidth															
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0612.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

lineBottomStartArrowWidth (4 bytes): An **MSOLINEENDWIDTH** enumeration value, as defined in section 2.4.17, specifying 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

The **lineBottomStartArrowLength** 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	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																lineBottomStartArrowLength															
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0613.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

lineBottomStartArrowLength (4 bytes): An **MSOLINEENDLENGTH** enumeration value, as defined in section 2.4.18, specifying 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

The **lineBottomEndArrowWidth** 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	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																lineBottomEndArrowWidth															
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0614.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

lineBottomEndArrowWidth (4 bytes): An **MSOLINEENDWIDTH** enumeration value, as defined in section 2.4.17, specifying 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

The **lineBottomEndArrowLength** property specifies the length of the **line end decoration** that is used at the end of the line.

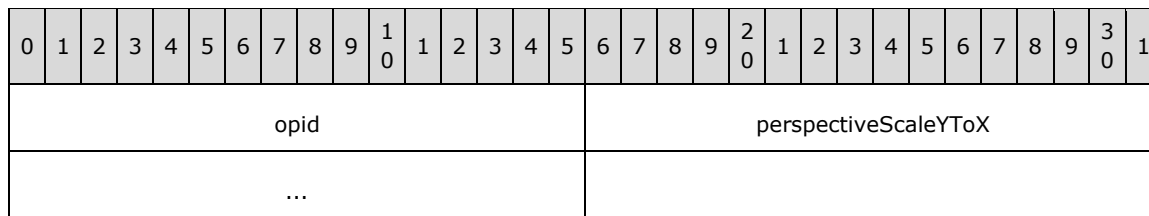| 0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																lineBottomEndArrowLength															
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0615.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

lineBottomEndArrowLength (4 bytes): An **MSOLINEENDLENGTH** enumeration value, as defined in section 2.4.18, specifying 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

The **lineBottomJoinStyle** property specifies the style of the line joins.

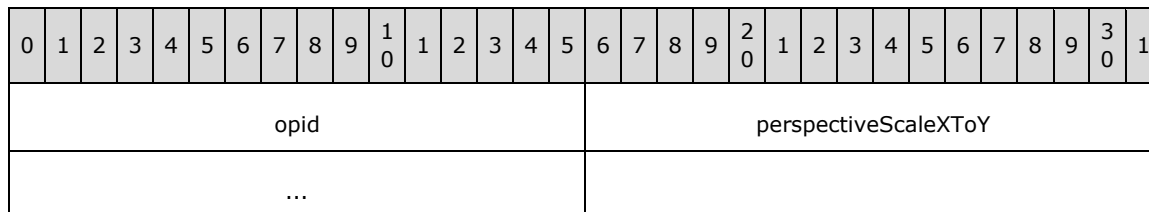| 0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																lineBottomJoinStyle															
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0616.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

lineBottomJoinStyle (4 bytes): An **MSOLINEJOIN** enumeration value, as defined in section 2.4.19, specifying the style of the line joins. The default value for this property is **msolineJoinRound**.

2.3.12.27   lineBottomEndCapStyle

The **lineBottomEndCapStyle** property specifies the style of the line end caps.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0617.
opid.fBid	A value that MUST be 0x0.

opid.fComplex	A value that MUST be 0x0.

lineBottomEndCapStyle (4 bytes): An **MSOLINECAP** enumeration value, as defined in section 2.4.20, specifying the style of the line end caps. The default value for this property is **msolineEndCapFlat**.

2.3.12.28 lineBottomColorExt

The **lineBottomColorExt** property specifies the extended foreground color.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0619.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

lineBottomColorExt (4 bytes): An **OfficeArtCOLORREF** record, as defined in section 2.2.2, that specifies the extended foreground color. The default value for this property is 0xFFFFFFFF.

2.3.12.29 reserved1562

The **reserved1562** property MUST equal 0xFFFFFFFF and MUST be ignored.

0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																reserved1562															
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x061A.

opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

reserved1562 (4 bytes): A value that MUST equal 0xFFFFFFFF and MUST be ignored. The default value for this property is 0xFFFFFFFF.

2.3.12.30   lineBottomColorExtMod

The **lineBottomColorExtMod** property specifies the color modification of the extended foreground color.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x061B.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

lineBottomColorExtMod (4 bytes): An MSOTINTSHADE record that specifies the extended foreground color modification. For more information, see the **OfficeArtCOLORREF** structure, as defined in section 2.2.2. The default value for this property is 0x20000000.

2.3.12.31   reserved1564

This property is reserved and MUST be ignored.

0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																reserved1564															
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x061C.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

reserved1564 (4 bytes): A value that MUST equal zero and MUST be ignored. The default value for this property is 0x00000000.

2.3.12.32 lineBottomBackColorExt

The **lineBottomBackColorExt** property specifies the extended background color.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x061D.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

lineBottomBackColorExt (4 bytes): An **OfficeArtCOLORREF** record, as defined in section 2.2.2, that specifies the extended background color. The default value for this property is 0xFFFFFFFF.

2.3.12.33 reserved1566

The **reserved1566** property MUST equal 0xFFFFFFFF and MUST be ignored.

0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
						opid															reserved1566											
						...																									

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x061E.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

reserved1566 (4 bytes): A value that MUST equal 0xFFFFFFFF and MUST be ignored. The default value for this property is 0xFFFFFFFF.

2.3.12.34   lineBottomBackColorExtMod

The **lineBottomBackColorExtMod** property specifies the color modification of the extended background color.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x061F.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

lineBottomBackColorExtMod (4 bytes): An MSOTINTSHADE record that specifies the extended background color modification. For more information, see the **OfficeArtCOLORREF** structure, as defined in section 2.2.2. The default value for this property is 0x20000000.

2.3.12.35   reserved1568

This property is reserved and MUST be ignored.

0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																reserved1568															
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0620.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

reserved1568 (4 bytes): A value that MUST equal zero and MUST be ignored. The default value for this property is 0x00000000.

2.3.12.36 reserved1569

The **reserved1569** property MUST equal 0xFFFFFFFF and MUST be ignored.

0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																reserved1569															
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0621.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

reserved1569 (4 bytes): A value that MUST equal 0xFFFFFFFF and MUST be ignored. The default value for this property is 0xFFFFFFFF.

2.3.12.37 reserved1570

The **reserved1570** property MUST equal 0xFFFFFFFF and MUST be ignored.

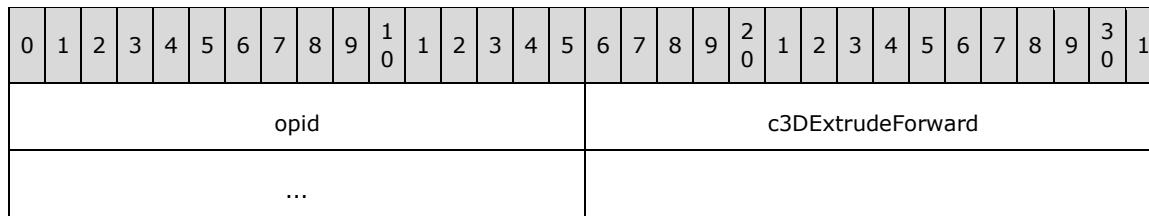| 0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																reserved1570															
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0622.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

reserved1570 (4 bytes): A value that MUST equal 0xFFFFFFFF and MUST be ignored. The default value for this property is 0xFFFFFFFF.

2.3.12.38 Bottom Line Style Boolean Properties

The **Bottom Line Style Boolean Properties** specify a 32-bit field of Boolean properties for the bottom line style.

0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																unused1						A	B	C	D	E	F	G	H	I	J
unused6								K	L	M	N	O	P	Q	R	S	T														

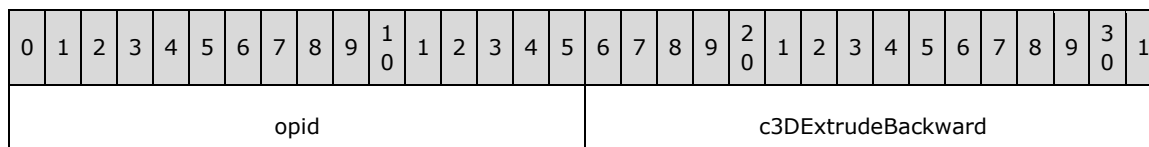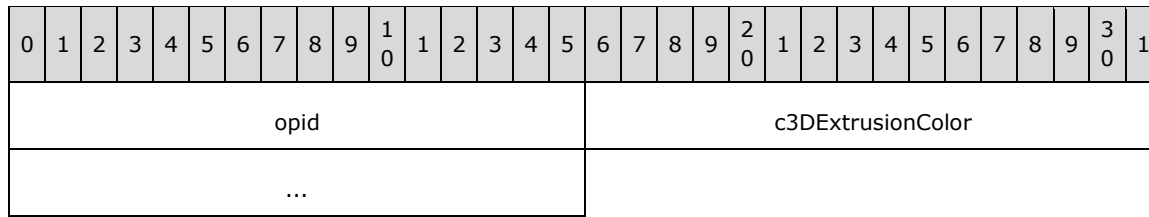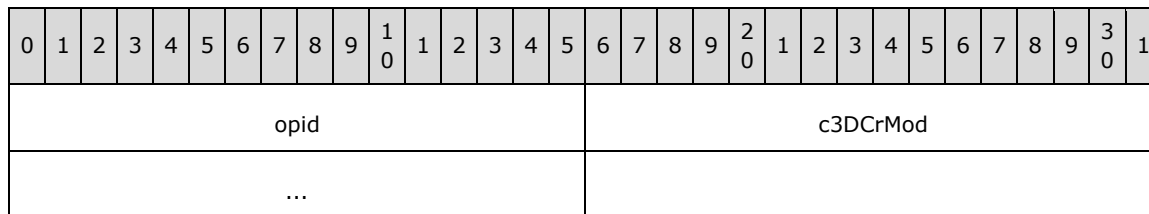**opid (2 bytes):** An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x063F.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

unused1 (6 bits): A value that is undefined and MUST be ignored.

A - unused2 (1 bit): A value that is undefined and MUST be ignored.

B - unused3 (1 bit): A value that is undefined and MUST be ignored.

C - unused4 (1 bit): A value that is undefined and MUST be ignored.

D - 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 used instead. The default value for this property is 0x0.

E - 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 used instead. The default value for this property is 0x0.

F - unused5 (1 bit): A value that is undefined and MUST be ignored.

G - 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 used instead. The default value for this property is 0x0.

H - 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 used instead. The default value for this property is 0x0.

I - 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 used instead. The default value for this property is 0x0.

J - 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 used instead. The default value for this property is 0x0.

unused6 (6 bits): A value that is undefined and MUST be ignored.

K - unused7 (1 bit): A value that is undefined and MUST be ignored.

L - reserved1 (1 bit): A value that MUST be zero and MUST be ignored.

M - reserved2 (1 bit): A value that MUST be zero and MUST be ignored.

N - fBottomInsetPen (1 bit): A bit that specifies whether to draw the line inside the **shape**. If **fBottomInsetPenOK** equals 0x0, this bit MUST be ignored. If **fUsefBottomInsetPen** equals 0x0, this value MUST be ignored. The default value for this property is 0x0.

O - fBottomInsetPenOK (1 bit): A bit that specifies whether insetting the pen is allowed. If **fUsefBottomInsetPenOK** equals 0x0, this value MUST be ignored. The default value for this property is 0x1.

P - reserved3 (1 bit): A value that MUST be zero and MUST be ignored.

Q - fBottomLine (1 bit): A bit that specifies whether to display the other line properties in this line style when handling the bottom side of a rectangular 2-D shape. If **fUsefBottomLine** equals 0x0, this value MUST be ignored. The default value for this property is 0x0. If the **rh.recInstance** field in the **OfficeArtFSP** record, as defined in section 2.2.40, for the shape is not set to one of the **MSOSPT** enumeration values, as defined in section 2.4.24, in the following list, 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**

R - fBottomHitTestLine (1 bit): A bit that specifies whether this line will be hit tested. If **fUsefBottomHitTestLine** equals 0x0, this value MUST be ignored. The default value for this property is 0x1.

S - fLineBottomFillShape (1 bit): A bit that specifies how the fill is aligned. The following table specifies the meaning of each value for this field. If **fUsefLineBottomFillShape** equals 0x0, this value MUST be ignored. The default value for this property is 0x1.

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 will move with the shape.

T - fBottomNoLineDrawDash (1 bit): A bit that specifies whether a dashed line will be drawn if the other properties specify that no line exists. If **fUsefBottomNoLineDrawDash** equals 0x0, this value MUST be ignored. The default value for this property is 0x0.

2.3.13 Shadow Style

The **Shadow Style** property set specifies how a shadow will appear when drawn.

2.3.13.1   shadowType

The **shadowType** property specifies the style of shadow to display with the object.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0200.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

shadowType (4 bytes): An **MSOSHADOWTYPE** enumeration value, as defined in section 2.4.21, that specifies the type of shadow. The default value for this property is **msoshadowOffset**.

2.3.13.2   shadowColor

The **shadowColor** property specifies the primary color of the shadow.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0201.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

shadowColor (4 bytes): An **OfficeArtCOLORREF** record, as defined in section 2.2.2, that specifies the primary color of the shadow. The default value for this property is 0x00808080.

2.3.13.3 shadowHighlight

The **shadowHighlight** property specifies the highlight color of the shadow. This property MUST exist if the **shadowType** property, as defined in section 2.3.13.1, equals **msoshadowDouble** or **msoshadowEmbossOrEngrave**; otherwise, this property MUST be ignored.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0202.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

shadowHighlight (4 bytes): An **OfficeArtCOLORREF** record, as defined in section 2.2.2, that specifies the highlight color of the shadow. The default value for this property is 0x00CBCBCB.

2.3.13.4 shadowCrMod

The **shadowCrMod** property specifies the shadow's primary color modifier to use when running in black-and-white display mode. This property MUST exist if black-and-white display mode is to be used; otherwise, this property MUST be ignored.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0203.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

shadowCrMod (4 bytes): An **OfficeArtCOLORREF** record, as defined in section 2.2.2, that specifies the shadow's primary color modifier to use when running in black-and-white display mode. The default value for this property is 0x20000000.

2.3.13.5   shadowOpacity

The **shadowOpacity** property specifies the opacity level of the shadow.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0204.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

shadowOpacity (4 bytes): A value of type **FixedPoint**, as specified in [MS-OSHARED] section 2.2.1.6, that specifies the opacity level of the shadow. This value MUST be from 0.0 through 1.0. The default value for this property is 0x00010000.

2.3.13.6   shadowOffsetX

The **shadowOffsetX** property specifies the distance along the x-axis that the shadow lies away from the **shape**. This property MUST exist if the **shadowType** property, as defined in section 2.3.13.1, equals **msoshadowOffset** or **msoshadowDouble**; otherwise, this property MUST be ignored.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0205.

opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

shadowOffsetX (4 bytes): A signed integer that specifies the distance, in **EMUs**, along the x-axis that the shadow lies away from the shape. If this value is positive, the shadow is offset from the right side of the axis-aligned **bounding rectangle** for the shape. If this value is negative, the shadow is offset from the left side of the axis-aligned bounding rectangle for the shape. The default value for this property is 0x00006338.

2.3.13.7   shadowOffsetY

The **shadowOffsetY** property specifies the distance along the y-axis that the shadow lies away from the **shape**. This property MUST exist if the **shadowType** property, as defined in section 2.3.13.1, equals **msoshadowOffset** or **msoshadowDouble**; otherwise, this property MUST be ignored.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0206.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

shadowOffsetY (4 bytes): A signed integer that specifies the distance, in **EMUs**, along the y-axis that the shadow lies away from the shape. If this value is positive, the shadow is offset from the bottom of the axis-aligned **bounding rectangle** for the shape. If this value is negative, the shadow is offset from the top of the axis-aligned bounding rectangle for the shape. The default value for this property is 0x00006338.

2.3.13.8   shadowSecondOffsetX

The **shadowSecondOffsetX** property specifies the distance along the x-axis that the highlighted shadow lies away from the **shape**. This property MUST exist if the **shadowType** property, as defined in section 2.3.13.1, equals **msoshadowDouble**; otherwise, this property MUST be ignored.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0207.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

shadowSecondOffsetX (4 bytes): A signed integer that specifies the distance, in **EMUs**, along the x-axis that the highlighted portion of the shadow lies away from the shape. If this value is positive, the shadow is offset from the right side of the axis-aligned **bounding rectangle** for the shape. If this value is negative, the shadow is offset from the left side of the axis-aligned bounding rectangle for the shape. The default value for this property is 0x00000000.

2.3.13.9   shadowSecondOffsetY

The **shadowSecondOffsetY** property specifies the distance along the y-axis that the highlighted shadow lies away from the **shape**. This property MUST exist if the **shadowType** property, as defined in section 2.3.13.1, equals **msoshadowDouble**; otherwise, this property MUST be ignored.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0208.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

shadowSecondOffsetY (4 bytes): A signed integer that specifies the distance, in **EMUs**, along the y-axis that the highlighted portion of the shadow lies away from the shape. If this value is positive, the shadow is offset from the bottom of the axis-aligned **bounding rectangle** for the shape. If this value is negative, the shadow is offset from the top of the axis-aligned bounding rectangle for the shape.

The default value for this property is 0x00000000.

2.3.13.10   shadowOriginX

The **shadowOriginX** 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	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																shadowOriginX															
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0210.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

shadowOriginX (4 bytes): A value of type **FixedPoint**, as specified in [MS-OSHARED] section 2.2.1.6, that specifies the origin, in **EMUs**, of the shadow relative to the center of the shape on the x-axis. The default value for this property is 0x00000000.

2.3.13.11   shadowOriginY

The **shadowOriginY** 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	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																shadowOriginY															
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0211.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

shadowOriginY (4 bytes): A value of type **FixedPoint**, as specified in [MS-OSHARED] section 2.2.1.6, that specifies the origin, in **EMUs**, of the shadow relative to the center of the shape on the y-axis. The default value for this property is 0x00000000.

2.3.13.12   shadowColorExt

The **shadowColorExt** property specifies the primary extended color of the shadow.

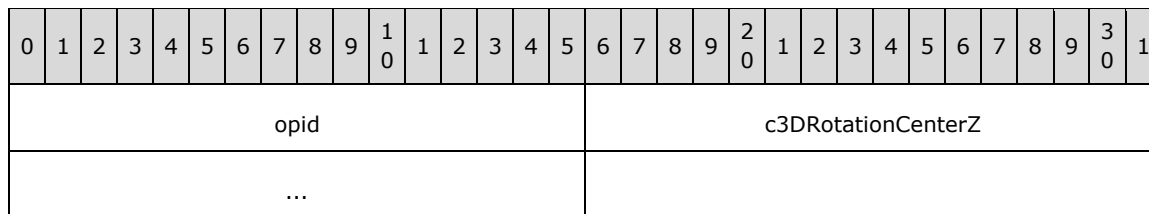| 0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																shadowColorExt															
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0212.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

shadowColorExt (4 bytes): An **OfficeArtCOLORREF** record, as defined in section 2.2.2, that specifies the primary extended color of the shadow. The default value for this property is 0xFFFFFFFF.

2.3.13.13   reserved531

The **reserved531** property MUST equal 0xFFFFFFFF and MUST be ignored.

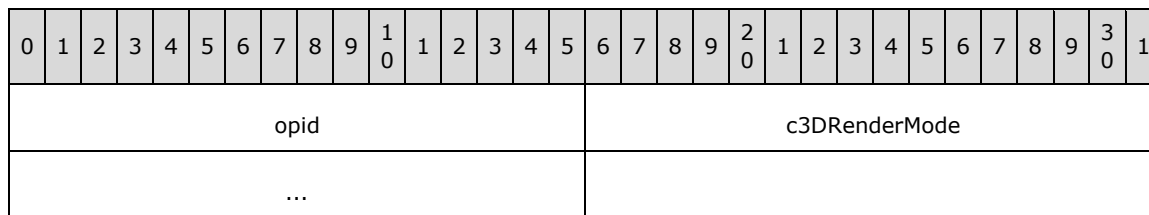| 0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																reserved531															
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0213.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

reserved531 (4 bytes): A value that MUST equal 0xFFFFFFFF and MUST be ignored. The default value for this property is 0xFFFFFFFF.

2.3.13.14 shadowColorExtMod

The **shadowColorExtMod** property specifies the color modification of the primary extended color of the shadow.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0214.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

shadowColorExtMod (4 bytes): An MSOTINTSHADE record that specifies the shadow's primary extended color modification. For more information, see the **OfficeArtCOLORREF** structure, as defined in section 2.2.2. The default value for this property is 0x20000000.

2.3.13.15 reserved533

This property is reserved and MUST be ignored.

0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																reserved533															
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0215.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

reserved533 (4 bytes): A value that MUST equal zero and MUST be ignored. The default value for this property is 0x00000000.

2.3.13.16   shadowHighlightExt

The **shadowHighlightExt** property specifies the extended highlight color of the shadow.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0216.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

shadowHighlightExt (4 bytes): An **OfficeArtCOLORREF** record, as defined in section 2.2.2, that specifies the extended highlight color of the shadow. The default value for this property is 0xFFFFFFFF.

2.3.13.17 reserved535

The **reserved535** property MUST equal 0xFFFFFFFF and MUST be ignored.

0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																reserved535															
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0217.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

reserved535 (4 bytes): A value that MUST equal 0xFFFFFFFF and MUST be ignored. The default value for this property is 0xFFFFFFFF.

2.3.13.18 shadowHighlightExtMod

The **shadowHighlightExtMod** property specifies the color modification of the extended highlight color of the shadow.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0218.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

shadowHighlightExtMod (4 bytes): An [MSOTINTSHADE](#) record that specifies the color modification of the extended highlight color of the shadow. For more information, see the **OfficeArtCOLORREF** structure, as defined in section [2.2.2](#). The default value for this property is 0x20000000.

2.3.13.19   reserved537

This property is reserved and MUST be ignored.

0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																reserved537															
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section [2.2.8](#), that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0219.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

reserved537 (4 bytes): A value that MUST equal zero and MUST be ignored. The default value for this property is 0x00000000.

2.3.13.20   reserved538

The **reserved538** property MUST equal 0xFFFFFFFF and MUST be ignored.

0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																reserved538															
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section [2.2.8](#), that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x021A.
opid.fBid	A value that MUST be 0x0.

opid.fComplex	A value that MUST be 0x0.

reserved538 (4 bytes): A value that MUST equal 0xFFFFFFFF and MUST be ignored. The default value for this property is 0xFFFFFFFF.

2.3.13.21   reserved539

The **reserved539** property MUST equal 0xFFFFFFFF and MUST be ignored.

0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																reserved539															
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x021B.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

reserved539 (4 bytes): A value that MUST equal 0xFFFFFFFF and MUST be ignored. The default value for this property is 0xFFFFFFFF.

2.3.13.22   shadowSoftness

The **shadowSoftness** property specifies the blur radius of the shadow. This property SHOULD<43> be ignored.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x021C.

opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

shadowSoftness (4 bytes): A signed integer that specifies the blur radius of the shadow. This value MUST be from 0x00000000 through 0x001170D8, inclusive. The default value for this property is 0x00000000<44>.

2.3.13.23   Shadow Style Boolean Properties

The **Shadow Style Boolean Properties** specify a 32-bit field of Boolean properties for the state of the shadow.

0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																unused1													A	B	C
unused2													D	E	F																

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x023F.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

unused1 (13 bits): A value that is undefined and MUST be ignored.

A - fUsefInnerShadow (1 bit): This bit is not used and MUST be ignored.

B - 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 used instead. The default value for this property is 0x0.

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 used instead. The default value for this property is 0x0.

unused2 (13 bits): A value that is undefined and MUST be ignored.

D - fInnerShadow (1 bit): This bit is not used and MUST be ignored.

E - 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.

F - fshadowObscured (1 bit): A bit that specifies whether the shadow is fully obscured by the shape. Being fully obscured and not being fully obscured, as illustrated by the following figure, are 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.

Value 0x1 specifies that the shadow is fully obscured by the shape, as below:	**Value 0x0 specifies that the shadow is not fully obscured by the shape, as below:**
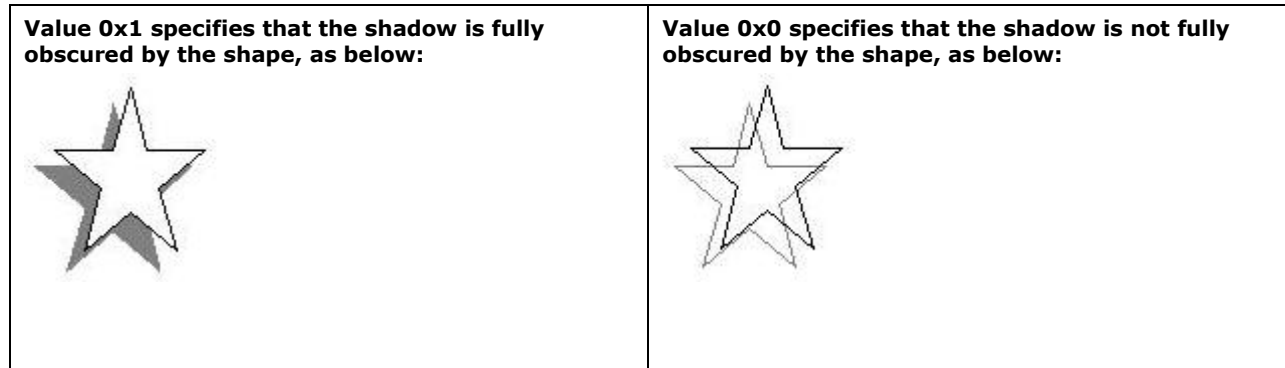
2.3.14 Perspective Style

The **Perspective Style** property set specifies how a **perspective transform** is constructed and applied to a **shape**. The following figure shows how the perspective transform matrix is specified.

$$\begin{bmatrix} perspectiveScaleXToX & perspectiveScaleXToY & 0 \\ perspectiveScaleYToX & perspectiveScaleYToY & 0 \\ perspectivePerspectiveX & perspectivePerspectiveY & 1 \end{bmatrix}$$

Figure 9: Structure of the perspective matrix

2.3.14.1 perspectiveType

The **perspectiveType** property specifies the style of the transform to be constructed for the perspective matrix.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0240.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

perspectiveType (4 bytes): An **MSOXFORMTYPE** enumeration value, as defined in section 2.4.22, 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

The **perspectiveOffsetX** property specifies the offset that is applied to the **shape** along the x-axis before the **perspective transform** is applied.

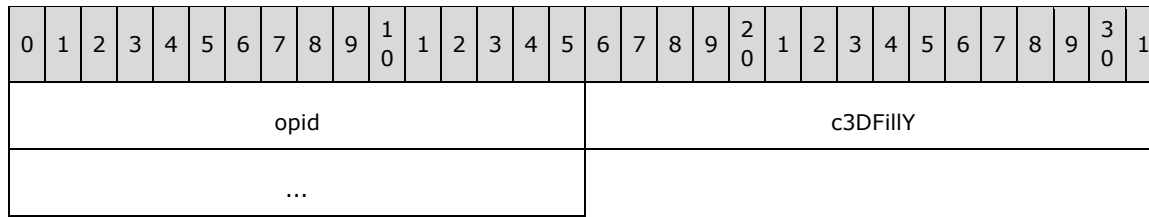| 0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																perspectiveOffsetX															
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0241.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

perspectiveOffsetX (4 bytes): A value of variable type that specifies the offset applied to a shape. If the **perspectiveType** property, as defined in section 2.3.14.1, equals **msoxformShape**, the offset is of type **FixedPoint**, as specified in [MS-OSHARED] section 2.2.1.6. Otherwise, the offset is an integral value, in **EMUs**. The default value for this property is 0x00000000.

2.3.14.3   perspectiveOffsetY

The **perspectiveOffsetY** property specifies the offset that is applied to the **shape** along the y-axis before the **perspective transform** is applied.

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

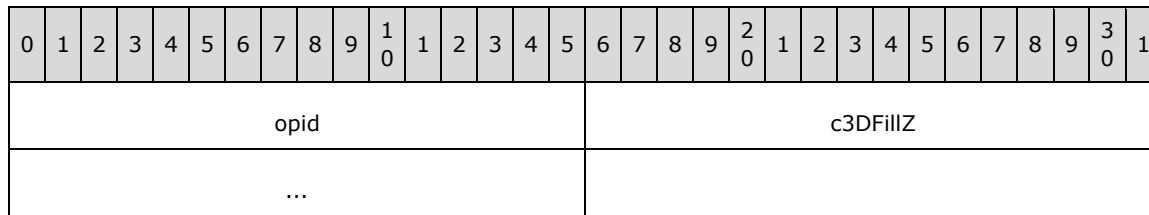**opid (2 bytes):** An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0242.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

perspectiveOffsetY (4 bytes): A value of variable type that specifies the offset applied to a shape. If the **perspectiveType** property, as defined in section 2.3.14.1, equals **msoxformShape**, the offset is of type **FixedPoint**, as specified in [MS-OSHARED] section 2.2.1.6. Otherwise, the offset is an integral value, in **EMUs**. The default value for this property is 0x00000000.

2.3.14.4 perspectiveScaleXToX

The **perspectiveScaleXToX** property specifies the x-axis scale value of the **perspective transform** matrix for the **shape**.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0243.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

perspectiveScaleXToX (4 bytes): A value of type **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

The **perspectiveScaleYToX** property specifies the y-axis to x-axis transform value of the **perspective transform** matrix for the **shape**.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0244.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

perspectiveScaleYToX (4 bytes): A value of type **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

The **perspectiveScaleXToY** property specifies the x-axis to y-axis transform value of the **perspective transform** matrix for the **shape**.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0245.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

perspectiveScaleXToY (4 bytes): A value of type **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

The **perspectiveScaleYToY** property specifies the y-axis scale value of the **perspective transform** matrix for the **shape**.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0246.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

perspectiveScaleYToY (4 bytes): A value of type **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

The **perspectivePerspectiveX** property specifies the offset on the x-axis of the **perspective transform** matrix for the **shape**.

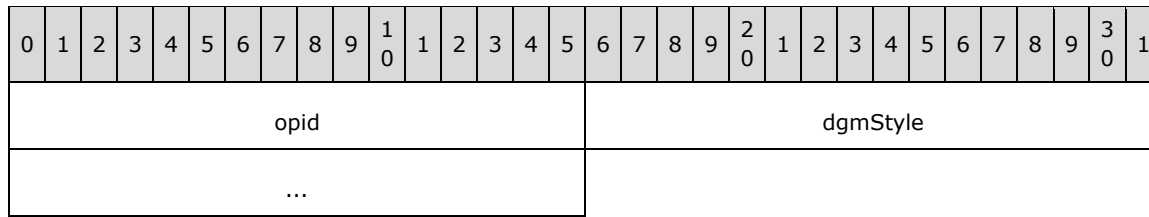| 0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																perspectivePerspectiveX															
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0247.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

perspectivePerspectiveX (4 bytes): A value of type **FixedPoint**, as specified in [MS-OSHARED] section 2.2.1.6, this is divided by the perspectiveWeight property to produce a value that specifies the perspective offset on the x-axis. The default value for this property is 0x00000000.

2.3.14.9 perspectivePerspectiveY

The **perspectivePerspectiveY** property specifies the offset on the y-axis of the **perspective transform** matrix for the **shape**.

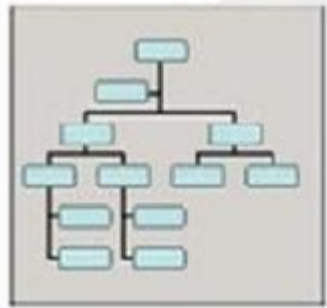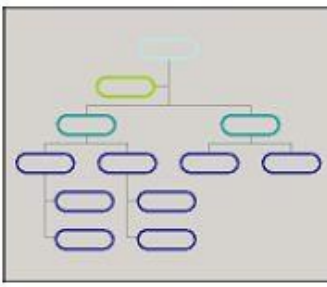| 0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																perspectivePerspectiveY															
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0248.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

perspectivePerspectiveY (4 bytes): A value of type **FixedPoint**, as specified in [MS-OSHARED] section 2.2.1.6, this is divided by the perspectiveWeight property to produce a value that specifies the perspective offset on the y-axis. The default value for this property is 0x00000000.

2.3.14.10 perspectiveWeight

The **perspectiveWeight** property specifies the perspective weighting of the **perspective transform** matrix for the **shape**.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.
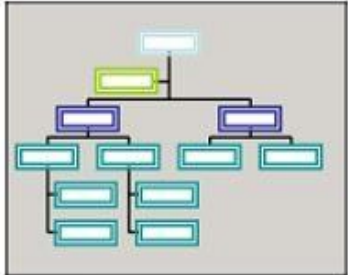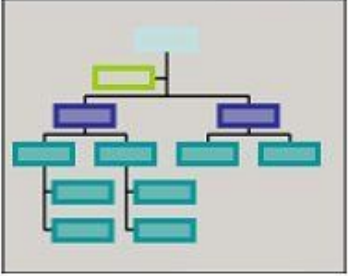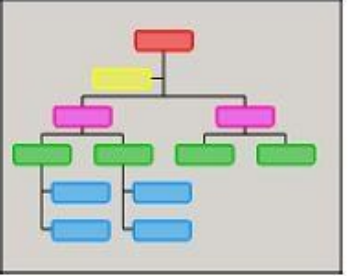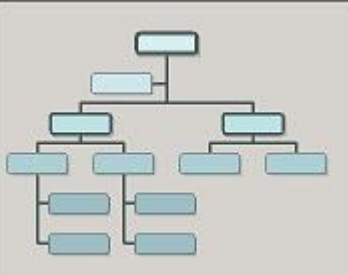
Field	Meaning
opid.opid	A value that MUST be 0x0249.

opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

perspectiveWeight (4 bytes): An unsigned integer that specifies the weighting of the perspectivePerspectiveX and perspectivePerspectiveY properties for the perspective transform. The default value for this property is 0x00000100.

2.3.14.11 perspectiveOriginX

The **perspectiveOriginX** 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	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid															perspectiveOriginX																
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

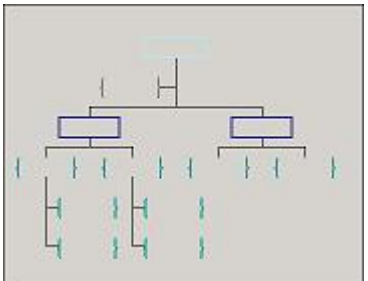| Field	Meaning
opid.opid	A value that MUST be 0x024A.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

perspectiveOriginX (4 bytes): A value of type **FixedPoint**, as specified in [MS-OSHARED] section 2.2.1.6, that specifies the origin, in **EMUs**, 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

The **perspectiveOriginY** 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	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid															perspectiveOriginY																
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x024B.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

perspectiveOriginY (4 bytes): A value of type **FixedPoint**, as specified in [MS-OSHARED] section 2.2.1.6, that specifies the origin, in **EMUs**, 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

The **Perspective Style Boolean Properties** specify a 32-bit field of Boolean properties for the **perspective transform**.

0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																unused1															A
unused2															B																

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x027F.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

unused1 (15 bits): A value that is undefined and MUST be ignored.

A - 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 used instead. The default value for this property is 0x0.

unused2 (15 bits): A value that is undefined and MUST be ignored.

B - 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.

2.3.15 3D Object

The **3D Object** property set specifies how a **shape** is to be rendered when displayed three-dimensionally.

2.3.15.1 c3DSpecularAmt

The **c3DSpecularAmt** property specifies the ratio of incident to specular light that is reflected on a **shape**.

0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																c3DSpecularAmt															
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0280.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

c3DSpecularAmt (4 bytes): A value of type **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

The **c3DDiffuseAmt** 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	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																c3DDiffuseAmt															
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0281.

opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

c3DDiffuseAmt (4 bytes): A value of type **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

The **c3DShininess** property specifies the specular power that is applied to the specular light 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	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																c3DShininess															
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0282.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

c3DShininess (4 bytes): A value of type **Long.** The default value for this property is 0x00000005.

2.3.15.4 c3DEdgeThickness

The **c3DEdgeThickness** property specifies the thickness of the specular edge.

0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																c3DEdgeThickness															
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0283.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

c3DEdgeThickness (4 bytes): A signed integer that specifies how thick the edge will be around the specular highlight. This value is expressed in **EMUs**. The default value for this property is 0x0000319C.

2.3.15.5 c3DExtrudeForward

The **c3DExtrudeForward** property specifies the distance to extrude the front face of the **shape**. The front face of the shape points toward the screen on a shape that has not been rotated.

0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																c3DExtrudeForward															
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0284.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

c3DExtrudeForward (4 bytes): A signed integer that specifies the distance to extrude the front face of the shape toward the screen. This value is expressed in **EMUs**. This value MUST be from 0x00000000 through 0x007445A0 inclusive. The default value for this property is 0x00000000.

2.3.15.6 c3DExtrudeBackward

The **c3DExtrudeBackward** 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 shape that has not been rotated.

0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																c3DExtrudeBackward															

		...		

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0285.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that 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 expressed in **EMUs**. This value MUST be from 0x00000000 through 0x07445A00. The default value for this property is 0x0006F9F0.

2.3.15.7 reserved646

The **reserved646** property MUST equal 0x00000000 and MUST be ignored.

0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
						opid														reserved646											
						...																									

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0286.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

reserved646 (4 bytes): A value that MUST equal 0x00000000 and MUST be ignored. The default value for this property is 0x00000000.

2.3.15.8 c3DExtrusionColor

The **c3DExtrusionColor** property specifies the color to apply to extruded geometry.

0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																c3DExtrusionColor															
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0287.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

c3DExtrusionColor (4 bytes): An **OfficeArtCOLORREF** record, as defined in section 2.2.2, that specifies the color of the extruded **shape** geometry. The default value for this property is 0x100000F7.

2.3.15.9   c3DCrMod

The **c3DCrMod** 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, this property MUST be ignored.

0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																c3DCrMod															
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0288.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

c3DCrMod (4 bytes): An **OfficeArtCOLORREF** record, as defined in section 2.2.2, 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

The **c3DExtrusionColorExt** property specifies the extrusion extended color of the **shape** geometry.

0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																c3DExtrusionColorExt															
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0289.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

c3DExtrusionColorExt (4 bytes): An **OfficeArtCOLORREF** record, as defined in section 2.2.2, that specifies the extended color of the extruded geometry. The default value for this property is 0xFFFFFFFF.

2.3.15.11   reserved650

The **reserved650** property MUST equal 0xFFFFFFFF and MUST be ignored.

0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																reserved650															
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x028A.
opid.fBid	A value that MUST be 0x0.

opid.fComplex	A value that MUST be 0x0.

reserved650 (4 bytes): A value that MUST equal 0xFFFFFFFF and MUST be ignored. The default value for this property is 0xFFFFFFFF.

2.3.15.12 c3DExtrusionColorExtMod

The **c3DExtrusionColorExtMod** property specifies the color modification of the extended color for the extruded geometry.

0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																c3DExtrusionColorExtMod															
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x028B.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

c3DExtrusionColorExtMod (4 bytes): An MSOTINTSHADE record that specifies the extended color modification for the extruded geometry. For more information, see the **OfficeArtCOLORREF** structure, as defined in section 2.2.2. The default value for this property is 0x20000000.

2.3.15.13 reserved652

This property is reserved and MUST be ignored.

0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																reserved652															
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x028C.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

reserved652 (4 bytes): A value that MUST equal zero and MUST be ignored. The default value for this property is 0x00000000.

2.3.15.14   reserved653

The **reserved653** property MUST equal 0xFFFFFFFF and MUST be ignored.

0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																reserved653															
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x028D.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

reserved653 (4 bytes): A value that MUST equal 0xFFFFFFFF and MUST be ignored. The default value for this property is 0xFFFFFFFF.

2.3.15.15   3D-Object Boolean Properties

The **3D-Object Boolean Properties** specify a 32-bit field of Boolean properties for a 3-D object.

0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																unused1												A	B	C	D
unused2														E	F	G	H														

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x02BF.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

unused1 (12 bits): A value that is undefined and MUST be ignored.

A - fUsef3D (1 bit): A bit that specifies whether the **f3D** bit is set. A value of 0x0 specifies that the **f3D** bit MUST be ignored and the default value used instead. The default value for this property is 0x0.

B - 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 used instead. The default value for this property is 0x0.

C - 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 used instead. The default value for this property is 0x0.

D - 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 used instead. The default value for this property is 0x0.

unused2 (12 bits): A value that is undefined and MUST be ignored.

E - f3D (1 bit): A bit that specifies whether the **shape** contains 3-D properties. This value MUST be ignored if **fUsef3D** is 0x0. The default value for this property is 0x0.

F - fc3DMetallic (1 bit): A bit that specifies whether the 3-D 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.

G - fc3DUseExtrusionColor (1 bit): A bit that specifies whether the extruded geometry will use a color that is separate from the shape color, as specified in the following table. This value MUST be ignored if **fUsefc3DUseExtrusionColor** is 0x0. The default value for this property is 0x0.

Value	Meaning
0x0	Specifies that the diffuse color will be used.
0x1	Specifies that the c3DExtrusionColor property will be used.

H - 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.

2.3.16 3D Style

The **3D Style** property set specifies how a **shape** will be oriented when displayed three-dimensionally.

2.3.16.1   c3DYRotationAngle

The **c3DYRotationAngle** property specifies the **shape** rotation around the y-axis. A shape with constrained 3D rotation is rotated in the following manner:

1. Around the y-axis by the angle specified by **c3DYRotationAngle.**

2. Around the x-axis by the angle specified by c3DXRotationAngle.

If the **fc3DConstrainRotation** bit of the 3D-Style Boolean Properties equals 0x1, this property MUST exist; otherwise, this property MUST be ignored.

| 0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																c3DYRotationAngle															
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x02C0.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

c3DYRotationAngle (4 bytes): A value of type **FixedPoint**, as specified in [MS-OSHARED] section 2.2.1.6, that specifies the number of degrees to rotate the shape around the y-axis. Positive values rotate in the clockwise direction. Negative values rotate in the counterclockwise direction. The valid range is from -90.0 degrees through 90.0 degrees. The default value for this property is 0x00000000.

2.3.16.2   c3DXRotationAngle

The **c3DXRotationAngle** property specifies the shape rotation around the x-axis. A shape with constrained 3D rotation is rotated in the following manner:

1. Around the y-axis by the angle specified by the **c3DYRotationAngle** property, as defined in section 2.3.16.1.

2. Around the x-axis by the angle specified by **c3DXRotationAngle**.

If the **fc3DConstrainRotation** bit of the 3D-Style Boolean Properties equals 0x1, this property MUST exist; otherwise, this property MUST be ignored.

0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																c3DXRotationAngle															

...

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x02C1.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

c3DXRotationAngle (4 bytes): A value of type **FixedPoint**, as specified in [MS-OSHARED] section 2.2.1.6, that specifies the number of degrees to rotate the **shape** around the x-axis. Positive values rotate in the clockwise direction. Negative values rotate in the counterclockwise direction. The valid range is from -90.0 degrees through 90.0 degrees. The default value for this property is 0x00000000.

2.3.16.3   c3DRotationAxisX

The **c3DRotationAxisX** property specifies the x portion of the axis that is used to rotate the **shape**. If the **fc3DConstrainRotation** bit of the 3D-Style Boolean Properties equals 0x0, this property MUST exist; otherwise, this property MUST be ignored.

0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																c3DRotationAxisX															
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x02C2.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

c3DRotationAxisX (4 bytes): A value of type **FixedPoint**, as specified in [MS-OSHARED] section 2.2.1.6, that specifies the x portion of the axis that is used to rotate a shape. The default value for this property is 0x00000064.

2.3.16.4 c3DRotationAxisY

The **c3DRotationAxisY** property specifies the Y portion of the axis that is used to rotate the **shape**. If the **fc3DConstrainRotation** bit of the 3D-Style Boolean Properties equals 0x0, this property MUST exist; otherwise, this property MUST be ignored.

0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																c3DRotationAxisY															
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x02C3.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

c3DRotationAxisY (4 bytes): A value of type **FixedPoint**, as specified in [MS-OSHARED] section 2.2.1.6, that specifies the Y portion of the axis that is used to rotate a shape. The default value for this property is 0x00000000.

2.3.16.5 c3DRotationAxisZ

The **c3DRotationAxisZ** property specifies the Z portion of the axis that is used to rotate the **shape**. If the **fc3DConstrainRotation** bit of the 3D-Style Boolean Properties equals 0x0, this property MUST exist; otherwise, this property MUST be ignored.

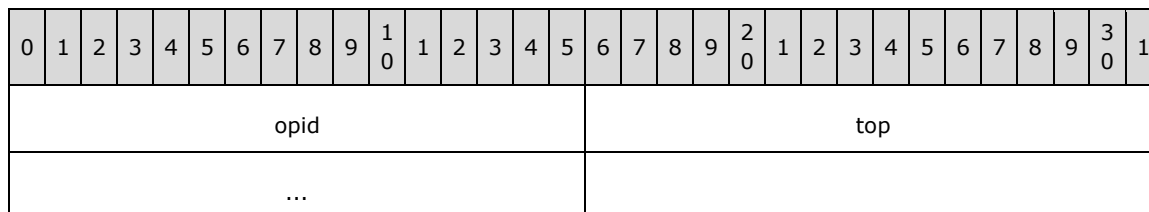| 0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																c3DRotationAxisZ															
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x02C4.
opid.fBid	A value that MUST be 0x0.

opid.fComplex	A value that MUST be 0x0.

c3DRotationAxisZ (4 bytes): A value of type **FixedPoint**, as specified in [MS-OSHARED] section 2.2.1.6, that specifies the Z portion of the axis that is used to rotate a shape. The default value for this property is 0x00000000.

2.3.16.6 c3DRotationAngle

The **c3DRotationAngle** property specifies the number of degrees to rotate a **shape** around an axis.

0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
					opid														c3DRotationAngle												
				...																											

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x02C5.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

c3DRotationAngle (4 bytes): A value of type **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 the **c3DRotationAxisX**, as defined in section 2.3.16.3, **c3DRotationAxisY**, as defined in section 2.3.16.4, and **c3DRotationAxisZ**, as defined in section 2.3.16.5, 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

The **c3DRotationCenterX** property specifies the location of the center of the **shape** along the x-axis. If the **fc3DRotationCenterAuto** bit of the 3D-Style Boolean Properties equals 0x0, this property MUST exist; otherwise, this property MUST be ignored.

0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
					opid														c3DRotationCenterX												
				...																											

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x02C6.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

c3DRotationCenterX (4 bytes): A value of type **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

The **c3DRotationCenterY** property specifies the location of the center of the **shape** along the y-axis. If the **fc3DRotationCenterAuto** bit of the 3D-Style Boolean Properties equals 0x0, this property MUST exist; otherwise, this property MUST be ignored.

0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid															c3DRotationCenterY																
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x02C7.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

c3DRotationCenterY (4 bytes): A value of type **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

The **c3DRotationCenterZ** property specifies the location of the center of the **shape** along the z-axis. If the **fc3DRotationCenterAuto** bit of the 3D-Style Boolean Properties equals 0x0, this property MUST exist; otherwise, this property MUST be ignored.

0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																c3DRotationCenterZ															
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x02C8.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

c3DRotationCenterZ (4 bytes): A value of type **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

The **c3DRenderMode** property specifies how to display a **shape**.

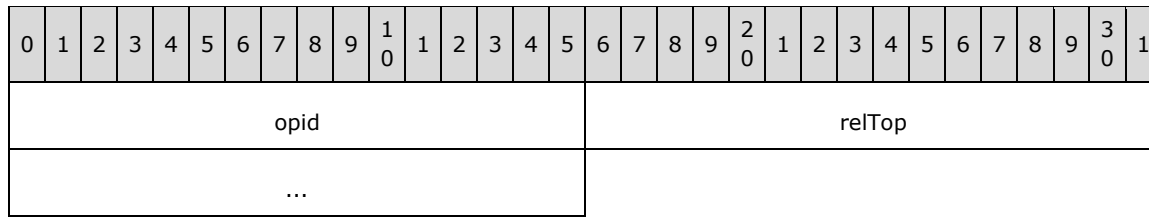| 0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																c3DRenderMode															
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x02C9.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

c3DRenderMode (4 bytes): An **MSO3DRENDERMODE** enumeration value, as defined in section 2.4.23, 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, the **c3DTolerance** property specifies the geometric deviation that is permitted for rendering the **shape**.

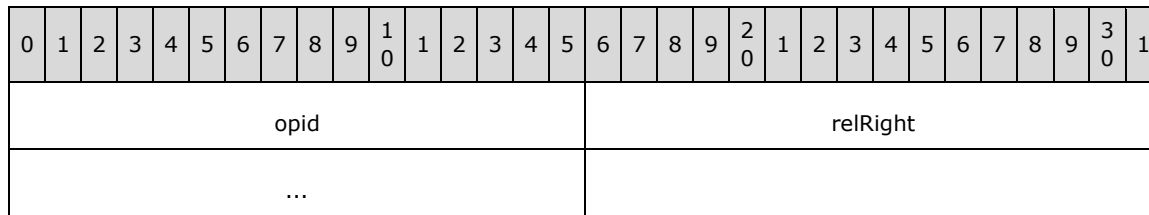| 0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																c3DTolerance															
...															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x02CA.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

c3DTolerance (4 bytes): A value of type **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

The **c3DXViewpoint** property specifies the location of the perspective camera on the x-axis. If the **fc3DParallel** bit of the 3D-Style Boolean Properties equals 0x0, this property MUST exist; otherwise, this property MUST be ignored.

0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																c3DXViewpoint															
...															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x02CB.
opid.fBid	A value that MUST be 0x0.

opid.fComplex	A value that MUST be 0x0.

c3DXViewpoint (4 bytes): A value of type **FixedPoint**, as specified in [MS-OSHARED] section 2.2.1.6, that specifies the location, in **EMUs**, of the perspective camera on the x-axis. The default value for this property is 0x001312D0.

2.3.16.13   c3DYViewpoint

The **c3DYViewpoint** property specifies the location of the perspective camera on the y-axis. If the **fc3DParallel** bit of the 3D-Style Boolean Properties equals 0x0, this property MUST exist; otherwise, this property MUST be ignored.

0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																c3DYViewpoint															
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x02CC.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

c3DYViewpoint (4 bytes): A value of type **FixedPoint**, as specified in [MS-OSHARED] section 2.2.1.6, that specifies the location, in **EMUs**, of the perspective camera on the y-axis. The default value for this property is 0xFFECED30.

2.3.16.14   c3DZViewpoint

The **c3DZViewpoint** property specifies the distance from the view plane of the perspective camera on the z-axis. If the **fc3DParallel** bit of the 3D-Style Boolean Properties equals 0x0, this property MUST exist; otherwise, this property MUST be ignored.

0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																c3DZViewpoint															
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x02CD.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

c3DZViewpoint (4 bytes): A value of type **FixedPoint**, as specified in [MS-OSHARED] section 2.2.1.6, that specifies the distance, in **EMUs**, from the view plane of the perspective camera on the z-axis. The default value for this property is 0x00895440.

2.3.16.15   c3DOriginX

The **c3DOriginX** 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 the 3D-Style Boolean Properties equals 0x0, this property MUST exist; otherwise, this property MUST be ignored.

0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																c3DOriginX															
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x02CE.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

c3DOriginX (4 bytes): A value of type **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

The **c3DOriginY** 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 the 3D-Style Boolean Properties equals 0x0, this property MUST exist; otherwise, this property MUST be ignored.

0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																c3DOriginY															
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x02CF.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

c3DOriginY (4 bytes): A value of type **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

The **c3DSkewAngle** property specifies the amount of skew that is added to the **shape** when a parallel projection is used. If the **fc3DParallel** bit of the 3D-Style Boolean Properties equals 0x1, this property MUST exist; otherwise, this property MUST be ignored.

0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																c3DSkewAngle															
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x02D0.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

c3DSkewAngle (4 bytes): A value of type **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

The **c3DSkewAmount** property specifies the amount of skew to add to a **shape** as a percentage of the skew. If the **fc3DParallel** bit of the 3D-Style Boolean Properties equals 0x1, this property MUST exist; otherwise, this property MUST be ignored.

0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																c3DSkewAmount															
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x02D1.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

c3DSkewAmount (4 bytes): A signed integer that specifies the percentage, as a value from 0xFFFFFF9C through 0x00000064, to skew the shape. The default value for this property is 0x00000032.

2.3.16.19   c3DAmbientIntensity

The **c3DAmbientIntensity** property specifies the intensity of the ambient light.

0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																c3DAmbientIntensity															
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x02D2.

opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

c3DAmbientIntensity (4 bytes): A value of type **FixedPoint**, as specified in [MS-OSHARED] section 2.2.1.6, that specifies the intensity of the ambient light. This value MUST be from 0.0 through 1.0. The default value for this property is 0x00004E20.

2.3.16.20   c3DKeyX

The **c3DKeyX** property specifies the directional vector of the primary light source along the x-axis.

0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																c3DKeyX															
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x02D3.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

c3DKeyX (4 bytes): A value of type **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

The **c3DKeyY** property specifies the directional vector of the primary light source along the y-axis.

0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																c3DKeyY															
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x02D4.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

c3DKeyY (4 bytes): A value of type **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

The **c3DKeyZ** property specifies the directional vector of the primary light source along the z-axis.

0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																c3DKeyZ															
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x02D5.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

c3DKeyZ (4 bytes): A value of type **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

The **c3DKeyIntensity** property specifies the intensity of the primary light source.

0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																c3DKeyIntensity															
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x02D6.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

c3DKeyIntensity (4 bytes): A value of type **FixedPoint**, as specified in [MS-OSHARED] section 2.2.1.6, that specifies the intensity of the primary light source. This value SHOULD<45> be from 0.0 through 1.0. The default value for this property is 0x00009470.

2.3.16.24   c3DFillX

The **c3DFillX** property specifies the directional vector along the x-axis of the secondary light source.

0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																c3DFillX															
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x02D7.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

c3DFillX (4 bytes): A value of type **FixedPoint**, as specified in [MS-OSHARED] section 2.2.1.6, that specifies the directional vector along the x-axis of the secondary light source. The default value for this property is 0xFFFF3CB0.

2.3.16.25   c3DFillY

The **c3DFillY** property specifies the directional vector along the y-axis of the secondary light source.

0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																c3DFillY															
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x02D8.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

c3DFillY (4 bytes): A value of type **FixedPoint**, as specified in [MS-OSHARED] section 2.2.1.6, that specifies the directional vector along the y-axis of the secondary light source. The default value for this property is 0x00000000.

2.3.16.26   c3DFillZ

The **c3DFillZ** property specifies the directional vector along the z-axis of the secondary light source.

0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																c3DFillZ															
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x02D9.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

c3DFillZ (4 bytes): A value of type **FixedPoint**, as specified in [MS-OSHARED] section 2.2.1.6, that specifies the directional vector along the z-axis of the secondary light source. The default value for this property is 0x00002710.

2.3.16.27   c3DFillIntensity

The **c3DFillIntensity** property specifies the intensity of the secondary light source.

0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																c3DFillIntensity															
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x02DA.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

c3DFillIntensity (4 bytes): A value of type **FixedPoint**, as specified in [MS-OSHARED] section 2.2.1.6, that specifies the intensity of the secondary light source. This value SHOULD<46> be from 0.0 through 1.0. The default value for this property is 0x00009470.

2.3.16.28   3D-Style Boolean Properties

The **3D-Style Boolean Properties** specify a 32-bit field of Boolean properties for the style of the 3-D object.

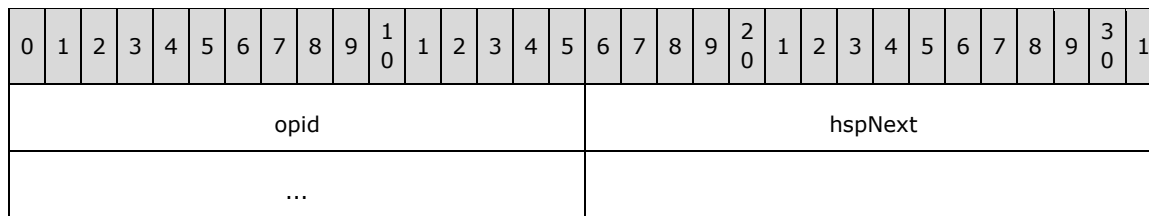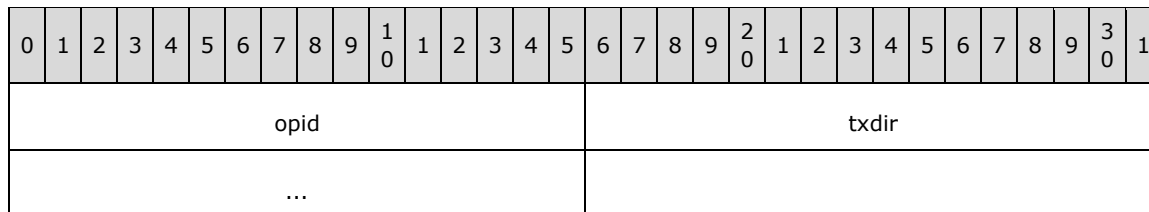| 0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																unused1											A	B	C	D	E
unused2											F	G	H	I	J																

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x02FF.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

unused1 (11 bits): A value that is undefined and MUST be ignored.

A - 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 used instead. The default value for this property is 0x0.

B - 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 used instead. The default value for this property is 0x0.

C - 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 used instead. The default value for this property is 0x0.

D - 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 used instead. The default value for this property is 0x0.

E - 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 used instead. The default value for this property is 0x0.

unused2 (11 bits): A value that is undefined and MUST be ignored.

F - fc3DConstrainRotation (1 bit): A bit that specifies how to rotate a **shape**. The following table specifies the meaning of each value for this field. The default value for this property is 0x1.

Value	Meaning
0x0	Specifies that the shape will rotate around an axis that is specified by the **3D style** property set.
0x1	Specifies that the shape will rotate along the screen's z-axis.

G - fc3DRotationCenterAuto (1 bit): A bit that specifies how to treat the center of the shape. The following table specifies the meaning of each value for this field. The default value for this property is 0x0.

Value	Meaning
0x0	Specifies that a user-specified value will be used.
0x1	Specifies that the center of the shape will be used.

H - fc3DParallel (1 bit): A bit that specifies whether the 3-D object will use a parallel projection. The following table specifies the meaning of each value for this field. The default value for this property is 0x1.

Value	Meaning
0x0	Specifies a perspective projection.
0x1	Specifies a parallel projection.

I - fc3DKeyHarsh (1 bit): A bit that specifies the lighting algorithm on the primary light source. The following table specifies the meaning of each value for this field. The default value for this property is 0x1.

Value	Meaning

Value	Meaning
0x0	Specifies an infinite, uniform, planar light source.
0x1	Specifies a directional light source.

J - fc3DFillHarsh (1 bit): A bit that specifies the lighting algorithm on the secondary light source. The following table specifies the meaning of each value for this field. The default value for this property is 0x0.

Value	Meaning
0x0	Specifies an infinite, uniform, planar light source.
0x1	Specifies a directional light source.

2.3.17 Diagram

The **Diagram** property set specifies the style and layout attributes of a **diagram**.

2.3.17.1 dgmt

The **dgmt** property specifies the type of the **diagram**.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0500.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

dgmt (4 bytes): An **MSODGMT** enumeration value, as defined in section 2.4.27, that specifies the type of the diagram. The default value for this property is 0x00000FFF.

2.3.17.2 dgmStyle

The **dgmStyle** property specifies a **diagram** style.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.
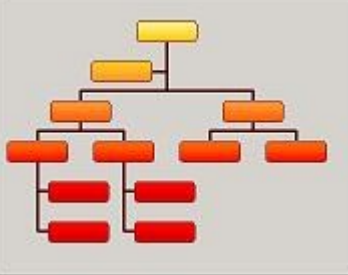
Field	Meaning
opid.opid	A value that MUST be 0x0501.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.
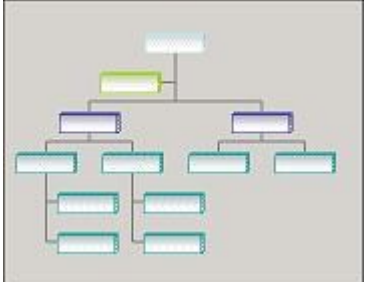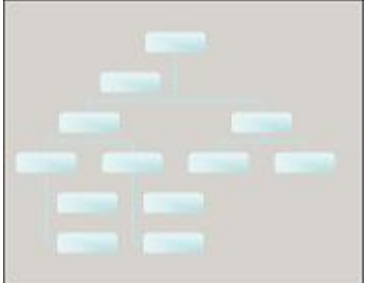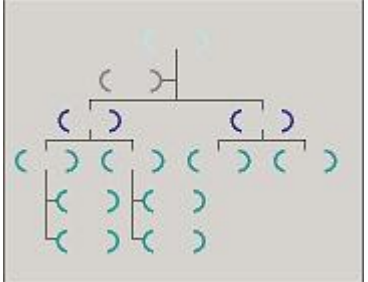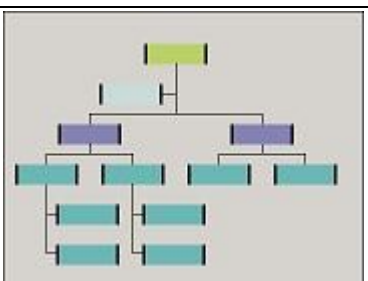
dgmStyle (4 bytes): An enumeration value that specifies a diagram style. The meaning of this value depends on the value of the **dgmt** property, as defined in section 2.3.17.1. The default value for this property is **msodgmstNil**, which is represented as 0x0000FFFF.
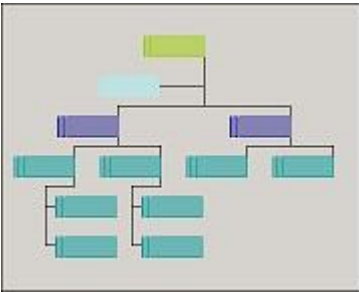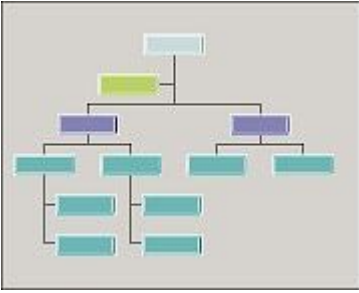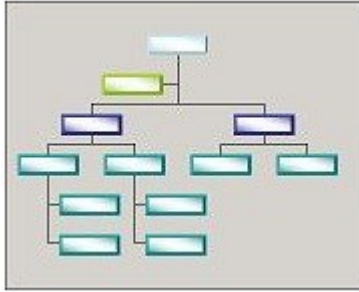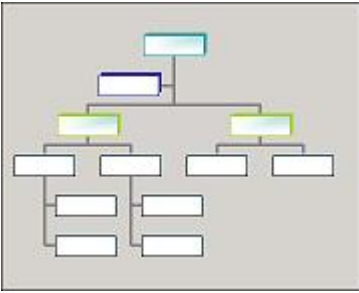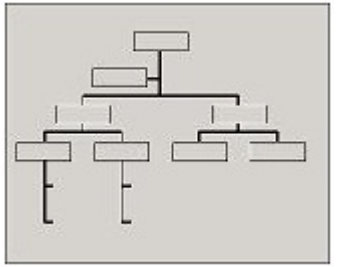
If the value of the **dgmt** property equals **msodgmtCanvas**, **dgmStyle** MUST be ignored.

If the value of the **dgmt** property equals **msodgmtOrgChart**, **dgmStyle** MUST be a value from the enumeration that is listed in the following table.
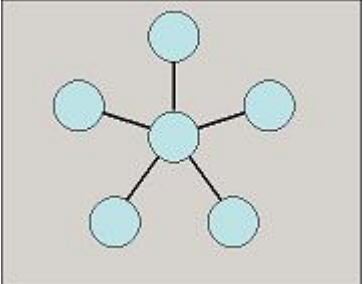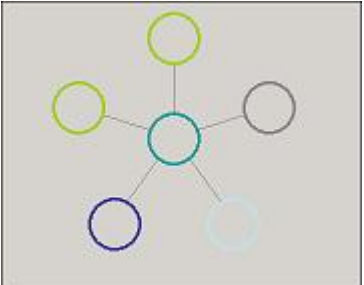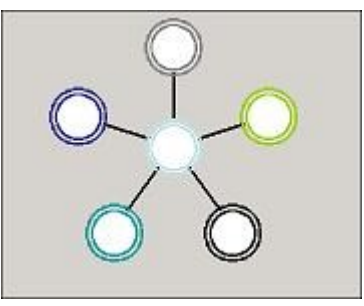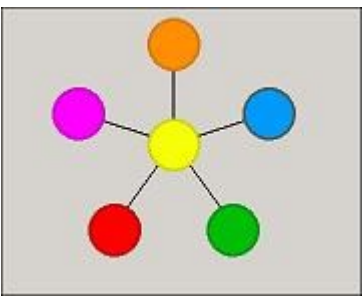
Name	Value	Meaning	Style
msodgmstOrgChartFirst	0x00000000	Default	
msodgmstOrgChart2	0x00000001	Outline	
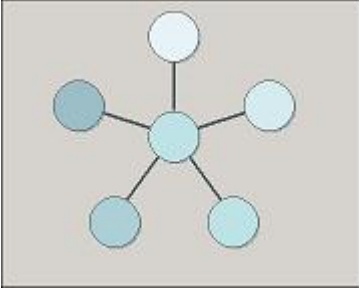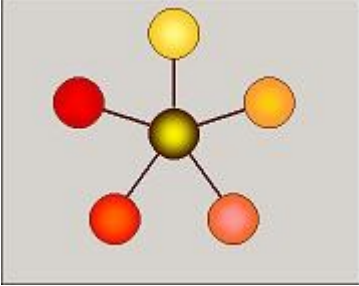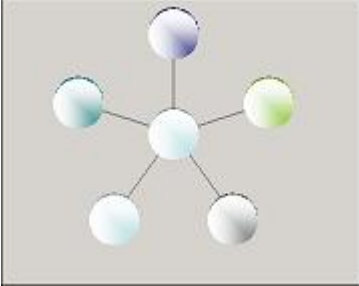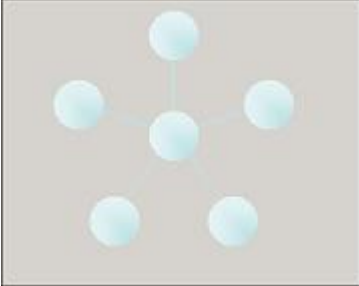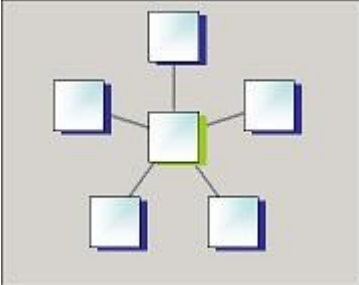
Name	Value	Meaning	Style
msodgmstOrgChart3	0x00000002	Double outline	
msodgmstOrgChart4	0x00000003	Thick outline	
msodgmstOrgChart5	0x00000004	Primary colors	
msodgmstOrgChart6	0x00000005	Shaded	
msodgmstOrgChart7	0x00000006	Fire	

Name	Value	Meaning	Style
msodgmstOrgChart8	0x00000007	3-D color	
msodgmstOrgChart9	0x00000008	Gradient	
msodgmstOrgChart10	0x00000009	Brackets	
msodgmstOrgChart11	0x0000000A	Braces	
msodgmstOrgChart12	0x0000000B	Bookend fills	
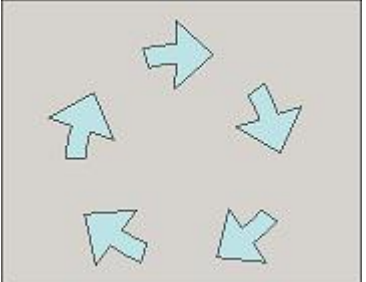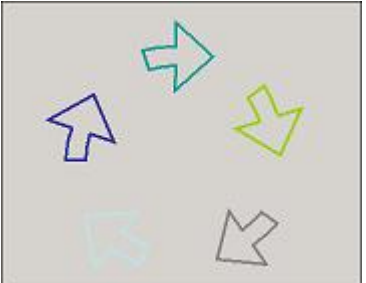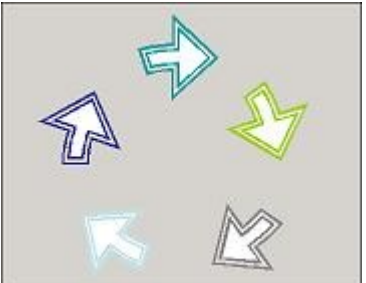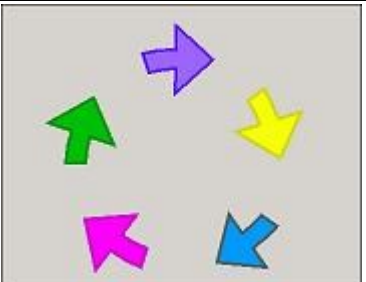
Name	Value	Meaning	Style
msodgmstOrgChart13	0x0000000C	Stripes	
msodgmstOrgChart14	0x0000000D	Beveled	
msodgmstOrgChart15	0x0000000E	Beveled gradient	
msodgmstOrgChart16	0x0000000F	Square shadows	
msodgmstOrgChart17	0x00000010	Wire frame	
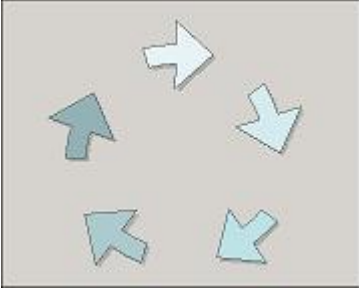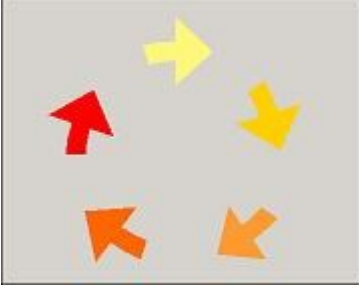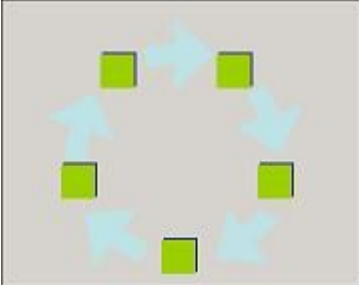
If the value of the **dgmt** property equals **msodgmtRadial**, **dgmStyle** MUST be a value from the enumeration that is listed in the following table.

Name	Value	Meaning	Style
msodgmstRadialFirst	0x00000000	Default	
msodgmstRadial2	0x00000001	Outline	
msodgmstRadial3	0x00000002	Double outline	
msodgmstRadial4	0x00000003	Thick outline	
msodgmstRadial5	0x00000004	Primary colors	
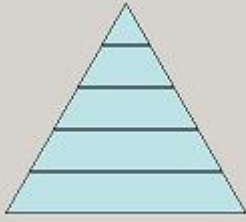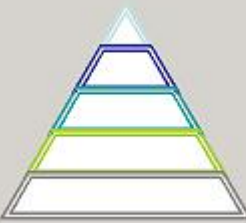
Name	Value	Meaning	Style
msodgmstRadial6	0x00000005	Shaded	
msodgmstRadial7	0x00000006	Fire	
msodgmstRadial8	0x00000007	3-D color	
msodgmstRadial9	0x00000008	Gradient	
msodgmstRadial10	0x00000009	Square shadows	
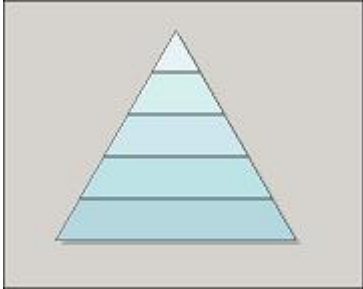
If the value of the **dgmt** property equals **msodgmtCycle**, **dgmStyle** MUST be a value from the enumeration that is listed in the following table.

Name	Value	Meaning	Style
msodgmstCycle11	0x0000000A	Default	
msodgmstCycle12	0x0000000B	Outline	
msodgmstCycle13	0x0000000C	Double outline	
msodgmstCycle14	0x0000000D	Thick outline	
msodgmstCycle15	0x0000000E	Primary colors	
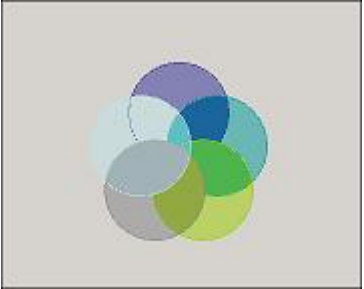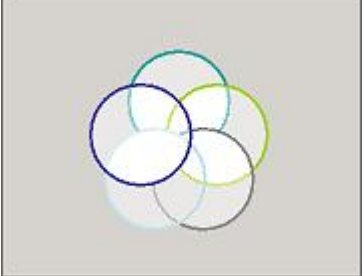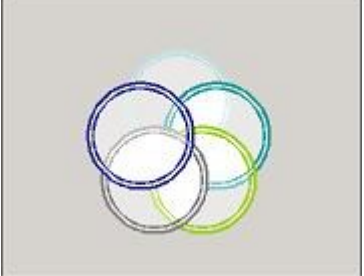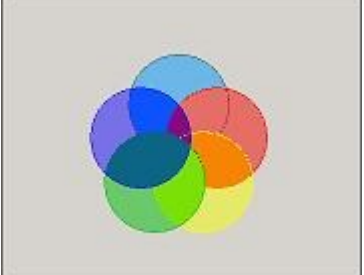
Name	Value	Meaning	Style
msodgmstCycle16	0x0000000F	Shaded	
msodgmstCycle17	0x00000010	Fire	
msodgmstCycle18	0x00000011	3-D color	
msodgmstCycle19	0x00000012	Gradient	
msodgmstCycle20	0x00000013	Square shadows	
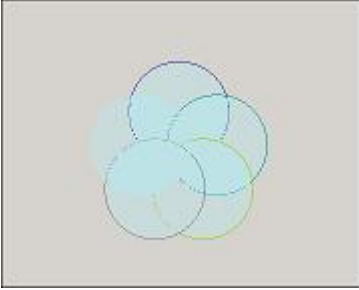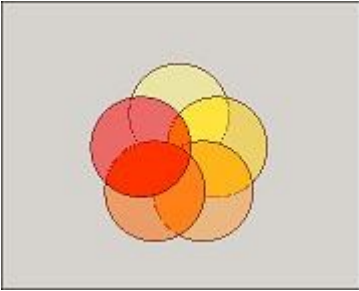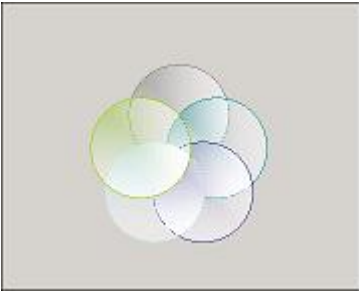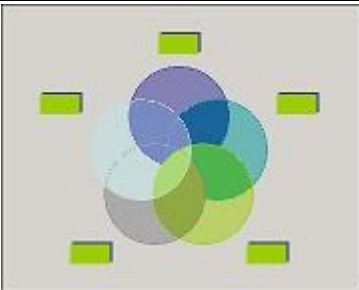
If the value of the **dgmt** property equals **msodgmtStacked**, **dgmStyle** MUST be a value from the enumeration that is listed in the following table.

Name	Value	Meaning	Style
msodgmstStackedFirst	0x00000000	Default	
msodgmstStacked2	0x00000001	Outline	
msodgmstStacked3	0x00000002	Double outline	
msodgmstStacked4	0x00000003	Thick outline	
msodgmstStacked5	0x00000004	Primary colors	
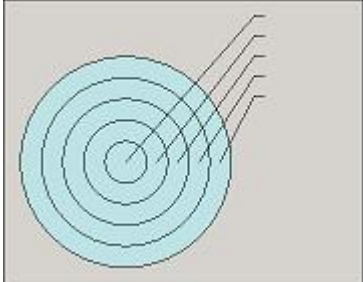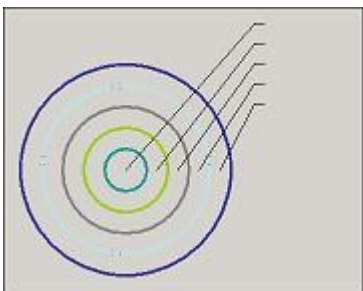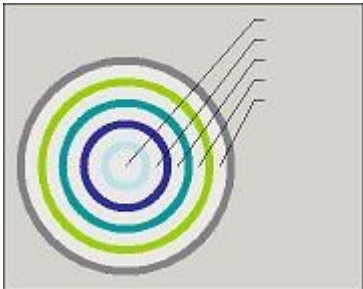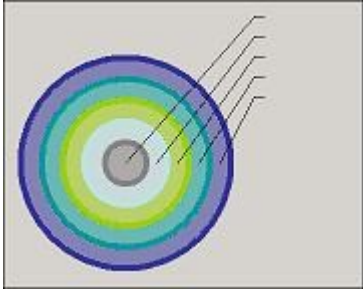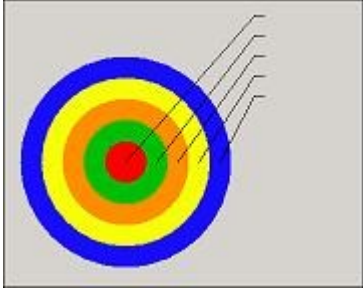
Name	Value	Meaning	Style
msodgmstStacked6	0x00000005	Shaded	
msodgmstStacked7	0x00000006	Fire	
msodgmstStacked8	0x00000007	3-D color	
msodgmstStacked9	0x00000008	Gradient	
msodgmstStacked10	0x00000009	Square shadows	
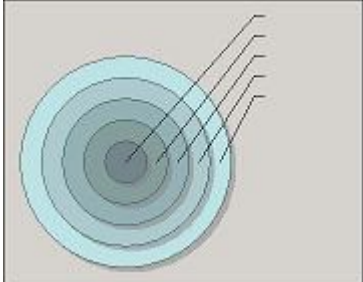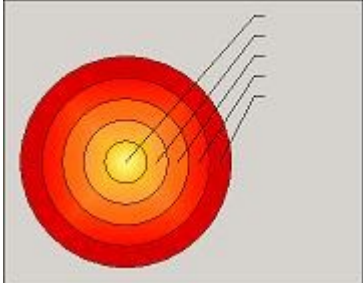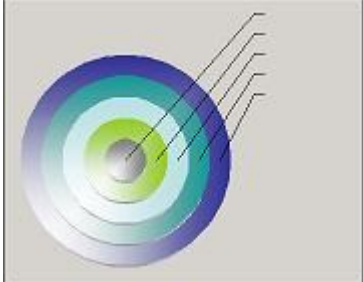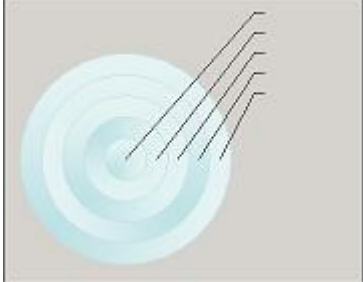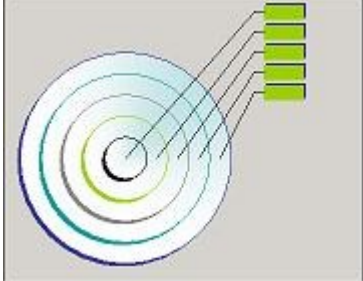
If the value of the **dgmt** property equals **msodgmtVenn**, **dgmStyle** MUST be a value from the enumeration that is listed in the following table.

Name	Value	Meaning	Style
msodgmstVennFirst	0x00000000	Default	
msodgmstVenn2	0x00000001	Outline	
msodgmstVenn3	0x00000002	Double outline	
msodgmstVenn4	0x00000003	Thick outline	
msodgmstVenn5	0x00000004	Primary colors	

Name	Value	Meaning	Style
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 equals **msodgmtBullsEye**, **dgmStyle** MUST be a value from the enumeration that is listed in the following table.

Name	Value	Meaning	Style
msodgmstBullsEyeFirst	0x00000000	Default	
msodgmstBullsEye2	0x00000001	Outline	
msodgmstBullsEye3	0x00000002	Double outline	
msodgmstBullsEye4	0x00000003	Thick outline	
msodgmstBullsEye5	0x00000004	Primary colors	

Name	Value	Meaning	Style
msodgmstBullsEye6	0x00000005	Shaded	
msodgmstBullsEye7	0x00000006	Fire	
msodgmstBullsEye8	0x00000007	3-D color	
msodgmstBullsEye9	0x00000008	Gradient	
msodgmstBullsEye10	0x00000009	Square shadows	

2.3.17.3 pRelationTbl

The **pRelationTbl** property specifies relationships in a **diagram**.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0504.
opid.fBid	A value that is undefined and MUST be ignored.
opid.fComplex	A bit that indicates whether the **pRelationTbl_complex** property, as defined in section 2.3.17.4, exists. If the value equals 0x1, **pRelationTbl_complex** MUST exist.

pRelationTbl (4 bytes): The number of bytes of data in the **pRelationTbl_complex** property. This value MUST be 0x00000000 if **opid.fComplex** is 0x0. The default value for this property is 0x00000000.
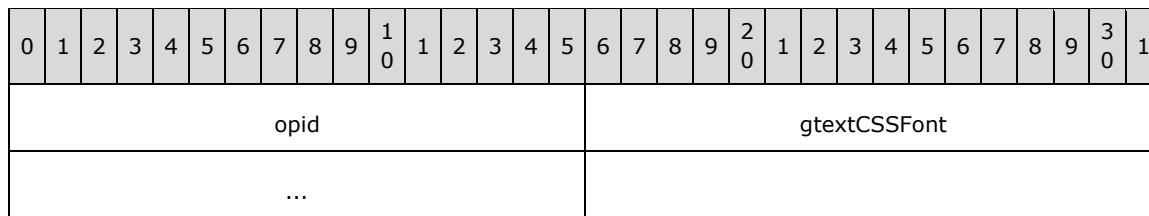
2.3.17.4 pRelationTbl_complex

The **pRelationTbl_complex** property specifies additional data for the **pRelationTbl** property, as defined in section 2.3.17.3. If the **opid.fComplex** bit of **pRelationTbl** equals 0x1, this property MUST exist.

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

pRelationTbl_complex (variable): An **IMsoArray** record, as defined in section 2.2.51, that specifies relationships in a **diagram**. Each array element describes a connection between two **shapes**. Each element is 12 bytes and consists of three values of type **ULONG**. Each of these values is a CRC32 Hash of the respective shape name<47>.

The three **ULONG** values specify the source shape, the destination shape, and the **connector** shape, in that order. Each array element specifies a connection from the source to the destination via the connector.

2.3.17.5 dgmScaleX

The **dgmScaleX** property specifies the amount to scale along the x-axis.

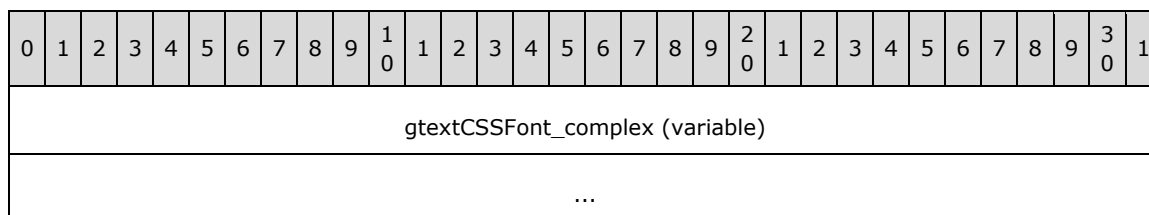| 0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																dgmScaleX															
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0505.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

dgmScaleX (4 bytes): A value of type **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

The **dgmScaleY** property specifies the amount to scale along the y-axis.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0506.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

dgmScaleY (4 bytes): A value of type **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

The **dgmDefaultFontSize** property specifies the default font size for new text in the **diagram**.

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

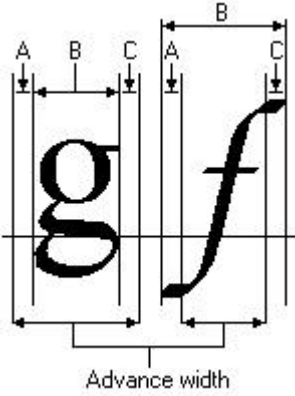**opid (2 bytes):** An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0507.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

dgmDefaultFontSize (4 bytes): A signed integer that specifies the default font size, in **points**, for new text in the diagram. A value of 0xFFFFFFFF MUST be ignored. The default value for this property is 0xFFFFFFFF.

2.3.17.8 dgmConstrainBounds

The **dgmConstrainBounds** property specifies the bounds of the **diagram**.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0508.
opid.fBid	A value that is undefined and MUST be ignored.
opid.fComplex	A bit that indicates whether the **dgmConstrainBounds_complex** property, as defined in section 2.3.17.9, exists. If the value equals 0x1, **dgmConstrainBounds_complex** MUST exist.

dgmConstrainBounds (4 bytes): The number of bytes of data in the **dgmConstrainBounds_complex** property, as defined in section 2.3.17.9. If **opid.fComplex** equals 0x0, this value MUST be 0x00000000. The default value for this property is 0x00000000.

2.3.17.9 dgmConstrainBounds_complex

The **dgmConstrainBounds_complex** property specifies additional data for the **dgmConstrainBounds** property, as defined in section 2.3.17.8. If the **opid.fComplex** bit of **dgmConstrainBounds** equals 0x1, this property MUST exist.
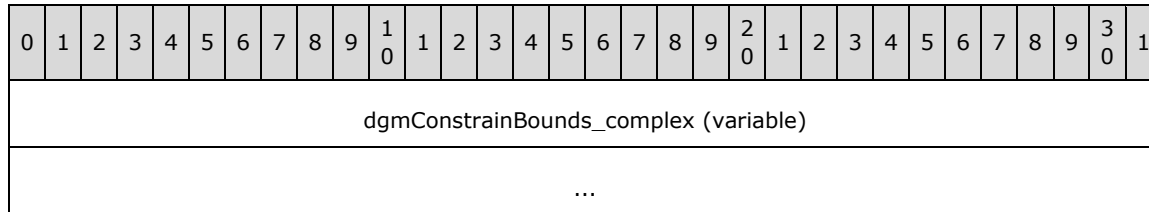
0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
dgmConstrainBounds_complex (variable)																															
...																															

dgmConstrainBounds_complex (variable): An **IMsoArray** record, as defined in section 2.2.51, that specifies the bounds of the **diagram**. Each element in this array is a 32-bit signed integer. The value of **dgmConstrainBounds_complex.nElems** MUST equal 0x0004. The four elements of this array specify, in order, the left, top, right, and bottom bound, in application-defined coordinates, of the diagram.

2.3.17.10 dgmBaseTextScale

The **dgmBaseTextScale** property specifies the amount to scale text. This property MAY<48> be ignored.
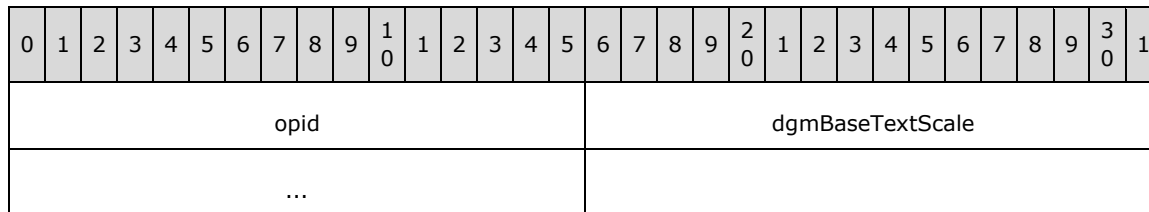
0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																dgmBaseTextScale															
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0509.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

dgmBaseTextScale (4 bytes): A value of type **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

The **Diagram Boolean Properties** specify a 32-bit field of Boolean properties for a **diagram**.

0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid															unused1										A	B	C	D	E	F
unused4										G	H	I	J	K	L																

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x053F.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

unused1 (10 bits): A value that is undefined and MUST be ignored.

A - unused2 (1 bit): A value that is undefined and MUST be ignored.

B - unused3 (1 bit): A value that is undefined and MUST be ignored.

C - 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.

D - 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.

E - 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.

F - 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.

unused4 (10 bits): A value that is undefined and MUST be ignored.

G - unused5 (1 bit): A value that is undefined and MUST be ignored.

H - unused6 (1 bit): A value that is undefined and MUST be ignored.

I - fDoFormat (1 bit): A bit that specifies whether the **dgmStyle** property, as defined in section 2.3.17.2, specifies 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.

J - fReverse (1 bit): A bit that specifies whether the diagram is horizontally mirrored. This value MUST be ignored if **fUsefReverse** is 0x0. The default value for this property is 0x0.

K - 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.

L - 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.

2.3.18 Transform

The **Transform** property set specifies the values that are necessary to construct a transform that is applied to a **shape** prior to rendering.

2.3.18.1   left

The **left** property specifies the left side of the **bounding rectangle** that contains an object.
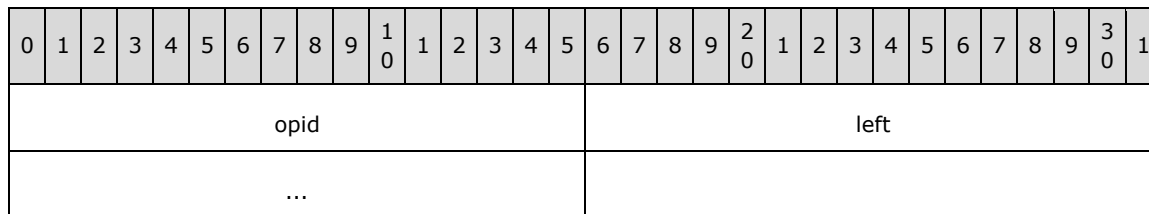
0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																left															
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0000.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

left (4 bytes): A signed integer that specifies the left side, in application-defined coordinates, of the bounding rectangle. The default value for this property is 0x00000000.

2.3.18.2   top

The **top** property specifies the top of the **bounding rectangle** that contains an object.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0001.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

top (4 bytes): A signed integer that specifies the top, in application-defined coordinates, of the bounding rectangle. The default value for this property is 0x00000000.

2.3.18.3 right

The **right** property specifies the right side of the **bounding rectangle** that contains an object.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0002.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

right (4 bytes): A signed integer that specifies the right side, in application-defined coordinates, of the bounding rectangle. The default value for this property is 0x00000001.

2.3.18.4 bottom

The **bottom** property specifies the bottom of the **bounding rectangle** that contains an object.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0003.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

bottom (4 bytes): A signed integer value that specifies the bottom, in application-defined coordinates, of the bounding rectangle. The default value for this property is 0x00000001.

2.3.18.5 rotation

The **rotation** property specifies the rotation on a **shape**.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0004.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

rotation (4 bytes): A value of type **FixedPoint**, as specified in [MS-OSHARED] section 2.2.1.6, that specifies the rotation, in degrees, that is applied to a shape. 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

The **gvPage** property specifies the page on which an object is located. This property SHOULD<49> be ignored.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0005.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

gvPage (4 bytes): An unsigned integer that specifies the page on which an object is located. The default value for this property is 0x00000000.

2.3.18.7   Transform Boolean Properties

The **Transform Boolean Properties** specify a 32-bit field of Boolean properties for the **shape** transform.

0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																unused1													A	B	C
unused3															D	E	F														

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x003F.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

unused1 (13 bits): A value that is undefined and MUST be ignored.

A - unused2 (1 bit): A value that is undefined and MUST be ignored.

B - 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 used instead. The default value of this property is 0x0.

C - 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 used instead. The default value of this property is 0x0.

unused3 (13 bits): A value that is undefined and MUST be ignored.

D - unused4 (1 bit): A value that is undefined and MUST be ignored.

E - 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.

F - 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.

2.3.19 Relative Transform

The **Relative Transform** property set specifies the values that are necessary to construct a transform, relative to another **shape**, that is applied to a shape prior to rendering.

2.3.19.1 relLeft

The **relLeft** 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	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																relLeft															
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x03C0.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

relLeft (4 bytes): A signed integer that specifies the left side, in application-defined coordinates, of the bounding rectangle. The default value for this property is 0x00000000.

2.3.19.2 relTop

The **relTop** 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	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																relTop															
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x03C1.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

relTop (4 bytes): A signed integer that specifies the top, in application-defined coordinates, of the bounding rectangle. The default value for this property is 0x00000000.

2.3.19.3   relRight

The **relRight** 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	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																relRight															
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x03C2.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

relRight (4 bytes): A signed integer that specifies the right side, in application-defined coordinates, of the bounding rectangle. The default value for this property is 0x00000001.

2.3.19.4   relBottom

The **relBottom** 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	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																relBottom															
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x03C3.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

relBottom (4 bytes): A signed integer that specifies the bottom, in application-defined coordinates, of the bounding rectangle. The default value for this property is 0x00000001.

2.3.19.5   relRotation

The **relRotation** property specifies the rotation on a **shape**, relative to the parent object or **group**.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x03C4.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

relRotation (4 bytes): A value of type **FixedPoint**, as specified in [MS-OSHARED] section 2.2.1.6, that specifies the rotation, in degrees, that is applied to a shape, relative to the parent object or group. 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

The **gvRelPage** property specifies the page on which an object is located, relative to a parent object or **group**. This property SHOULD<50> be ignored.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x03C5.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

gvRelPage (4 bytes): An unsigned integer that specifies the page on which an object is located, relative to a parent object or group. The default value for this property is 0x00000000.

2.3.19.7   Relative Transform Boolean Properties

The **Relative Transform Boolean Properties** specify a 32-bit field of Boolean properties for the relative transform of the **shape**.

0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																unused1													A	B	C
unused3													D	E	F																

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x03FF.

opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

unused1 (13 bits): A value that is undefined and MUST be ignored.

A - unused2 (1 bit): A value that is undefined and MUST be ignored.

B - 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 used instead. The default value for this property is 0x0.

C - 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 used instead. The default value for this property is 0x0.

unused3 (13 bits): A value that is undefined and MUST be ignored.

D - unused4 (1 bit): A value that is undefined and MUST be ignored.

E - 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.

F - 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.

2.3.20 Protection

The **Protection** property set specifies the protection attributes that apply to a **shape**.

2.3.20.1   Protection Boolean Properties

The **Protection Boolean Properties** specify a 32-bit field of Boolean properties for the protection of the **shape**.

0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																unused1					A	B	C	D	E	F	G	H	I	J
unused2						K	L	M	N	O	P	Q	R	S	T																

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.
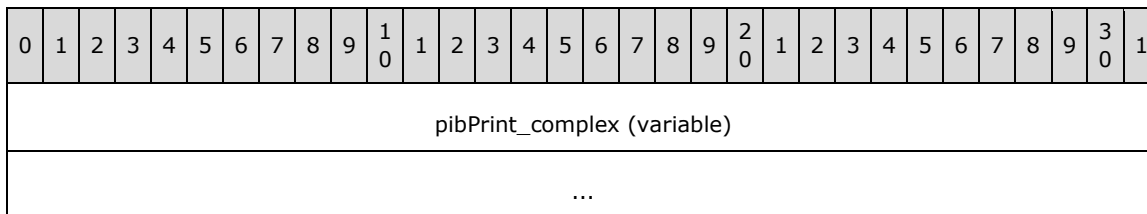
Field	Meaning
opid.opid	A value that MUST be 0x007F.
opid.fBid	A value that MUST be 0x0.

opid.fComplex	A value that MUST be 0x0.

unused1 (6 bits): A value that is undefined and MUST be ignored.

A - 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.

B - 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.

C - 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.

D - 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.

E - 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.

F - 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.

G - 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.

H - 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. The default value of this property is 0x0.

I - 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.

J - 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.

unused2 (6 bits): A value that is undefined and MUST be ignored.

K - fLockAgainstUngrouping (1 bit): A bit that specifies whether a grouped shape is be locked from being ungrouped. This bit MAY<51> be ignored. This value MUST be ignored if **fUsefLockAgainstUngrouping** is 0x0. The default value of this property is 0x0.

L - fLockRotation (1 bit): A bit that specifies whether the rotation of a shape is be locked from being edited. This value MUST be ignored if **fUsefLockRotation** is 0x0. The default value of this property is 0x0.

M - fLockAspectRatio (1 bit): A bit that specifies whether the aspect ratio of a shape is be locked from being edited. This value MUST be ignored if **fUsefLockAspectRatio** is 0x0. The default value of this property is 0x0.

N - fLockPosition (1 bit): A bit that specifies whether the position of a shape is be locked from being edited. This value MUST be ignored if **fUsefLockPosition** is 0x0. The default value of this property is 0x0.

O - fLockAgainstSelect (1 bit): A bit that specifies whether the shape is be locked from being selectable in an editor application. This value MUST be ignored if **fUsefLockAgainstSelect** is 0x0. The default value of this property is 0x0.

P - fLockCropping (1 bit): A bit that specifies whether the cropping of a picture is be locked from being edited. This value MUST be ignored if **fUsefLockCropping** is 0x0. The default value of this property is 0x0.

Q - fLockVertices (1 bit): A bit that specifies whether the vertices of a path is be locked from being edited. This value MUST be ignored if **fUsefLockVertices** is 0x0. The default value of this property is 0x0.

R - fLockText (1 bit): A bit that specifies whether the text that is attached to a shape is be locked from being edited. This value MUST be ignored if **fUsefLockText** is 0x0. The default value of this property is 0x0.

S - fLockAdjustHandles (1 bit): A bit that specifies whether the **adjust handles** of a shape, as specified by the **pAdjustHandles_complex** property, as defined in section 2.3.6.25, is locked from being edited. This value MUST be ignored if **fUsefLockAdjustHandles** is 0x0. The default value of this property is 0x0.

T - fLockAgainstGrouping (1 bit): A bit that specifies whether the shape is locked from being grouped with other shapes. This value MUST be ignored if **fUsefLockAgainstGrouping** is 0x0. The default value of this property is 0x0.

2.3.21 Text

The **Text** property set specifies properties for text that is contained by **shapes**.

2.3.21.1 lTxid

The **lTxid** property specifies an identifier for the text.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0080.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

lTxid (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

The **dxTextLeft** property specifies the size of the margin to the left of the text.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0081.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

dxTextLeft (4 bytes): A signed integer that specifies the size, in **EMUs**, of the margin inside the containing **shape** to the left of the text. This value MUST be from 0x00000000 through 0x0132F540, inclusive. The default value for this property is 0x00016530.

2.3.21.3 dyTextTop

The **dyTextTop** property specifies the size of the margin above the text.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0082.
opid.fBid	A value that MUST be 0x0.

opid.fComplex	A value that MUST be 0x0.

dyTextTop (4 bytes): A signed integer that specifies the size, in **EMUs**, of the margin inside the containing **shape** above the text. This value MUST be from 0x00000000 through 0x0132F540, inclusive. The default value for this property is 0x0000B298.

2.3.21.4 dxTextRight

The **dxTextRight** property specifies the size of the margin to the right of the text.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0083.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

dxTextRight (4 bytes): A signed integer that specifies the size, in **EMUs**, of the margin inside the containing **shape** to the right of the text. This value MUST be from 0x00000000 through 0x0132F540, inclusive. The default value for this property is 0x00016530.

2.3.21.5 dyTextBottom

The **dyTextBottom** property specifies the size of the margin below the text.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0084.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

dyTextBottom (4 bytes): A signed integer that specifies the size, in **EMUs**, of the margin inside the containing **shape** below the text. This value MUST be from 0x00000000 through 0x0132F540, inclusive. The default value for this property is 0x0000B298.

2.3.21.6   WrapText

The **WrapText** property specifies the type of wrapping that is applied to the text.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0085.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

WrapText (4 bytes): An **MSOWRAPMODE** enumeration value, as defined in section 2.4.3, specifying the type of wrapping that is applied to the text. The default value for this property is **msowrapSquare**.

2.3.21.7   unused134

The **unused134** property is undefined and MUST be ignored.

0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																unused134															
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0086.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

unused134 (4 bytes): A value that is undefined and MUST be ignored.

2.3.21.8 anchorText

The **anchorText** property specifies the type of **anchor** that is applied to the text. This value MAY<52> be used.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0087.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

anchorText (4 bytes): An **MSOANCHOR** enumeration value, as defined in section 2.4.4, specifying the type of anchor that is applied to the text. The default value for this property is **msoanchorTop**.

2.3.21.9 txflTextFlow

The **txflTextFlow** property specifies the type of flow that is applied to the text.

0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																txflTextFlow															

...	

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0088.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

txflTextFlow (4 bytes): An **MSOTXFL** enumeration value, as defined in section 2.4.5, specifying the type of flow that is applied to the text. The default value for this property is **msotxflHorzN**.

2.3.21.10   cdirFont

The **cdirFont** property specifies the rotation that is applied to the text. This property MAY<53> be used.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0089.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

cdirFont (4 bytes): An **MSOCDIR** enumeration value, as defined in section 2.4.6, specifying the rotation that is applied to the text. The default value for this property is msocdir0.

2.3.21.11   hspNext

The **hspNext** property specifies the next **shape** in a sequence of linked shapes. This property MAY<54> be used.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x008A.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

hspNext (4 bytes): A value of type **MSOSPID**, as defined in section 2.1.2, that specifies the next shape in a sequence of linked shapes. The default value for this property is 0x00000000.

2.3.21.12   txdir

The **txdir** property specifies the direction of the text. This property MAY<55> be used.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x008B.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

txdir (4 bytes): An **MSOTXDIR** enumeration value, as defined in section 2.4.7, that specifies the direction of the text. The default value for this property is **msotxdirLTR**.

2.3.21.13   unused140

The **unused140** property is undefined and MUST be ignored.

0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																unused140															
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section [2.2.8](#), that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x008C.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

unused140 (4 bytes): A value that is undefined and MUST be ignored.

2.3.21.14   unused141

The **unused141** property is undefined and MUST be ignored.

0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																unused141															
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section [2.2.8](#), that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x008D.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

unused141 (4 bytes): A value that is undefined and MUST be ignored.

2.3.21.15   Text Boolean Properties

The **Text Boolean Properties** specify a 32-bit field of Boolean properties for the text that is contained by a **shape**.

0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																unused1											A	B	C	D	E
unused4											F	G	H	I	J																

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x00BF.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

unused1 (11 bits): A value that is undefined and MUST be ignored.

A - fUsefSelectText (1 bit): A bit that specifies whether the **fSelectText** bit is set. A value of 0x0 specifies that the **fSelectText** bit MUST be ignored and the default value used instead. The default value of this property is 0x0.

B - fUsefAutoTextMargin (1 bit): A bit that specifies whether the **fAutoTextMargin** bit is set. A value of 0x0 specifies that the **fAutoTextMargin** bit MUST be ignored and the default value used instead. The default value of this property is 0x0.

C - unused2 (1 bit): A value that is undefined and MUST be ignored.

D - fUsefFitShapeToText (1 bit): A bit that specifies whether the **fFitShapeToText** bit is set. A value of 0x0 specifies that the **fFitShapeToText** bit MUST be ignored and the default value used instead. The default value of this property is 0x0.

E - unused3 (1 bit): A value that is undefined and MUST be ignored.

unused4 (11 bits): A value that is undefined and MUST be ignored.

F - fSelectText (1 bit): A bit that specifies whether the containing shape SHOULD<56> enter a text editing mode when the user clicks the contained text area. A value of 0x0 specifies that a single click selects the shape and that a second click will enter a text editing mode. This value MUST be ignored if **fUsefSelectText** is 0x0. The default value of this property is 0x1.

G - fAutoTextMargin (1 bit): A bit that specifies whether the containing shape SHOULD<57> use a set of default internal margins for text on shapes. A value of 0x0 specifies that the internal margins of the containing shape will assume the values that are specified by the dxTextLeft, dyTextTop, dxTextRight, and dyTextBottom properties in the containing **OfficeArtRGFOPTE** record, as defined in section 2.3.1, using the default 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.

H - unused5 (1 bit): A value that is undefined and MUST be ignored.

I - fFitShapeToText (1 bit): A bit that specifies whether the containing shape SHOULD<58> adjust its dimensions to fit its contained text. This value MUST be ignored if **fUsefFitShapeToText** is 0x0. The default value of this property is 0x0.

J - unused6 (1 bit): A value that is undefined and MUST be ignored.

2.3.22 Geometry Text

The **Geometry Text** property set specifies text that is drawn to follow the geometry of the **shape** containing it, as opposed to text box text, which uses the geometry of the shape as a **bounding rectangle**. A shape SHOULD NOT have both **geometry text** and text for a text box.

2.3.22.1 gtextUNICODE

The **gtextUNICODE** property specifies the text for this shape's **geometry text**.

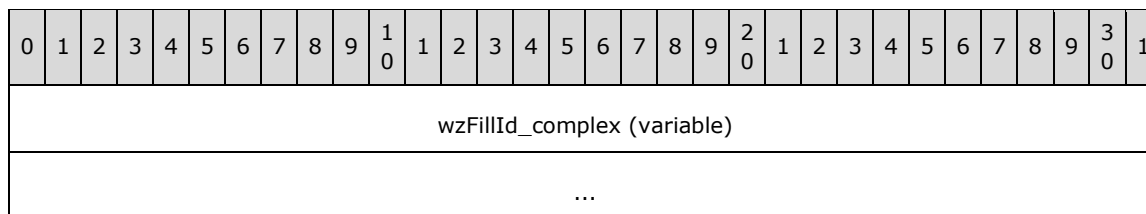| 0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																gtextUNICODE															
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x00C0.
opid.fBid	A value that is undefined and MUST be ignored.
opid.fComplex	A bit that indicates whether the **gtextUNICODE_complex** property, as defined in section 2.3.22.2, exists. If the value equals 0x1, **gtextUNICODE_complex** MUST exist.

gtextUNICODE (4 bytes): The number of bytes of data in the **gtextUNICODE_complex** property. If **opid.fComplex** equals 0x0, this value MUST be 0x00000000. The default value for this property is 0x00000000.
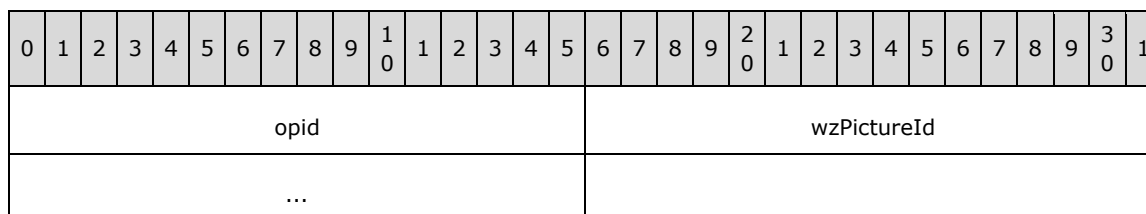
2.3.22.2 gtextUNICODE_complex

The **gtextUNICODE_complex** property specifies additional data for the **gtextUNICODE** property, as defined in section 2.3.22.1. If the **opid.fComplex** bit of **gtextUNICODE** equals 0x1, this property MUST exist.

0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
gtextUNICODE_complex (variable)																															

...

gtextUNICODE_complex (variable): A null-terminated **Unicode** string that specifies the text to show.

2.3.22.3   gtextAlign

The **gtextAlign** property specifies how **geometry text** is aligned on this **shape**.
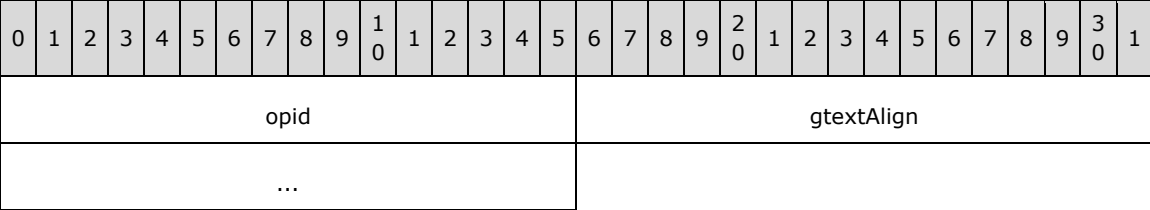
0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid															gtextAlign																
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section [2.2.8](#), that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x00C2.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

gtextAlign (4 bytes): An unsigned integer that specifies how geometry text is aligned on this shape. The alignment is applicable only if space remains after laying out a line of text along the geometry of the shape. 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. The default value for this property is **msoalignTextCenter**.

Name	Value	Meaning
msoalignTextStretch	0x00000000	Text SHOULD[59] 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:

Name	Value	Meaning
		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<60> 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<61> be added so that the words fill the entire path: **Multiple Lines of Text**

2.3.22.4   gtextSize

The **gtextSize** property specifies the font size, in points, of the **geometry text** for this **shape**.
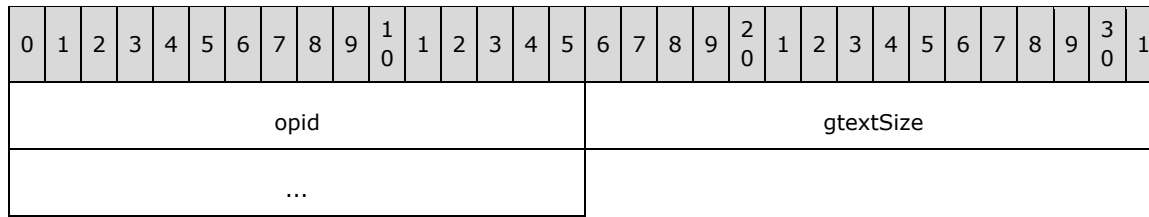
0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																gtextSize															
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x00C3.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

gtextSize (4 bytes): A value of type **FixedPoint**, as specified in [MS-OSHARED] section 2.2.1.6, that specifies the font size, in points, of the geometry text for this shape. This value MUST be greater than or equal to 0x00000000. The default value for this property is 0x00240000.

2.3.22.5 gtextSpacing

The **gtextSpacing** property specifies the amount of spacing between characters in the text.
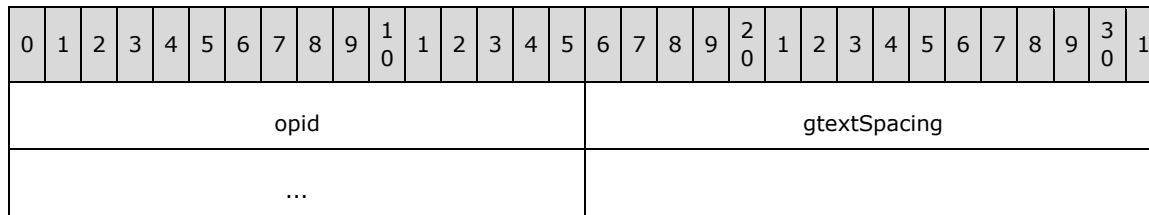
0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																gtextSpacing															
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x00C4.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

gtextSpacing (4 bytes): A value of type **FixedPoint**, as specified in [MS-OSHARED] section 2.2.1.6, that specifies a scaling factor to apply to the spacing between characters in the **geometry text** for this **shape**. The quantity to which the scaling factor is applied is specified by the **gtextFTight** bit of the Geometry Text Boolean Properties for this shape. 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

The **gtextFont** property specifies the font to use for the text.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x00C5.
opid.fBid	A value that is undefined and MUST be ignored.
opid.fComplex	A bit that indicates whether the **gtextFont_complex** property, as defined in section 2.3.22.7, exists. If the value equals 0x1, **gtextFont_complex** MUST exist.

gtextFont (4 bytes): The number of bytes of data in the **gtextFont_complex** property. If **opid.fComplex** equals 0x0, this value MUST be 0x00000000. The default value for this property is an empty string.

2.3.22.7   gtextFont_complex

The **gtextFont_complex** property specifies additional data for the **gtextFont** property, as defined in section 2.3.22.6. If the **opid.fComplex** bit of **gtextFont** equals 0x1, this property MUST exist.

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

gtextFont_complex (variable): A null-terminated **Unicode** string that specifies the font name to use for this text.

2.3.22.8   gtextCSSFont

The **gtextCSSFont** property specifies extra font information, beyond the single font in the **gtextFont_complex** property, as defined in section 2.3.22.7. This property SHOULD<62> be used so that on conversion to and from **HTML**, the correct font information will be preserved.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x00C6.
opid.fBid	A value that is undefined and MUST be ignored.
opid.fComplex	A bit that indicates whether the **gtextCSSFont_complex** property, as defined in section 2.3.22.9, exists. If the value equals 0x1, **gtextCSSFont_complex** MUST exist.

gtextCSSFont (4 bytes): The number of bytes of data in the **gtextCSSFont_complex** property. If **opid.fComplex** equals 0x0, this value MUST be 0x00000000. The default value for this property is 0x00000000.

2.3.22.9   gtextCSSFont_complex

The **gtextCSSFont_complex** property specifies additional data for the **gtextCSSFont** property, as defined in section 2.3.22.8. If the **opid.fComplex** bit of **gtextCSSFont** equals 0x1, this property MUST exist.

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

gtextCSSFont_complex (variable): A null-terminated **Unicode** string that specifies extra font information, beyond the font that is stored in the **gTextFont_complex** property, as defined in section 2.3.22.7, for this **shape**. The string contains a comma-delimited list of font-family names and generic font-family names, according to the **font** or **font-family** property as specified in [CSS-LEVEL2], minus the first value in that string. The first value is stored instead in the **gtextFont_complex** property. The font names are enclosed by double quotation marks.

2.3.22.10   Geometry Text Boolean Properties

The **Geometry Text Boolean Properties** specify a 32-bit field of Boolean values for text that is drawn with visual effects.

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

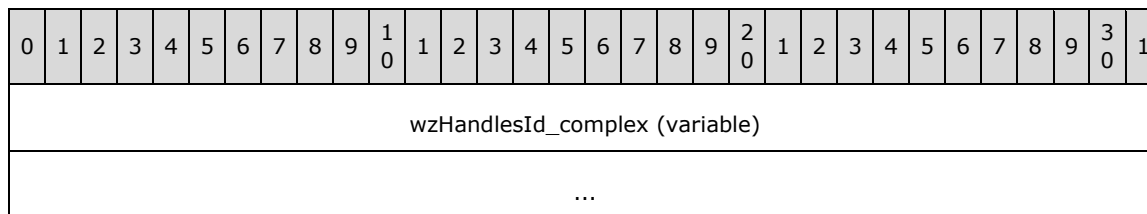**opid (2 bytes):** An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x00FF.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

A - fUsegtextFReverseRows (1 bit): A bit that specifies whether the **gtextFReverseRows** bit is set. A value of 0x0 specifies that the **gtextFReverseRows** bit MUST be ignored and the default value used instead. The default value of this property is 0x0.

B - fUsefGtext (1 bit): A bit that specifies whether the **fGtext** bit is set. A value of 0x0 specifies that the **fGtext** bit MUST be ignored and the default value used instead. The default value of this property is 0x0.

C - fUsegtextFVertical (1 bit): A bit that specifies whether the **gtextFVertical** bit is set. A value of 0x0 specifies that the **gtextFVertical** bit MUST be ignored and the default value used instead. The default value of this property is 0x0.

D - fUsegtextFKern (1 bit): A bit that specifies whether the **gtextFKern** bit is set. A value of 0x0 specifies that the **gtextFKern** bit MUST be ignored and the default value used instead. The default value of this property is 0x0.

E - fUsegtextFTight (1 bit): A bit that specifies whether the **gtextFTight** bit is set. A value of 0x0 specifies that the **gtextFTight** bit MUST be ignored and the default value used instead. The default value of this property is 0x0.

F - fUsegtextFStretch (1 bit): A bit that specifies whether the **gtextFStretch** bit is set. A value of 0x0 specifies that the **gtextFStretch** bit MUST be ignored and the default value used instead. The default value of this property is 0x0.

G - fUsegtextFShrinkFit (1 bit): A bit that specifies whether the **gtextFShrinkFit** bit is set. A value of 0x0 specifies that the **gtextFShrinkFit** bit MUST be ignored and the default value used instead. The default value of this property is 0x0.

H - fUsegtextFBestFit (1 bit): A bit that specifies whether the **gtextFBestFit** bit is set. A value of 0x0 specifies that the **gtextFBestFit** bit MUST be ignored and the default value used instead. The default value of this property is 0x0.

I - fUsegtextFNormalize (1 bit): A bit that specifies whether the **gtextFNormalize** bit is set. A value of 0x0 specifies that the **gtextFNormalize** bit MUST be ignored and the default value used instead. The default value of this property is 0x0.

J - fUsegtextFDxMeasure (1 bit): A bit that specifies whether the **gtextFDxMeasure** bit is set. A value of 0x0 specifies that the **gtextFDxMeasure** bit MUST be ignored and the default value used instead. The default value of this property is 0x0.

K - fUsegtextFBold (1 bit): A bit that specifies whether the **gtextFBold** bit is set. A value of 0x0 specifies that the **gtextFBold** bit MUST be ignored and the default value used instead. The default value of this property is 0x0.

L - fUsegtextFItalic (1 bit): A bit that specifies whether the **gtextFItalic** bit is set. A value of 0x0 specifies that the **gtextFItalic** bit MUST be ignored and the default value used instead. The default value of this property is 0x0.

M - fUsegtextFUnderline (1 bit): A bit that specifies whether the **gtextFUnderline** bit is set. A value of 0x0 specifies that the **gtextFUnderline** bit MUST be ignored and the default value used instead. The default value of this property is 0x0.

N - fUsegtextFShadow (1 bit): A bit that specifies whether the **gtextFShadow** bit is set. A value of 0x0 specifies that the **gtextFShadow** bit MUST be ignored and the default value used instead. The default value of this property is 0x0.

O - fUsegtextFSmallcaps (1 bit): A bit that specifies whether the **gtextFSmallcaps** bit is set. A value of 0x0 specifies that the **gtextFSmallcaps** bit MUST be ignored and the default value used instead. The default value of this property is 0x0.

P - fUsegtextFStrikethrough (1 bit): A bit that specifies whether the **gtextFStrikethrough** bit is set. A value of 0x0 specifies that the **gtextFStrikethrough** bit MUST be ignored and the default value used instead. The default value of this property is 0x0.

Q - gtextFReverseRows (1 bit): A bit that specifies whether the order in which lines of **geometry text** are laid out SHOULD<63> be reversed. This bit is applicable only if the geometry text is vertically oriented, 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.

R - fGtext (1 bit): A bit that specifies whether this **shape** has geometry text. If **fGtext** is 0x1, the **gtextUNICODE_complex** property, as defined in section 2.3.22.2, MUST exist. This value MUST be ignored if **fUsefGtext** is 0x0. The default value of this property is 0x0.

S - gtextFVertical (1 bit): A bit that specifies whether the characters of the geometry text for this shape are laid out vertically rather than horizontally. This value MUST be ignored if **fUsegtextFVertical** is 0x0. The default value of this property is 0x0.

T - gtextFKern (1 bit): A bit that specifies whether the geometry text of this shape SHOULD<64> use kerning. This value MUST be ignored if **fUsegtextFKern** is 0x0. The default value of this property is 0x0.

U - gtextFTight (1 bit): A bit that specifies the quantity that the scaling factor, as specified by the gtextSpacing property, SHOULD<65> be applied to. The following table describes the effect of each value for this bit. This value MUST be ignored if **fUsegtextFTight** is 0x0. The default value of this property is 0x0.

Value	Meaning
0x0	Tightening—the value of **gtextSpacing** is used to scale the character advance width, as shown in the following figure.

Value	Meaning
	 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 negative numbers.
0x1	Tracking—the value of **gtextSpacing** is used to scale the amount of spacing between the characters.

V - gtextFStretch (1 bit): A bit that specifies whether the geometry text of this shape SHOULD<66> 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.

W - gtextFShrinkFit (1 bit): A bit that specifies whether the bounding rectangle of the geometry text SHOULD<67> be measured according to the bounding rectangle of the characters that are used in the string, rather than according to the bounding rectangle of the characters in the font. The following table shows the effect of this bit on the bounding rectangle of the geometry text. This bit is applicable only if **gtextFStretch** is 0x1 and **fUsegtextFStretch** is 0x1; otherwise, it MAY be any value. This value MUST be ignored if **fUsegtextFShrinkFit** is 0x0.

Value	Meaning
0x0	The bounding rectangle of the geometry text is measured according to the bounding rectangle of the characters in the font.
0x1	The bounding rectangle of the geometry text is measured according to the bounding rectangle of the characters that are used in the string.

X - gtextFBestFit (1 bit): A bit that specifies whether the geometry text SHOULD<68> be stretched to fill the entire line. Stretching occurs in the same direction as the orientation of the geometry text, as specified by **gtextFVertical**. This bit is applicable only 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.

Y - gtextFNormalize (1 bit): A bit that specifies whether every character in the geometry text is adjusted to fill the available space for that character. The definition of the available space varies based on the text orientation, as specified by **gtextFVertical**. The following table shows how the text orientation affects the normalization of the text. This value MUST be ignored if **fUsegtextFNormalize** is 0x0.

Text orientation	Original text	Normalized text
Horizontal		
Vertical		

Z - gtextFDxMeasure (1 bit): A bit that specifies whether the distance that is used to calculate the amount to warp text along the geometry of this shape SHOULD<69> use only the x component rather a combination of the x and y components. This value MUST be ignored if **fUsegtextFDxMeasure** is 0x0. The default value of this property is 0x0.

a - 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.

b - 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.

c - gtextFUnderline (1 bit): A bit that specifies whether this geometry text uses an underline effect on the text characters. This value SHOULD<70> be ignored. This value MUST be ignored if **fUsegtextFUnderline** is 0x0. The default value of this property is 0x0.

d - 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 **fUsegtextFShadow** is 0x0. The default value of this property is 0x0.

e - 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 counterparts. This value SHOULD<71> be ignored. This value MUST be ignored if **fUsegtextFSmallcaps** is 0x0. The default value of this property is 0x0.

f - gtextFStrikethrough (1 bit): A bit that specifies whether this geometry text has strikethrough formatting. This value SHOULD<72> be ignored. This value MUST be ignored if **fUsegtextFStrikethrough** is 0x0. The default value of this property is 0x0.

2.3.23 Blip

The **Blip** property set specifies the visual attributes of a picture **shape**.

2.3.23.1 cropFromTop

The **cropFromTop** property specifies the location of the top of the **crop** rectangle.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0100.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

cropFromTop (4 bytes): A value of type **FixedPoint**, as specified in [MS-OSHARED] section 2.2.1.6, that specifies the location, expressed as a fraction of the image height, of the top of the crop rectangle. 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

The **cropFromBottom** property specifies the location of the bottom of the crop rectangle.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0101.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

cropFromBottom (4 bytes): A value of type **FixedPoint**, as specified in [MS-OSHARED] section 2.2.1.6, that specifies the location, expressed as a fraction of the image height, of the bottom of the crop rectangle. 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

The **cropFromLeft** property specifies the location of the left side of the crop rectangle.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0102.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

cropFromLeft (4 bytes): A value of type **FixedPoint**, as specified in [MS-OSHARED] section 2.2.1.6, that specifies the location, expressed as a fraction of the image width, of the left side of the crop rectangle. A value of 0x00000000 specifies that the left side 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

The **cropFromRight** property specifies the location of the right side of the crop rectangle.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning

opid.opid	A value that MUST be 0x0103.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

cropFromRight (4 bytes): A value of type **FixedPoint**, as specified in [MS-OSHARED] section 2.2.1.6, that specifies the location of the right side, expressed as a fraction of the image width, of the crop rectangle. A value of 0x00000000 specifies that the right side 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

The **pib** property specifies which **BLIP** in the **OfficeArtBStoreContainer** record, as defined in section 2.2.20, to display in the picture **shape**.

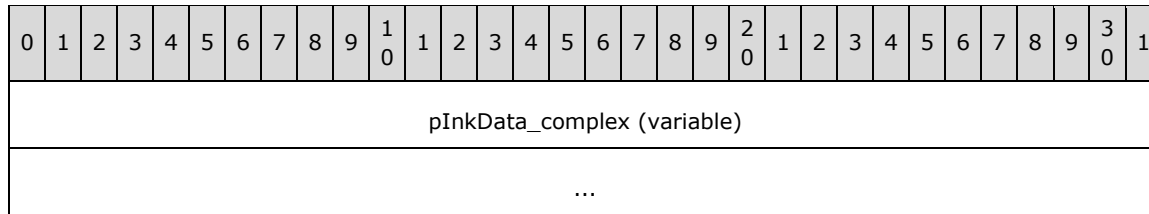| 0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
						opid																	pib								
						...																									

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0104.
opid.fBid	A value that MUST be 0x1 if **fComplex** equals 0x0. Otherwise, this value MUST be ignored. If this record is contained in an **OfficeArtInlineSpContainer** record, as defined in section 2.2.15, then the value MUST be ignored.
opid.fComplex	A bit that indicates whether the **pib_complex** property, as defined in section 2.3.23.6, exists. If the value equals 0x1, **pib_complex** MUST exist. If this record is contained in an **OfficeArtInlineSpContainer** record then the value MUST be ignored.

pib (4 bytes): An unsigned integer that specifies the BLIP to display in the picture shape. The value of **opid.fComplex** determines the meaning of this field, as specified in the following table. The default value for this property is 0x00000000. If this record is contained in an **OfficeArtInlineSpContainer** record then the value MUST be ignored.

Value of opid.fComplex	Meaning of pib field
0x0	Specifies a one-based index into the **rgfb** array of the **OfficeArtBStoreContainer**

	record, as defined in section 2.2.20. A value of 0x00000000 MUST be ignored.
0x1	Specifies the number of bytes of data in the **pib_complex** property, as defined in section 2.3.23.6.

2.3.23.6 pib_complex

The **pib_complex** property specifies additional data for the **pib** property, as defined in section 2.3.23.5. If the **opid.fComplex** bit of the **pib** equals 0x1, this property MUST exist.
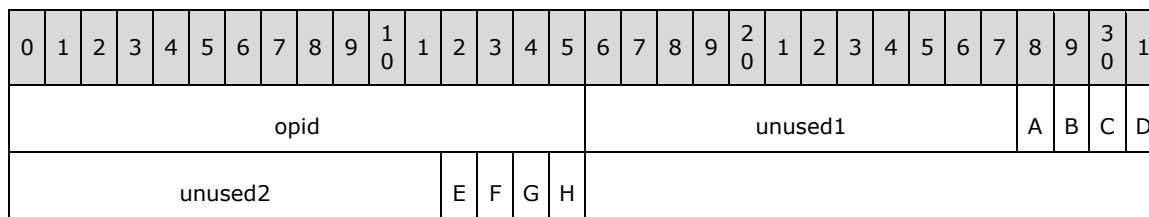
0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
pib_complex (variable)																														
...																														

pib_complex (variable): An **OfficeArtBlip** record, as defined in section 2.2.23, that specifies the **BLIP** to display in the picture **shape**.

2.3.23.7 pibName

The **pibName** property specifies the comment, file name, or **URL**, as specified by the **pibFlags** property, as defined in section 2.3.23.9, for this **BLIP**.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0105.
opid.fBid	A value that is undefined and MUST be ignored.
opid.fComplex	A bit that indicates whether the **pibName_complex** property, as defined in section 2.3.23.8, exists. If the value equals 0x1, **pibName_complex** 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

The **pibName_complex** property specifies additional data for the **pibName** property, as defined in section 2.3.23.7. If the **opid.fComplex** bit of **pibName** equals 0x1, this property MUST exist.

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

pibName_complex (variable): A null-terminated **Unicode** string that specifies the comment, file name, or **URL**, as specified by the **pibFlags** property, as defined in section 2.3.23.9, for the **BLIP**.

2.3.23.9 pibFlags

The **pibFlags** property specifies a set of flags that relate to the usage of the **BLIP**.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0106.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

pibFlags (4 bytes): An **MSOBLIPFLAGS** enumeration value, as defined in section 2.4.8, that specifies how to interpret the **pibName_complex** property, as defined in section 2.3.23.8, and other properties of the BLIP to display. The default value for this property is **msoblipflagComment**.

2.3.23.10 pictureTransparent

The **pictureTransparent** property specifies the transparent pixel color.

0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
					opid														pictureTransparent												

...

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0107.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

pictureTransparent (4 bytes): An **OfficeArtCOLORREF** record, as defined in section 2.2.2, that specifies the color value that is treated as transparent. The default value for this property is 0xFFFFFFFF.

2.3.23.11   pictureContrast

The **pictureContrast** property specifies the contrast modification for the picture.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0108.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

pictureContrast (4 bytes): A signed integer that specifies the amount with which 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

The **pictureBrightness** property specifies the brightness modification for the picture.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0109.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

pictureBrightness (4 bytes): A signed integer that specifies the amount with which 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

The **pictureId** property specifies the **OLE** identifier of the picture.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x010B.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that 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 pictureDblCrMod

The **pictureDblCrMod** property specifies a shadow color for pictures that have a double shadow in black-and-white display mode.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x010C.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

pictureDblCrMod (4 bytes): An **OfficeArtCOLORREF** record, as defined in section 2.2.2, specifying the shadow color that is used to modify the picture when a double shadow exists in black-and-white display mode. This value SHOULD be ignored. The default value for this property is 0x100000F4.

2.3.23.15 pictureFillCrMod

The **pictureFillCrMod** property specifies the fill color modification that is used in black-and-white display mode.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x010D.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

pictureFillCrMod (4 bytes): An **OfficeArtCOLORREF** record, as defined in section 2.2.2, specifying the fill color modification that is used in black-and-white display mode. The default value for this property is 0x20000000.

2.3.23.16 pictureLineCrMod

The **pictureLineCrMod** property specifies the line color modification that is used in black-and-white display mode.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x010E.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

pictureLineCrMod (4 bytes): An **OfficeArtCOLORREF** record, as defined in section 2.2.2, specifying the line color modification that is used in black-and-white display mode. The default value for this property is 0x20000000.

2.3.23.17 pibPrint

The **pibPrint** property specifies which **BLIP** in the **OfficeArtBStoreContainer** record, as defined in section 2.2.20, to print. By default, this property is not set, and the display BLIP that is specified by the **pib**, as defined in section 2.3.23.5, property or **pib_complex** property, as defined in section 2.3.23.6, will be printed.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning

opid.opid	A value that MUST be 0x010F.
opid.fBid	A value that MUST be 0x1 if **fComplex** equals 0x0. Otherwise, this value MUST be ignored. If this record is contained in an **OfficeArtInlineSpContainer** record, as defined in section 2.2.15, the value MUST be ignored.
opid.fComplex	A bit that indicates whether the **pibPrint_complex** property, as defined in section 2.3.23.18, exists. If the value equals 0x1, **pibPrint_complex** MUST exist. If this record is contained in an **OfficeArtInlineSpContainer** record then the value MUST be ignored.

pibPrint (4 bytes): An unsigned integer that specifies the BLIP to print. The value of **opid.fComplex** determines the meaning of this field, as specified in the following table. The default value for this property is 0x00000000. If this record is contained in an **OfficeArtInlineSpContainer** record then the value MUST be ignored.

Value of opid.fComplex	Meaning of pibPrint field
0x0	Specifies a one-based index into the **rgfb** array of the **OfficeArtBStoreContainer** record, as defined in section 2.2.20. A value of 0x00000000 MUST be ignored.
0x1	Specifies the number of bytes of data in the **pibPrint_complex** property, as defined in section 2.3.23.18.

2.3.23.18   pibPrint_complex

The **pibPrint_complex** property specifies additional data for the **pibPrint** property, as defined in section 2.3.23.17. If the **opid.fComplex** bit of **pibPrint** equals 0x1, this property MUST exist.

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

pibPrint_complex (variable): An **OfficeArtBlip** record, as defined in section 2.2.23, that specifies the **BLIP** to print.

2.3.23.19   pibPrintName

The **pibPrintName** property specifies the comment, file name, or **URL**, as specified by the **pibPrintFlags** property, as defined in section 2.3.23.21, for the **BLIP** to print.

0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
							opid													pibPrintName											

...	

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0110.
opid.fBid	A value that is undefined and MUST be ignored.
opid.fComplex	A bit that indicates whether the **pibPrintName_complex** property, as defined in section 2.3.23.20, exists. If the value equals 0x1, **pibPrintName_complex** MUST exist.

pibPrintName (4 bytes): The number of bytes of data in the **pibPrintName_complex** property, as defined in section 2.3.23.20. If **opid.fComplex** equals 0x0, this value MUST be 0x00000000. The default value for this property is 0x00000000.

2.3.23.20   pibPrintName_complex

The **pibPrintName_complex** property specifies additional data for the **pibPrintName** property, as defined in section 2.3.23.19. If the **opid.fComplex** bit of **pibPrintName** equals 0x1, this property MUST exist.

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

pibPrintName_complex (variable): A null-terminated **Unicode** string that specifies the comment, file name, or **URL**, as specified by the **pibPrintFlags** property, as defined in section 2.3.23.21, for the **BLIP** to print.

2.3.23.21   pibPrintFlags

The **pibPrintFlags** property specifies a set of flags that relate to the usage of the **BLIP** to print.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0111.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

pibPrintFlags (4 bytes): An **MSOBLIPFLAGS** enumeration value, as defined in section 2.4.8, that specifies how to interpret the **pibPrintName_complex** property, as defined in section 2.3.23.20, and other properties of the BLIP to print. The default value for this property is **msoblipflagComment**.

2.3.23.22 movie

The **movie** property specifies movie data. This property SHOULD be ignored.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0112.
opid.fBid	A value that is undefined and MUST be ignored.
opid.fComplex	A bit that indicates whether the **movie_complex** property, as defined in section 2.3.23.23, exists. If the value equals 0x1, **movie_complex** 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

The **movie_complex** property specifies movie data. This property SHOULD be ignored.

0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
movie_complex (variable)																															

...																														

movie_complex (variable): A binary serialization of movie data, as determined by the implementer.

2.3.23.24   pictureTransparentExt

The **pictureTransparentExt** property specifies the transparent pixel extended color.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0115.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

pictureTransparentExt (4 bytes): An **OfficeArtCOLORREF** record, as defined in section 2.2.2, that specifies the extended color value to be treated as transparent. The default value for this property is 0xFFFFFFFF.

2.3.23.25   reserved278

The reserved278 property MUST equal 0xFFFFFFFF and MUST be ignored.

0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid															reserved278																
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0116.
opid.fBid	A value that MUST be 0x0.

opid.fComplex	A value that MUST be 0x0.

reserved278 (4 bytes): A value that MUST equal 0xFFFFFFFF and MUST be ignored. The default value for this property is 0xFFFFFFFF.

2.3.23.26 pictureTransparentExtMod

The **pictureTransparentExtMod** property specifies the color modification of the transparent pixel extended color.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0117.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

pictureTransparentExtMod (4 bytes): An MSOTINTSHADE record that specifies the color modification of the extended color value. For more information, see the **OfficeArtCOLORREF** structure, as defined in section 2.2.2. The default value for this property is 0x20000000.

2.3.23.27 reserved280

This property is reserved and MUST be ignored.

0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																reserved280															
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning

opid.opid	A value that MUST be 0x0118.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

reserved280 (4 bytes): A value that MUST equal zero and MUST be ignored. The default value for this property is 0x00000000.

2.3.23.28   reserved281

The **reserved281** property MUST equal 0xFFFFFFFF and MUST be ignored.

0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																reserved281															
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0119.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

reserved281 (4 bytes): A value that MUST equal 0xFFFFFFFF and MUST be ignored. The default value for this property is 0xFFFFFFFF.

2.3.23.29   pictureRecolor

The **pictureRecolor** property specifies the color that is used to recolor the image.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x011A.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

pictureRecolor (4 bytes): An **OfficeArtCOLORREF** record, as defined in section 2.2.2, specifies the color that is used to recolor the image. The default value for this property is 0xFFFFFFFF.

2.3.23.30   pictureRecolorExt

The **pictureRecolorExt** property specifies the extended color that is used to recolor the image.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x011B.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

pictureRecolorExt (4 bytes): An **OfficeArtCOLORREF** record, as defined in section 2.2.2, specifying the extended color that is used to recolor the image. The default value for this property is 0xFFFFFFFF.

2.3.23.31   reserved284

The **reserved284** property MUST equal 0xFFFFFFFF and MUST be ignored.

0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																reserved284															
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x011C.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

reserved284 (4 bytes): A value that MUST equal 0xFFFFFFFF and MUST be ignored. The default value for this property is 0xFFFFFFFF.

2.3.23.32 pictureRecolorExtMod

The **pictureRecolorExtMod** property specifies the color modification of the extended color that is used to recolor the image.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x011D.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

pictureRecolorExtMod (4 bytes): An MSOTINTSHADE record specifying the color modification of the extended color that is used to recolor the image. For more information, see the **OfficeArtCOLORREF** structure, as defined in section 2.2.2. The default value for this property is 0x20000000.

2.3.23.33 reserved286

This property is reserved and MUST be ignored.

0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																reserved286															
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x011E.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

reserved286 (4 bytes): A value that MUST equal zero and MUST be ignored. The default value for this property is 0x00000000.

2.3.23.34   reserved287

The **reserved287** property MUST equal 0xFFFFFFFF and MUST be ignored.

0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																reserved287															
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x011F.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

reserved287 (4 bytes): A value that MUST equal 0xFFFFFFFF and MUST be ignored. The default value for this property is 0xFFFFFFFF.

2.3.23.35   Blip Boolean Properties

The **Blip Boolean Properties** specify a 32-bit field of Boolean properties for the **BLIP** style.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x013F.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

unused1 (9 bits): A value that is undefined and MUST be ignored.

A - fUsefPicturePreserveGrays (1 bit): A bit that specifies whether the **fPicturePreserveGrays** bit is set. A value of 0x0 specifies that **fPicturePreserveGrays** MUST be ignored and the default value used instead. The default value of this property is 0x0.

B - fUsefRewind (1 bit): A bit that specifies whether the **fRewind** bit is set. A value of 0x0 specifies that **fRewind** MUST be ignored and the default value used instead. The default value of this property is 0x0.

C - fUsefLooping (1 bit): A bit that specifies whether the **fLooping** bit is set. A value of 0x0 specifies that **fLooping** MUST be ignored and the default value used instead. The default value of this property is 0x0.

D - fUsefNoHitTestPicture (1 bit): A bit that specifies whether the **fNoHitTestPicture** bit is set. A value of 0x0 specifies that **fNoHitTestPicture** MUST be ignored and the default value used instead. The default value of this property is 0x0.

E - fUsefPictureGray (1 bit): A bit that specifies whether the **fPictureGray** bit is set. A value of 0x0 specifies that **fPictureGray** MUST be ignored and the default value used instead. The default value of this property is 0x0.

F - fUsefPictureBiLevel (1 bit): A bit that specifies whether the **fPictureBiLevel** bit is set. A value of 0x0 specifies that **fPictureBiLevel** MUST be ignored and the default value be used instead. The default value of this property is 0x0.

G - fUsefPictureActive (1 bit): A bit that specifies whether the **fPictureActive** bit is set. A value of 0x0 specifies that **fPictureActive** MUST be ignored and the default value used instead. The default value of this property is 0x0.

unused2 (9 bits): A value that is undefined and MUST be ignored.

H - 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.

I - fRewind (1 bit): A bit that specifies whether to rewind this animated picture or movie when it is finished playing. This value MUST be ignored if **fUsefRewind** is 0x0. The default value of this property is 0x0.

J - 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.

K - fNoHitTestPicture (1 bit): A bit that specifies whether this picture is selectable from the user interface. A value of 0x0 means that the picture is selectable. This value MUST be ignored if **fUsefNoHitTestPicture** is 0x0. The default value of this property is 0x0.

L - fPictureGray (1 bit): A bit that specifies whether this picture SHOULD be displayed in gray scale. This value MUST be ignored if **fUsefPictureGray** is 0x0. The default value of this property is 0x0.

M - 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.

N - fPictureActive (1 bit): A bit specifying 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.

2.3.24 Unknown HTML

The **Unknown HTML** property set specifies the **Vector Markup Language (VML)**, as specified in [ISO/IEC29500-4:2012], Section 14, of specific attributes of the **shape** that is imported from the **HTML** document.

2.3.24.1   wzLineId

The **wzLineId** property specifies the identifier of the **VML stroke** element, as specified in [ISO/IEC29500-4:2012], Section 14. This property MAY<73> be ignored.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0402.
opid.fBid	A value that is undefined and MUST be ignored.
opid.fComplex	A bit that indicates whether the **wzLineId_complex** property, as defined in section 2.3.24.2, exists. If the value equals 0x1, **wzLineId_complex** MUST exist.

wzLineId (4 bytes): The number of bytes of data in the **wzLineId_complex** property. If **opid.fComplex** equals 0x0, this value MUST be 0x00000000. The default value for this property is 0x00000000.

2.3.24.2   wzLineId_complex

The **wzLineId_complex** property specifies additional data for the **wzLineId** property, as defined in section 2.3.24.1. If the **opid.fComplex** bit of **wzLineId** equals 0x1, this property MUST exist.

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

wzLineId_complex (variable): A null-terminated **Unicode** string that specifies the identifier of the **VML** stroke element, as specified in [ISO/IEC29500-4:2011], Section 14.

2.3.24.3   wzFillId

The **wzFillId** property specifies the identifier of the **VML fill** element, as specified in [ISO/IEC29500-4:2011], Section 14. This property MAY<74> be ignored.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0403.
opid.fBid	A value that is undefined and MUST be ignored.
opid.fComplex	A bit that indicates whether the **wzFillId_complex** property, as defined in section 2.3.24.4, exists. If the value equals 0x1, **wzFillId_complex** MUST exist.

wzFillId (4 bytes): The number of bytes of data in the **wzFillId_complex** property. If **opid.fComplex** equals 0x0, this value MUST be 0x00000000. The default value for this property is 0x00000000.

2.3.24.4   wzFillId_complex

The **wzFillId_complex** property specifies additional data for the **wzFillId** property, as defined in section 2.3.24.3. If the **opid.fComplex** bit of **wzFillId** equals 0x1, this property MUST exist.

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

wzFillId_complex (variable): A null-terminated **Unicode** string that specifies the identifier of the **VML** fill element, as specified in [ISO/IEC29500-4:2011], Section 14.

2.3.24.5   wzPictureId

The **wzPictureId** property specifies the identifier of the **VML imagedata** element, as specified [ISO/IEC29500-4:2011], Section 14. This property MAY<75> be ignored.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0404.
opid.fBid	A value that is undefined and MUST be ignored.
opid.fComplex	A bit that indicates whether the **wzPictureId_complex** property, as defined in section 2.3.24.6, exists. If the value equals 0x1, **wzPictureId_complex** MUST exist.

wzPictureId (4 bytes): The number of bytes of data in the **wzPictureId_complex** property. If **opid.fComplex** equals 0x0, this value MUST be 0x00000000. The default value for this property is 0x00000000.

2.3.24.6   wzPictureId_complex

The **wzPictureId_complex** property specifies additional data for the **wzPictureId** property, as defined in section 2.3.24.5. If the **opid.fComplex** bit of **wzPictureId** equals 0x1, this property MUST exist.

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

wzPictureId_complex (variable): A null-terminated **Unicode** string that specifies the identifier of the **VML imagedata** element, as specified in [ISO/IEC29500-4:2011], Section 14.

2.3.24.7   wzPathId

The **wzPathId** property specifies the identifier of the **VML path** element, as specified in [ISO/IEC29500-4:2011], Section 14. This property MAY<76> be ignored.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0405.
opid.fBid	A value that is undefined and MUST be ignored.
opid.fComplex	A bit that indicates whether the **wzPathId_complex** property, as defined in section 2.3.24.8, exists. If the value equals 0x1, **wzPathId_complex** MUST exist.

wzPathId (4 bytes): The number of bytes of data in the **wzPathId_complex** property. If **opid.fComplex** equals 0x0, this value MUST be 0x00000000. The default value for this property is 0x00000000.

2.3.24.8   wzPathId_complex

The **wzPathId_complex** property specifies additional data for the **wzPathId** property, as defined in section 2.3.24.7. If the **opid.fComplex** bit of **wzPathId** equals 0x1, this property MUST exist.

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

wzPathId_complex (variable): A null-terminated **Unicode** string that specifies the identifier of the **VML path** element, as specified in [ISO/IEC29500-4:2011], Section 14.

2.3.24.9 wzShadowId

The **wzShadowId** property specifies the identifier of the **VML shadow** element, as specified in [ISO/IEC29500-4:2011], Section 14. This property MAY<77> be ignored.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0406.
opid.fBid	A value that is undefined and MUST be ignored.
opid.fComplex	A bit that indicates whether the **wzShadowId_complex** property, as defined in section 2.3.24.10, exists. If the value equals 0x1, **wzShadowId_complex** MUST exist.

wzShadowId (4 bytes): The number of bytes of data in the **wzShadowId_complex** property. If **opid.fComplex** equals 0x0, this value MUST be 0x00000000. The default value for this property is 0x00000000.

2.3.24.10 wzShadowId_complex

The **wzShadowId_complex** property specifies additional data for the **wzShadowId** property, as defined in section 2.3.24.9. If the **opid.fComplex** bit of **wzShadowId** equals 0x1, this property MUST exist.

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

wzShadowId_complex (variable): A null-terminated **Unicode** string that specifies the identifier of the **VML shadow** element, as specified in [ISO/IEC29500-4:2011], Section 14.

2.3.24.11 wzPerspectiveId

The **wzPerspectiveId** property specifies the identifier of the **VML skew** element, as specified in [ISO/IEC29500-4:2011], Section 14. This property MAY<78> be ignored.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0407.
opid.fBid	A value that is undefined and MUST be ignored.
opid.fComplex	A bit that indicates whether the **wzPerspectiveId_complex** property, as defined in section 2.3.24.12, exists. If the value equals 0x1, **wzPerspectiveId_complex** MUST exist.

wzPerspectiveId (4 bytes): The number of bytes of data in the **wzPerspectiveId_complex** property. If **opid.fComplex** equals 0x0, this value MUST be 0x00000000. The default value for this property is 0x00000000.

2.3.24.12   wzPerspectiveId_complex

The **wzPerspectiveId_complex** property specifies additional data for the **wzPerspectiveId** property, as defined in section 2.3.24.11. If the **opid.fComplex** bit of **wzPerspectiveId** equals 0x1, this property MUST exist.

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

wzPerspectiveId_complex (variable): A null-terminated **Unicode** string that specifies the identifier of the **VML** **skew** element, as specified in [ISO/IEC29500-4:2011], Section 14.

2.3.24.13   wzGtextId

The **wzGtextId** property specifies the identifier of the **VML** **textpath** element, as specified in [ISO/IEC29500-4:2011], Section 14. This property MAY<79> be ignored.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0408.
opid.fBid	A value that is undefined and MUST be ignored.
opid.fComplex	A bit that indicates whether the **wzGtextId_complex** property, as defined in section 2.3.24.14, exists. If the value equals 0x1, **wzGtextId_complex** MUST exist.

wzGtextId (4 bytes): The number of bytes of data in the **wzGtextId_complex** property. If **opid.fComplex** equals 0x0, this value MUST be 0x00000000. The default value for this property is 0x00000000.

2.3.24.14 wzGtextId_complex

The **wzGtextId_complex** property specifies additional data for the **wzGtextId** property, as defined in section 2.3.24.13. If the **opid.fComplex** bit of **wzGtextId** equals 0x1, this property MUST exist.

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

wzGtextId_complex (variable): A **Unicode** null-terminated Unicode string that specifies the identifier of the **VML textpath** element, as specified [ISO/IEC29500-4:2011], Section 14.

2.3.24.15 wzFormulaeId

The **wzFormulaeId** property specifies the identifier of the **VML formulas** element, as specified in [ISO/IEC29500-4:2011], Section 14. This property MAY<80> be ignored.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0409.

opid.fBid	A value that is undefined and MUST be ignored.
opid.fComplex	A bit that indicates whether the **wzFormulaeId_complex** property, as defined in section 2.3.24.16, exists. If the value equals 0x1, **wzFormulaeId_complex** MUST exist.

wzFormulaeId (4 bytes): The number of bytes of data in the **wzFormulaeId_complex** property. If **opid.fComplex** equals 0x0, this value MUST be 0x00000000. The default value for this property is 0x00000000.

2.3.24.16   wzFormulaeId_complex

The **wzFormulaeId_complex** property specifies additional data for the **wzFormulaeId** property, as defined in section 2.3.24.15. If the **opid.fComplex** bit of **wzFormulaeId** equals 0x1, this property MUST exist.

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

wzFormulaeId_complex (variable): A null-terminated **Unicode** string that specifies the identifier of the **VML formulas** element, as specified in [ISO/IEC29500-4:2011], Section 14.

2.3.24.17   wzHandlesId

The **wzHandlesId** property specifies the identifier of the **VML handles** element, as specified in [ISO/IEC29500-4:2011], Section 14. This property MAY<81> be ignored.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x040A.
opid.fBid	A value that is undefined and MUST be ignored.
opid.fComplex	A bit that indicates whether the **wzHandlesId_complex** property, as defined in section 2.3.24.18, exists. If the value equals 0x1, **wzHandlesId_complex** MUST exist.

wzHandlesId (4 bytes): The number of bytes of data in the **wzHandlesId_complex** property. If **opid.fComplex** equals 0x0, this value MUST be 0x00000000. The default value for this property is 0x00000000.

2.3.24.18   wzHandlesId_complex

The **wzHandlesId_complex** property specifies additional data for the **wzHandlesId** property, as defined in section 2.3.24.17. If the **opid.fComplex** bit of **wzHandlesId** equals 0x1, this property MUST exist.

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

wzHandlesId_complex (variable): A null-terminated **Unicode** string that specifies the identifier of the **VML** **handles** element, as specified in [ISO/IEC29500-4:2011], Section 14.

2.3.24.19   wzCalloutId

The **wzCalloutId** property specifies the identifier of the **VML** **callout** element, as specified in [ISO/IEC29500-4:2011], Section 14. This property MAY<82> be ignored.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x040B.
opid.fBid	A value that is undefined and MUST be ignored.
opid.fComplex	A bit that indicates whether the **wzCalloutId_complex** property, as defined in section 2.3.24.20, exists. If the value equals 0x1, **wzCalloutId_complex** MUST exist.

wzCalloutId (4 bytes): The number of bytes of data in the **wzCalloutId_complex** property. If **opid.fComplex** equals 0x0, this value MUST be 0x00000000. The default value for this property is 0x00000000.

2.3.24.20 wzCalloutId_complex

The **wzCalloutId_complex** property specifies additional data for the **wzCalloutId** property, as defined in section 2.3.24.19. If the **opid.fComplex** bit of **wzCalloutId** equals 0x1, this property MUST exist.

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

wzCalloutId_complex (variable): A null-terminated **Unicode** string that specifies the identifier of the **VML callout** element, as specified in [ISO/IEC29500-4:2011], Section 14.

2.3.24.21 wzLockId

The **wzLockId** property specifies the identifier of the **VML lock** element, as specified in [ISO/IEC29500-4:2011], Section 14. This property MAY<83> be ignored.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x040C.
opid.fBid	A value that is undefined and MUST be ignored.
opid.fComplex	A bit that indicates whether the **wzLockId_complex** property, as defined in section 2.3.24.22, exists. If the value equals 0x1, **wzLockId_complex** MUST exist.

wzLockId (4 bytes): The number of bytes of data in the **wzLockId_complex** property. If **opid.fComplex** equals 0x0, this value MUST be 0x00000000. The default value for this property is 0x00000000.

2.3.24.22 wzLockId_complex

The **wzLockId_complex** property specifies additional data for the **wzLockId** property, as defined in section 2.3.24.21. If the **opid.fComplex** bit of **wzLockId** equals 0x1, this property MUST exist.

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

wzLockId_complex (variable): A null-terminated **Unicode** string that specifies the identifier of the **VML lock** element, as specified in [ISO/IEC29500-4:2011], Section 14.

2.3.24.23 wzTextId

The **wzTextId** property specifies the identifier of the **VML textbox** element, as specified in [ISO/IEC29500-4:2011], Section 14. This property MAY<84> be ignored.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x040D.
opid.fBid	A value that is undefined and MUST be ignored.
opid.fComplex	A bit that indicates whether the **wzTextId_complex** property, as defined in section 2.3.24.24, exists. If the value equals 0x1, **wzTextId_complex** MUST exist.

wzTextId (4 bytes): The number of bytes of data in the **wzTextId_complex** property. If **opid.fComplex** equals 0x0, this value MUST be 0x00000000. The default value for this property is 0x00000000.

2.3.24.24 wzTextId_complex

The **wzTextId_complex** property specifies additional data for the **wzTextId** property, as defined in section 2.3.24.23. If the **opid.fComplex** bit of **wzTextId** equals 0x1, this property MUST exist.

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

wzTextId_complex (variable): A null-terminated **Unicode** string that specifies the identifier of the **VML textbox** element, as specified in [ISO/IEC29500-4:2011], Section 14.

2.3.24.25 wzThreeDId

The **wzThreeDId** property specifies the identifier of the **VML extrusion** element, as specified in [ISO/IEC29500-4:2011], Section 14. This property MAY<85> be ignored.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x040E.
opid.fBid	A value that is undefined and MUST be ignored.
opid.fComplex	A bit that indicates whether the **wzThreeDId_complex** property, as defined in section 2.3.24.26, exists. If the value equals 0x1, **wzThreeDId_complex** MUST exist.

wzThreeDId (4 bytes): The number of bytes of data in the **wzThreeDId_complex** property. If **opid.fComplex** equals 0x0, this value MUST be 0x00000000. The default value for this property is 0x00000000.

2.3.24.26 wzThreeDId_complex

The **wzThreeDId_complex** property specifies additional data for the **wzThreeDId** property, as defined in section 2.3.24.25. If the **opid.fComplex** bit of **wzThreeDId** equals 0x1, this property MUST exist.

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

wzThreeDId_complex (variable): A null-terminated **Unicode** string that specifies the identifier of the **VML extrusion** element, as specified in [ISO/IEC29500-4:2011], Section 14.

2.3.24.27 Unknown HTML Boolean Properties

The **Unknown HTML Boolean Properties** specify a 32-bit field of Boolean properties for the **shape** that is imported from **VML** content, as specified in [ISO/IEC29500-4:2011], Section 14. This property MAY<86> be ignored.

0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																unused1														A	B	C
unused3															D	E	F														

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x043F.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

unused1 (13 bits): A value that is undefined and MUST be ignored.

A - fUsefOleFromHtml (1 bit): A bit that specifies whether the **fOleFromHtml** bit is set. A value of 0x0 specifies that **fOleFromHtml** MUST be ignored. The default value for this property is 0x0.

B - fUsefFakeMaster (1 bit): A bit that specifies whether the **fFakeMaster** bit is set. A value of 0x0 specifies that **fFakeMaster** MUST be ignored. The default value for this property is 0x0.

C - unused2 (1 bit): A value that is undefined and MUST be ignored.

unused3 (13 bits): A value that is undefined and MUST be ignored.

D - fOleFromHtml (1 bit): A bit that specifies whether this shape is imported from a VML **shape** element, as specified in [ISO/IEC29500-4:2011], Section 14, which is an embedded object. This value MUST be ignored if **fUsefOleFromHtml** is 0x0. The default value for this property is 0x0.

E - fFakeMaster (1 bit): A bit that specifies whether the shape is imported from a VML **shapetype** element, as specified in [ISO/IEC29500-4:2011], Section 14. If this bit is set to 0x1, the shape will not be rendered and can be used to create other shapes. This value MUST be ignored if **fUsefFakeMaster** is 0x0. The default value for this property is 0x0.

F - unused4 (1 bit): A value that is undefined and MUST be ignored.

2.3.25 Web Component

The **Web Component** property set specifies the **HTML** content attributes of the **shape**.

2.3.25.1 webComponentWzHtml

The **webComponentWzHtml** property specifies the **HTML** content of the **Web component**. This property MAY<87> be ignored.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0680.
opid.fBid	A value that is undefined and MUST be ignored.
opid.fComplex	A bit that indicates whether the **webComponentWzHtml_complex** property, as defined in section 2.3.25.2, exists. If the value equals 0x1, **webComponentWzHtml_complex** MUST exist.

webComponentWzHtml (4 bytes): The number of bytes of data in the **webComponentWzHtml_complex** property. If **opid.fComplex** equals 0x0, this value MUST be 0x00000000. The default value for this property is 0x00000000.

2.3.25.2 webComponentWzHtml_complex

The **webComponentWzHtml_complex** property specifies additional data for the **webComponentWzHtml** property, as defined in section 2.3.25.1. If the **opid.fComplex** bit of **webComponentWzHtml** equals 0x1, this property MUST exist.

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

webComponentWzHtml_complex (variable): A null-terminated **Unicode** string that specifies **HTML** content.

2.3.25.3 webComponentWzName

The **webComponentWzName** property specifies the name of the **Web component**. This property MAY<88> be ignored.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0681.
opid.fBid	A value that is undefined and MUST be ignored.
opid.fComplex	A bit that indicates whether the **webComponentWzName_complex** property, as defined in section 2.3.25.4, exists. If the value equals 0x1, **webComponentWzName_complex** MUST exist.

webComponentWzName (4 bytes): The number of bytes of data in the **webComponentWzName_complex** property. If **opid.fComplex** equals 0x0, this value MUST be 0x00000000. The default value for this property is 0x00000000.

2.3.25.4   webComponentWzName_complex

The **webComponentWzName_complex** property specifies additional data for the **webComponentWzName** property, as defined in section 2.3.25.3. If the **opid.fComplex** bit of **webComponentWzName** equals 0x1, this property MUST exist.

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

webComponentWzName_complex (variable): A null-terminated **Unicode** string that specifies the name.

2.3.25.5   webComponentWzUrl

The **webComponentWzUrl** property specifies the **URL** of the **Web component**. This property MAY<89> be ignored.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0682.
opid.fBid	A value that is undefined and MUST be ignored.
opid.fComplex	A bit that indicates whether the **webComponentWzUrl_complex** property, as defined in section 2.3.25.6, exists. If the value equals 0x1, **webComponentWzUrl_complex** MUST exist.

webComponentWzUrl (4 bytes): The number of bytes of data in the **webComponentWzUrl_complex** property. If **opid.fComplex** equals 0x0, this value MUST be 0x00000000. The default value for this property is 0x00000000.

2.3.25.6 webComponentWzUrl_complex

The **webComponentWzUrl_complex** property specifies additional data for the **webComponentWzUrl** property, as defined in section 2.3.25.5. If the **opid.fComplex** bit of **webComponentWzUrl** equals 0x1, this property MUST exist.

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

webComponentWzUrl_complex (variable): A null-terminated **Unicode** string that specifies the **URL**.

2.3.25.7 Web Component Boolean Properties

The **Web Component Boolean Properties** specify a 32-bit field of Boolean properties for the **Web component**. This property MAY<90> be ignored.

0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid															unused1																A
unused2															B																

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x06BF.

opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

unused1 (15 bits): A value that is undefined and MUST be ignored.

A - 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): A value that is undefined and MUST be ignored.

B - 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.

2.3.26 Ink

The **Ink** property set specifies the ink data of an **ink shape**.

2.3.26.1   pInkData

The **pInkData** property specifies the data that is used to represent an **ink shape**.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0700.
opid.fBid	A value that is undefined and MUST be ignored.
opid.fComplex	A bit that indicates whether the **pInkData_complex** property, as defined in section 2.3.26.2, exists. If the value equals 0x1, **pInkData_complex** 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

The **pInkData_complex** property specifies additional data for the **pInkData** property, as defined in section 2.3.26.1. If the **opid.fComplex** bit of **pInkData** equals 0x1, this property MUST exist.

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

pInkData_complex (variable): An Ink Serialization Format stream, as specified in [MC-ISF], that specifies the ink strokes in this **shape**.

This property is an **IMsoInkData** record, as specified in section 2.2.52. It contains custom data that is stored as extended properties on ink stroke objects. The extended property information is specified in the following table.

Name	GUID	Meaning
DrawAttributeColorScheme	000C6800-0000-0000-C000-000000000046	An **MSOCR** record, as defined in section 2.2.44, that specifies an ink stroke color.
TimeStamp	8A54CF58-97E6-4fc5-8F06-F8BAD2E19B22	A Universal Time Coordinates (UTC) time stamp.

2.3.26.3 Ink Boolean Properties

The **Ink Boolean Properties** specify a 32-bit field of Boolean properties for **ink shapes**.

0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																unused1												A	B	C	D
unused2													E	F	G	H															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x073F.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

unused1 (12 bits): A value that is undefined and MUST be ignored.

A - fUsefInkAnnotation (1 bit): A bit that specifies whether the **fInkAnnotation** bit is set. A value of 0x0 specifies that **fInkAnnotation** MUST be ignored and the default value used instead. The default value for this property is 0x0.

B - fUsefHitTestInk (1 bit): A bit that specifies whether the **fHitTestInk** bit is set. A value of 0x0 specifies that **fHitTestInk** MUST be ignored and the default value used instead. The default value for this property is 0x0.

C - fUsefRenderShape (1 bit): A bit that specifies whether the **fRenderShape** bit is set. A value of 0x0 specifies that **fRenderShape** MUST be ignored and the default value used instead. The default value for this property is 0x0.

D - fUsefRenderInk (1 bit): A bit that specifies whether the **fRenderInk** bit is set. A value of 0x0 specifies that **fRenderInk** MUST be ignored and the default value used instead. The default value for this property is 0x0.

unused2 (12 bits): A value that is undefined and MUST be ignored.

E - 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.

F - 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.

G - fRenderShape (1 bit): A bit that specifies whether to render the shape effects that are specified by other graphics properties in the **OfficeArtRGFOPTE** record, as defined in section 2.3.1. This value MUST be ignored if **fUsefRenderShape** is 0x0. The default value for this property is 0x0.

H - 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.

2.3.27 Signature Line

The **Signature Line** property set specifies the attributes of the **digital signature** signing setup of the **shape**.

2.3.27.1   wzSigSetupId

The **wzSigSetupId** property specifies the GUID of the **signature line**. This property SHOULD<91> be ignored.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0781.

opid.fBid	A value that is undefined and MUST be ignored.
opid.fComplex	A bit that indicates whether the **wzSigSetupId_complex** property, as defined in section 2.3.27.2, exists. If the value equals 0x1, **wzSigSetupId_complex** 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

The **wzSigSetupId_complex** property specifies additional data for the **wzSigSetupId** property, as defined in section 2.3.27.1. If the **opid.fComplex** bit of **wzSigSetupId** equals 0x1, this property MUST exist.

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

wzSigSetupId_complex (variable): A null-terminated **Unicode** string that specifies the GUID of the **signature line**. The GUID is formatted in the following pattern:

{XXXXXXXX-XXXX-XXXX-XXXX-XXXXXXXXXXXX}

where the value of the GUID is represented as a series of hexadecimal digits in groups of 8, 4, 4, 4, and 12 digits that are separated by hyphens, with the entire series enclosed by braces.

2.3.27.3   wzSigSetupProvId

The **wzSigSetupProvId** property specifies the GUID of the provider that creates the **signature line**. This property SHOULD<92> be ignored.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0782.
opid.fBid	A value that is undefined and MUST be ignored.

opid.fComplex	A bit that indicates whether the **wzSigSetupProvId_complex** property, as defined in section 2.3.27.4, exists. If the value equals 0x1, **wzSigSetupProvId_complex** 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

The **wzSigSetupProvId_complex** property specifies additional data for the **wzSigSetupProvId** property, as defined in section 2.3.27.3. If the **opid.fComplex** bit of **wzSigSetupProvId** equals 0x1, this property MUST exist.

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

wzSigSetupProvId_complex (variable): A null-terminated **Unicode** string that specifies the GUID of the provider that creates the **signature line**. The GUID is formatted in the following pattern:

{XXXXXXXX-XXXX-XXXX-XXXX-XXXXXXXXXXXX}

where the value of the GUID is represented as a series of hexadecimal digits in groups of 8, 4, 4, 4, and 12 digits that are separated by hyphens, with the entire series enclosed by braces.

2.3.27.5   wzSigSetupSuggSigner

The **wzSigSetupSuggSigner** property specifies the name of the suggested signer. This property SHOULD<93> be ignored.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0783.
opid.fBid	A value that is undefined and MUST be ignored.
opid.fComplex	A bit that indicates whether the **wzSigSetupSuggSigner_complex** property, as defined in

section 2.3.27.6, exists. If the value equals 0x1, **wzSigSetupSuggSigner_complex** 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

The **wzSigSetupSuggSigner_complex** property specifies additional data for the **wzSigSetupSuggSigner** property, as defined in section 2.3.27.5. If the **opid.fComplex** bit of **wzSigSetupSuggSigner** equals 0x1, this property MUST exist.

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

wzSigSetupSuggSigner_complex (variable): A null-terminated **Unicode** string that specifies the name of the suggested signer.

2.3.27.7 wzSigSetupSuggSigner2

The **wzSigSetupSuggSigner2** property specifies the title or additional information about the suggested signer. This property SHOULD<94> be ignored.

0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																wzSigSetupSuggSigner2															
...																															

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0784.
opid.fBid	A value that is undefined and MUST be ignored.
opid.fComplex	A bit that indicates whether the **wzSigSetupSuggSigner2_complex** property, as defined in section 2.3.27.8, exists. If the value equals 0x1, **wzSigSetupSuggSigner2_complex** 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, as defined in section 2.3.27.7. If the **opid.fComplex** bit of **wzSigSetupSuggSigner2** equals 0x1, this property MUST exist.
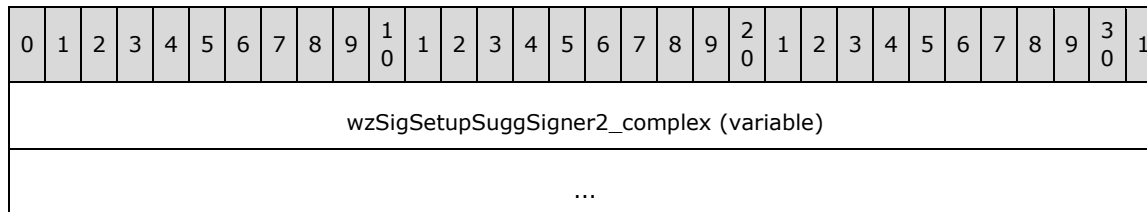
0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
wzSigSetupSuggSigner2_complex (variable)																															
...																															

wzSigSetupSuggSigner2_complex (variable): A null-terminated **Unicode** string that specifies the title or additional information about the suggested signer.

2.3.27.9   wzSigSetupSuggSignerEmail

The **wzSigSetupSuggSignerEmail** property specifies the e-mail address of the suggested signer. This property SHOULD<95> be ignored.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0785.
opid.fBid	A value that is undefined and MUST be ignored.
opid.fComplex	A bit that indicates whether the **wzSigSetupSuggSignerEmail_complex** property, as defined in section 2.3.27.10, exists. If the value equals 0x1, **wzSigSetupSuggSignerEmail_complex** 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

The **wzSigSetupSuggSignerEmail_complex** property specifies additional data for the **wzSigSetupSuggSignerEmail** property, as defined in section 2.3.27.9. If the **opid.fComplex** bit of **wzSigSetupSuggSignerEmail** equals 0x1, this property MUST exist.

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

wzSigSetupSuggSignerEmail_complex (variable): A null-terminated **Unicode** string that specifies the e-mail address of the suggested signer.

2.3.27.11   wzSigSetupSignInst

The **wzSigSetupSignInst** property specifies the signing instruction that is displayed to the signer. This property SHOULD<96> be ignored.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0786.
opid.fBid	A value that is undefined and MUST be ignored.
opid.fComplex	A bit that indicates whether the **wzSigSetupSignInst_complex** property, as defined in section 2.3.27.12, exists. If the value equals 0x1, **wzSigSetupSignInst_complex** 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

The **wzSigSetupSignInst_complex** property specifies additional data for the **wzSigSetupSignInst** property, as defined in section 2.3.27.11. If the **opid.fComplex** bit of **wzSigSetupSignInst** equals 0x1, this property MUST exist.

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

wzSigSetupSignInst_complex (variable): A null-terminated **Unicode** string specifying the signing instruction that is displayed to the signer.

2.3.27.13   wzSigSetupAddlXml

The **wzSigSetupAddlXml** property specifies additional information in **XML** format that is provided by the provider that creates the **signature line**. This property SHOULD<97> be ignored.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0787.
opid.fBid	A value that is undefined and MUST be ignored.
opid.fComplex	A bit that indicates whether the **wzSigSetupAddlXml_complex** property, as defined in section 2.3.27.14, exists. If the value equals 0x1, **wzSigSetupAddlXml_complex** MUST exist.

wzSigSetupAddlXml (4 bytes): The number of bytes of data in the **wzSigSetupAddlXml_complex** property. This value MUST be 0x00000000 if **opid.fComplex** is 0x0. The default value for this property is 0x00000000.

2.3.27.14   wzSigSetupAddlXml_complex

The **wzSigSetupAddlXml_complex** property specifies additional data for the **wzSigSetupAddlXml** property, as defined in section 2.3.27.13. If the **opid.fComplex** bit of **wzSigSetupAddlXml** equals 0x1, this property MUST exist.

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

wzSigSetupAddlXml_complex (variable): A null-terminated **Unicode** string that specifies additional information in **XML** format.

2.3.27.15 wzSigSetupProvUrl

The **wzSigSetupProvUrl** property specifies the **URL** of the provider that creates the **signature line**. This property SHOULD<98> be ignored.

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

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x0788.
opid.fBid	A value that is undefined and MUST be ignored.
opid.fComplex	A bit that indicates whether the **wzSigSetupProvUrl_complex** property, as defined in section 2.3.27.16, exists. If the value equals 0x1, **wzSigSetupProvUrl_complex** 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

The **wzSigSetupProvUrl_complex** property specifies additional data for the **wzSigSetupProvUrl** property, as defined in section 2.3.27.15. If the **opid.fComplex** bit of **wzSigSetupProvUrl** equals 0x1, this property MUST exist.

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

wzSigSetupProvUrl_complex (variable): A null-terminated **Unicode** string that specifies the **URL** of the provider.

2.3.27.17   Signature Line Boolean Properties

The **Signature Line Boolean Properties** specify a 32-bit field of Boolean properties for the **signature line**. This property SHOULD<99> be ignored.

0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
opid																unused1												A	B	C	D
unused2												E	F	G	H																

opid (2 bytes): An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for this property. The following table specifies the subfields.

Field	Meaning
opid.opid	A value that MUST be 0x07BF.
opid.fBid	A value that MUST be 0x0.
opid.fComplex	A value that MUST be 0x0.

unused1 (12 bits): A value that is undefined and MUST be ignored.

A - fUsefSigSetupShowSignDate (1 bit): A bit that specifies whether the **fSigSetupShowSignDate** bit is set. A value of 0x0 specifies that **fSigSetupShowSignDate** MUST be ignored. The default value for this property is 0x0.

B - fUsefSigSetupAllowComments (1 bit): A bit that specifies whether the **fSigSetupAllowComments** bit is set. A value of 0x0 specifies that **fSigSetupAllowComments** MUST be ignored. The default value for this property is 0x0.

C - fUsefSigSetupSignInstSet (1 bit): A bit that specifies whether the **fSigSetupSignInstSet** bit is set. A value of 0x0 specifies that **fSigSetupSignInstSet** MUST be ignored. The default value for this property is 0x0.

D - fUsefIsSignatureLine (1 bit): A bit that specifies whether the **fIsSignatureLine** bit is set. A value of 0x0 specifies that **fIsSignatureLine** MUST be ignored. The default value for this property is 0x0.

unused2 (12 bits): A value that is undefined and MUST be ignored.

E - fSigSetupShowSignDate (1 bit): A bit that specifies whether the signing date will be displayed. This value MUST be ignored if **fUsefSigSetupShowSignDate** is 0x0. The default value for this property is 0x1.

F - fSigSetupAllowComments (1 bit): A bit that specifies whether a comment from the signer is allowed. This value MUST be ignored if **fUsefSigSetupAllowComments** is 0x0. The default value for this property is 0x0.

G - fSigSetupSignInstSet (1 bit): A bit that specifies whether the signing instruction will be overridden. The following table specifies the meaning of each value for this bit. This value MUST be ignored if **fUsefSigSetupSignInstSet** is 0x0. The default value for this property is 0x0.

Value	Meaning
0x0	Specifies that a default signing instruction will be displayed.
0x1	Specifies that the wzSigSetupSignInst_complex property will be displayed.

H - fIsSignatureLine (1 bit): A bit that specifies whether the **shape** is a signature line. This value MUST be ignored if **fUsefIsSignatureLine** is 0x0. The default value for this property is 0x0.

2.4 Enumerations

2.4.1 MSOBLIPTYPE

Referenced by: OfficeArtFBSE

The **MSOBLIPTYPE** enumeration, as shown in the following table, specifies the persistence format of bitmap data.

Name	Value	Meaning
msoblipERROR	0x00	Error reading the file.
msoblipUNKNOWN	0x01	Unknown **BLIP** type.
msoblipEMF	0x02	**EMF**.
msoblipWMF	0x03	**WMF**.
msoblipPICT	0x04	**Macintosh PICT**.
msoblipJPEG	0x05	**JPEG**.
msoblipPNG	0x06	**PNG**.
msoblipDIB	0x07	**DIB**
msoblipTIFF	0x11	**TIFF**
msoblipCMYKJPEG	0x12	JPEG in the **YCCK** or **CMYK** color space.

2.4.2 MSODGCID

The **MSODGCID** enumeration, as shown in the following table, specifies the command identifiers that are used for customizing toolbars and keyboard shortcuts.

Name	Value	Meaning
msodgcidNil	0x0000	Undefined—the command is specified by a **toolbar control identifier (TCID)**.
msodgcidPaste	0x0004	Paste the **drawing object**.
msodgcidSelectAll	0x0006	Select all drawing objects.
msodgcidRepeat	0x0008	Repeat the last action.
msodgcidBringToFront	0x000C	Bring the drawing objects to the front.
msodgcidSendToBack	0x000D	Send the drawing objects to the back.

Name	Value	Meaning
msodgcidBringForward	0x000E	Bring the drawing objects forward. (Not necessarily all the way to the front.)
msodgcidSendBackward	0x000F	Send the drawing objects backward. (Not necessarily all the way to the back.)
msodgcidBringInFrontOfDocument	0x0010	Bring the drawing objects in front of the text.
msodgcidSendBehindDocument	0x0011	Send the drawing objects behind the text.
msodgcidGroup	0x0012	Group the drawing objects.
msodgcidUngroup	0x0013	Ungroup the grouped drawing objects.
msodgcidRegroup	0x0014	Regroup the drawing objects.
msodgcidInsertPolygonPt	0x0019	Add a point to a polygon **shape**.
msodgcidDeletePolygonPt	0x001A	Delete a point from a polygon shape.
msodgcidCopyPolygonPt	0x001C	Copy a polygon point.
msodgcidClosePolygon	0x001D	Close the path on a shape that has an open path.
msodgcidOpenPolygon	0x001E	Open the path on a shape that has a closed path.
msodgcidPolygonReshape	0x0020	Update the vertex and segment information in the polygon.
msodgcidAutoVertex	0x0021	Edit a point on a shape to be an automatic point. An automatic point has Bezier handles which are automatically calculated based on the positions of the adjacent vertices.
msodgcidSmoothVertex	0x0022	Edit a point on a shape to be a smooth point. A smooth point has Bezier handles which are collinear with and equidistant from the point.
msodgcidStraightVertex	0x0023	Edit a point on a shape to be a straight point. A straight point has Bezier handles which are collinear with the point, but not necessarily equidistant from it.
msodgcidCornerVertex	0x0024	Edit a point on a shape to be a corner point.
msodgcidStraightSegment	0x0025	Edit a segment on a shape to be a straight segment.
msodgcidCurvedSegment	0x0026	Edit a segment on a shape to be a curved segment.
msodgcidRotateLeft90	0x0029	Rotate the drawing objects 90 degrees counterclockwise.
msodgcidRotateRight90	0x002A	Rotate the drawing objects 90 degrees clockwise.

Name	Value	Meaning
msodgcidFlipHorizontal	0x002B	Horizontally flip the drawing objects.
msodgcidFlipVertical	0x002C	Vertically flip the drawing objects.
msodgcidAlignLeft	0x002D	Align the drawing objects to the left side.
msodgcidAlignCenterHorizontal	0x002E	Align the drawing objects to the center.
msodgcidAlignRight	0x002F	Align the drawing objects to the right side.
msodgcidAlignTop	0x0030	Align the drawing objects to the top.
msodgcidAlignCenterVertical	0x0031	Vertically align the drawing objects to the middle.
msodgcidAlignBottom	0x0032	Align the drawing objects to the bottom.
msodgcidAlignPageRelative	0x0033	Align the drawing objects relative to the page, rather than relative to one another.
msodgcidDistributeHorizontal	0x0034	Horizontally distribute the drawing objects.
msodgcidDistributeVertical	0x0035	Vertically distribute the drawing objects.
msodgcidDistributePageRelative	0x0036	Distribute the drawing objects relative to the page or **slide**, rather than relative to one another.
msodgcidNudgeLeft	0x0037	Nudge the drawing objects to the left.
msodgcidNudgeRight	0x0038	Nudge the drawing objects to the right.
msodgcidNudgeUp	0x0039	Nudge the drawing objects up.
msodgcidNudgeDown	0x003A	Nudge the drawing objects down.
msodgcidNudgeLeftOne	0x003B	Nudge the drawing objects to the left by one pixel.
msodgcidNudgeRightOne	0x003C	Nudge the drawing objects to the right by one pixel.
msodgcidNudgeUpOne	0x003D	Nudge the drawing objects up by one pixel.
msodgcidNudgeDownOne	0x003E	Nudge the drawing objects down by one pixel.
msodgcidToggleReshapeMode	0x003F	Toggle the reshape mode.
msodgcidToggleRotateMode	0x0040	Toggle the rotate mode.
msodgcidToggleCropMode	0x0041	Crop the 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.

Name	Value	Meaning
msodgcidMoreArrow	0x0047	Show more line end decorations.
msodgcidTextEffectRotateCharacters	0x0048	Display the text in stylized text objects as vertical text.
msodgcidTextEffectStretchToFill	0x0049	Stretch the text in stylized text objects to fill the shape.
msodgcidTextEffectSameHeight	0x004A	Set all the letters to the same height in stylized text objects.
msodgcidTextEffectAlignLeft	0x004B	Align the text in stylized text objects to the left side.
msodgcidTextEffectAlignCenter	0x004C	Align the text in stylized text objects to the center.
msodgcidTextEffectAlignRight	0x004D	Align the text in stylized text objects to the right side.
msodgcidTextEffectAlignLetterJustify	0x004E	Set the alignment for stylized text objects to letter justify.
msodgcidTextEffectAlignWordJustify	0x0050	Set the alignment for stylized text objects to word justify.
msodgcidTextEffectAlignStretchJustify	0x0051	Set the alignment for stylized text objects to stretch justify.
msodgcidTextEffectSpacingVeryTight	0x0052	Set the text spacing for stylized text objects to very tight.
msodgcidTextEffectSpacingTight	0x0053	Set the text spacing for stylized text objects to tight.
msodgcidTextEffectSpacingNormal	0x0054	Set the text spacing for stylized text objects to normal.
msodgcidTextEffectSpacingLoose	0x0055	Set the text spacing for stylized text objects to loose.
msodgcidTextEffectSpacingVeryLoose	0x0056	Set the text spacing for stylized text objects to very loose.
msodgcidTextEffectKernPairs	0x0057	Kern character pairs that exist in the text in stylized text objects.
msodgcidTextEffectEditText	0x0058	Edit the text in a stylized text object.
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 the picture to the default settings.
msodgcidPictureImageAutomatic	0x005E	Use automatic picture colors.
msodgcidPictureImageGrayscale	0x005F	Display the picture in grayscale.

Name	Value	Meaning
msodgcidPictureImageBlackWhite	0x0060	Display picture in black and white.
msodgcidPictureImageWatermark	0x0061	Add a watermark to the picture.
msodgcidPictureInLine	0x0062	Set the picture to be inline with the text.
msodgcidMoreShadow	0x0067	Show the shadow settings.
msodgcidMoreShadowColor	0x0068	Show more shadow colors.
msodgcidNudgeShadowUp	0x0069	Nudge the shadow up.
msodgcidNudgeShadowDown	0x006A	Nudge the shadow down.
msodgcidNudgeShadowLeft	0x006B	Nudge the shadow to the left.
msodgcidNudgeShadowRight	0x006C	Nudge the shadow to the right.
msodgcidMore3D	0x006D	Show the 3-D settings.
msodgcidMore3DColor	0x006E	Show more 3-D colors.
msodgcid3DToggle	0x006F	Toggle the 3-D options on or off.
msodgcid3DTiltForward	0x0070	Tilt the 3-D drawing objects down.
msodgcid3DTiltBackward	0x0071	Tilt the 3-D drawing objects up.
msodgcid3DTiltLeft	0x0072	Tilt the 3-D drawing objects to the left.
msodgcid3DTiltRight	0x0073	Tilt the 3-D drawing objects to the right.
msodgcid3DDepth0	0x0074	Set the 3-D depth to 0 **points**.
msodgcid3DDepth1	0x0075	Set the 3-D depth to 36 points.
msodgcid3DDepth2	0x0076	Set the 3-D depth to 72 points.
msodgcid3DDepth3	0x0077	Set the 3-D depth to 144 points.
msodgcid3DDepth4	0x0078	Set the 3-D depth to 288 points.
msodgcid3DDepthInfinite	0x0079	Set the 3-D depth to infinity.
msodgcid3DPerspective	0x007A	Set the 3-D direction to perspective.
msodgcid3DParallel	0x007B	Set the 3-D direction to parallel.
msodgcid3DLightingFlat	0x007C	Set the 3-D lighting to bright.
msodgcid3DLightingNormal	0x007D	Set the 3-D lighting to normal.
msodgcid3DLightingHarsh	0x007E	Set the 3-D lighting to dim.
msodgcid3DSurfaceMatte	0x007F	Set the 3-D surface to matte.
msodgcid3DSurfacePlastic	0x0080	Set the 3-D surface to plastic.
msodgcid3DSurfaceMetal	0x0081	Set the 3-D surface to metal.
msodgcid3DSurfaceWireFrame	0x0082	Set the 3-D surface to wire frame.
msodgcidToolPointer	0x0087	Select drawing objects.

Name	Value	Meaning
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 text box.
msodgcidToolStraightConnector	0x009D	Insert a straight **connector** shape.
msodgcidToolAngledConnector	0x009E	Insert an elbow connector shape.
msodgcidToolCurvedConnector	0x009F	Insert a curved connector shape.
msodgcidSwatchFillColorNone	0x00A1	Set the fill color to no color.
msodgcidSwatchFillColorStandard	0x00A2	Use standard colors to fill a shape.
msodgcidSwatchFillColorMRU	0x00A3	Use recently used colors to fill a shape.
msodgcidSwatchLineColorNone	0x00A4	Set the line color to no color.
msodgcidSwatchLineColorStandard	0x00A5	Use standard colors for a line.
msodgcidSwatchLineColorMRU	0x00A6	Use recently used colors for a line.
msodgcidSwatchShadowColorStandard	0x00A8	Use standard colors for a shadow.
msodgcidSwatchShadowColorMRU	0x00A9	Use recently used colors for a shadow.
msodgcidSwatch3DColorAutomatic	0x00AB	Use automatic colors for a 3-D shape..
msodgcidSwatch3DColorStandard	0x00AC	Use standard colors for a 3-D shape.
msodgcidSwatch3DColorMRU	0x00AD	Use recently used colors for a 3-D shape.
msodgcidSwatchDlgGradientFgColorStandard	0x00BD	Select the gradient foreground color from the standard colors.
msodgcidSwatchDlgColorMRU	0x00C7	Select from all recently used colors.
msodgcidSplitMenuLineColor	0x00DF	Select from colors that were recently used for a line.
msodgcidSplitMenuShadowColor	0x00E0	Select from colors that were recently used for a shadow.

Name	Value	Meaning
msodgcidSplitMenu3DColor	0x00E1	Select from colors that were recently used for a 3-D shape.
msodgcidRerouteConnections	0x00E2	Reroute the connectors.
msodgcidStraightStyle	0x00E3	Change the selected connector to a straight connector.
msodgcidAngledStyle	0x00E4	Change the selected connector to an elbow connector.
msodgcidCurvedStyle	0x00E5	Change the selected connector to a curved connector.
msodgcidToggleFill	0x00E6	Toggle the fill color on or off.
msodgcidToggleLine	0x00E7	Toggle the line color on or off.
msodgcidToggleShadow	0x00E8	Toggle the shadow on or off.
msodgcidEditPicture	0x00EB	Edit the picture.
msodgcidFormatShape	0x00EC	Format the shape object.
msodgcidTextEffectInsert	0x00F0	Show the options for stylized text objects.
msodgcidTextEffectToolbarToggle	0x00F1	Show the toolbar for stylized text objects.
msodgcidLinePatternFill	0x00FD	Show the options for patterned lines.
msodgcidActivateText	0x010A	Add text to the drawing object.
msodgcidToggleShadowOpacity	0x010B	Set the shadow opacity.
msodgcidExitReshapeMode	0x010C	Exit edit point mode.
msodgcidToolVerticalText	0x010D	Insert a vertical text box.
msodgcidExitRotateMode	0x010E	Exit rotate mode.
msodgcidTogglePictureToolbar	0x010F	Show the picture toolbar.
msodgcidSetDefaults	0x0110	Set the selected shape as the 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.
msodgcidToolStraightDblArrowConnector	0x0115	Insert a straight double-arrow connector shape.
msodgcidToolAngledDblArrowConnector	0x0116	Insert an elbow double-arrow connector shape.
msodgcidToolCurvedDblArrowConnector	0x0117	Insert a curved double-arrow connector shape.
msodgcidToolSetTransparentColor	0x0118	Set the transparent color.
msodgcidTextEffectGallery	0x0119	Show the gallery for stylized text objects.

Name	Value	Meaning
		The gallery is a series of sample images that illustrate the various stylized text objects available. Any option might be customized after it has been selected from the gallery.
msodgcidShowAutoShapesAndDrawingToolbars	0x011A	Show the automatic shapes and drawing toolbars.
msodgcidDeleteSegment	0x011D	Delete a line segment from a shape.
msodgcidTogglePointerMode	0x0122	Select objects.
msodgcidInsertScript	0x0136	Insert a script on the Web page.
msodgcidRunCag	0x0139	Open the task pane for clip art.
msodgcidRunCagForPictures	0x013A	Insert a picture from the clip organizer.
msodgcidRunCagForMovies	0x013B	Insert a movie from the clip organizer.
msodgcidRunCagForSounds	0x013C	Insert a sound from the clip organizer.
msodgcidRunCagForShapes	0x013D	Show the automatic shapes from the clip organizer.
msodgcidMultiSelect	0x013F	Select multiple objects.
msodgcidInsertDrawingCanvas	0x0140	Insert a new drawing canvas.
msodgcidInsertOrgChart	0x0141	Insert an organizational 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 a subordinate node for an organizational chart.
msodgcidOrgChartInsertCoworker	0x0148	Insert a coworker node for an organizational chart.
msodgcidOrgChartInsertAssistant	0x0149	Insert an assistant node for an organizational chart.
msodgcidOrgChartDeleteNode	0x014A	Delete the diagram node.
msodgcidOrgChartLayoutHorizontal1	0x014B	Set the organizational chart layout to standard.
msodgcidOrgChartLayoutHorizontal2	0x014C	Set the organizational chart layout to both hanging.
msodgcidOrgChartLayoutVertical1	0x014D	Set the organizational chart layout to right hanging.
msodgcidOrgChartLayoutVertical2	0x014E	Set the organizational chart layout to left

Name	Value	Meaning
		hanging.
msodgcidDiagramStyle	0x014F	Change the diagram style.
msodgcidConvertToVenn	0x0151	Convert the selected diagram to a Venn diagram.
msodgcidConvertToRadial	0x0152	Convert the selected diagram to a radial diagram.
msodgcidConvertToCycle	0x0153	Convert the selected diagram to a cycle diagram.
msodgcidConvertToBullsEye	0x0154	Convert the selected diagram to a target diagram.
msodgcidConvertToPyramid	0x0155	Convert the selected diagram to a pyramid diagram.
msodgcidMoveDiagramShapeUp	0x0156	Move the diagram shape backward.
msodgcidMoveDiagramShapeDown	0x0157	Move the diagram shape forward.
msodgcidInsertDiagramShape	0x0158	Insert a shape into diagram.
msodgcidInsertDiagram	0x0159	Insert a diagram.
msodgcidCanvasFit	0x015B	Fit the diagram to the canvas.
msodgcidCanvasResize	0x015C	Resize the drawing canvas.
msodgcidToggleCanvasToolbar	0x015D	Show the drawing canvas toolbar.
msodgcidCanvasExpand	0x015F	Expand the drawing canvas.
msodgcidAlignCanvasRelative	0x0179	Align the diagram relative to the drawing canvas, rather than relative to the page or to other objects.
msodgcidOrgChartSelectLevel	0x017A	Select the level inside the organizational chart.
msodgcidOrgChartSelectBranch	0x017B	Select the branch inside the organizational chart.
msodgcidOrgChartSelectAllAssistants	0x017C	Select all the assistants.
msodgcidOrgChartSelectAllConnectors	0x017D	Select all the connector shapes.
msodgcidDiagramDeleteNode	0x017E	Delete the shape from the diagram.
msodgcidDiagramReverse	0x017F	Reverse the direction of the diagram.
msodgcidDiagramAutoLayout	0x0180	Set the diagram layout to automatic layout.
msodgcidOrgChartAutoLayout	0x0181	Set the organizational chart layout to automatic layout.
msodgcidOptimizePictDialog	0x0187	Show the compress pictures options.
msodgcidDiagramFit	0x018D	Fit the diagram to its contents.

Name	Value	Meaning
msodgcidDiagramResize	0x018E	Resize the diagram.
msodgcidDiagramExpand	0x018F	Expand the diagram.
msodgcidOrgChartFit	0x0190	Fit the organizational chart to its contents.
msodgcidOrgChartResize	0x01F5	Resize the organizational chart.
msodgcidOrgChartExpand	0x01F6	Expand the organizational chart.
msodgcidOrgChartStyle	0x01F7	Change the style for the organizational chart.
msodgciSplitMenuOrgChartInsertShape	0x01F8	Insert a shape in the organizational chart.
msodgcidDiagramAutoFormat	0x01F9	Use automatic formatting for the organizational chart.
msodgcidCanvasScale	0x01FB	Scale the drawing canvas.
msodgcidOrgChartScale	0x01FC	Scale the organizational chart.
msodgcidDiagramScale	0x01FD	Scale the diagram.
msodgcidAlignOrgChartRelative	0x01FF	Align the selection relative to the organizational chart it is contained in.
msodgcidAlignDiagramRelative	0x0200	Align the selection relative to the diagram it is contained in.
msodgcidSplitMenuInkColor	0x0204	Select from recently used **ink** colors.
msodgcidSplitMenuInkAnntColor	0x0206	Select from recently used annotation colors.
msodgcidInkStyle1	0x0208	Set the ink style to Color 1.
msodgcidInkStyle2	0x0209	Set the ink style to Color 2.
msodgcidInkStyle3	0x020A	Set the ink style to Color 3.
msodgcidInkStyle4	0x020B	Set the ink style to Color 4.
msodgcidInkStyle5	0x020C	Set the ink style to Color 5.
msodgcidInkStyle6	0x020D	Set the ink style to Color 6.
msodgcidInkStyle7	0x020E	Set the ink style to Color 7.
msodgcidInkStyle8	0x020F	Set the ink style to Color 8.
msodgcidInkStyle9	0x0210	Set the ink style to Color 9.
msodgcidInkAnnotationStyle1	0x0211	Set the annotation style to Color 1.
msodgcidInkAnnotationStyle2	0x0212	Set the annotation style to Color 2.
msodgcidInkAnnotationStyle3	0x0213	Set the annotation style to Color 3.
msodgcidInkAnnotationStyle4	0x0214	Set the annotation style to Color 4.
msodgcidInkAnnotationStyle5	0x0215	Set the annotation style to Color 5.

Name	Value	Meaning
msodgcidInkAnnotationStyle6	0x0216	Set the annotation style to Color 6.
msodgcidInkAnnotationStyle7	0x0217	Set the annotation style to Color 7.
msodgcidInkAnnotationStyle8	0x0218	Set the annotation style to Color 8.
msodgcidInkAnnotationStyle9	0x0219	Set the annotation style to Color 9.
msodgcidToggleInkToolbar	0x021A	Show the ink drawing and writing toolbar.
msodgcidToggleInkAnnotationToolbar	0x021B	Show the ink annotations toolbar.
msodgcidClearAllInkAnnotations	0x021C	Delete all the ink annotations in the document.
msodgcidInkDrawing	0x021E	Toggle the ink drawing/writing mode.
msodgcidExitInkMode	0x0220	Exit ink mode.
msodgcidInkEraser	0x0221	Use the ink eraser.
msodgcidInkAnnotationEraser	0x0222	Use the 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 the organizational chart.
msodgcidEyedropperFillColor	0x0228	Set the eyedropper fill color.
msodgcidEyedropperLineColor	0x0229	Set the eyedropper line color.
msodgcidEyedropperShadowColor	0x022A	Set the eyedropper shadow color.
msodgcidEyedropper3DColor	0x022B	Set the eyedropper 3-D color.
msodgcidPictureFill	0x022C	Set the picture fill.
msodgcidAlignSelectionRelativeSmart	0x022D	Align the selected objects relative to the page.
msodgcidAlignContainerRelativeSmart	0x022E	Align all drawing objects relative to the page.
msodgcidDistributeHorizontalSmart	0x0235	Horizontally distribute the drawing objects.
msodgcidDistributeVerticalSmart	0x0236	Vertically distribute the drawing objects.
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.

Name	Value	Meaning
msodgcidAlignRelativeToMarginSmart	0x0248	Align the drawing objects to the nearest margin.
msodgcidMoreSize	0x0249	Show additional size options.
msodgcidMoreInkColor	0x024B	Show more pen colors.
msodgcidFillEffectGradient	0x024C	Show the gradient options.
msodgcidFillEffectTexture	0x024D	Show the texture options.
msodgcidFillEffectPattern	0x024E	Show the pattern options.
msodgcidCloseInkTab	0x024F	Close the 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.

Name	Value	Meaning
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.

Name	Value	Meaning
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 smiling 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.

Name	Value	Meaning
msodgcidShapeEllipseRibbon2	0x106C	Insert a curved-up ribbon shape.
msodgcidShapeFlowChartProcess	0x106D	Insert a flowchart process shape.
msodgcidShapeFlowChartDecision	0x106E	Insert a flowchart decision shape.
msodgcidShapeFlowChartInputOutput	0x106F	Insert a flowchart data shape.
msodgcidShapeFlowChartPredefinedProcess	0x1070	Insert a flowchart predefined-process shape.
msodgcidShapeFlowChartInternalStorage	0x1071	Insert a flowchart internal-storage shape.
msodgcidShapeFlowChartDocument	0x1072	Insert a flowchart document shape.
msodgcidShapeFlowChartMultidocument	0x1073	Insert a flowchart multiple-document shape.
msodgcidShapeFlowChartTerminator	0x1074	Insert a flowchart terminator shape.
msodgcidShapeFlowChartPreparation	0x1075	Insert a flowchart preparation shape.
msodgcidShapeFlowChartManualInput	0x1076	Insert a flowchart manual-input shape.
msodgcidShapeFlowChartManualOperation	0x1077	Insert a flowchart manual-operation shape.
msodgcidShapeFlowChartConnector	0x1078	Insert a flowchart connector shape.
msodgcidShapeFlowChartPunchedCard	0x1079	Insert a flowchart card shape.
msodgcidShapeFlowChartPunchedTape	0x107A	Insert a flowchart punched-tape shape.
msodgcidShapeFlowChartSummingJunction	0x107B	Insert a flowchart summing-junction shape.
msodgcidShapeFlowChartOr	0x107C	Insert a flowchart OR shape.
msodgcidShapeFlowChartCollate	0x107D	Insert a flowchart collate shape.
msodgcidShapeFlowChartSort	0x107E	Insert a flowchart sort shape.
msodgcidShapeFlowChartExtract	0x107F	Insert a flowchart extract shape.
msodgcidShapeFlowChartMerge	0x1080	Insert a flowchart merge shape.
msodgcidShapeFlowChartOfflineStorage	0x1081	Insert a flowchart offline-storage shape.
msodgcidShapeFlowChartOnlineStorage	0x1082	Insert a flowchart stored-data shape.
msodgcidShapeFlowChartMagneticTape	0x1083	Insert a flowchart sequential-access storage shape.
msodgcidShapeFlowChartMagneticDisk	0x1084	Insert a flowchart magnetic-disk shape.
msodgcidShapeFlowChartMagneticDrum	0x1085	Insert a flowchart direct-access storage shape.
msodgcidShapeFlowChartDisplay	0x1086	Insert a flowchart display shape.
msodgcidShapeFlowChartDelay	0x1087	Insert a flowchart delay shape.
msodgcidShapeFlowChartAlternateProcess	0x10B0	Insert a flowchart alternate-process

Name	Value	Meaning
		shape.
msodgcidShapeFlowChartOffpageConnector	0x10B1	Insert a flowchart 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 rectangle shape which has a single snipped corner.
msodgcidShapeSnipSameSideCornerRectangle	0x10D2	Insert a rectangle shape which has two snipped corners on the same side.
msodgcidShapeSnipDiagonalCornerRectangle	0x10D3	Insert a rectangle shape which has two snipped corners diagonally across from one another.
msodgcidShapeSnipRoundSingleCornerRectangle	0x10D4	Insert a rectangle shape which has one rounded and one snipped corner on the same side.
msodgcidShapeRoundSingleCornerRectangle	0x10D5	Insert a rectangle shape which has a single rounded corner.
msodgcidShapeRoundSameSideCornerRectangle	0x10D6	Insert a rectangle shape which has two rounded corners on the same side.
msodgcidShapeRoundDiagonalCornerRectangle	0x10D7	Insert a rectangle shape which has two rounded corners diagonally across from one another.
msodgcidShapeDecagon	0x10D8	Insert a decagon shape.

Name	Value	Meaning
msodgcidShapeDodecagon	0x10D9	Insert a dodecagon shape.
msodgcidShapeDiagonalStripe	0x10DA	Insert a diagonal stripe shape.
msodgcidShapeTearDrop	0x10DB	Insert a teardrop 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.

Name	Value	Meaning
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

Name	Value	Meaning
		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

Name	Value	Meaning
		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 smiling face shape.
msodgcidChangeShapeVerticalScroll	0x2061	Change the selected shape to a vertical scroll shape.
msodgcidChangeShapeHorizontalScroll	0x2062	Change the selected shape to a horizontal

Name	Value	Meaning
		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 multiple-document 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

Name	Value	Meaning
		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-

Name	Value	Meaning
		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, as shown in the following table, specifies the wrapping **rules** for a body of text.
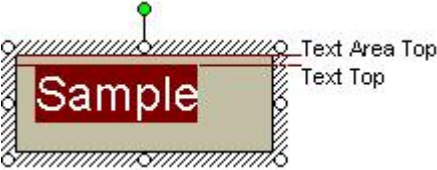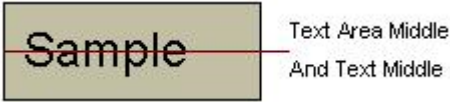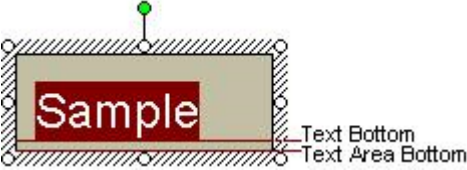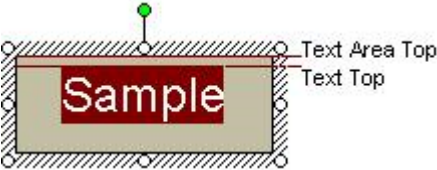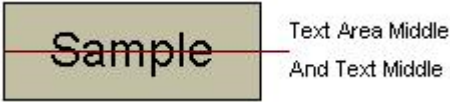
Name	Value	Meaning
msowrapSquare	0x00000000	Specifies that a line of text will continue on subsequent lines instead of extending into or beyond a margin. This value MAY[<100>](#) be used.
msowrapByPoints	0x00000001	Specifies a wrapping rule that is equivalent to that of **msowrapSquare**. This value MAY[<101>](#) be used.
msowrapNone	0x00000002	Specifies that a line of text will extend into or beyond a margin instead of continuing on subsequent lines. This value SHOULD[<102>](#) be used.
msowrapTopBottom	0x00000003	Specifies a wrapping rule that is undefined and MUST be ignored.
msowrapThrough	0x00000004	Specifies a wrapping rule that is undefined and MUST be ignored.
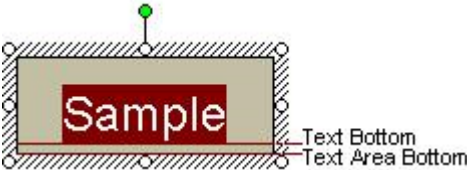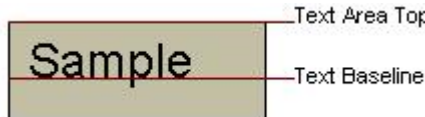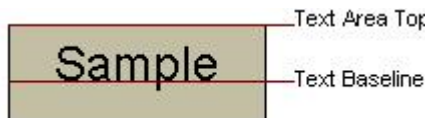
2.4.4 MSOANCHOR

Referenced by: [anchorText](#)

The **MSOANCHOR** enumeration, as shown in the following table, specifies the suggested placement **rule** for a body of text. These enumeration values are relative to the orientation, text box area, and margin sizes of the containing **shape**. The exact placement of the text is application dependent and varies to accommodate other languages and text properties. These enumeration values MAY[<103>](#) be used.

Name	Value	Meaning
msoanchorTop	0x00000000	The primary determinant for the placement of the text is that the top of the text coincides with the top internal margin of the text box area.

Name	Value	Meaning
msoanchorMiddle	0x00000001	The primary determinant for the placement of the text is that the vertical center of the text coincides with the vertical midpoint of the internal margins of the text box area.
msoanchorBottom	0x00000002	The primary determinant for the placement of the text is that the bottom of the text coincides with the bottom internal margin of the text box area.
msoanchorTopCentered	0x00000003	This **anchor** mode specifies the same vertical placement as that of **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 text box area, respecting the specified internal margins.
msoanchorMiddleCentered	0x00000004	This anchor mode specifies the same vertical placement as that of **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 text box area, respecting the specified internal margins.
msoanchorBottomCentered	0x00000005	This anchor mode specifies the same vertical placement as that of **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 text box area, respecting the specified internal margins.

Name	Value	Meaning
msoanchorTopBaseline	0x00000006	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 text box area. The offset is determined by the host application. This value SHOULD NOT<104> be used. The value **msoanchorTop** MAY be used instead.
msoanchorBottomBaseline	0x00000007	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 text box area. The offset is determined by the host application. This value SHOULD NOT<105> be used. The value **msoanchorBottom** MAY be used instead.
msoanchorTopCenteredBaseline	0x00000008	This anchor mode specifies the same vertical placement as that of **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 text box area, respecting the specified internal margins. This value SHOULD NOT<106> be used. The value **msoanchorTopCentered** MAY be used instead.
msoanchorBottomCenteredBaseline	0x00000009	This anchor mode specifies the same vertical placement as that of **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 text box area, respecting the specified internal margins. This value SHOULD NOT<107> be used. The value **msoanchorBottomCentered** MAY be used instead.

Name	Value	Meaning

2.4.5 MSOTXFL

Referenced by: [txflTextFlow](#)

The **MSOTXFL** enumeration, as shown in the following table, specifies the text flow **rules** for 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. The descriptions in the table use spatial direction terminology that is relative to the container of the body of text. The exact placement of the text is application dependent and varies to accommodate other languages and text properties.

Name	Value	Meaning
msotxflHorzN	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[108] be used.
msotxflTtoBA	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[109] be used.
msotxflBtoT	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[110] be used.
msotxflTtoBN	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[111] be used.

Name	Value	Meaning
msotxflHorzA	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<112> be used.

01234
56789 |
| **msotxflVertN** | 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<113> be used.

56789 01234 |

2.4.6 MSOCDIR

Referenced by: cdirFont

The **MSOCDIR** enumeration, as shown in the following table, specifies a rotation. Rotation begins horizontally to the right and proceeds in a clockwise direction, completing a full rotation at 360 degrees.

Name	Value	Meaning
msocdir0	0x00000000	Specifies either no rotation or a direction that is horizontally to the right.
msocdir90	0x00000001	Specifies either a 90-degree rotation or a direction that is vertically down.
msocdir180	0x00000002	Specifies either a 180-degree rotation or a direction that is horizontally to the left.
msocdir270	0x00000003	Specifies either a 270-degree rotation or a direction that is vertically up.

2.4.7 MSOTXDIR

Referenced by: txdir

The **MSOTXDIR** enumeration, which is used for bidirectional text, specifies the direction of a **text run**.

Name	Value	Meaning
msotxdirLTR	0x00000000	Specifies that the text is read from left to right.<114>
msotxdirRTL	0x00000001	Specifies that the text is read from right to left.<115>
msotxdirContext	0x00000002	Specifies that the direction is determined from the text string. If no associated text string exists, the text SHOULD be read from left to right.

2.4.8 MSOBLIPFLAGS

Referenced by: fillBlipFlags, lineBottomFillBlipFlags, lineFillBlipFlags, lineLeftFillBlipFlags, lineRightFillBlipFlags, lineTopFillBlipFlags, pibFlags, pibPrintFlags

The **MSOBLIPFLAGS** enumeration, as shown in the following table, specifies a set of flags that are used by the **BLIP** properties. The enumeration values can be combined, except where prohibited as indicated in the table.

Name	Value	Meaning
msoblipflagComment	0x00000000	Specifies that the name in the property set designates a comment. This value, **msoblipflagFile**, and **msoblipflagURL** are mutually exclusive.
msoblipflagFile	0x00000001	Specifies that the name in the property set designates a file name. This value, **msoblipflagComment**, and **msoblipflagURL** are mutually exclusive.
msoblipflagURL	0x00000002	Specifies that the name in the property set designates a **URL**. This value, **msoblipflagComment**, and **msoblipflagFile** are mutually exclusive.
msoblipflagDoNotSave	0x00000004	Specifies that the BLIP data MUST NOT be embedded on save. If this flag is set, **msoblipflagLinkToFile** MUST also be set.
msoblipflagLinkToFile	0x00000008	Specifies that the BLIP data is linked in the specified URL. If this flag is set, either **msoblipflagFile** or **msoblipflagURL** MUST also be set.

2.4.9 MSOSHAPEPATH

Referenced by: shapePath

The **MSOSHAPEPATH** enumeration, as shown in the following table, 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 composed of a combination of multiple types of lines. The **pSegmentInfo_complex** property, as defined in section 2.3.6.9, of this shape specifies the types of lines that form the path, and that property MUST exist.

2.4.10 MSOCXK

Referenced by: cxk
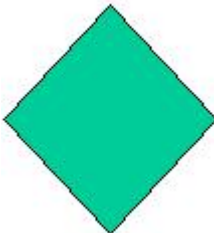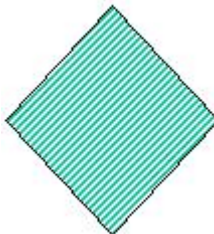
The **MSOCXK** enumeration, as shown in the following table, specifies the types of **connection points**.

Name	Value	Meaning
msocxkNone	0x00000000	No connection points exist.
msocxkSegments	0x00000001	The **edit points** of the **shape** are used as connection points.
msocxkCustom	0x00000002	A custom array of connection points is used.
msocxkRect	0x00000003	The standard four connection points at the midpoints of the top, bottom, left, and right sides are used.

2.4.11 MSOFILLTYPE

Referenced by: fillType

The **MSOFILLTYPE** enumeration, as shown in the following table, specifies the fill types.

Name	Value	Meaning
msofillSolid	0x00000000	A solid fill:
msofillPattern	0x00000001	A patterned fill:
msofillTexture	0x00000002	A textured fill:
msofillPicture	0x00000003	A picture fill:

Name	Value	Meaning
msofillShade	0x00000004	A gradient fill that starts and ends with defined endpoints:
msofillShadeCenter	0x00000005	A gradient fill that starts and ends based on the bounds of the **shape**:
msofillShadeShape	0x00000006	A gradient fill that starts on the outline of the shape and ends at a point defined within the shape:
msofillShadeScale	0x00000007	A gradient fill that starts on the outline of the shape and ends at a point defined within the shape. The fill angle is scaled by the aspect ratio of the shape:

Name	Value	Meaning
msofillShadeTitle	0x00000008	A gradient fill interpreted by the host application:
msofillBackground	0x00000009	A fill that matches the background fill:

2.4.12 MSODZTYPE

Referenced by: [fillDztype](), [lineBottomFillDztype](), [lineFillDztype](), [lineLeftFillDztype](), [lineRightFillDztype](), [lineTopFillDztype]()

The **MSODZTYPE** enumeration, as shown in the following table, specifies the units for measuring length and how drawing parameters will be interpreted.

Name	Value	Meaning
msodztypeDefault	0x00000000	The width and height are ignored, and the **shape** dimensions are used.
msodztypeA	0x00000001	Values are in **EMUs.**
msodztypeV	0x00000002	Values are in pixels.
msodztypeShape	0x00000003	Values are of type **FixedPoint**, as specified in [MS-OSHARED] section 2.2.1.6, and specify fractions of a shape dimension.
msodztypeFixedAspect	0x00000004	The aspect ratio of the shape is maintained. The width and height are ignored, and the shape dimensions are used.
msodztypeAFixed	0x00000005	Values are in EMUs. 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 EMUs. The aspect ratio is maintained, favoring the largest dimension.

Name	Value	Meaning
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
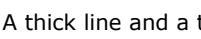
The **MSOLINETYPE** enumeration, as shown in the following table, specifies the fill properties for a line.

Name	Value	Meaning
msolineSolidType	0x00000000	A solid fill:
msolinePattern	0x00000001	A patterned fill:
msolineTexture	0x00000002	A textured fill:

2.4.14 MSOLINESTYLE

Referenced by: lineBottomStyle, lineLeftStyle, lineRightStyle, lineStyle, lineTopStyle

The **MSOLINESTYLE** enumeration, as shown in the following table, specifies the type of line style that will be used.

Name	Value	Meaning
msolineSimple	0x00000000	A simple line:
msolineDouble	0x00000001	A double line:
msolineThickThin	0x00000002	A thick line and a thin line:

Name	Value	Meaning
msolineThinThick	0x00000003	A thin line and a thick line:
msolineTriple	0x00000004	A triple line:

2.4.15 MSOLINEDASHING

Referenced by: lineBottomDashing, lineDashing, lineLeftDashing, lineRightDashing, lineTopDashing

The **MSOLINEDASHING** enumeration, as shown in the following table, specifies preset dashed-line values. Each style corresponds to 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

Name	Value	Meaning
msolineLongDashDotDotGEL	0x0000000A	1111111100010001000

2.4.16 MSOLINEEND

Referenced by: lineBottomEndArrowhead, lineBottomStartArrowhead, lineEndArrowhead, lineLeftEndArrowhead, lineLeftStartArrowhead, lineRightEndArrowhead, lineRightStartArrowhead, lineStartArrowhead, lineTopEndArrowhead, lineTopStartArrowhead

The **MSOLINEEND** enumeration, as shown in the following table, specifies the **line end decorations** that appear at the ends of lines.

Name	Value	Meaning
msolineNoEnd	0x00000000	No **shape**.
msolineArrowEnd	0x00000001	A triangular arrow head:
msolineArrowStealthEnd	0x00000002	A stealth arrow head:
msolineArrowDiamondEnd	0x00000003	A diamond:
msolineArrowOvalEnd	0x00000004	An oval:
msolineArrowOpenEnd	0x00000005	A line arrow head:
msolineArrowChevronEnd	0x00000006	A value that MUST be ignored.
msolineArrowDoubleChevronEnd	0x00000007	A value that MUST be ignored.

2.4.17 MSOLINEENDWIDTH

Referenced by: lineBottomEndArrowWidth, lineBottomStartArrowWidth, lineEndArrowWidth, lineLeftEndArrowWidth, lineLeftStartArrowWidth, lineRightEndArrowWidth, lineRightStartArrowWidth, lineStartArrowWidth, lineTopEndArrowWidth, lineTopStartArrowWidth

The **MSOLINEENDWIDTH** enumeration, as shown in the following table, specifies widths of **line end decorations** that are relative to the widths of the lines themselves.

Name	Value	Meaning
msolineNarrowArrow	0x00000000	Narrow:
msolineMediumWidthArrow	0x00000001	Medium:

Name	Value	Meaning
msolineWideArrow	0x00000002	Wide:

2.4.18 MSOLINEENDLENGTH

Referenced by: lineBottomEndArrowLength, lineBottomStartArrowLength, lineEndArrowLength, lineLeftEndArrowLength, lineLeftStartArrowLength, lineRightEndArrowLength, lineRightStartArrowLength, lineStartArrowLength, lineTopEndArrowLength, lineTopStartArrowLength

The **MSOLINEENDLENGTH** enumeration, as shown in the following table, specifies lengths of **line end decorations**.

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, as shown in the following table, specifies the types of **join styles** that can be applied to lines in the document.

Name	Value	Meaning
msolineJoinBevel	0x00000000	Beveled:
msolineJoinMiter	0x00000001	Mitered:
msolineJoinRound	0x00000002	Rounded:

Name	Value	Meaning

2.4.20 MSOLINECAP

Referenced by: lineBottomEndCapStyle, lineEndCapStyle, lineLeftEndCapStyle, lineRightEndCapStyle, lineTopEndCapStyle

The **MSOLINECAP** enumeration, as shown in the following table, specifies ways to cap the ends of lines in the document.

Name	Value	Meaning
msolineEndCapRound	0x00000000	A rounded end that protrudes past the line endpoint:
msolineEndCapSquare	0x00000001	A square end that protrudes past the line endpoint:
msolineEndCapFlat	0x00000002	A flat end that ends at the line endpoint:

2.4.21 MSOSHADOWTYPE

Referenced by: shadowType

The **MSOSHADOWTYPE** enumeration, as shown in the following table, specifies how to display shadows that are 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:

Name	Value	Meaning
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 is cast to create an embossed or engraved appearance. Embossed: Engraved:

Name	Value	Meaning

2.4.22 MSOXFORMTYPE

Referenced by: perspectiveType

The **MSOXFORMTYPE** enumeration, as shown in the following table, specifies the ways that a **perspective transform** SHOULD be applied.

Name	Value	Meaning
msoxformAbsolute	0x00000000	The perspective transform is applied in **absolute space**, centered on the **shape**.
msoxformShape	0x00000001	The perspective transform is applied to the shape geometry.
msoxformDrawing	0x00000002	The perspective transform is applied in the **drawing space**.

2.4.23 MSO3DRENDERMODE

Referenced by: c3DRenderMode

The **MSO3DRENDERMODE** enumeration, as shown in the following table, specifies the rendering modes 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
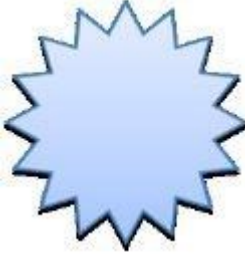
The **MSOSPT** enumeration, as shown in the following table, specifies the preset **shapes** and preset text shape geometries that will be used for a shape. An enumeration of this type is used so that a custom geometry does not need to be specified but can instead be automatically constructed by the generating application.

Name	Value	Meaning
msosptNotPrimitive	0x00000000	A shape that has no preset geometry and is instead drawn with custom geometry. For example, freeform shapes that are drawn by users fall into this category.
msosptRectangle	0x00000001	A rectangle shape:

Name	Value	Meaning
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:

Name	Value	Meaning
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:

Name	Value	Meaning
msosptArrow	0x0000000D	An arrow shape:
msosptThickArrow	0x0000000E	A value that 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:

Name	Value	Meaning
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:
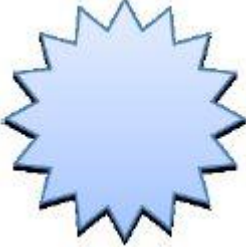
Name	Value	Meaning
msosptTextSimple	0x00000018	A simple text shape. The text SHOULD<116> be drawn on a straight line:
msosptTextOctagon	0x00000019	An octagonal text shape. The text SHOULD<117> be drawn within an octagonal boundary:
msosptTextHexagon	0x0000001A	A hexagonal text shape. The text SHOULD<118> be drawn within a hexagonal boundary:
msosptTextCurve	0x0000001B	A curved text shape. The text SHOULD<119> be drawn on a curved line:
msosptTextWave	0x0000001C	A wavy text shape. The text SHOULD<120> be drawn on a wavy line:
msosptTextRing	0x0000001D	A ringed text shape. The text SHOULD<121> be drawn within a semicircular arc:
msosptTextOnCurve	0x0000001E	A text shape that draws text on a curve. The text SHOULD<122> be drawn on a curved line:
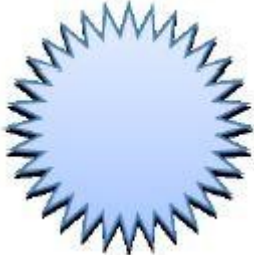
Name	Value	Meaning
		Sample Text
msosptTextOnRing	0x0000001F	A text shape that draws text on a ring. The text SHOULD<123> be drawn on a semicircular arc: Sample Text
msosptStraightConnector1	0x00000020	A straight **connector** shape:
msosptBentConnector2	0x00000021	A bent connector shape:
msosptBentConnector3	0x00000022	A bent connector shape:
msosptBentConnector4	0x00000023	A bent connector shape:
msosptBentConnector5	0x00000024	A bent connector shape:
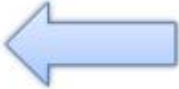
Name	Value	Meaning
msosptCurvedConnector2	0x00000025	A curved connector shape:
msosptCurvedConnector3	0x00000026	A curved connector shape:
msosptCurvedConnector4	0x00000027	A curved connector shape:
msosptCurvedConnector5	0x00000028	A curved connector shape:
msosptCallout1	0x00000029	A **callout** shape:
msosptCallout2	0x0000002A	A callout shape:

Name	Value	Meaning
msosptCallout3	0x0000002B	A callout shape:
msosptAccentCallout1	0x0000002C	A callout shape with a side accent:
msosptAccentCallout2	0x0000002D	A callout shape with a side accent:
msosptAccentCallout3	0x0000002E	A callout shape with a side accent:
msosptBorderCallout1	0x0000002F	A callout shape with a border:
msosptBorderCallout2	0x00000030	A callout shape with a border:

Name	Value	Meaning
msosptBorderCallout3	0x00000031	A callout shape with a border:
msosptAccentBorderCallout1	0x00000032	A callout shape with a border and a side accent:
msosptAccentBorderCallout2	0x00000033	A callout shape with a border and a side accent:
msosptAccentBorderCallout3	0x00000034	A callout shape with a border and a side accent:
msosptRibbon	0x00000035	A ribbon shape:
msosptRibbon2	0x00000036	A ribbon shape:
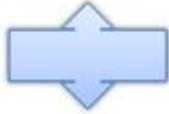
Name	Value	Meaning
msosptChevron	0x00000037	A chevron shape:
msosptPentagon	0x00000038	A regular pentagon shape:
msosptNoSmoking	0x00000039	A circle-with-a-slash shape:
msosptSeal8	0x0000003A	A seal shape with eight points:
msosptSeal16	0x0000003B	A seal shape with sixteen points:
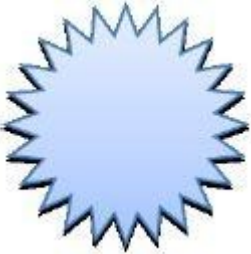
Name	Value	Meaning
msosptSeal32	0x0000003C	A seal shape with thirty-two points:
msosptWedgeRectCallout	0x0000003D	A rectangular callout shape:
msosptWedgeRRectCallout	0x0000003E	A rectangular callout shape with rounded corners:
msosptWedgeEllipseCallout	0x0000003F	An elliptical callout shape:
msosptWave	0x00000040	A wave shape:
msosptFoldedCorner	0x00000041	A rectangular shape with a folded corner:

Name	Value	Meaning
msosptLeftArrow	0x00000042	An arrow shape that points to the left:
msosptDownArrow	0x00000043	An arrow shape that points down:
msosptUpArrow	0x00000044	An arrow shape that points up:
msosptLeftRightArrow	0x00000045	An arrow shape that points both left and right:
msosptUpDownArrow	0x00000046	An arrow shape that points both down and up:
msosptIrregularSeal1	0x00000047	An irregular seal shape:

Name	Value	Meaning
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 that has arrows pointing down, left, right, and up:
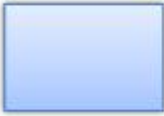
Name	Value	Meaning
msosptLeftArrowCallout	0x0000004D	A callout shape that has an arrow pointing to the left:
msosptRightArrowCallout	0x0000004E	A callout shape that has an arrow pointing to the right:
msosptUpArrowCallout	0x0000004F	A callout shape that has an arrow pointing up:
msosptDownArrowCallout	0x00000050	A callout shape that has an arrow pointing down:
msosptLeftRightArrowCallout	0x00000051	A callout shape that has arrows pointing both left and right:
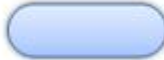
Name	Value	Meaning
msosptUpDownArrowCallout	0x00000052	A callout shape that has arrows pointing both down and up:
msosptQuadArrowCallout	0x00000053	A callout shape that has arrows pointing down, left, right, and up:
msosptBevel	0x00000054	A beveled rectangle shape:
msosptLeftBracket	0x00000055	An opening bracket shape:
msosptRightBracket	0x00000056	A closing bracket shape:
msosptLeftBrace	0x00000057	An opening brace shape:

Name	Value	Meaning
		(brace shape continued)
msosptRightBrace	0x00000058	A closing brace shape:
msosptLeftUpArrow	0x00000059	An arrow shape that points both left and up:
msosptBentUpArrow	0x0000005A	A bent arrow shape that has its base on the left and that points up:
msosptBentArrow	0x0000005B	A curved arrow shape that has its base on the bottom and that points to the right:
msosptSeal24	0x0000005C	A seal shape with twenty-four points:

Name	Value	Meaning
msosptStripedRightArrow	0x0000005D	A striped arrow shape that points to the right:
msosptNotchedRightArrow	0x0000005E	A notched arrow shape that points to the right:
msosptBlockArc	0x0000005F	A semicircular arc shape:
msosptSmileyFace	0x00000060	A smiling face shape:
msosptVerticalScroll	0x00000061	A scroll shape that is vertically opened:
msosptHorizontalScroll	0x00000062	A scroll shape that is horizontally opened:
msosptCircularArrow	0x00000063	A semicircular arrow shape:

Name	Value	Meaning
msosptNotchedCircularArrow	0x00000064	A value that SHOULD NOT be used.
msosptUturnArrow	0x00000065	A semicircular arrow shape that has 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:

Name	Value	Meaning
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:
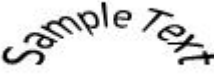
Name	Value	Meaning
msosptFlowChartPredefinedProcess	0x00000070	A predefined process shape for flowcharts:
msosptFlowChartInternalStorage	0x00000071	An internal storage shape for flowcharts:
msosptFlowChartDocument	0x00000072	A document shape for flowcharts:
msosptFlowChartMultidocument	0x00000073	A multiple-document 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:

Name	Value	Meaning
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:

Name	Value	Meaning
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:
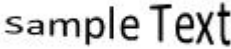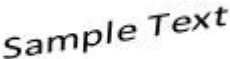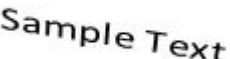
Name	Value	Meaning
msosptFlowChartMagneticDisk	0x00000084	A magnetic disk shape for flowcharts:
msosptFlowChartMagneticDrum	0x00000085	A magnetic drum shape for flowcharts:
msosptFlowChartDisplay	0x00000086	A display shape for flowcharts:
msosptFlowChartDelay	0x00000087	A delay shape for flowcharts:
msosptTextPlainText	0x00000088	A plain text shape: Sample Text
msosptTextStop	0x00000089	An octagonal text shape: sample Text
msosptTextTriangle	0x0000008A	A triangular text shape that points upward:

Name	Value	Meaning
		sample Text
msosptTextTriangleInverted	0x0000008B	A triangular text shape that points downward: Sample Text
msosptTextChevron	0x0000008C	A chevron text shape that points upward: Sample Text
msosptTextChevronInverted	0x0000008D	A chevron text shape that points downward: Sample Text
msosptTextRingInside	0x0000008E	A circular text shape, in which reading the text is like reading an inscription on the inside of a ring: sampl Text
msosptTextRingOutside	0x0000008F	A circular text shape, in which reading the text is like reading an inscription on the outside of a ring: Text sampl
msosptTextArchUpCurve	0x00000090	An upward-arching curved text shape: Sample Text
msosptTextArchDownCurve	0x00000091	A downward-arching curved text shape: Sample Text
msosptTextCircleCurve	0x00000092	A circular text shape:
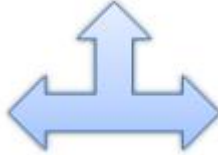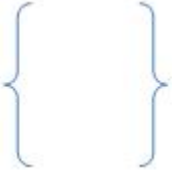
Name	Value	Meaning
msosptTextButtonCurve	0x00000093	A text shape that resembles a button:
msosptTextArchUpPour	0x00000094	An upward-arching text shape:
msosptTextArchDownPour	0x00000095	A downward-arching text shape:
msosptTextCirclePour	0x00000096	A circular text shape:
msosptTextButtonPour	0x00000097	A text shape that resembles a button:
msosptTextCurveUp	0x00000098	An upward-curving text shape:

Name	Value	Meaning
		Sample Text
msosptTextCurveDown	0x00000099	A downward-curving text shape: Sample Text
msosptTextCascadeUp	0x0000009A	A cascading text shape that points up: Sample Text
msosptTextCascadeDown	0x0000009B	A cascading text shape that points down: Sample Text
msosptTextWave1	0x0000009C	A wavy text shape: Sample Text
msosptTextWave2	0x0000009D	A wavy text shape: Sample Text
msosptTextWave3	0x0000009E	A wavy text shape: Sample Text
msosptTextWave4	0x0000009F	A wavy text shape: Sample Text
msosptTextInflate	0x000000A0	A text shape that vertically expands in the middle: Sample Text
msosptTextDeflate	0x000000A1	A text shape that vertically shrinks in the middle:

Name	Value	Meaning
		Sample Text
msosptTextInflateBottom	0x000000A2	A text shape that expands downward in the middle: Sample Text
msosptTextDeflateBottom	0x000000A3	A text shape that shrinks upward 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 in which the lower lines expand upward, and the upper lines shrink to compensate: Sample Text Sample Text
msosptTextDeflateInflateDeflate	0x000000A7	A text shape in which the lines in the center vertically expand, and the upper and lower lines shrink to compensate: Sample Text Sample Text Sample Text
msosptTextFadeRight	0x000000A8	A text shape that vertically shrinks on the right side: Sample Text
msosptTextFadeLeft	0x000000A9	A text shape that vertically shrinks on the left side:
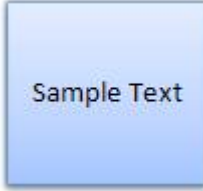
Name	Value	Meaning
		sample Text
msosptTextFadeUp	0x000000AA	A text shape that horizontally shrinks on the top: Sample Text
msosptTextFadeDown	0x000000AB	A text shape that horizontally shrinks on the bottom: Sample Text
msosptTextSlantUp	0x000000AC	An upward-slanted text shape: Sample Text
msosptTextSlantDown	0x000000AD	A downward-slanted text shape: Sample Text
msosptTextCanUp	0x000000AE	A text shape that is curved upward as if being read on the side of a can: Sample Text
msosptTextCanDown	0x000000AF	A text shape that is curved downward as if being read on the side of a can: Sample Text
msosptFlowChartAlternateProcess	0x000000B0	An alternate process shape for flowcharts:
msosptFlowChartOffpageConnector	0x000000B1	An off-page connector shape for flowcharts:

Name	Value	Meaning
msosptCallout90	0x000000B2	A callout shape:
msosptAccentCallout90	0x000000B3	A callout shape with a side accent:
msosptBorderCallout90	0x000000B4	A callout shape with a border:
msosptAccentBorderCallout90	0x000000B5	A callout shape with a border and a side accent:
msosptLeftRightUpArrow	0x000000B6	A shape that has arrows pointing left, right, and up:

Name	Value	Meaning
msosptSun	0x000000B7	A sun shape:
msosptMoon	0x000000B8	A moon shape:
msosptBracketPair	0x000000B9	A shape that is enclosed in brackets:
msosptBracePair	0x000000BA	A shape that is enclosed in braces:
msosptSeal4	0x000000BB	A seal shape with four points:
msosptDoubleWave	0x000000BC	A double wave shape:

Name	Value	Meaning
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:

Name	Value	Meaning
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:

Name	Value	Meaning
msosptActionButtonSound	0x000000C7	A sound button shape:
msosptActionButtonMovie	0x000000C8	A movie button shape:
msosptHostControl	0x000000C9	A value that SHOULD NOT be used.
msosptTextBox	0x000000CA	A text box shape:

2.4.25 MSOCXSTYLE

Referenced by: cxstyle

The **MSOCXSTYLE** enumeration specifies types of **connectors**.

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
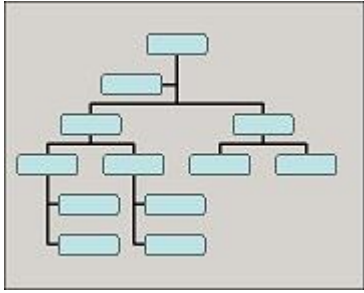
The **MSOBWMODE** enumeration, as shown in the following table, specifies the ways to render an object when black-and-white display mode is specified.
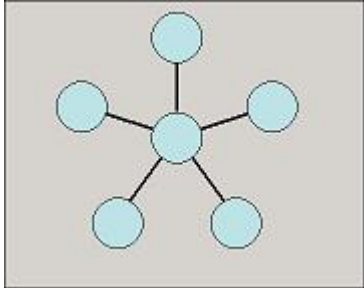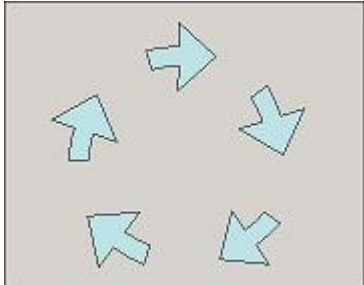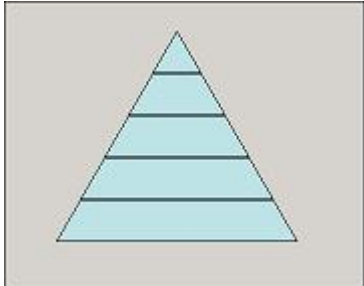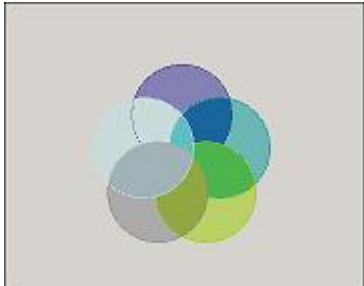
Name	Value	Meaning
msobwColor	0x00000000	The object is rendered with normal coloring.
msobwAutomatic	0x00000001	The object is rendered with automatic coloring.
msobwGrayScale	0x00000002	The object is rendered with gray coloring.
msobwLightGrayScale	0x00000003	The object is rendered with light gray coloring.
msobwInverseGray	0x00000004	The object is rendered with inverse gray coloring.
msobwGrayOutline	0x00000005	The object is rendered with gray and white coloring.
msobwBlackTextLine	0x00000006	The object is rendered with black and gray coloring.
msobwHighContrast	0x00000007	The object is rendered with black and white coloring.
msobwBlack	0x00000008	The object is rendered only with black coloring.
msobwWhite	0x00000009	The object is rendered with white coloring.
msobwDontShow	0x0000000A	The object is not rendered.
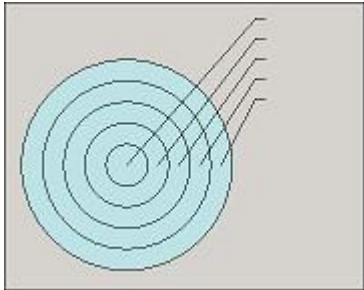
2.4.27 MSODGMT

Referenced by: dgmt

The **MSODGMT** enumeration, as shown in the following table specifies the types of **diagrams**.

Name	Value	Meaning
msodgmtCanvas	0x00000000	A drawing area for **ink** and **shapes**.
msodgmtOrgChart	0x00000001	An organizational chart diagram:
msodgmtRadial	0x00000002	A diagram that shows the relationships to a central entity:

Name	Value	Meaning
msodgmtCycle	0x00000003	A diagram that shows a cyclical process:
msodgmtStacked	0x00000004	A pyramid diagram:
msodgmtVenn	0x00000005	A Venn diagram:
msodgmtBullsEye	0x00000006	A diagram that has concentric rings:

Name	Value	Meaning
msodgmtNil	0x00000FFF	No diagram or an invalid diagram.

2.4.28 MSODGSLK

Referenced by: OfficeArtFDGSL
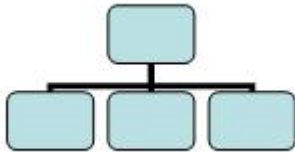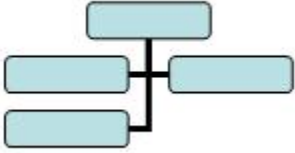
The **MSODGSLK** enumeration, as shown in the following table, specifies selection states for selected **shapes**.
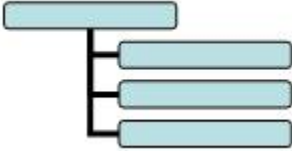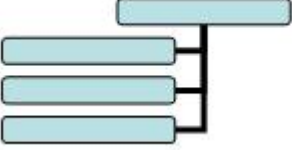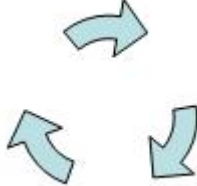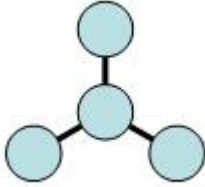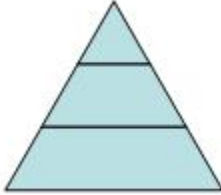
Name	Value	Meaning
msodgslkNormal	0x00000000	The default state.
msodgslkRotate	0x00000001	Ready to rotate.
msodgslkReshape	0x00000002	Ready to change the curvature of line shapes.
msodgslkCrop	0x00000007	Ready to crop the picture.
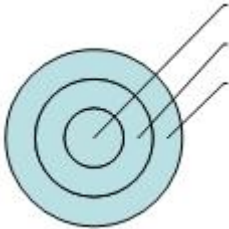
2.4.29 MSODGMLO

Referenced by: dgmLayout, dgmLayoutMRU

The **MSODGMLO** enumeration, as defined in the following table, specifies layouts for **shapes** that are nodes in a **diagram**. The value 0x000000FF (**msodgmloNil**) indicates that no shape is present.

Name	Value	Meaning
msodgmloOrgChartStd	0x00000000	Organizational chart:
msodgmloOrgChartBothHanging	0x00000001	Organizational chart with child nodes hanging both left and right:

Name	Value	Meaning
msodgmloOrgChartRightHanging	0x00000002	Organizational chart with child nodes hanging to the right:
msodgmloOrgChartLeftHanging	0x00000003	Organizational chart with child nodes hanging to the left:
msodgmloCycleStd	0x00000004	Cycle diagram:
msodgmloRadialStd	0x00000005	Radial diagram:
msodgmloStackedStd	0x00000006	Pyramid diagram:
msodgmloVennStd	0x00000007	Venn diagram:

Name	Value	Meaning
msodgmloBullsEyeStd	0x00000008	Target diagram:

2.4.30 MSOPATHTYPE

The **MSOPATHTYPE** enumeration, as shown in the following table, specifies how the individual pieces of a path SHOULD be interpreted.

Name	Value	Meaning
msopathLineTo	0x00000000	For each **POINT** record, as defined in section 2.2.55, in the array, add a straight line segment from the current ending **POINT** to the new **POINT**. The number of **POINT** values to process equals the number of segments. The last **POINT** in the array becomes the new ending **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 ending **POINT**. The number of **POINT** values consumed is three times the number of segments.
msopathMoveTo	0x00000002	Start a new sub-path by using a single **POINT**. The starting **POINT** becomes the current ending **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 ending **POINT** are not the same, a single straight line is drawn to connect the starting **POINT** and the 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 subsequent 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, as defined in section 2.2.53, is treated as an **MSOPATHESCAPEINFO** record, as defined in section 2.2.54.
msopathClientEscape	0x00000006	The **MSOPATHINFO** record is treated as an **MSOPATHESCAPEINFO** record specific to the client.

2.4.31 MSOPATHESCAPE

The **MSOPATHESCAPE** enumeration, as shown in the following table, modifies the path properties by adding elements to a path, providing additional control, or specifying how to handle the editing of **POINT** data, as defined in section 2.2.55.

Name	Value	Meaning
msopathEscapeExtension	0x00000000	This value adds additional **POINT** values, as defined in section 2.2.55, 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 the x value and the ending radius in the y value. 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 equals 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 the x value and the ending radius in the y value. 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 equals 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 starts at the **POINT** where the first radial vector intersects the bounding rectangle and goes to the **POINT** where the second radial vector intersects the bounding rectangle. The drawing direction is 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 equals 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 starts at the **POINT** where the first radial vector intersects the bounding rectangle and goes to the **POINT** where the second radial vector intersects the bounding rectangle. The drawing direction is counterclockwise. The number of arc segments drawn equals 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 starts at the **POINT** where the first radial vector intersects the bounding rectangle and goes to the **POINT** where the second radial vector intersects the bounding rectangle. The drawing direction is clockwise. If the path has already been started, a line is drawn from the last **POINT** to the starting **POINT** of the

Name	Value	Meaning
		arc; otherwise, a new path is started. The number of arc segments drawn equals 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 starts at the **POINT** where the first radial vector intersects the bounding rectangle and goes to the **POINT** where the second radial vector intersects the bounding rectangle. The drawing direction is clockwise. The number of arc segments drawn equals the number of segments divided by four. This escape code starts a new path.
msopathEscapeEllipticalQuadrantX	0x00000007	This value adds an ellipse to the path from the current **POINT** to the next **POINT**. 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 equals the number of segments.
msopathEscapeEllipticalQuadrantY	0x00000008	This value adds an ellipse to the path from the current **POINT** to the next **POINT**. 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 equals 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** property of the containing **MSOPATHESCAPEINFO** record, as defined in section 2.2.54.
msopathEscapeNoFill	0x0000000A	The path is not to be filled, even if it is passed to a rendering routine that would normally fill the path.
msopathEscapeNoLine	0x0000000B	The path is not to be drawn, even if it passed to a rendering routine that would normally draw the path.
msopathEscapeAutoLine	0x0000000C	For Bezier curve editing, the vertex joints are calculated, are of equal length, and are collinear. The segment after the **POINT** is a line. The tangent is not visible.
msopathEscapeAutoCurve	0x0000000D	For Bezier curve editing, the vertex joints are calculated, are of equal length, and are collinear. The segment after the **POINT** is a curve. The tangent is not visible.
msopathEscapeCornerLine	0x0000000E	For Bezier curve editing, the vertex joints are not calculated, are not of equal lengths and are not collinear. The segment after the **POINT** is a line. The tangent is visible.
msopathEscapeCornerCurve	0x0000000F	For Bezier curve editing, the vertex joints are not calculated, are not of equal length, and are not collinear. The segment after the **POINT** is a curve. The tangent is visible.
msopathEscapeSmoothLine	0x00000010	For Bezier curve editing, the vertex joints are not calculated, are not of equal length, and are not collinear. The segment after the **POINT** is a line. The tangent is

Name	Value	Meaning
		visible.
msopathEscapeSmoothCurve	0x00000011	For Bezier curve editing, the vertex joints are not calculated, are not of equal length, and are not collinear. The segment after the **POINT** is a curve. The tangent is visible.
msopathEscapeSymmetricLine	0x00000012	For Bezier curve editing, the vertex joints are not calculated, are of equal length, and are not collinear. The segment after the **POINT** is a line. The tangent is visible.
msopathEscapeSymmetricCurve	0x00000013	For Bezier curve editing the vertex joints are not calculated, are of equal length, and are not collinear. The segment after the **POINT** is a curve. The tangent is visible.
msopathEscapeFreeform	0x00000014	For Bezier curve editing, the vertex joints are calculated, are of equal length, and are collinear. The tangent is not visible.
msopathEscapeFillColor	0x00000015	This value sets a new fill color. A single **POINT** is used to represent the colors. The x value is an **OfficeArtCOLORREF** structure, as defined in section 2.2.2, that specifies the new foreground color. The y value is an **OfficeArtCOLORREF** that specifies the new background color.
msopathEscapeLineColor	0x00000016	This value sets a new line drawing color. A single **POINT** is used to represent the colors. The x value is an **OfficeArtCOLORREF** structure, as defined in section 2.2.2, that specifies the new foreground color. The y value is an **OfficeArtCOLORREF** that specifies the new background color.

2.5   Algorithms

2.5.1   Data for VtHyperlink

The following algorithm specifies how hyperlink properties, as specified in [MS-OSHARED] section 2.3.3.1.18, that are associated with OfficeArt shapes construct their **dwInfo** structure member values:

- 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** 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 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 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 path to an image resource that specifies the graphic used for the shape outline, the **dwInfo** value MUST be 0x00000003.

3 Structure Examples

This section contains examples that illustrate different features of the Office Drawing Binary File Format Structure.

The example structures are derived from sample files<124>. The example structures will be similar for other applications<125>, but records and fields that are defined by the client application might vary slightly.

3.1 Diagram

This section provides an example of the record hierarchy within a **drawing** container that specifies the structure of a **diagram**. This section outlines some of the records that define the structure and properties specific to the following **drawing objects**<126>:

- Basic **shapes**, including:

    - Shape fill and color

    - Shape outline

    - Shape position

    - Shape grouping

- Text

- Diagram type, layout, and protection

- **Connector** lines

The diagram image that is shown in the following figure represents a basic organizational-chart diagram, which consists of a top-level shape, an assistant shape, coworker shapes, and a subordinate shape. Each shape in the diagram contains text, a fill color, and a shape outline. All of the shapes are connected by lines that are called connectors.
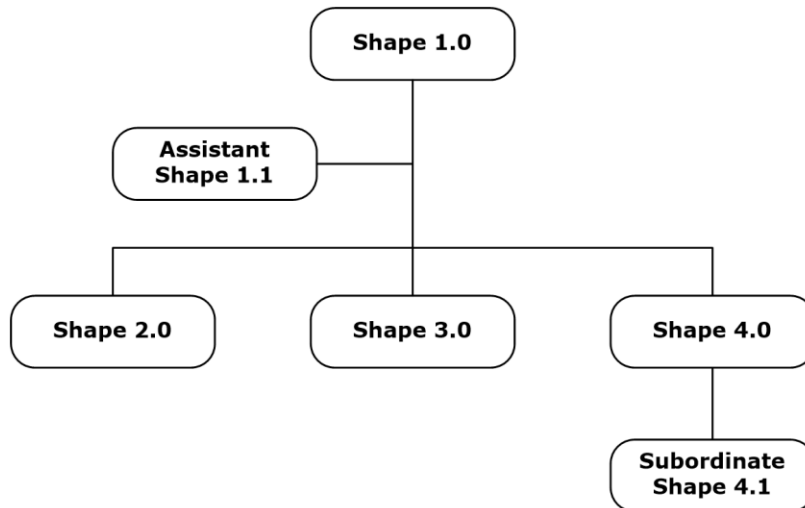
Figure 10: Basic organizational chart

The remainder of this section shows the record hierarchy that is used to define a diagram and the shapes that are used to construct a diagram. For a detailed specification of each record that is mentioned, see Structures, as defined in section 2.

3.1.1 DrawingContainer

All the records that are 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 might be named differently in the file format of the host application.

The following table shows the child-record hierarchy of the **DrawingContainer** record ([MS-PPT] section 2.5.13) named **drawing**. This example focuses on the four top-level containers, which are labeled **1**, **2**, **3**, and **4** within the **OfficeArtDgContainer** record, as defined in section 2.2.13.

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 11: Child-Record Hierarchy of a DrawingContainer Record

The top-level records of the drawing container are specified as follows:

drawing: A drawing container that contains a **RecordHeader** record, as defined in section 2.2.1, and a top-level **OfficeArtDgContainer** drawing container.

OfficeArtDg: An **OfficeArtDgContainer** record, as defined in section 2.2.13, that contains all the per-slide, per-document, and per-sheet information, including the **shapes**.

OfficeArtDg.drawingData: An **OfficeArtFDG** record, as defined in section 2.2.49, that contains information about the shape count, drawing identifier, and shape identifier of the last shape in a drawing.

OfficeArtDg.groupShape: An **OfficeArtSpgrContainer** record, as defined in section 2.2.16, that contains groups of shapes. This group container contains a variable number of shape containers and other group containers. The group itself is a shape.

OfficeArtDg.shape: An **OfficeArtSpContainer** record, as defined in section 2.2.14, that acts as a container for shapes.

OfficeArtDg.solvers: An **OfficeArtSolverContainer** record, as defined in section 2.2.18, that acts as a container for **rules** that are applicable to shapes.

The containers that are labeled **1**, **2**, **3**, and **4** are described in more detail in the following four subsections.

3.1.2 OfficeArtFDG

The following table shows the child-record hierarchy of **OfficeArtFDG**, as defined in section 2.2.49, container **1**.

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 12: Child-Record Hierarchy of OfficeArtFDG Container 1

The records that are contained within **OfficeArtFDG** container **1** are specified as follows:

rh: An **OfficeArtRecordHeader** structure, as defined in section 2.2.1, that 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: The record version, which is 0x0 if the record is an atom or 0xF if the record is a container.

rh.recInstance: The record instance (0x002), which is useful for differentiating atoms when more than one atom of the same type exists in a particular container.

rh.recType: The type (0xF008) of the record. OfficeArt uses values from 0xF000 to 0xFFFF. Client applications can define their own records by using other ranges.

rh.recLen: The length (0x00000008), in bytes, of the record. If the record is an atom, this value specifies the length of the atom excluding the header. If the record is a container, this value specifies the sum of the lengths of the contained atoms plus the length of the record header for each atom.

csp: The number (0x0000000E) of **shapes** in this **drawing**.

spidCur: The shape identifier (0x00000818) of the last shape in this drawing.

3.1.3 OfficeArtSpgrContainer

The following table shows the child-record hierarchy of **OfficeArtSpgrContainer** container, as defined in section 2.2.16, record **2**.

Offset	Size	Structure
00000D8F	0966	**2**: OfficeArtSpgrContainer - **groupShape**
00000D8F	0008	OfficeArtRecordHeader - **rh**
00000D97	095E	OfficeArtSpgrContainerFileBlockArray - **rgfb**

Offset	Size	Structure
00000D97	0030	**A**: OfficeArtSpgrContainerFileBlock - **OfficeArtSpgrContainerFB**
00000DC7	092E	OfficeArtSpgrContainerFileBlock - **OfficeArtSpgrContainerFB**
00000DC7	092E	OfficeArtSpgrContainer - **case_of_msofbtSpgrContainer**
00000DC7	0008	OfficeArtRecordHeader - **rh**
00000DCF	0926	OfficeArtSpgrContainerFileBlockArray - **rgfb**
00000DCF	00EA	**B**: OfficeArtSpgrContainerFileBlock - **OfficeArtSpgrContainerFB**
00000EB9	005C	**C**: OfficeArtSpgrContainerFileBlock - **OfficeArtSpgrContainerFB**
00000F15	007C	**D**: OfficeArtSpgrContainerFileBlock - **OfficeArtSpgrContainerFB**
00000F91	0076	OfficeArtSpgrContainerFileBlock - **OfficeArtSpgrContainerFB**
00001007	007C	OfficeArtSpgrContainerFileBlock - **OfficeArtSpgrContainerFB**
00001083	007C	OfficeArtSpgrContainerFileBlock - **OfficeArtSpgrContainerFB**
000010FF	007C	OfficeArtSpgrContainerFileBlock - **OfficeArtSpgrContainerFB**
0000117B	00EB	**E**: OfficeArtSpgrContainerFileBlock - **OfficeArtSpgrContainerFB**
00001266	00E5	**F**: OfficeArtSpgrContainerFileBlock - **OfficeArtSpgrContainerFB**
0000134B	00E5	OfficeArtSpgrContainerFileBlock - **OfficeArtSpgrContainerFB**
00001430	00E5	**G**: OfficeArtSpgrContainerFileBlock - **OfficeArtSpgrContainerFB**
00001515	00EF	OfficeArtSpgrContainerFileBlock - **OfficeArtSpgrContainerFB**
00001604	00F1	OfficeArtSpgrContainerFileBlock - **OfficeArtSpgrContainerFB**

Figure 13: Child-Record Hierarchy of OfficeArtSpgrContainer Container 2

The record types within **OfficeArtSpgrContainer** container **2** that have not been explained in previous sections are specified as follows:

rgfb: An array of **OfficeArtSpgrContainerFileBlock** records, as defined in section 2.2.17, that specifies **groups** or **shapes** contained within this group.

rgfb.OfficeArtSpgrContainerFB: 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 following seven structure examples show the records that are labeled **A**, **B**, **C**, **D**, **E**, **F**, and **G** in the preceding table in more detail.

The following table shows the child-record hierarchy of **OfficeArtSpgrContainerFileBlock** record **A**.

Offset	Size	Structure	Value
00000D97	0030	**A**: OfficeArtSpgrContainerFileBlock - **OfficeArtSpgrContainerFB**	
00000D97	0030	OfficeArtSpContainer - **case_of_msofbtSpContainer**	
00000D97	0008	OfficeArtRecordHeader - **rh**	
00000D9F	0018	OfficeArtFSPGR - **shapeGroup**	

Offset	Size	Structure	Value
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 14: Child-Record Hierarchy of OfficeArtSpgrContainerFileBlock Record A

The record types within **OfficeArtSpgrContainerFileBlock** record **A** that have not been explained in previous structure examples are specified as follows:

case_of_msofbtSpContainer.shapeGroup.frc: The coordinate system of the **group shape** that the anchors of the child shape are expressed in. This structure is present only in group shapes.

case_of_msofbtSpContainer.shapeGroup.frc.xLeft: The left boundary (0x00000000) of the coordinate system of the group.

case_of_msofbtSpContainer.shapeGroup.frc.yTop: The top boundary (0x00000000) of the coordinate system of the group (4).

case_of_msofbtSpContainer.shapeGroup.frc.xRight: The right boundary (0x00000000) of the coordinate system of the group (4).

case_of_msofbtSpContainer.shapeGroup.frc.yBottom: The bottom boundary (0x00000000) of the coordinate system of the group (4).

case_of_msofbtSpContainer.shapeProp: An **OfficeArtFSP** record, as defined in section 2.2.40, that 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 following table shows the child-record hierarchy of **OfficeArtFSP** record **H**.

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

Offset	Size	Structure	Value
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 15: Child-Record Hierarchy of OfficeArtFSP Record H

The record types within **OfficeArtFSP** record **H** that have not been explained in previous structure examples are specified as follows:

spid: The identifier (0x00000800) of this shape.

fGroup: A value that specifies whether this shape is a group shape. The value 0x1 specifies that this shape is a group shape.

fChild: A value that specifies whether this shape is a **child** shape. The value 0x0 specifies that this shape is not a child shape.

fPatriarch: A value that specifies whether this shape is the topmost group shape. The value 0x1 specifies that this shape is the topmost group shape. Exactly one topmost group shape exists per **drawing**.

fDeleted: A value that specifies whether this shape has been deleted. The value 0x0 specifies that this shape has not been deleted.

fOleShape: A value that specifies whether this shape is an **OLE object**. The value 0x0 specifies that this shape is not an OLE object.

fHaveMaster: A value that specifies whether this shape has a valid **master** in the **hspMaster** property, as defined in section 2.3.2.1. The value 0x0 specifies that this shape does not have such a valid master.

fFlipH: A value that specifies whether this shape is flipped horizontally. The value 0x0 specifies that this shape is not flipped horizontally.

fFlipV: A value that specifies whether this shape is flipped vertically. The value 0x0 specifies that this shape is not flipped vertically.

fConnector: A value that specifies whether this shape is a **connector** shape. The value 0x0 specifies that this shape is not a connector shape.

fHaveAnchor: A value that specifies whether this shape has an **anchor**. The value 0x0 specifies that this shape does not have an anchor.

fBackground: A value that specifies whether this shape is a **background shape**. The value 0x0 specifies that this shape is not a background shape.

fHaveSpt: A value that specifies whether this shape has a shape type property. The value 0x0 specifies that this shape does not have a shape type property.

unused1: A value that is undefined and needs to be ignored.

The following table shows the child-record hierarchy of **OfficeArtSpgrContainerFileBlock**, as defined in section 2.2.17, record **B**.

Offset	Size	Structure	Value
00000DCF	00EA	**B**: OfficeArtSpgrContainerFileBlock - **OfficeArtSpgrContainerFB**	
00000DCF	00EA	OfficeArtSpContainer - **case_of_msofbtSpContainer**	
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	OfficeArtRGFOPTE **- fopt**	
00000E15	0006	dgmt **- Diagram Type**	
00000E15	0002	OfficeArtFOPTEOPID **- opid**	
00000E17	0004	MSODGMT **- dgmt**	0x00000001
00000E1B	0006	dgmStyle **- Diagram Style**	
00000E1B	0002	OfficeArtFOPTEOPID **- opid**	
00000E1D	0004	LONG **- dgmStyle**	0x00000000
00000E21	0006	pRelationTbl **- Diagram Shape Relationship**	
00000E21	0002	OfficeArtFOPTEOPID **- opid**	
00000E23	0004	ULONG **- pRelationTbl**	0x0000004E
00000E27	0006	dgmScaleX **- Diagram ScaleX**	
00000E27	0002	OfficeArtFOPTEOPID **- opid**	
00000E29	0004	FixedPoint **- dgmScaleX**	0x00013333
00000E2D	0006	dgmScaleY **- Diagram ScaleY**	
00000E2D	0002	OfficeArtFOPTEOPID **- opid**	
00000E2F	0004	FixedPoint **- dgmScaleY**	0x00011748
00000E33	0006	dgmDefaultFontSize **- Diagram Default Font Size**	
00000E33	0002	OfficeArtFOPTEOPID **- opid**	
00000E35	0004	LONG **- dgmDefaultFontSize**	0x0000000D
00000E39	0006	dgmConstrainBounds **- Diagram Bounds**	
00000E39	0002	OfficeArtFOPTEOPID **- opid**	
00000E3B	0004	ULONG **- dgmConstrainBounds**	0x00000016

Offset	Size	Structure	Value
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 16: Child-Record Hierarchy of OfficeArtSpgrContainerFileBlock Record B

The record types within **OfficeArtSpgrContainerFileBlock** record **B** that have not been explained in previous structure examples are specified as follows:

case_of_msofbtSpContainer.shapeTertiaryOptions: An **OfficeArtTertiaryFOPT** record, as defined in section 2.2.11, that contains a table of **OfficeArtRGFOPTE** properties, as defined in section 2.3.1.

case_of_msofbtSpContainer.shapeTertiaryOptions.fopt.Diagram Type.opid: An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for an entry in a property table.

case_of_msofbtSpContainer.shapeTertiaryOptions.fopt.Diagram Type.dgmt: A value that specifies whether this **diagram** type is an organizational-chart diagram. The value 0x00000001 specifies that this diagram type is an organizational-chart diagram.

case_of_msofbtSpContainer.shapeTertiaryOptions.fopt.Diagram Style: A property that specifies a diagram style.

case_of_msofbtSpContainer.shapeTertiaryOptions.fopt.Diagram Style.dgmStyle: A value that specifies whether this diagram has the default style. The value 0x00000000 specifies that this diagram has the default style.

case_of_msofbtSpContainer.shapeTertiaryOptions.fopt.Diagram Shape Relationship: A pRelationTbl property that specifies the relationships in a diagram.

case_of_msofbtSpContainer.shapeTertiaryOptions.fopt.Diagram Shape Relationship.pRelationTbl: The number (0x0000004E) of bytes of data in the pRelationTbl_complex property.

case_of_msofbtSpContainer.shapeTertiaryOptions.fopt.Diagram ScaleX: A property that specifies the amount to scale along the x-axis.

case_of_msofbtSpContainer.shapeTertiaryOptions.fopt.Diagram ScaleX.dgmScaleX: The amount (0x00013333) to scale along the x-axis.

case_of_msofbtSpContainer.shapeTertiaryOptions.fopt.Diagram ScaleY: A property that specifies the amount to scale along the y-axis.

case_of_msofbtSpContainer.shapeTertiaryOptions.fopt.Diagram ScaleY.dgmScaleY: The amount (0x00011748) to scale along the y-axis.

case_of_msofbtSpContainer.shapeTertiaryOptions.fopt.Diagram Default Font Size: A property that specifies the default font size for new text in this diagram.

case_of_msofbtSpContainer.shapeTertiaryOptions.fopt.Diagram Default Font Size.dgmDefaultFontSize: The default font size (0x0000000D), in **points**, for new text in this diagram.

case_of_msofbtSpContainer.shapeTertiaryOptions.fopt.Diagram Bounds: A **dgmConstrainBounds** property, as defined in section 2.3.17.8, that specifies the bounds of this diagram.

case_of_msofbtSpContainer.shapeTertiaryOptions.fopt.Diagram Bounds.dgmConstrainBounds: The number (0x00000016) of bytes of data in the **dgmConstrainBounds_complex** property, as defined in section 2.3.17.9.

case_of_msofbtSpContainer.shapeTertiaryOptions.fopt.Diagram Boolean: A 32-bit field of Boolean properties for a diagram.

case_of_msofbtSpContainer.shapeTertiaryOptions.fopt.Diagram Shape Relationship Data: A **pRelationTbl_complex** property that specifies additional data for **pRelationTbl**.

case_of_msofbtSpContainer.shapeTertiaryOptions.fopt.Diagram Bounds Data: A **dgmConstrainBounds_complex** property, as defined in section 2.3.17.9, that specifies additional data for the **dgmConstrainBounds** property, as defined in section 2.3.17.8.

The following three example structures show the records that are labeled **I**, **J**, and **K** in **OfficeArtSpgrContainerFileBlock** record **B** in more detail.

The following table shows the child-record hierarchy of **Diagram Boolean Properties** record **I**.

Offset	Size	Structure	Value
00000E3F	0006	**I**: Diagram Boolean Properties - **Diagram Boolean Properties**	
00000E3F	0002	OfficeArtFOPTEOPID - **opid**	
00000E3F	14 bits	bit - **opid**	0x053F
00000E3F	1 bit	bit - **fBid**	0x0
00000E3F	1 bit	bit - **fComplex**	0x0
00000E41	10 bits	bit - **unused6**	0x000
00000E41	1 bit	bit - **unused5**	0x0
00000E41	1 bit	bit - **unused4**	0x0
00000E41	1 bit	bit - **fUsefDoFormat**	0x1
00000E41	1 bit	bit - **fUsefReverse**	0x0
00000E41	1 bit	bit - **fUsefDoLayout**	0x0
00000E41	1 bit	bit - **fUsefPseudoInline**	0x0
00000E41	10 bits	bit - **unused3**	0x000
00000E41	1 bit	bit - **unused2**	0x0
00000E41	1 bit	bit - **unused1**	0x0
00000E41	1 bit	bit - **fDoFormat**	0x0
00000E41	1 bit	bit - **fReverse**	0x0
00000E41	1 bit	bit - **fDoLayout**	0x0
00000E41	1 bit	bit - **fPseudoInline**	0x0

Figure 17: Child-Record Hierarchy of Diagram Boolean Properties Record I

The **Diagram Boolean Properties** that are listed in record **I** are specific to diagrams. The record types within **Diagram Boolean Properties** record **I** that have not been explained in previous structure examples are specified as follows:

opid.opid: The identifier (0x053F) of the property in this entry.

opid.fBid: A value that specifies whether the value in the **op** field is a **BLIP** identifier. The value 0x0 specifies that the value in the **op** field is not a BLIP identifier.

opid.fComplex: A value that specifies whether this property is a complex property. The value 0x0 specifies that this property is not a complex property.

fUsefDoFormat: A value that specifies whether the **fDoFormat** bit has been set. The value 0x1 specifies that the **fDoFormat** bit has been set.

fUsefReverse: A value that specifies whether the **fReverse** bit needs to be ignored. The value 0x0 specifies that the **fReverse** bit needs to be ignored.

fUsefDoLayout: A value that specifies whether the **fDoLayout** bit needs to be ignored. The value 0x0 specifies that the **fDoLayout** bit needs to be ignored.

fUsefPseudoInline: A value that specifies whether the **fPseudoInline** bit needs to be ignored. The value 0x0 specifies that the **fPseudoInline** bit needs to be ignored.

fDoFormat: A value that specifies whether the **dgmStyle** property, as defined in section 2.3.17.2, for this diagram contains a default formatting style for this diagram type. The value 0x0 specifies that the **dgmStyle** property for this diagram contains a default formatting style for this diagram type.

fReverse: A value that specifies whether this diagram is mirrored horizontally. The value 0x0 specifies that this diagram is not mirrored horizontally.

fDoLayout: A value that specifies whether this diagram has a layout that is directly editable. The value 0x0 specifies that this diagram has a layout that is directly editable.

fPseudoInline: A value that specifies whether this diagram is placed in line with surrounding text. The value 0x0 specifies that this diagram is not placed in line with surrounding text.

The following table shows the child-record hierarchy of **pRelationTbl_complex** record **J**.

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 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

Figure 18: Child-Record Hierarchy of pRelationTbl_complex Record J

The record types within **pRelationTbl_complex** record **J** that have not been explained in previous structure examples are specified as follows:

pRelationTbl: An **IMsoArray** record, as defined in section 2.2.51, that specifies the relationships in a diagram. Each array element specifies a connection between two shapes.

pRelationTbl.nElems: A value (0x0006) that specifies the number of elements contained in this record. This diagram thus contains six shapes.

pRelationTbl.nElemsAlloc: The maximum number (0x0008) of elements that this record can contain.

pRelationTbl.cbElem: The size (0x000C), in bytes, of each element in the **data** record.

pRelationTbl.data: An array that contains **nElems** elements, each of which is **cbElem** bytes in size.

The following table shows the child-record hierarchy of **dgmConstrainBounds_complex** record **K**.

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 19: Child-Record Hierarchy of dgmConstrainBounds_complex Record K

The record types within **dgmConstrainBounds_complex** record **K** that have not been explained in previous structure examples are specified as follows:

dgmConstrainBounds: An **IMsoArray** record, as defined in section 2.2.51, of four elements that specify, in order, the left, top, right, and bottom bounds, in application-defined coordinates, of the diagram.

The following table shows the child-record hierarchy of **OfficeArtSpgrContainerFileBlock**, as defined in section 2.2.17, record **C**.

Offset	Size	Structure	Value
00000EB9	005C	**C**: OfficeArtSpgrContainerFileBlock - **OfficeArtSpgrContainerFB**	
00000EB9	005C	OfficeArtSpContainer - **case_of_msofbtSpContainer**	
00000EB9	0008	OfficeArtRecordHeader - **rh**	
00000EC1	0010	**L**: OfficeArtFSP - **shapeProp**	
00000ED1	002C	OfficeArtFOPT - **shapePrimaryOptions**	
00000ED1	0008	OfficeArtRecordHeader - **rh**	
00000ED9	0024	OfficeArtRGFOPTE - **fopt**	
00000ED9	0006	**M**: Protection Boolean Properties - **Protection Boolean**	

Offset	Size	Structure	Value
00000EDF	0006	cxk - **Shape Connection Points**	
00000EDF	0002	OfficeArtFOPTEOPID - **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 20: Child-Record Hierarchy of OfficeArtSpgrContainerFileBlock Record C

The record types within **OfficeArtSpgrContainerFileBlock** record **C** that have not been explained in previous structure examples are specified as follows:

case_of_msofbtSpContainer.shapePrimaryOptions.fopt.Protection Boolean: A 32-bit field that aggregates Boolean values to prevent the editing of certain shape properties.

case_of_msofbtSpContainer.shapePrimaryOptions.fopt.Shape Connection Points: A record that specifies where **connection points** exist on the shape.

case_of_msofbtSpContainer.shapePrimaryOptions.fopt.Shape Connection Points.cxk: An **MSOCXK** enumeration value, as defined in section 2.4.10, that specifies where connection points exist on the shape. The value 0x00000000 specifies that this shape has no connection points.

case_of_msofbtSpContainer.shapePrimaryOptions.fopt.Geometry Boolean: A 32-bit field that aggregates the Boolean values of the geometry properties for the shape.

case_of_msofbtSpContainer.shapePrimaryOptions.fopt.Fill Style Boolean: A 32-bit field that aggregates the Boolean properties of the fill style.

case_of_msofbtSpContainer.shapePrimaryOptions.fopt.Line Style Boolean: A 32-bit field that aggregates the Boolean properties of the line style.

case_of_msofbtSpContainer.shapePrimaryOptions.fopt.Shape Boolean Properties: A 32-bit field that aggregates the Boolean properties for a shape.

case_of_msofbtSpContainer.childAnchor: A record containing four signed integers that specify the anchor for the shape that contains this record. This record is present only when the containing shape is a member of a group of shapes. The integers identify the offset from the origin of the specified coordinate system—that is, specified by the **OfficeArtFSPGR** record, as defined in section 2.2.38, contained in the same **OfficeArtSpgrContainer**, as defined in, as defined in section 2.2.16, that contains this record. The integers are in units of the coordinate system that is specified by the same **OfficeArtFSPGR**.

The following seven example structures show the records labeled **L**, **M**, **N**, **O**, **P**, **Q**, and **R** from **OfficeArtSpgrContainerFileBlock** record **C** in more detail.

The following table shows the child-record hierarchy of **OfficeArtFSP** record, as defined in section 2.2.40, **L**.

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 21: Child-Record Hierarchy of OfficeArtFSP Record L

The records contained in **OfficeArtFSP** record **L** are similar to those in **OfficeArtFSP** record **H** but represent a different shape in the diagram. The differences can be seen in the values of **fChild** and **fPatriarch**. In **OfficeArtFSP** record **H**, the value of **fChild** is 0x0, which specifies that the shape is not a child shape, and the value of **fPatriarch** is 0x1, which specifies that the shape is the topmost one. The values of for **fChild** and **fPatriarch** in **OfficeArtFSP** record **L** specify that the shape is a child shape and that it is not the topmost shape.

The following table shows the child-record hierarchy of **Protection Boolean Properties** record **M**.

Offset	Size	Structure	Value
00000ED9	0006	**M**: Protection Boolean Properties - **Protection Boolean Properties**	
00000ED9	0002	OfficeArtFOPTEOPID - **opid**	
00000ED9	14 bits	bit - **opid**	0x007F
00000ED9	1 bit	bit - **fBid**	0x0
00000ED9	1 bit	bit - **fComplex**	0x0
00000EDB	6 bits	bit - **unused2**	0x00
00000EDB	1 bit	bit - **fUsefLockAgainstUngrouping**	0x0
00000EDB	1 bit	bit - **fUsefLockRotation**	0x0

Offset	Size	Structure	Value
00000EDB	1 bit	bit - **fUsefLockAspectRatio**	0x0
00000EDB	1 bit	bit - **fUsefLockPosition**	0x0
00000EDB	1 bit	bit - **fUsefLockAgainstSelect**	0x0
00000EDB	1 bit	bit - **fUsefLockCropping**	0x0
00000EDB	1 bit	bit - **fUsefLockVertices**	0x0
00000EDB	1 bit	bit - **fUsefLockText**	0x1
00000EDB	1 bit	bit - **fUsefLockAdjustHandles**	0x0
00000EDB	1 bit	bit - **fUsefLockAgainstGrouping**	0x0
00000EDB	6 bits	bit - **unused1**	0x00
00000EDB	1 bit	bit - **fLockAgainstUngrouping**	0x0
00000EDB	1 bit	bit - **fLockRotation**	0x0
00000EDB	1 bit	bit - **fLockAspectRatio**	0x0
00000EDB	1 bit	bit - **fLockPosition**	0x0
00000EDB	1 bit	bit - **fLockAgainstSelect**	0x0
00000EDB	1 bit	bit - **fLockCropping**	0x0
00000EDB	1 bit	bit - **fLockVertices**	0x0
00000EDB	1 bit	bit - **fLockText**	0x1
00000EDB	1 bit	bit - **fLockAdjustHandles**	0x0
00000EDB	1 bit	bit - **fLockAgainstGrouping**	0x0

Figure 22: Child-Record Hierarchy of Protection Boolean Properties Record M

The record types within **Protection Boolean Properties** record **M** that have not been explained in previous structure examples are specified as follows:

fUsefLockAgainstUngrouping: A value that specifies whether the **fLockAgainstUngrouping** flag will be ignored and the default value used instead. The value 0x0 specifies that the **fLockAgainstUngrouping** flag will be ignored and the default value used instead.

fUsefLockRotation: A value that specifies whether the **fLockRotation** flag will be ignored and the default value used instead. The value 0x0 specifies that the **fLockRotation** flag will be ignored and the default value used instead.

fUsefLockAspectRatio: A value that specifies whether the **fLockAspectRatio** flag will be ignored and the default value used instead. The value 0x0 specifies that the **fLockAspectRatio** flag will be ignored and the default value used instead.

fUsefLockPosition: A value that specifies whether the **fLockPosition** flag will be ignored and the default value used instead. The value 0x0 specifies that the **fLockPosition** flag will be ignored and the default value used instead.

fUsefLockAgainstSelect: A value that specifies whether the **fLockAgainstSelect** flag will be ignored and the default value used instead. The value 0x0 specifies that the **fLockAgainstSelect** flag will be ignored and the default value used instead.

fUsefLockCropping: A value that specifies whether the **fLockCropping** flag will be ignored and the default value used instead. The value 0x0 specifies that the **fLockCropping** flag will be ignored and the default value used instead.

fUsefLockVertices: A value that specifies whether the **fLockVertices** flag will be ignored and the default value used instead. The value 0x0 specifies that the **fLockVertices** flag will be ignored and the default value used instead.

fUsefLockText: A value that specifies whether the **fLockText** flag is set. The value 0x1 specifies that the **fLockText** flag is set.

fUsefLockAdjustHandles: A value that specifies whether the **fLockAdjustHandles** flag will be ignored and the default value used instead. The value 0x0 specifies that the **fLockAdjustHandles** flag will be ignored and the default value used instead.

fUsefLockAgainstGrouping: A value that specifies whether the **fLockAgainstGrouping** flag will be ignored and the default value used instead. The value 0x0 specifies that the **fLockAgainstGrouping** flag will be ignored and the default value used instead.

fLockAgainstUngrouping: A value that specifies whether the grouped shape is locked from being ungrouped. The value 0x0 specifies that the grouped shape is not locked from being ungrouped.

fLockRotation: A value that specifies whether the rotation of the shape is locked from being edited. The value 0x0 specifies that the rotation of the shape is not locked from being edited.

fLockAspectRatio: A value that specifies whether the aspect ratio of the shape is locked from being edited. The value 0x0 specifies that the aspect ratio of the shape is not locked from being edited.

fLockPosition: A value that specifies whether the position of the shape is locked from being edited. The value 0x0 specifies that the position of the shape is not locked from being edited.

fLockAgainstSelect: A value that specifies whether the shape is locked from being selectable in an editor application. The value 0x0 specifies that the shape is not locked from being selectable in an editor application.

fLockCropping: A value that specifies whether the cropping of a picture in the diagram is locked from being edited. The value 0x0 specifies that the cropping of a picture in the diagram is not locked from being edited.

fLockVertices: A value that specifies whether the vertices of the path are locked from being edited. The value 0x0 specifies that the vertices of the path are not locked from being edited.

fLockText: A value that specifies whether the text attached to the shape is locked from being edited. The value 0x1 specifies that the text attached to the shape is locked from being edited.

fLockAdjustHandles: A value that specifies whether the **adjust handles** of the shape are locked from being edited. The value 0x0 specifies that the adjust handles of the shape are not locked from being edited.

fLockAgainstGrouping: A value that specifies whether the shape is locked from being grouped with other shapes. The value 0x0 specifies that the shape is not locked from being grouped with other shapes.

The following table shows the child-record hierarchy of **Geometry Boolean Properties** record **N**.

Offset	Size	Structure	Value
00000EE5	0006	**N**: Geometry Boolean Properties - **Geometry Boolean Properties**	
00000EE5	0002	OfficeArtFOPTEOPID **- opid**	
00000EE5	14 bits	bit **- opid**	**0x017F**
00000EE5	1 bit	bit **- fBid**	**0x0**
00000EE5	1 bit	bit **- fComplex**	**0x0**
00000EE7	9 bits	bit **- unused4**	**0x000**
00000EE7	1 bit	bit **- unused3**	**0x0**
00000EE7	1 bit	bit **- fUsefShadowOK**	**0x1**
00000EE7	1 bit	bit **- fUsef3DOK**	**0x1**
00000EE7	1 bit	bit **- fUsefLineOK**	**0x1**
00000EE7	1 bit	bit **- fUsefGtextOK**	**0x0**
00000EE7	1 bit	bit **- fUsefFillShadeShapeOK**	**0x0**
00000EE7	1 bit	bit **- fUsefFillOK**	**0x1**
00000EE7	9 bits	bit **- unused2**	**0x000**
00000EE7	1 bit	bit **- unused1**	**0x0**
00000EE7	1 bit	bit **- fShadowOK**	**0x1**
00000EE7	1 bit	bit **- f3DOK**	**0x1**
00000EE7	1 bit	bit **- fLineOK**	**0x1**
00000EE7	1 bit	bit **- fGtextOK**	**0x0**
00000EE7	1 bit	bit **- fFillShadeShapeOK**	**0x0**
00000EE7	1 bit	bit **- fFillOK**	**0x1**

Figure 23: Child-Record Hierarchy of Geometry Boolean Properties Record N

The record types within **Geometry Boolean Properties** record **N** that have not been explained in previous structure examples are specified as follows:

fUsefShadowOK: A value that specifies whether the **fShadowOK** bit is set. The value 0x1 specifies that the **fShadowOK** bit is set.

fUsef3DOK: A value that specifies whether the **f3DOK** bit is set. The value 0x1 specifies that the **f3DOK** bit is set.

fUsefLineOK: A value that specifies whether the **fLineOK** bit is set. The value 0x1 specifies that the **fLineOK** bit is set.

fUsefGtextOK: A value that specifies whether the **fGtextOK** bit will be ignored and the default value used instead. The value 0x0 specifies the **fGtextOK** bit will be ignored and the default value used instead.

fUsefFillShadeShapeOK: A value that specifies whether the **fFillShadeShapeOK** bit will be ignored and the default value used instead. The value 0x0 specifies that the **fFillShadeShapeOK** bit will be ignored and the default value used instead.

fUsefFillOK: A value that specifies whether the **fFillOK** bit is set. The value 0x1 specifies that the **fFillOK** bit is set.

fShadowOK: A value that specifies whether the shadow of this shape is set to display if applied. The value 0x1 specifies that the shadow of this shape is set to display if applied.

f3DOK: A value that specifies whether the extrusion effect of this shape is set to display if applied. The value 0x1 specifies that the extrusion effect of this shape is set to display if applied.

fLineOK: A value that specifies whether the line of this shape is set to display if applied. The value 0x1 specifies that the line of this shape is set to display if applied.

fGtextOK: A value that specifies whether the text aligned to this shape will display. The value 0x0 specifies that the text aligned to this shape will not display.

fFillShadeShapeOK: A value that specifies whether the fill is aligned to the **bounding rectangle** of the shape. The value 0x0 specifies that the fill is aligned to the bounding rectangle of the shape.

fFillOK: A value that specifies whether the fill of this shape is set to display if applied. The value 0x1 specifies that the fill of this shape is set to display if applied.

The following table shows the child-record hierarchy of **Fill Style Boolean Properties** record **O**.

Offset	Size	Structure	Value
00000EEB	0006	**O**: Fill Style Boolean Properties - **Fill Style Boolean Properties**	
00000EEB	0002	OfficeArtFOPTEOPID **- opid**	
00000EEB	14 bits	bit **- opid**	0x01BF
00000EEB	1 bit	bit **- fBid**	0x0
00000EEB	1 bit	bit **- fComplex**	0x0
00000EED	9 bits	bit **- unused2**	0x000
00000EED	1 bit	bit **- fUsefRecolorFillAsPicture**	0x0
00000EED	1 bit	bit **- fUsefUseShapeAnchor**	0x0
00000EED	1 bit	bit **- fUsefFilled**	0x1
00000EED	1 bit	bit **- fUsefHitTestFill**	0x0
00000EED	1 bit	bit **- fUsefillShape**	0x0
00000EED	1 bit	bit **- fUsefillUseRect**	0x0
00000EED	1 bit	bit **- fUsefNoFillHitTest**	0x1
00000EED	9 bits	bit **- unused1**	0x000
00000EED	1 bit	bit **- fRecolorFillAsPicture**	0x0
00000EED	1 bit	bit **- fUseShapeAnchor**	0x0
00000EED	1 bit	bit **- fFilled**	0x0

Offset	Size	Structure	Value
00000EED	1 bit	bit - **fHitTestFill**	0x0
00000EED	1 bit	bit - **fillShape**	0x0
00000EED	1 bit	bit - **fillUseRect**	0x0
00000EED	1 bit	bit - **fNoFillHitTest**	0x1

Figure 24: Child-Record Hierarchy of Fill Style Boolean Properties Record O

The record types within **Fill Style Boolean Properties** record **O** that have not been explained in previous structure examples are specified as follows:

fUsefRecolorFillAsPicture: A value that specifies whether **fRecolorFillAsPicture** will be ignored and the default value used instead. The value 0x0 specifies that **fRecolorFillAsPicture** will be ignored and the default value used instead.

fUsefUseShapeAnchor: A value that specifies whether **fUseShapeAnchor** will be ignored and the default value used instead. The value 0x0 specifies that **fUseShapeAnchor** will be ignored and the default value used instead.

fUsefFilled: A value that specifies whether the **fFilled** bit is set. The value 0x1 specifies that the **fFilled** bit is set.

fUsefHitTestFill: A value that specifies whether **fHitTestFill** will be ignored and the default value used instead. The value 0x0 specifies that **fHitTestFill** will be ignored and the default value used instead.

fUsefillShape: A value that specifies whether **fillShape** will be ignored and the default value used instead. The value 0x0 specifies that **fillShape** will be ignored and the default value used instead.

fUsefillUseRect: A value that specifies whether **fillUseRect** will be ignored and the default value used instead. The value 0x0 specifies that **fillUseRect** will be ignored and the default value used instead.

fUsefNoFillHitTest: A value that specifies whether the **fNoFillHitTest** bit is set. The value 0x1 specifies that the **fNoFillHitTest** bit is set.

fRecolorFillAsPicture: A value that specifies whether the **fillCrMod** property, as defined in section 2.3.7.6, will be used for recoloring. The value 0x0 specifies that the **fillCrMod** property will be used for recoloring.

fUseShapeAnchor: A value that specifies whether the fill will be rotated with the shape. The value 0x0 specifies that the fill will not be rotated with the shape.

fFilled: A value that specifies whether the fill of this shape will be rendered. The value 0x0 specifies that the fill of this shape will not be rendered.

fHitTestFill: A value that specifies whether this fill is to be hit tested. The value 0x0 specifies that this fill is not to be hit tested.

fillShape: A value that specifies whether the fill is aligned with the origin of the view. The value 0x0 specifies the fill is aligned with the origin of the view.

fillUseRect: A value that specifies whether to use the bounding rectangle of the shape as the filled area. The value 0x0 specifies using the bounding rectangle of the shape as the filled area**.**

fNoFillHitTest: A value that specifies whether this shape is to be hit tested as though it were filled. The value 0x1 specifies that this shape is to be hit tested as though it were filled.

The following table shows the child-record hierarchy of **Line Style Boolean Properties** record **P**.

Offset	Size	Structure	Value
00000EF1	0006	**P**: Line Style Boolean Properties - **Line Style Boolean Properties**	
00000EF1	0002	OfficeArtFOPTEOPID **- opid**	
00000EF1	14 bits	bit **- opid**	0x01FF
00000EF1	1 bit	bit **- fBid**	0x0
00000EF1	1 bit	bit **- fComplex**	0x0
00000EF3	6 bits	bit **- unused4**	0x00
00000EF3	1 bit	bit **- fUsefLineOpaqueBackColor**	0x0
00000EF3	1 bit	bit **- unused3**	0x0
00000EF3	1 bit	bit **- unused2**	0x0
00000EF3	1 bit	bit **- fUsefInsetPen**	0x0
00000EF3	1 bit	bit **- fUsefInsetPenOK**	0x0
00000EF3	1 bit	bit **- fUsefArrowheadsOK**	0x0
00000EF3	1 bit	bit **- fUsefLine**	0x1
00000EF3	1 bit	bit **- fUsefHitTestLine**	0x0
00000EF3	1 bit	bit **- fUsefLineFillShape**	0x0
00000EF3	1 bit	bit **- fUsefNoLineDrawDash**	0x0
00000EF3	6 bits	bit **- unused1**	0x00
00000EF3	1 bit	bit **- fLineOpaqueBackColor**	0x0
00000EF3	1 bit	bit **- reserved2**	0x0
00000EF3	1 bit	bit **- reserved1**	0x0
00000EF3	1 bit	bit **- fInsetPen**	0x0
00000EF3	1 bit	bit **- fInsetPenOK**	0x0
00000EF3	1 bit	bit **- fArrowheadsOK**	0x0
00000EF3	1 bit	bit **- fLine**	0x0
00000EF3	1 bit	bit **- fHitTestLine**	0x0
00000EF3	1 bit	bit **- fLineFillShape**	0x0
00000EF3	1 bit	bit **- fNoLineDrawDash**	0x0

Figure 25: Child-Record Hierarchy of Line Style Boolean Properties Record P

The record types within **Line Style Boolean Properties** record **P** that have not been explained in previous structure examples are specified as follows:

fUsefLineOpaqueBackColor: A value that specifies whether **fLineOpaqueBackColor** will be ignored and the default value used instead. The value 0x0 specifies that **fLineOpaqueBackColor** will be ignored and the default value used instead.

fUsefInsetPen: A value that specifies whether the **fInsetPen** will be ignored and the default value used instead. The value 0x0 specifies that **fInsetPen** will be ignored and the default value used instead.

fUsefInsetPenOK: A value that specifies whether **fInsetPenOK** will be ignored and the default value used instead. The value 0x0 specifies that **fInsetPenOK** will be ignored and the default value used instead.

fUsefArrowheadsOK: A value that specifies whether **fArrowheadsOK** will be ignored and the default value used instead. The value 0x0 specifies that **fArrowheadsOK** will be ignored and the default value used instead.

fUsefLine: A value that specifies whether **fLine** will be ignored and the default value used instead. The value 0x1 specifies that the value for **fLine** will be used.

fUsefHitTestLine: A value that specifies whether **fHitTestLine** will be ignored and the default value used instead. The value 0x0 specifies that **fHitTestLine** will be ignored and the default value used instead.

fUsefLineFillShape: A value that specifies whether **fLineFillShape** will be ignored and the default value used instead. The value 0x0 specifies that **fLineFillShape** will be ignored and the default value used instead.

fUsefNoLineDrawDash: A value that specifies whether **fNoLineDrawDash** will be ignored and the default value used instead. The value 0x0 specifies that **fNoLineDrawDash** will be ignored and the default value used instead.

fLineOpaqueBackColor: A value that specifies whether an extra line is to be rendered underneath the line that is specified by this property set. The value 0x0 specifies that an extra line is not to be rendered underneath the line that is specified by this property set.

fInsetPen: A value that specifies whether the pen is inset. The value 0x0 specifies that the pen is not inset.

fInsetPenOK: A value that specifies whether insetting the pen is allowed. The value 0x0 specifies that insetting the pen is not allowed.

fArrowheadsOK: A value that specifies whether the arrowhead properties are to be editable. The value 0x0 specifies that the arrowhead properties are not to be editable.

fLine: A value that specifies whether the lines of this shape will be drawn. The value 0x0 specifies that the lines of this shape will not be drawn.

fHitTestLine: A value that specifies whether this line is be hit tested. The value 0x0 specifies that this line is not be hit tested.

fLineFillShape: A value that specifies whether the pattern or texture fill is to be aligned with the origin of the view. The value 0x0 specifies that the pattern or texture fill is to be aligned with the origin of the view.

fNoLineDrawDash: A value that specifies whether a dashed line is to be drawn. The value 0x0 specifies that a dashed line is not to be drawn.

The following table shows the child-record hierarchy of **Shape Boolean Properties** record **Q**.

Offset	Size	Structure	Value
00000EF7	0006	**Q**: Shape Boolean Properties - **Shape Boolean Properties**	
00000EF7	0002	OfficeArtFOPTEOPID - **opid**	
00000EF7	14 bits	bit - **opid**	0x033F
00000EF7	1 bit	bit - **fBid**	0x0
00000EF7	1 bit	bit - **fComplex**	0x0
00000EF9	6 bits	bit - **unused3**	0x00
00000EF9	1 bit	bit - **fUsefPolicyLabel**	0x0
00000EF9	1 bit	bit - **fUsefPolicyBarcode**	0x0
00000EF9	1 bit	bit - **fUsefFlipHOverride**	0x0
00000EF9	1 bit	bit - **fUsefFlipVOverride**	0x0
00000EF9	1 bit	bit - **fUsefOleIcon**	0x0
00000EF9	1 bit	bit - **fUsefPreferRelativeResize**	0x1
00000EF9	1 bit	bit - **fUsefLockShapeType**	0x0
00000EF9	1 bit	bit - **fUsefInitiator**	0x0
00000EF9	1 bit	bit - **unused2**	0x0
00000EF9	1 bit	bit - **fUsefBackground**	0x0
00000EF9	6 bits	bit - **unused1**	0x00
00000EF9	1 bit	bit - **fPolicyLabel**	0x0
00000EF9	1 bit	bit - **fPolicyBarcode**	0x0
00000EF9	1 bit	bit - **fFlipHOverride**	0x0
00000EF9	1 bit	bit - **fFlipVOverride**	0x0
00000EF9	1 bit	bit - **fOleIcon**	0x0
00000EF9	1 bit	bit - **fPreferRelativeResize**	0x0
00000EF9	1 bit	bit - **fLockShapeType**	0x0
00000EF9	1 bit	bit - **fInitiator**	0x0
00000EF9	1 bit	bit - **reserved1**	0x0
00000EF9	1 bit	bit - **fBackground**	0x0

Figure 26: Child-Record Hierarchy of Shape Boolean Properties Record Q

The record types within **Shape Boolean Properties** record **Q** that have not been explained in previous structure examples are specified as follows:

fUsefPolicyLabel: A value that specifies whether **fPolicyLabel** will be ignored and the default value used instead. The value 0x0 specifies that **fPolicyLabel** will be ignored and the default value used instead.

fUsefPolicyBarcode: A value that specifies whether **fPolicyBarcode** will be ignored and the default value used instead. The value 0x0 specifies that **fPolicyBarcode** will be ignored and the default value used instead.

fUsefFlipHOverride: A value that specifies whether **fFlipHOverride** will be ignored and the default value used instead. The value 0x0 specifies that **fFlipHOverride** will be ignored and the default value used instead.

fUsefFlipVOverride: A value that specifies whether **fFlipVOverride** will be ignored and the default value used instead. The value 0x0 specifies that **fFlipVOverride** will be ignored and the default value used instead.

fUsefOleIcon: A value that specifies whether **fOleIcon** will be ignored and the default value used instead. The value 0x0 specifies that **fOleIcon** will be ignored and the default value used instead.

fUsefPreferRelativeResize: A value that specifies whether the **fPreferRelativeResize** bit has been set. The value 0x1 specifies that the **fPreferRelativeResize** bit has been set.

fUsefLockShapeType: A value that specifies whether **fLockShapeType** will be ignored and the default value used instead. The value 0x0 specifies that **fLockShapeType** will be ignored and the default value used instead.

fUsefInitiator: A value that specifies whether **fInitiator** will be ignored and the default value used instead. The value 0x0 specifies that **fInitiator** will be ignored and the default value used instead.

fUsefBackground: A value that specifies whether **fBackground** will be ignored and the default value used instead. The value 0x0 specifies that **fBackground** will be ignored and the default value used instead.

fPolicyLabel: A value that specifies whether this object is a label image and will be used to identify the containing document as part of a **content management system**. The value 0x0 specifies that this object is not a label image and will not be used to identify the containing document as part of a content management system.

fPolicyBarcode: A value that specifies whether this object is a barcode image and will be used to identify the containing document as part of a content management system. The value 0x0 specifies that this object is not a barcode image and will not be used to identify the containing document as part of a content management system.

fFlipHOverride: A value that specifies whether the **fFlipH** flag in the **OfficeArtFSP** record, as defined in section 2.2.40, of the containing **OfficeArtSpContainer** record, as defined in section 2.2.14, is to be used. The value 0x0 specifies that the **fFlipH** flag in the **OfficeArtFSP** of the containing **OfficeArtSpContainer** is to be used.

fFlipVOverride: A value that specifies whether the **fFlipV** flag in the **OfficeArtFSP** record, as defined in section 2.2.40, of the containing **OfficeArtSpContainer** record, as defined in section 2.2.14, is to be used. The value 0x0 specifies that the **fFlipV** flag in the **OfficeArtFSP** of the containing **OfficeArtSpContainer** is to be used.

fOleIcon: A value that specifies whether this OLE object will be displayed as an icon. The value 0x0 specifies that this OLE object will not be displayed as an icon.

fPreferRelativeResize: A value that specifies whether the application's user interface for resizing this shape is to express its size relative to the current size. The value 0x0 specifies that the application's user interface for resizing this shape is not to express its size relative to the current size.

fLockShapeType: A value that specifies whether the shape type is locked and can be changed by the end user. The value 0x0 specifies that the shape type is not locked and can be changed by the end user.

fInitiator: A value that specifies whether this shape is to be processed by a **rules** engine. The value 0x0 specifies that this shape is not to be processed by a rules engine.

fBackground: A value that specifies whether this shape is the background shape of a drawing. The value 0x0 specifies that this shape is not the background shape of a drawing.

The following table shows the child-record hierarchy of **OfficeArtChildAnchor** record, as defined in section 2.2.39, **R**.

Offset	Size	Structure	Value
00000EFD	0018	**R**: OfficeArtChildAnchor - **case_of_msofbtChildAnchor**	
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 27: Child-Record Hierarchy of OfficeArtChildAnchor Record R

OfficeArtChildAnchor record **R** specifies the coordinate system of the group shape that the anchors of the child shape are expressed in.

The following table shows the child-record hierarchy of **OfficeArtSpgrContainerFileBlock**, as defined in section 2.2.17, record **D**.

Offset	Size	Structure	Value
00000F15	007C	**D**: OfficeArtSpgrContainerFileBlock - **OfficeArtSpgrContainerFB**	
00000F15	007C	OfficeArtSpContainer - **case_of_msofbtSpContainer**	
00000F15	0008	OfficeArtRecordHeader - **rh**	
00000F1D	0010	OfficeArtFSP - **shapeProp**	
00000F2D	004C	OfficeArtFOPT - **shapePrimaryOptions**	
00000F2D	0008	OfficeArtRecordHeader - **rh**	
00000F35	0044	OfficeArtRGFOPTE - **fopt**	
00000F35	0006	rotation - **rotation**	
00000F35	0002	OfficeArtFOPTEOPID - **opid**	
00000F37	0004	FixedPoint - **rotation**	0x010E0000
00000F3B	0006	adjustValue - **adjustValue**	
00000F3B	0002	OfficeArtFOPTEOPID - **opid**	
00000F3D	0004	LONG - **adjustValue**	0xFFF769F3
00000F41	0006	adjust2Value - **adjust2Value**	

Offset	Size	Structure	Value
00000F41	0002	OfficeArtFOPTEOPID - **opid**	
00000F43	0004	LONG - **adjust2Value**	0xFFFFFFFF
00000F47	0006	adjust3Value - **adjust3Value**	
00000F47	0002	OfficeArtFOPTEOPID - **opid**	
00000F49	0004	LONG - **adjust3Value**	0xFFF769F3
00000F4D	0006	**S**: lineColor - **lineColor**	
00000F4D	0002	OfficeArtFOPTEOPID - **opid**	
00000F4F	0004	OfficeArtCOLORREF - **lineColor**	
00000F53	0006	lineWidth - **lineWidth**	
00000F53	0002	OfficeArtFOPTEOPID - **opid**	
00000F55	0004	LONG - **lineWidth**	0x00006F9F
00000F59	0006	**T**: Line Style Boolean Properties - **Line Style Boolean**	
00000F5F	0006	cxstyle - **cxstyle**	
00000F5F	0002	OfficeArtFOPTEOPID - **opid**	
00000F61	0004	MSOCXSTYLE - **cxstyle**	0x00000001
00000F65	0006	wzName - **wzName**	
00000F65	0002	OfficeArtFOPTEOPID - **opid**	
00000F67	0004	ULONG - **wzName**	0x0000000E
00000F6B	000E	wzName_complex - **wzName_complex**	
00000F6B	000E	WideString - **wzName**	_s2072
00000F79	0018	OfficeArtChildAnchor - **childAnchor**	

Figure 28: Child-Record Hierarchy of OfficeArtSpgrContainerFileBlock Record D

The record types within **OfficeArtSpgrContainerFileBlock** record **D** that have not been explained in previous structure examples are specified as follows:

case_of_msofbtSpContainer.shapePrimaryOptions.fopt.rotation: A property that specifies the rotation on a shape.

case_of_msofbtSpContainer.shapePrimaryOptions.fopt.rotation.rotation: The rotation (0x010E0000) on the shape.

case_of_msofbtSpContainer.shapePrimaryOptions.fopt.adjustValue: A property that specifies a value that a user can change to adjust the geometry of the shape.

case_of_msofbtSpContainer.shapePrimaryOptions.fopt.adjustValue.adjustValue: A value (0xFFF769F3) that is used to adjust the geometry of this shape.

case_of_msofbtSpContainer.shapePrimaryOptions.fopt.adjust2Value: A property that specifies a value that a user can change to adjust the geometry of the shape.

case_of_msofbtSpContainer.shapePrimaryOptions.fopt.adjust2Value.adjust2Value: A value (0xFFFFFFFF) that is used to adjust the geometry of this shape.

case_of_msofbtSpContainer.shapePrimaryOptions.fopt.adjust3Value: A property that specifies a value that a user can change to adjust the geometry of the shape.

case_of_msofbtSpContainer.shapePrimaryOptions.fopt.adjust3Value.adjust3Value: A value (0xFFF769F3) that is used to adjust the geometry of this shape.

case_of_msofbtSpContainer.shapePrimaryOptions.fopt.lineColor: A property that specifies the foreground color of the line.

case_of_msofbtSpContainer.shapePrimaryOptions.fopt.lineColor.lineColor: An **OfficeArtCOLORREF** record, as defined in section 2.2.2, that specifies the color to use while drawing.

case_of_msofbtSpContainer.shapePrimaryOptions.fopt.lineWidth: A property that specifies the width of the line.

case_of_msofbtSpContainer.shapePrimaryOptions.fopt.lineWidth.lineWidth: The width (0x00006F9F) of the line.

case_of_msofbtSpContainer.shapePrimaryOptions.fopt.cxstyle: A property that specifies the connector style.

case_of_msofbtSpContainer.shapePrimaryOptions.fopt.cxstyle.cxstyle: A value (0x00000001) that specifies that this shape is an elbow-shaped connector.

case_of_msofbtSpContainer.shapePrimaryOptions.fopt.wzName: A property that specifies the name of the shape.

case_of_msofbtSpContainer.shapePrimaryOptions.fopt.wzName.wzName: The number (0x0000000E) of bytes of data that is contained in the **wzName_complex** property, as defined in section 2.3.4.2.

case_of_msofbtSpContainer.shapePrimaryOptions.fopt.wzName_complex: A property that specifies additional data for the **wzName** property, as defined in section 2.3.4.1.

case_of_msofbtSpContainer.shapePrimaryOptions.fopt.wzName_complex.wzName: The name (_s2072) of the shape.

The following two example structures show the records labeled **S** and **T** from **OfficeArtSpgrContainerFileBlock** record **D** in more detail.

The following table shows the child-record hierarchy of **lineColor** record **S**.

Offset	Size	Structure	Value
00000F4D	0006	**S**: lineColor - **lineColor**	
00000F4D	0002	OfficeArtFOPTEOPID - **opid**	
00000F4D	14 bits	bit - **opid**	0x01C0
00000F4D	1 bit	bit - **fBid**	0x0
00000F4D	1 bit	bit - **fComplex**	0x0
00000F4F	0004	OfficeArtCOLORREF - **lineColor**	
00000F52	1 bit	bit - **unused3**	0x0

Offset	Size	Structure	Value
00000F52	1 bit	bit - **unused2**	0x0
00000F52	1 bit	bit - **unused1**	0x0
00000F52	1 bit	bit - **fSysIndex**	0x0
00000F52	1 bit	bit - **fSchemeIndex**	0x1
00000F52	1 bit	bit - **fSystemRGB**	0x0
00000F52	1 bit	bit - **fPaletteRGB**	0x0
00000F52	1 bit	bit - **fPaletteIndex**	0x0
00000F51	0001	BYTE - **blue**	0x00
00000F50	0001	BYTE - **green**	0x00
00000F4F	0001	BYTE - **red**	0x01

Figure 29: Child-Record Hierarchy of lineColor Record S

The record types within **lineColor** record **S** that have not been explained in previous structure examples are specified as follows:

opid: An **OfficeArtFOPTEOPID** record, as defined in section 2.2.8, that specifies the header for an entry in a property table.

lineColor: An **OfficeArtCOLORREF** structure, as defined in section 2.2.2, that specifies the foreground color of the line.

lineColor.unused3: A value that is undefined and needs to be ignored.

lineColor.unused2: A value that is undefined and needs to be ignored.

lineColor.unused1: A value that is undefined and needs to be ignored.

lineColor.fSysIndex: A value (0x0) specifying that the system color scheme will not be used to determine the color.

lineColor.fSchemeIndex: A value (0x1) specifying that the current color scheme will be used to determine the color. The value 0x1 indicates that **red** provides an index into the current scheme color table. When the value of **fSchemeIndex** is 0x1, the values of **green** and **blue** need to be 0x00.

lineColor.fSystemRGB: A value (0x0) that specifies whether the color is a standard RGB color. The value 0x0 indicates that the RGB color might use half-tone dithering to display.

lineColor.fPaletteRGB: A value (0x0) specifying that the current palette will not be used to determine the color.

lineColor.fPaletteIndex: A value (0x0) specifying that the current palette will not be used to determine the color.

lineColor.blue: A property that will be ignored when **fSchemeIndex** is set to 0x1.

lineColor.green: A property that will be ignored when **fSchemeIndex** is set to 0x1.

lineColor.red: The index (0x01) into the current scheme color table when **fSchemeIndex** is set to 0x1.

The following table shows the child-record hierarchy of **Line Style Boolean Properties** record **T**.

Offset	Size	Structure	Value
00000F59	0006	**T**: Line Style Boolean Properties - **Line Style Boolean Properties**	
00000F59	0002	OfficeArtFOPTEOPID **- opid**	
00000F59	14 bits	bit **- opid**	0x01FF
00000F59	1 bit	bit **- fBid**	0x0
00000F59	1 bit	bit **- fComplex**	0x0
00000F5B	6 bits	bit **- unused4**	0x00
00000F5B	1 bit	bit **- fUsefLineOpaqueBackColor**	0x0
00000F5B	1 bit	bit **- unused3**	0x0
00000F5B	1 bit	bit **- unused2**	0x0
00000F5B	1 bit	bit **- fUsefInsetPen**	0x0
00000F5B	1 bit	bit **- fUsefInsetPenOK**	0x0
00000F5B	1 bit	bit **- fUsefArrowheadsOK**	0x0
00000F5B	1 bit	bit **- fUsefLine**	0x1
00000F5B	1 bit	bit **- fUsefHitTestLine**	0x0
00000F5B	1 bit	bit **- fUselineFillShape**	0x0
00000F5B	1 bit	bit **- fUsefNoLineDrawDash**	0x0
00000F5B	6 bits	bit **- unused1**	0x00
00000F5B	1 bit	bit **- fLineOpaqueBackColor**	0x0
00000F5B	1 bit	bit **- reserved2**	0x0
00000F5B	1 bit	bit **- reserved1**	0x0
00000F5B	1 bit	bit **- fInsetPen**	0x0
00000F5B	1 bit	bit **- fInsetPenOK**	0x0
00000F5B	1 bit	bit **- fArrowheadsOK**	0x0
00000F5B	1 bit	bit **- fLine**	0x1
00000F5B	1 bit	bit **- fHitTestLine**	0x0
00000F5B	1 bit	bit **- lineFillShape**	0x0
00000F5B	1 bit	bit **- fNoLineDrawDash**	0x0

Figure 30: Child-Record Hierarchy of Line Style Boolean Properties Record T

Line Style Boolean Properties record **T** is similar to **Line Style Boolean Properties** record **P**, except that the **fLine** property in record **T** is set to 0x1, which specifies displaying other line properties in the line style when handling a 2-D shape. The **fLine** property in record **P** is set to 0x0, so the other line properties in that line style will not be displayed.

The following table shows the child-record hierarchy of **OfficeArtSpgrContainerFileBlock**, as defined in section 2.2.17, record **E**.

Offset	Size	Structure	Value
0000117B	00EB	**E**: OfficeArtSpgrContainerFileBlock - **OfficeArtSpgrContainerFB**	
0000117B	00EB	OfficeArtSpContainer - **case_of_msofbtSpContainer**	
0000117B	0008	OfficeArtRecordHeader - **rh**	
00001183	0010	OfficeArtFSP - **shapeProp**	
00001193	005E	OfficeArtFOPT - **shapePrimaryOptions**	
00001193	0008	OfficeArtRecordHeader - **rh**	
0000119B	0056	OfficeArtRGFOPTE - **fopt**	
0000119B	0006	lTxid - **lTxid**	
0000119B	0002	OfficeArtFOPTEOPID - **opid**	
0000119D	0004	LONG - **lTxid**	0x00AEDC04
000011A1	0006	dxTextLeft - **dxTextLeft**	
000011A1	0002	OfficeArtFOPTEOPID - **opid**	
000011A3	0004	LONG - **dxTextLeft**	0x00000000
000011A7	0006	dyTextTop - **dyTextTop**	
000011A7	0002	OfficeArtFOPTEOPID - **opid**	
000011A9	0004	LONG - **dyTextTop**	0x00000000
000011AD	0006	dxTextRight - **dxTextRight**	
000011AD	0002	OfficeArtFOPTEOPID - **opid**	
000011AF	0004	LONG - **dxTextRight**	0x00000000
000011B3	0006	dyTextBottom - **dyTextBottom**	
000011B3	0002	OfficeArtFOPTEOPID - **opid**	
000011B5	0004	LONG - **dyTextBottom**	0x00000000
000011B9	0006	WrapText - **WrapText**	
000011B9	0002	OfficeArtFOPTEOPID - **opid**	
000011BB	0004	MSOWRAPMODE - **WrapText**	0x00000002
000011BF	0006	anchorText - **anchorText**	
000011BF	0002	OfficeArtFOPTEOPID - **opid**	
000011C1	0004	MSOANCHOR - **anchorText**	0x00000001
000011C5	0006	**U**: fillColor - **fillColor**	
000011CB	0006	**V**: Fill Style Boolean Properties - **Fill Style Boolean Properties**	

Offset	Size	Structure	Value
000011D1	0006	lineColor - **lineColor**	
000011D1	0002	OfficeArtFOPTEOPID - **opid**	
000011D3	0004	OfficeArtCOLORREF - **lineColor**	
000011D7	0006	Line Style Boolean Properties - **Line Style Boolean Properties**	
000011DD	0006	wzName - **wzName**	
000011DD	0002	OfficeArtFOPTEOPID - **opid**	
000011DF	0004	ULONG - **wzName**	0x0000000E
000011E3	000E	wzName_complex - **wzName_complex**	
000011E3	000E	WideString - **wzName**	_s2054
000011F1	001A	OfficeArtTertiaryFOPT - **shapeTertiaryOptions**	
0000120B	0018	OfficeArtChildAnchor - **childAnchor**	
00001223	0043	OfficeArtClientTextbox - **clientTextbox**	

Figure 31: Child-Record Hierarchy of OfficeArtSpgrContainerFileBlock Record E

The record types within **OfficeArtSpgrContainerFileBlock** record **E** that have not been explained in previous structure examples are specified as follows:

case_of_msofbtSpContainer.shapePrimaryOptions.fopt.lTxid: A property that specifies an identifier for the text.

case_of_msofbtSpContainer.shapePrimaryOptions.fopt.lTxid.lTxid: An identifier (0x00AEDC04) for the text. The value is determined by the host application.

case_of_msofbtSpContainer.shapePrimaryOptions.fopt.dxTextLeft: A property that specifies the size of the margin to the left of the text.

case_of_msofbtSpContainer.shapePrimaryOptions.fopt.dxTextLeft.dxTextLeft: The size (0x00000000) of the margin that exists inside the containing shape to the left of the text. The unit of measurement is an **EMU**.

case_of_msofbtSpContainer.shapePrimaryOptions.fopt.dyTextTop: A property that specifies the size of the margin above the text.

case_of_msofbtSpContainer.shapePrimaryOptions.fopt.dyTextTop.dyTextTop: The size (0x00000000) of the margin that exists inside the containing shape above the text. The unit of measurement is an EMU.

case_of_msofbtSpContainer.shapePrimaryOptions.fopt.dxTextRight: A property that specifies the size of the margin to the right of the text.

case_of_msofbtSpContainer.shapePrimaryOptions.fopt.dxTextRight.dxTextRight: The size (0x00000000) of the margin that exists inside the containing shape to the right of the text. The unit of measurement is an EMU.

case_of_msofbtSpContainer.shapePrimaryOptions.fopt.dyTextBottom: A property that specifies the size of the margin below the text.

case_of_msofbtSpContainer.shapePrimaryOptions.fopt.dyTextBottom.dyTextBottom: The size (0x00000000) of the margin that exists inside the containing shape below the text. The unit of measurement is an EMU.

case_of_msofbtSpContainer.shapePrimaryOptions.fopt.WrapText: A property that specifies the type of wrapping applied to the text.

case_of_msofbtSpContainer.shapePrimaryOptions.fopt.WrapText.WrapText: A value (0x00000002) specifying that a line of text will extend into or beyond a margin instead of continuing on subsequent lines.

case_of_msofbtSpContainer.shapePrimaryOptions.fopt.anchorText: A property that specifies the type of anchor applied to the text.

case_of_msofbtSpContainer.shapePrimaryOptions.fopt.anchorText.anchorText: A value that specifies the primary determinant for the placement of the text. The value 0x00000001 specifies that the vertical center of the text will coincide with the vertical midpoint of the internal margins of the text box area.

case_of_msofbtSpContainer.shapePrimaryOptions.fopt.fillColor: A property that specifies the foreground color of the fill.

The following two example structures show the records labeled **U** and **V** from **OfficeArtSpgrContainerFileBlock** record **E** in more detail.

The following table shows the child-record hierarchy of **fillColor** record **U**.

Offset	Size	Structure	Value
000011C5	0006	**U**: fillColor - **fillColor**	
000011C5	0002	OfficeArtFOPTEOPID - **opid**	
000011C5	14 bits	bit - **opid**	0x0181
000011C5	1 bit	bit - **fBid**	0x0
000011C5	1 bit	bit - **fComplex**	0x0
000011C7	0004	OfficeArtCOLORREF - **fillColor**	
000011CA	1 bit	bit - **unused3**	0x0
000011CA	1 bit	bit - **unused2**	0x0
000011CA	1 bit	bit - **unused1**	0x0
000011CA	1 bit	bit - **fSysIndex**	0x0
000011CA	1 bit	bit - **fSchemeIndex**	0x1
000011CA	1 bit	bit - **fSystemRGB**	0x0
000011CA	1 bit	bit - **fPaletteRGB**	0x0
000011CA	1 bit	bit - **fPaletteIndex**	0x0
000011C9	0001	BYTE - **blue**	0x00
000011C8	0001	BYTE - **green**	0x00
000011C7	0001	BYTE - **red**	0x04

Figure 32: Child-Record Hierarchy of fillColor Record U

The properties in **fillColor** record **U** are similar to the color properties in **lineColor** record **S**. Record **S** outlines color properties applied to a line. Record **U** outlines color properties applied to a shape fill. For more details about the property values that are listed in record **U**, see the property value definitions for record **S** earlier in this section.

The following table shows the child-record hierarchy of **Fill Style Boolean Properties** record **V**.

Offset	Size	Structure	Value
000011CB	0006	**V**: Fill Style Boolean Properties - **Fill Style Boolean Properties**	
000011CB	0002	OfficeArtFOPTEOPID **- opid**	
000011CB	14 bits	bit **- opid**	0x01BF
000011CB	1 bit	bit **- fBid**	0x0
000011CB	1 bit	bit **- fComplex**	0x0
000011CD	9 bits	bit **- unused1**	0x000
000011CD	1 bit	bit **- fUsefRecolorFillAsPicture**	0x0
000011CD	1 bit	bit **- fUsefUseShapeAnchor**	0x0
000011CD	1 bit	bit **- fUsefFilled**	0x1
000011CD	1 bit	bit **- fUsefHitTestFill**	0x0
000011CD	1 bit	bit **- fUsefillShape**	0x0
000011CD	1 bit	bit **- fUsefillUseRect**	0x0
000011CD	1 bit	bit **- fUsefNoFillHitTest**	0x0
000011CD	9 bits	bit **- unused2**	0x000
000011CD	1 bit	bit **- fRecolorFillAsPicture**	0x0
000011CD	1 bit	bit **- fUseShapeAnchor**	0x0
000011CD	1 bit	bit **- fFilled**	0x1
000011CD	1 bit	bit **- fHitTestFill**	0x0
000011CD	1 bit	bit **- fillShape**	0x0
000011CD	1 bit	bit **- fillUseRect**	0x0
000011CD	1 bit	bit **- fNoFillHitTest**	0x0

Figure 33: Child-Record Hierarchy of Fill Style Boolean Properties Record V

Fill Style Boolean Properties record **V** is similar to **Fill Style Boolean Properties** record **O**. Record **O** outlines property settings that will not render the shape fill. Record **V** outlines values that will render the shape fill. For more details about the property values that are listed in record **V**, see the property value definitions that are listed for record **O** earlier in this section.

The following table shows the child-record hierarchy of **OfficeArtSpgrContainerFileBlock**, as defined in section 2.2.17, record **F**.

Offset	Size	Structure	Value
00001266	00E5	**F**: OfficeArtSpgrContainerFileBlock - **OfficeArtSpgrContainerFB**	
00001266	00E5	OfficeArtSpContainer - **case_of_msofbtSpContainer**	
00001266	0008	OfficeArtRecordHeader - **rh**	
0000126E	0010	OfficeArtFSP - **shapeProp**	
0000127E	005E	OfficeArtFOPT - **shapePrimaryOptions**	
000012DC	0014	**W**: OfficeArtTertiaryFOPT - **shapeTertiaryOptons**	
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 34: Child-Record Hierarchy of OfficeArtSpgrContainerFileBlock Record F

The record types within **OfficeArtSpgrContainerFileBlock** record **F** that have not been explained in previous structure examples are specified by the following definitions. The host application defines these fields and records. For more information, see [MS-PPT] section 2.9.76.

case_of_msofbtSpContainer.clientTextbox.rgChildRec: An array of **TextClientDataSubContainerOrAtom** records.

case_of_msofbtSpContainer.clientTextbox.rgChildRec.rec: A **TextClientDataSubContainerOrAtom** record, which is a variable-type record. The type and meaning of this record is dictated by the value of **rh.recType** (not shown in this example).

case_of_msofbtSpContainer.clientTextbox.rgChildRec.rec.case_of_RT_TextHeaderAtom: An **atom** record that specifies the type of a text body.

case_of_msofbtSpContainer.clientTextbox.rgChildRec.rec.case_of_RT_TextHeaderAtom.textType: A value (0x00000004) specifying that the text is of type "Any other text".

case_of_msofbtSpContainer.clientTextbox.rgChildRec.rec1.case_of_RT_TextBytesAtom: An atom record that specifies Unicode characters.

case_of_msofbtSpContainer.clientTextbox.rgChildRec.rec1.case_of_RT_TextBytesAtom.textBytes: A value ("Shape 2.0") specifying that the text string within **shape**.**textBytes** is an array of bytes containing the characters of the corresponding text.

case_of_msofbtSpContainer.clientTextbox.rgChildRec.rec2.case_of_RT_StyleTextPropAtom: An atom record that specifies character-level and paragraph-level formatting.

case_of_msofbtSpContainer.clientTextbox.rgChildRec.rec2.case_of_RT_StyleTextPropAtom.rgTextPFRun: An array of **TextPFRun** container records that each specify paragraph-level formatting for a length of the corresponding text.

case_of_msofbtSpContainer.clientTextbox.rgChildRec.rec2.case_of_RT_StyleTextPropAtom.rgTextCFRun: An array of **TextCFRun** container records that each specify character-level formatting for a length of the corresponding text.

The following three example structures show the records labeled **W**, **X**, and **Y** from **OfficeArtSpgrContainerFileBlock** record **F** in more detail.

The following table shows the child-record hierarchy of the **OfficeArtTertiaryFOPT** record, as defined in section 2.2.11, **W**.

Offset	Size	Structure	Value
000012DC	0014	**W**: OfficeArtTertiaryFOPT - **shapeTertiaryOptions**	
000012DC	0008	OfficeArtRecordHeader - **rh**	
000012E4	000C	OfficeArtRGFOPTE - **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 35: Child-Record Hierarchy of OfficeArtTertiaryFOPT Record W

The record types within **OfficeArtTertiaryFOPT** record **W** that have not been explained in previous structure examples are specified as follows:

fopt.dgmLayout: A property that specifies the diagram node layout for a shape.

fopt.dgmLayout.dgmLayout: A value (0x00000000) specifying that this **MSODGMLO** layout is an organizational chart.

fopt.dgmNodeKind: A property that specifies a diagram node type.

fopt.dgmNodeKind.dgmNodeKind: A value (0x00000000) specifying that this node is a regular diagram node of no particular type.

The following table shows the child-record hierarchy of **TextPFRunArray** record **X**.

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 36: Child-Record Hierarchy of TextPFRunArray Record X

The fields and records for text in **TextPFRunArray** record **X** are defined by the host application. For more information, see [MS-PPT] section 2.9.45. Record **X** might appear differently for each host application. Some text, font, and paragraph properties might be located in other containers, depending on the structure requirements for each host application.

The following table shows the child-record hierarchy of **TextCFRunArray** record **Y**.

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 37: Child-Record Hierarchy of TextCFRunArray Record Y

The fields and records for text in **TextPFRunArray** record **Y** are defined by the host application. For more information, see [MS-PPT] section 2.9.46. Record **Y** might appear differently for each host application. Some text, font, and paragraph properties might be located in other containers, depending on the structure requirements for each host application.

The following table shows the child-record hierarchy of **OfficeArtSpgrContainerFileBlock**, as defined in section 2.2.17, record **G**.

Offset	Size	Structure	Value
00001430	00E5	**G**: OfficeArtSpgrContainerFileBlock - **OfficeArtSpgrContainerFB**	
00001430	00E5	OfficeArtSpContainer - **case_of_msofbtSpContainer**	
00001430	0008	OfficeArtRecordHeader - **rh**	
00001438	0010	OfficeArtFSP - **shapeProp**	
00001448	005E	OfficeArtFOPT - **shapePrimaryOptions**	
000014A6	0014	OfficeArtTertiaryFOPT - **shapeTertiaryOptions**	
000014A6	0008	OfficeArtRecordHeader - **rh**	
000014AE	000C	OfficeArtRGFOPTE - **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 38: Child-Record Hierarchy of OfficeArtSpgrContainerFileBlock Record G

3.1.4 OfficeArtSpContainer

The following table shows the child-record hierarchy of **OfficeArtSpContainer**, as defined in section 2.2.14, container **3**.

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	OfficeArtRGFOPTE - **fopt**	
00001715	0006	fillColor - **fillColor**	
00001715	0002	OfficeArtFOPTEOPID - **opid**	
00001717	0004	OfficeArtCOLORREF - **fillColor**	
0000171B	0006	fillBackColor - **fillBackColor**	

Offset	Size	Structure	Value
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	MSOBWMODE - **bWMode**	0x00000009
0000173F	0006	Shape Boolean Properties - **Shape Boolean Properties**	

Figure 39: Child-Record Hierarchy of OfficeArtSpContainer Container 3

The record types within **OfficeArtSpContainer** container **3** that have not been explained in previous structure examples are specified as follows:

shapePrimaryOptions.fopt.fillBackColor: A property that specifies the background color of the fill.

shapePrimaryOptions.fopt.fillRectRight: A property that specifies the rectangle right bound, in **EMUs**, of the shaded fill.

shapePrimaryOptions.fopt.fillRectRight.fillRectRight: A value (0x008B9F8E) that specifies the rectangle right bound of the shaded fill.

shapePrimaryOptions.fopt.fillRectBottom: A property that specifies the rectangle bottom bound, in EMUs, of the shaded fill.

shapePrimaryOptions.fopt.fillRectBottom.fillRectBottom: A value (0x0068BDDE) that specifies the rectangle bottom bound of the shaded fill.

shapePrimaryOptions.fopt.bWMode: A property that specifies how a **shape** will render in black-and-white display mode.

shapePrimaryOptions.fopt.bWMode.bWMode: A value (0x00000009) specifying that the shape will render with white coloring.

The following table shows the child-record hierarchy of **OfficeArtCOLORREF**, as defined in section 2.2.2, record **A**.

Offset	Size	Structure	Value
0000171D	0004	**A**: OfficeArtCOLORREF - **fillBackColor**	

Offset	Size	Structure	Value
00001720	1 bit	bit **- unused3**	0x0
00001720	1 bit	bit **- unused2**	0x0
00001720	1 bit	bit **- unused1**	0x0
00001720	1 bit	bit **- fSysIndex**	0x0
00001720	1 bit	bit **- fSchemeIndex**	0x1
00001720	1 bit	bit **- fSystemRGB**	0x0
00001720	1 bit	bit **- fPaletteRGB**	0x0
00001720	1 bit	bit **- fPaletteIndex**	0x0
0000171F	0001	BYTE **- blue**	0x00
0000171E	0001	BYTE **- green**	0x00
0000171D	0001	BYTE **- red**	0x05

Figure 40: Child-Record Hierarchy of OfficeArtCOLORREF Record A

3.1.5   OfficeArtSolverContainer

The following table shows the child-record hierarchy of **OfficeArtSolverContainer**, as defined in section 2.2.18, container **4**.

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**	

Offset	Size	Structure	Value
000017CD	0020	OfficeArtSolverContainerFileBlock **-** **OfficeArtSolverContainerFB**	

Figure 41: Child-Record Hierarchy of OfficeArtSolverContainer Container 4

The record types within **OfficeArtSolverContainer** container **4** that have not been explained in previous structure examples are specified as follows:

rgfb: A record that specifies a file block containing a record that specifies **rule** data.

rgfb.OfficeArtSolverContainerFB: A record that specifies a file block containing a record that specifies overall **drawing** data.

rgfb.OfficeArtSolverContainerFB.case_of_msofbtConnectorRule: A record that specifies the connection between two **shapes** via a **connector** shape.

rgfb.OfficeArtSolverContainerFB.case_of_msofbtConnectorRule.ruid: The identifier (0x00000001) of this rule.

rgfb.OfficeArtSolverContainerFB.case_of_msofbtConnectorRule.spidA: The identifier (0x00000807) of the shape where the connector shape starts.

rgfb.OfficeArtSolverContainerFB.case_of_msofbtConnectorRule.spidB: The identifier (0x00000806) of the shape where the connector shape ends.

rgfb.OfficeArtSolverContainerFB.case_of_msofbtConnectorRule.spidC: The identifier (0x0000080A) of the connector shape.

rgfb.OfficeArtSolverContainerFB.case_of_msofbtConnectorRule.cptiA: The **connection site** index (0x00000000) of the shape where the connector shape starts.

rgfb.OfficeArtSolverContainerFB.case_of_msofbtConnectorRule.cptiB: The connection site index (0x00000002) of the shape where the connector shape ends.

3.2   Shape Properties

This section provides an example of a **shape** with effects. The following figure shows a rounded rectangle that contains text and that has a gradient background fill, double-line outline, and shadow properties applied.

Figure 42: Shape with effects

The remainder of this section provides example structures that outline properties specific to similar<127> shapes. For a detailed specification of each record that is mentioned, see section 2.

3.2.1 Shape Type Properties

The **OfficeArtFSP** record, as defined in section 2.2.40, specifies an instance of a **shape**. The **OfficeArtRecordHeader** structure, as defined in section 2.2.1, contains the shape type, and the record contains the shape identifier and a set of bits that further define the shape.

The following table shows the child-record hierarchy of the **OfficeArtFSP** container for the shape.

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 43: OfficeArtFSP Shape Properties

The records that are contained within the **OfficeArtFSP** container, as defined in section 2.2.40, are specified as follows:

shapeProp: An **OfficeArtFSP** record that specifies an instance of the shape.

rh: An **OfficeArtRecordHeader** structure, as defined in section 2.2.1, that contains the record type, the record length, and if the record is an **atom**, a version identifier.

rh.recVer: The record version (0x2).

rh.recInstance: The shape type, which in this case is a rectangle shape with rounded corners (0x002).

rh.recType: The type (0xF00A) of this record.

rh.recLen: The length (0x00000008), in bytes, of the record.

spid: The identifier (0x00000804) of this shape.

fGroup: A value that specifies whether this shape is a **group shape**. The value 0x0 specifies that this shape is not a group shape.

fChild: A value that specifies whether this shape is a **child** shape. The value 0x0 specifies that this shape is not a child shape.

fPatriarch: A value that specifies whether this shape is the topmost group shape. The value 0x0 specifies that this shape is not the topmost group shape.

fDeleted: A value that specifies whether this shape has been deleted. The value 0x0 specifies that this shape has not been deleted.

fOleShape: A value that specifies whether this shape is an **OLE object**. The value 0x0 specifies that this shape is not an OLE object.

fHaveMaster: A value that specifies whether this shape has a **master** in the **hspMaster** property, as defined in section 2.3.2.1. The value 0x0 specifies that this shape does not have a master in the **hspMaster** property.

fFlipH: A value that specifies whether this shape is flipped horizontally. The value 0x0 specifies that this shape is not flipped horizontally.

fFlipV: A value that specifies whether this shape is flipped vertically. The value 0x0 specifies that this shape is not flipped vertically.

fConnector: A value that specifies whether this shape is a **connector** shape. The value 0x0 specifies that this shape is not a connector shape.

fHaveAnchor: A value that specifies whether this shape has an **anchor**. The value 0x1 specifies that this shape has an anchor.

fBackground: A value that specifies whether this shape is a **background shape**. The value 0x0 specifies that this shape is not a background shape.

fHaveSpt: A value that specifies whether this shape has a shape type property, as specified by the **recInstance** property in the **OfficeArtRecordHeader** structure, as defined in section 2.2.1. The value 0x1 specifies that this shape has such a shape type property.

unused1: A value that is undefined and needs to be ignored.

3.2.2 Shape Primary Options

This section outlines the primary property options for the **shape** with effects that is specified in Shape Properties Example in section 3.2.

The following table shows the child-record hierarchy of the **OfficeArtFOPT** record, as defined in section 2.2.9, container for the shape.

Offset	Size	Structure
00000DCB	0074	OfficeArtFOPT - **shapePrimaryOptions**
00000DCB	0008	OfficeArtRecordHeader - **rh**

Offset	Size	Structure
00000DD3	006C	OfficeArtRGFOPTE - **fopt**
00000DD3	0006	Protection Boolean Properties - **Protection Boolean Properties**
00000DD9	0006	**A**: lTxid - **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 44: Child–Record Hierarchy of the OfficeArtFOPT Shape Primary Options

The record types within the **OfficeArtFOPT** container that have not been explained in previous structure examples are specified as follows:

shapePrimaryOptions: An **OfficeArtFOPT** record that specifies a table of **OfficeArtRGFOPTE** properties, as defined in section 2.3.1.

fopt: An **OfficeArtRGFOPTE** record, as defined in section 2.3.1, specifying 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: A property specifying a 32-bit field of Boolean properties for the protection of the shape.

fopt.Text ID: A property specifying an identifier for the text.

fopt.Wrap Text: An **MSOWRAPMODE** enumeration value, as defined in section 2.4.3, that specifies the type of wrapping applied to the text. The default value for this property is **msowrapSquare**.

fopt.Anchor Text: A property that specifies the type of anchor applied to the text.

fopt.Fill Type: A property that specifies either the fill attributes of the shape or the background of the slide.

fopt.Fill Color: A property that specifies the foreground color of the fill.

fopt.Fill Back Color: A property that specifies the background color of the fill.

fopt.Fill Focus: A property that specifies the relative position of the last color in the shaded fill.

fopt.Shade Type: A property that specifies how the shaded fill is to be computed.

fopt.Fill Style Boolean Properties: A property that specifies a 32-bit field of Boolean properties for the fill style.

fopt.Line Color: A property that specifies the foreground color of the line.

fopt.Line Width: A property that specifies the width of the line.

fopt.Line Style: A property that specifies the style of the line.

fopt.Line Style Boolean Properties: A property that specifies a 32-bit field of Boolean properties for the line style.

fopt.Shadow Color: A property that specifies the primary color of the shadow.

fopt.Shadow Opacity: A property that specifies the opacity level of the shadow.

fopt.Shadow Style Boolean Properties: A property that specifies a 32-bit field of Boolean properties for the state of the shadow.

fopt.3D Object Boolean Properties: A property that specifies a 32-bit field of Boolean properties for a 3-D object.

The following 10 example structures show the records labeled **A**, **B**, **C**, **D**, **E**, **F**, **G**, **H**, **I**, and **J** from the **OfficeArtFOPT** container in more detail.

The following table shows **lTxid** property **A**.

Offset	Size	Structure	Value
00000DD9	0006	**A**: lTxid - **Text ID**	
00000DD9	0002	OfficeArtFOPTEOPID - **opid**	
00000DDB	0004	LONG - **lTxid**	0x01D82D38

Figure 45: lTxid Shape Property Options

lTxid: An identifier (0x01D82D38) for the text inside the shape.

The following table shows **WrapText** property **B**.

Offset	Size	Structure	Value
00000DDF	0006	**B**: WrapText - **Wrap Text**	
00000DDF	0002	OfficeArtFOPTEOPID - **opid**	
00000DE1	0004	MSOWRAPMODE - **WrapText**	0x00000002

Figure 46: WrapText Shape Property Options

WrapText: An **MSOWRAPMODE** enumeration value, as defined in section 2.4.3, (0x00000002) specifying that a line of text will extend into or beyond a margin instead of continuing on subsequent lines.

The following table shows **anchorText** property **C**.

Offset	Size	Structure	Value
00000DE5	0006	**C**: anchorText **- Anchor Text**	
00000DE5	0002	OfficeArtFOPTEOPID **- opid**	
00000DE7	0004	MSOANCHOR **- anchorText**	0x00000001

Figure 47: anchorText Shape Property Options

anchorText: An **MSOANCHOR** enumeration value, as defined in section 2.4.4, (0x00000001) specifying that the vertical center of the text will coincide with the vertical midpoint of the internal margins of the text box area.

The following table shows **fillType** property **D**.

Offset	Size	Structure	Value
00000DEB	0006	**D**: fillType **- Fill Type**	
00000DEB	0002	OfficeArtFOPTEOPID **- opid**	
00000DED	0004	MSOFILLTYPE **- fillType**	0x00000007

Figure 48: fillType Shape Property Options

fillType: An **MSOFILLTYPE** enumeration value, as defined in section 2.4.11, (0x00000007) specifying that 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 following table shows **fillFocus** property **E**.

Offset	Size	Structure	Value
00000DFD	0006	**E**: fillFocus **- Fill Focus**	
00000DFD	0002	OfficeArtFOPTEOPID **- opid**	
00000DFF	0004	LONG **- fillFocus**	0xFFFFFFCE

Figure 49: fillFocus Shape Property Options

fillFocus: The relative position (0xFFFFFFCE) of the last color in the shaded fill.

The following table shows **fillShadeType** property **F**.

Offset	Size	Structure	Value
00000E03	0006	**F**: fillShadeType **- Fill Shade Type**	
00000E03	0002	OfficeArtFOPTEOPID **- 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

Offset	Size	Structure	Value
00000E05	1 bit	bit - **msoshadeOneColor**	0x0
00000E05	27 bits	bit - **unused1**	0x0200000

Figure 50: fillShadeType Shape Property Options

The **fillShadeType** properties that have not been explained in previous structure examples are specified as follows:

fillShadeType: An **MSOSHADETYPE** record, as defined in section 2.2.50, that specifies the interpolation of colors between the color/position values that are stated for the fill. Values can be combined to produce compounded effects.

fillShadeType.msoshadeNone: A value that specifies whether color correction will be performed after interpolation. The value 0x1 specifies that no color correction will be performed after interpolation.

fillShadeType.msoshadeGamma: A value that specifies whether **gamma correction** will be applied after interpolation. The value 0x1 specifies that gamma correction will be applied after interpolation.

fillShadeType.msoshadeSigma: A value that specifies whether a **sigma transfer function** will be applied after interpolation. The value 0x0 specifies that no sigma transfer function will be applied after interpolation.

fillShadeType.msoshadeBand: A value that specifies whether a flat band will be added at the start of the interpolation. The value 0x1 specifies that a flat band will be added at the start of the interpolation.

fillShadeType.msoshadeOneColor: A value that specifies whether more than one color can be used to determine the fill. The value 0x0 specifies that more than one color can be used to determine the fill.

fillShadeType.unused1: A value that is undefined and needs to be ignored.

The following table shows **lineWidth** property **G**.

Offset	Size	Structure	Value
00000E15	0006	**G**: lineWidth - **Line Width**	
00000E15	0002	OfficeArtFOPTEOPID - **opid**	
00000E17	0004	LONG - **lineWidth**	0x000094D4

Figure 51: lineWidth Shape Property Options

lineWidth: The width (0x000094D4), in **EMUs**, of the line.

The following table shows **lineStyle** property **H**.

Offset	Size	Structure	Value
00000E1B	0006	**H**: lineStyle - **Line Style**	
00000E1B	0002	OfficeArtFOPTEOPID - **opid**	
00000E1D	0004	MSOLINESTYLE - **lineStyle**	0x00000001

Figure 52: lineStyle Shape Property Options

lineStyle: An **MSOLINESTYLE** enumeration value, as defined in section 2.4.14, (0x00000001) specifying that the line style for the shape outline is two lines of equal width.

The following table shows **shadowOpacity** property **I**.

Offset	Size	Structure	Value
00000E2D	0006	**I**: shadowOpacity **- Shadow Opacity**	
00000E2D	0002	OfficeArtFOPTEOPID **- opid**	
00000E2F	0004	FixedPoint **- shadowOpacity**	0x00008000

Figure 53: shadowOpacity Shape Property Options

shadowOpacity: The opacity (0x00008000) of the shadow applied to the shape.

The following table shows **Shadow Style Boolean Properties** record **J**.

Offset	Size	Structure	Value
00000E33	0006	**J**: Shadow Style Boolean Properties **- Shadow Style Boolean Properties**	
00000E35	14 bits	bit **- unused2**	0x0000
00000E35	1 bit	bit **- fUsefShadow**	0x1
00000E35	1 bit	bit **- fUsefshadowObscured**	0x0
00000E35	14 bits	bit **- unused1**	0x0000
00000E35	1 bit	bit **- fShadow**	0x1
00000E35	1 bit	bit **- fshadowObscured**	0x0
00000E33	0002	OfficeArtFOPTEOPID **- opid**	

Figure 54: Shadow Style Boolean Properties Options

unused2: A value that is undefined and needs to be ignored.

fUsefShadow: A value that specifies whether the **fShadow** bit is set. The value 0x1 specifies that the **fShadow** bit is set.

fUsefshadowObscured: A value that specifies whether the **fshadowObscured** bit is set. The value 0x0 specifies the **fshadowObscured** bit is not set.

unused1: A value that is undefined and needs to be ignored.

fShadow: A value that specifies whether the shape has a shadow. The value 0x1 specifies that the shape has a shadow.

fshadowObscured: A value that specifies whether the shadow is fully obscured by the shape. The value 0x0 specifies that the shadow is not fully obscured by the shape.

3.2.3 Shape Text Properties

The text in a **shape** is host-dependent, and not all the text properties are supported by each host application.

The text-related fields and records in this section are defined by the host application. For more information, see [MS-PPT] section 2.9.76.

The following table shows the **OfficeArtClientTextbox** record.

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	TextCFRunArray **- rgTextCFRun**	

Figure 55: OfficeArtClientTextbox Shape Text Properties

The records contained within the **OfficeArtClientTextbox** container that have not been explained in previous structure examples are specified as follows:

clientTextbox: A container that specifies text-related data for a shape.

rgChildRec: An array of **TextClientDataSubContainerOrAtom** records that specifies text-related data.

rgChildRec.rec: A variable-type record for which the type and meaning are dictated by the value of **rh.recType**.

rgChildRec.rec.case_of_RT_TextHeaderAtom: An **atom** that specifies the type of a text body. The presence of this atom indicates a text body that has properties specified by subsequent atoms and containers.

rgChildRec.rec.case_of_RT_TextHeaderAtom.textType: A value that specifies the text type. The value 0x00000004 specifies that the text type is the **TextTypeEnum** enumeration value **Tx_TYPE_OTHER**, which means any other text.

rgChildRec.rec.case_of_RT_TextBytesAtom: An atom that specifies Unicode characters.

rgChildRec.rec.case_of_RT_TextBytesAtom.textBytes: An array of bytes that specifies the characters ("Shape with text") of the corresponding text within the shape.

rgChildRec.rec.case_of_RT_StyleTextPropAtom: An atom that specifies both character-level and paragraph-level formatting.

4   Security Considerations

This file format allows **HTML** code 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 not mandatory and can be replaced by defaults or omitted entirely. For privacy reasons, applications ought to provide users with a way to remove this information from files. Personally identifiable information in this file 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 logon credentials nor to any other form of identity verification. Therefore, it is not advisable for applications to make security decisions based on this information.

5   Appendix A: Product Behavior

The information in this specification is applicable to the following Microsoft products or supplemental software. References to product versions include updates to those products.

- Microsoft Office 97

- Microsoft Office 2000

- Microsoft Office XP

- Microsoft Office 2003

- the 2007 Microsoft Office system

- Microsoft Office 2010 suites

- Microsoft Office 2013

- Microsoft Office 2016

- Microsoft Office 2019

- Microsoft Office 2021

- Microsoft Office 2024 Preview

Exceptions, if any, are noted in this section. If an update version, service pack or Knowledge Base (KB) number appears with a product name, the behavior changed in that update. The new behavior also applies to subsequent updates unless otherwise specified. If a product edition appears with the product version, behavior is different in that product edition.

Unless otherwise specified, any statement of optional behavior in this specification that is prescribed using the terms "SHOULD" or "SHOULD NOT" implies product behavior in accordance with the SHOULD or SHOULD NOT prescription. Unless otherwise specified, the term "MAY" implies that the product does not follow the prescription.

<1> Section 2.2.2: This color can be dithered if the rendering system supports dithering or halftone dithering.

<2> Section 2.2.12: The z-order of shapes in a diagram are determined by their order in the file.

<3> Section 2.2.13: This array is supported only by Microsoft Word 97, Microsoft Word 2000, Microsoft Word 2002, and Microsoft Office Word 2003.

<4> Section 2.2.15: Word 97, Word 2000, Word 2002, Office Word 2003, Microsoft Office Word 2007, and Microsoft Word 2010 do not ignore this record.

<5> Section 2.2.23: 0xF02A is treated as 0xF01D.

<6> Section 2.2.33: Microsoft Excel 97, Microsoft Excel 2000, Microsoft Excel 2002, and Microsoft Office Excel 2003 do not ignore this record.

<7> Section 2.2.35: This record is not persisted in Microsoft Office Excel 2007, Microsoft Excel 2010, Microsoft Office PowerPoint 2007, or Microsoft PowerPoint 2010. This record is supported by Office Excel 2007 and Excel 2010 only if the **shape** is contained by a **dialog sheet**, as specified in [MS-XLS] section 2.1.7.20.2.

<8> Section 2.2.36: Word 97 and Word 2000 ignore this record.

<9> Section 2.2.37: Word 97, Word 2000, Word 2002, and Office Word 2003 use this record.

<10> Section 2.3: Microsoft PowerPoint 97, Word 97 and Excel 97 do not support these properties.

<11> Section 2.3: PowerPoint 97, Word 97, Excel 97, Microsoft PowerPoint 2000, Excel 2000 and Word 2000 do not support this property..

<12> Section 2.3: PowerPoint 97, Word 97, Excel 97, PowerPoint 2000, Excel 2000, Word 2000, Microsoft PowerPoint 2002, Word 2002 and Excel 2002 do not support these properties.

<13> Section 2.3: PowerPoint 97, Word 97, Excel 97, PowerPoint 2000, Excel 2000, Word 2000, PowerPoint 2002, Word 2002, Excel 2002, Microsoft Office PowerPoint 2003, Office Word 2003 and Office Excel 2003 do not support these properties.

<14> Section 2.3: PowerPoint 97, Word 97, Excel 97, PowerPoint 2000, Excel 2000, Word 2000, PowerPoint 2002, Word 2002, Excel 2002, Office PowerPoint 2003, Office Word 2003, Office Excel 2003, Office PowerPoint 2007, Office Word 2007 and Office Excel 2007 do not support this property.

<15> Section 2.3.2.6: Office 2000, Office XP, and Office 2003 use this field.

<16> Section 2.3.2.11: Office Word 2007 and Word 2010 use this field.

<17> Section 2.3.2.12: Office Excel 2007, Office PowerPoint 2007, Office Word 2007, Excel 2010, PowerPoint 2010, and Word 2010 use this bit.

<18> Section 2.3.2.12: Office Excel 2007, Office PowerPoint 2007, Office Word 2007, Excel 2010, PowerPoint 2010, and Word 2010 use this bit.

<19> Section 2.3.2.12: Excel 97, PowerPoint 97, Word 97, Excel 2000, PowerPoint 2000, and Word 2000 do not use this bit.

<20> Section 2.3.2.12: Excel 97, PowerPoint 97, Word 97, Excel 2000, PowerPoint 2000, and Word 2000 do not use this bit.

<21> Section 2.3.4.19: Word 2000, Word 2002, Office Word 2003, Office Word 2007 and Word 2010 use this field.

<22> Section 2.3.4.20: Word 2000, Word 2002, Office Word 2003, Office Word 2007 and Word 2010 use this field.

<23> Section 2.3.4.21: Word 2000, Word 2002, Office Word 2003, Office Word 2007 and Word 2010 use this field.

<24> Section 2.3.4.22: Word 2000, Word 2002, Office Word 2003, Office Word 2007 and Word 2010 use this field.

<25> Section 2.3.4.23: Word 2000, Word 2002, Office Word 2003, Office Word 2007 and Word 2010 do not ignore this property.

<26> Section 2.3.4.24: Word 2000, Word 2002, Office Word 2003, Office Word 2007 and Word 2010 do not ignore this property.

<27> Section 2.3.4.25: Word 2000, Word 2002, Office Word 2003, Office Word 2007 and Word 2010 do not ignore this property.

<28> Section 2.3.4.26: Word 2000, Word 2002, Office Word 2003, Office Word 2007 and Word 2010 do not ignore this property.

<29> Section 2.3.4.36: PowerPoint 97, PowerPoint 2000, PowerPoint 2002, Office PowerPoint 2003, Office PowerPoint 2007, and PowerPoint 2010 do not ignore this property.

<30> Section 2.3.4.37: PowerPoint 97, PowerPoint 2000, PowerPoint 2002, Office PowerPoint 2003, Office PowerPoint 2007, and PowerPoint 2010 do not ignore this property.

<31> Section 2.3.4.41: The 2007 Microsoft Office system and Office 2010 do not ignore this property.

<32> Section 2.3.4.43: Office Word 2007 and Word 2010 do not ignore this property.

<33> Section 2.3.5.1: Office Word 2007 and Word 2010 do not ignore this property.

<34> Section 2.3.5.2: Office Word 2007 and Word 2010 do not ignore this property.

<35> Section 2.3.5.3: Office Word 2007 and Word 2010 do not ignore this property.

<36> Section 2.3.5.4: Office Word 2007 and Word 2010 do not ignore this property.

<37> Section 2.3.5.5: Office Word 2007 and Word 2010 do not ignore this property.

<38> Section 2.3.5.6: Office Word 2007 and Word 2010 do not ignore this property.

<39> Section 2.3.6.25: Office Excel 2007, Excel 2010, Office PowerPoint 2007, and PowerPoint 2010 do not show the adjust handles that are specified in the pAdjustHandles property.

<40> Section 2.3.6.31: Microsoft Office 95 does not ignore this bit.

<41> Section 2.3.7.8: Excel 97, Excel 2000, Excel 2002, Office Excel 2003, Office Excel 2007, and Excel 2010 do not ignore this property.

<42> Section 2.3.8.38: Office 97 and Office 2000 do not render the **line end decorations** if the line end decoration properties are specified and this bit is set to 0x0.

<43> Section 2.3.13.22: Microsoft Office 2010 suites does not ignore this property.

<44> Section 2.3.13.22: In Office 2010, the default value is 0x0000F80C.

<45> Section 2.3.16.23: Values that are less than 0.0 will invert the lighting effect. Values that are greater than 1.0 can be used for brighter lighting effects.

<46> Section 2.3.16.27: Values that are less than 0.0 will invert the lighting effect. Values that are greater than 1.0 can be used for brighter lighting effects.

<47> Section 2.3.17.4: Prior to the beta release of Office 2003, the values stored in the **IMsoArray** were of type **MSOSPID** as defined in section 2.1.2. To cover all documents, first the **MSOSPID** is used to locate a shape in the Relationship Table. If this is not successful, the CRC32 Hash of the shape name is used to locate the shape.

<48> Section 2.3.17.10: Office 97, Office 2000, and Office XP ignore this property.

<49> Section 2.3.18.6: Word 97, Word 2000, Word 2002, Office Word 2003, Office Word 2007, and Word 2010 do not ignore this property.

<50> Section 2.3.19.6: Word 97, Word 2000, Word 2002, Office Word 2003, Office Word 2007, Word 2010 do not ignore this property.

<51> Section 2.3.20.1: Office 97 ignores this bit.

<52> Section 2.3.21.8: PowerPoint 97, PowerPoint 2000, PowerPoint 2002, Office PowerPoint 2003, Office PowerPoint 2007, and PowerPoint 2010 use this field. The MSOANCHOR enumeration specifies exceptions for some individual values.

<53> Section 2.3.21.10: This property is supported only by Office Excel 2007, Excel 2010, PowerPoint 97, PowerPoint 2000, PowerPoint 2002, Office PowerPoint 2003, Office PowerPoint 2007, and PowerPoint 2010.

<54> Section 2.3.21.11: Word 97, Word 2000, Word 2002, Office Word 2003, Office Word 2007, and Word 2010 use this property.

<55> Section 2.3.21.12: Excel 2000, Excel 2002, Office Excel 2003, Office Excel 2007, and Excel 2010 use this property.

<56> Section 2.3.21.15: Excel 97, PowerPoint 97, Excel 2000, PowerPoint 2000, Excel 2002, PowerPoint 2002, Office Excel 2003, and Office PowerPoint 2003 use this bit.

<57> Section 2.3.21.15: Excel 97, Excel 2000, Excel 2002, and Office Excel 2003 use this bit. Office Excel 2007 and Excel 2010 properly read and use the value of 0x1 but do not write it.

<58> Section 2.3.21.15: Word 97 and Word 2000 do not use this bit.

<59> Section 2.3.22.3: Office Excel 2007, Excel 2010, Office PowerPoint 2007, and PowerPoint 2010 treat **msoalignTextStretch** as **msoalignTextCenter**.

<60> Section 2.3.22.3: Office Excel 2007, Excel 2010, Office PowerPoint 2007 and PowerPoint 2010 do not use **msoalignTextLetterJust**.

<61> Section 2.3.22.3: Office Excel 2007, Excel 2010, Office PowerPoint 2007 and PowerPoint 2010 do not use **msoalignTextWordJust**.

<62> Section 2.3.22.8: Office 97 does not use this property.

<63> Section 2.3.22.10: Office Excel 2007, Excel 2010, Office PowerPoint 2007, and PowerPoint 2010 do not use this bit.

<64> Section 2.3.22.10: Office Excel 2007, Excel 2010, Office PowerPoint 2007, and PowerPoint 2010 ignore this bit.

<65> Section 2.3.22.10: Office Excel 2007, Excel 2010, Office PowerPoint 2007, and PowerPoint 2010 ignore this bit and apply scaling to the character advance width.

<66> Section 2.3.22.10: Office Excel 2007, Excel 2010, Office PowerPoint 2007, and PowerPoint 2010 ignore this bit.

<67> Section 2.3.22.10: Office Excel 2007, Excel 2010, Office PowerPoint 2007, and PowerPoint 2010 ignore this bit.

<68> Section 2.3.22.10: Office Excel 2007, Excel 2010, Office PowerPoint 2007, and PowerPoint 2010 ignore this bit.

<69> Section 2.3.22.10: Office Excel 2007, Excel 2010, Office PowerPoint 2007 and PowerPoint 2010 ignore this bit.

<70> Section 2.3.22.10: Office Excel 2007, Excel 2010, Office PowerPoint 2007 and PowerPoint 2010 do not ignore this bit.

<71> Section 2.3.22.10: Office Excel 2007, Excel 2010, Office PowerPoint 2007 and PowerPoint 2010 do not ignore this bit.

<72> Section 2.3.22.10: Office Excel 2007, Excel 2010, Office PowerPoint 2007, and PowerPoint 2010 do not ignore this bit.

<73> Section 2.3.24.1: Excel 97, PowerPoint 97, and Word 97 ignore this property.

<74> Section 2.3.24.3: Excel 97, PowerPoint 97, and Word 97 ignore this property.

<75> Section 2.3.24.5: Excel 97, PowerPoint 97, and Word 97 ignore this property.

<76> Section 2.3.24.7: Excel 97, PowerPoint 97, and Word 97 ignore this property.

<77> Section 2.3.24.9: Excel 97, PowerPoint 97, and Word 97 ignore this property.

<78> Section 2.3.24.11: Excel 97, PowerPoint 97, and Word 97 ignore this property.

<79> Section 2.3.24.13: Excel 97, PowerPoint 97, and Word 97 ignore this property.

<80> Section 2.3.24.15: Excel 97, PowerPoint 97, and Word 97 ignore this property.

<81> Section 2.3.24.17: Excel 97, PowerPoint 97, and Word 97 ignore this property.

<82> Section 2.3.24.19: Excel 97, PowerPoint 97, and Word 97 ignore this property.

<83> Section 2.3.24.21: Excel 97, PowerPoint 97, and Word 97 ignore this property.

<84> Section 2.3.24.23: Excel 97, PowerPoint 97, and Word 97 ignore this property.

<85> Section 2.3.24.25: Excel 97, PowerPoint 97, and Word 97 ignore this property.

<86> Section 2.3.24.27: Excel 97, PowerPoint 97, and Word 97 ignore this property.

<87> Section 2.3.25.1: Office 97 and Office 2000 ignore this property.

<88> Section 2.3.25.3: Office 97 and Office 2000 ignore this property.

<89> Section 2.3.25.5: Office 97 and Office 2000 ignore this property.

<90> Section 2.3.25.7: Office 97 and Office 2000 ignore this property.

<91> Section 2.3.27.1: Office Excel 2007, Excel 2010, Office PowerPoint 2007, PowerPoint 2010, Office Word 2007, and Word 2010 do not ignore this property.

<92> Section 2.3.27.3: Office Excel 2007, Excel 2010, Office PowerPoint 2007, PowerPoint 2010, Office Word 2007, and Word 2010 do not ignore this property.

<93> Section 2.3.27.5: Office Excel 2007, Excel 2010, Office PowerPoint 2007, PowerPoint 2010, and Office Word 2007 do not ignore this property.

<94> Section 2.3.27.7: Office Excel 2007, Excel 2010, Office PowerPoint 2007, PowerPoint 2010, and Office Word 2007 do not ignore this property.

<95> Section 2.3.27.9: Office Excel 2007, Excel 2010, Office PowerPoint 2007, PowerPoint 2010, and Office Word 2007 do not ignore this property.

<96> Section 2.3.27.11: Office Excel 2007, Excel 2010, Office PowerPoint 2007, PowerPoint 2010, and Office Word 2007 do not ignore this property.

<97> Section 2.3.27.13: Office Excel 2007, Excel 2010, Office PowerPoint 2007, PowerPoint 2010, and Office Word 2007 do not ignore this property.

<98> Section 2.3.27.15: Office Excel 2007, Excel 2010, Office PowerPoint 2007, PowerPoint 2010, and Office Word 2007 do not ignore this property.

<99> Section 2.3.27.17: Office Excel 2007, Excel 2010, Office PowerPoint 2007, PowerPoint 2010, and Office Word 2007 do not ignore this property.

<100> Section 2.4.3: Office Excel 2007, Excel 2010, PowerPoint 97, and PowerPoint 2010 read and use this value properly but do not write it.

<101> Section 2.4.3: Excel 97, Excel 2000, Excel 2002, and Office Excel 2003 use this value.

<102> Section 2.4.3: Excel 97, Word 97, Excel 2000, Word 2000, Excel 2002, and Office Excel 2003 do not use this value.

<103> Section 2.4.4: PowerPoint 97 and PowerPoint 2010 use these values. Exceptions are specified for some individual values.

<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 2.4.4: PowerPoint 97, PowerPoint 2000, PowerPoint 2002, and Office PowerPoint 2003 use this value.

<107> Section 2.4.4: PowerPoint 97, PowerPoint 2000, PowerPoint 2002, and Office PowerPoint 2003 use this value.

<108> Section 2.4.5: PowerPoint 97, PowerPoint 2000, PowerPoint 2002, Office PowerPoint 2003, Office PowerPoint 2007, PowerPoint 2010, Word 97, Word 2000, Word 2002, Office Word 2003, Office Word 2007, and Word 2010 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 **msotxflVertN** when reading it.

<109> Section 2.4.5: Excel 97, Excel 2000, Excel 2002, Office Excel 2003, Office Excel 2007, and Excel 2010 convert this value to **msotxflVertN** when reading it.

<110> Section 2.4.5: Office PowerPoint 2007 and PowerPoint 2010 do not use this value. PowerPoint 97, PowerPoint 2000, PowerPoint 2002 and Office PowerPoint 2003 interpret this value as **msotxflHorzN**.

<111> Section 2.4.5: Office PowerPoint 2007 and PowerPoint 2010 do not use this value. PowerPoint 97, PowerPoint 2000, PowerPoint 2002 and Office PowerPoint 2003 interpret this value as **msotxflHorzN**.

<112> Section 2.4.5: Office PowerPoint 2007 and PowerPoint 2010 do not use this value. PowerPoint 97, PowerPoint 2000, PowerPoint 2002, and Office PowerPoint 2003 interpret this value as **msotxflTtoBA**. Excel 97, Excel 2000, Excel 2002, Office Excel 2003, Office Excel 2007, and Excel 2010 remove this value upon reading it.

<113> Section 2.4.5: Office PowerPoint 2007 and PowerPoint 2010 do not use this value. PowerPoint 97, PowerPoint 2000, PowerPoint 2002, and Office PowerPoint 2003 interpret this value as **msotxflHorzN**. Office Word 2007 and Word 2010 instead place subsequent lines of text to the right of antecedent lines of text. Excel 97, Excel 2000, Excel 2002, Office Excel 2003, Office Excel 2007, and Excel 2010 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, and subsequent lines of text are placed to the right of antecedent lines of text.

<114> Section 2.4.7: Office Excel 2007 and Excel 2010 use this value but do not save it.

<115> Section 2.4.7: Office Excel 2007 and Excel 2010 use this value but do not save it.

<116> Section 2.4.24: Office PowerPoint 2007, PowerPoint 2010, Office Word 2007, Word 2010, Office Excel 2007 and Excel 2010 convert shapes of type **msosptTextSimple** into text boxes that contain unstyled text.

<117> Section 2.4.24: Office PowerPoint 2007, PowerPoint 2010, Office Word 2007, Word 2010, Office Excel 2007 and Excel 2010 convert shapes of type **msosptTextOctagon** into text boxes that contain unstyled text.

<118> Section 2.4.24: Office PowerPoint 2007, PowerPoint 2010, Office Word 2007, Word 2010, Office Excel 2007 and Excel 2010 convert shapes of type **msosptTextHexagon** into text boxes that contain unstyled text.

<120> Section 2.4.24: Office PowerPoint 2007, PowerPoint 2010, Office Word 2007, Word 2010, Office Excel 2007 and Excel 2010 convert shapes of type **msosptTextCurve** into text boxes that contain unstyled text.

<120> Section 2.4.24: Office PowerPoint 2007, PowerPoint 2010, Office Word 2007, Word 2010, Office Excel 2007 and Excel 2010 convert shapes of type **msosptTextWave** into text boxes that contain unstyled text.

<121> Section 2.4.24: Office PowerPoint 2007, PowerPoint 2010, Office Word 2007, Word 2010, Office Excel 2007 and Excel 2010 convert shapes of type **msosptTextRing** into text boxes that contain unstyled text.

<122> Section 2.4.24: Office PowerPoint 2007, PowerPoint 2010, Office Word 2007, Word 2010, Office Excel 2007 and Excel 2010 convert shapes of type **msosptTextOnCurve** into text boxes that contain unstyled text.

<123> Section 2.4.24: Office PowerPoint 2007, PowerPoint 2010, Office Word 2007, Word 2010, Office Excel 2007 and Excel 2010 convert shapes of type **msosptTextOnRing** into text boxes that contain unstyled text.

<124> Section 3: Sample files were created by using Office PowerPoint 2003.

<125> Section 3: Similar structures are created by using Office 97, Office 2000, Office XP, and Office 2003.

<126> Section 3.1: This section pertains to Office 97, Office 2000, Office XP, and Office 2003 **drawing objects**.

<127> Section 3.2: The properties are specific to Office 97, Office 2000, Office XP, and Office 2003 shapes.

6   Change Tracking

This section identifies changes that were made to this document since the last release. Changes are classified as Major, Minor, or None.

The revision class **Major** means that the technical content in the document was significantly revised. Major changes affect protocol interoperability or implementation. Examples of major changes are:

- A document revision that incorporates changes to interoperability requirements.
- A document revision that captures changes to protocol functionality.

The revision class **Minor** means that the meaning of the technical content was clarified. Minor changes do not affect protocol interoperability or implementation. Examples of minor changes are updates to clarify ambiguity at the sentence, paragraph, or table level.

The revision class **None** means that no new technical changes were introduced. Minor editorial and formatting changes may have been made, but the relevant technical content is identical to the last released version.

The changes made to this document are listed in the following table. For more information, please contact dochelp@microsoft.com.

Section	Description	Revision class
2.2.14 OfficeArtSpContainer	Added "optional" to description of shapeSecondaryOptions2 and shapeTertiaryOptions2.	Minor
5 Appendix A: Product Behavior	Updated list of supported products.	Major

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