[MS-ODRAWXML]:
Office Drawing Extensions to Office Open XML Structure

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Revision Summary

Date	Revision History	Revision Class	Comments
07/13/2009	0.1	Major	Initial Availability
08/28/2009	0.2	Major	Updated and revised the technical content
11/06/2009	0.3	Editorial	Revised and edited the technical content
02/19/2010	1.0	Major	Updated and revised the technical content
03/31/2010	1.01	Editorial	Revised and edited the technical content
04/30/2010	1.02	Editorial	Revised and edited the technical content
06/07/2010	1.03	Editorial	Revised and edited the technical content
06/29/2010	1.04	Editorial	Changed language and formatting in the technical content.
07/23/2010	1.04	No change	No changes to the meaning, language, or formatting of the technical content.
09/27/2010	1.04	No change	No changes to the meaning, language, or formatting of the technical content.
11/15/2010	1.04	No change	No changes to the meaning, language, or formatting of the technical content.
12/17/2010	1.04	No change	No changes to the meaning, language, or formatting of the technical content.
03/18/2011	1.04	No change	No changes to the meaning, language, or formatting of the technical content.
06/10/2011	1.04	No change	No changes to the meaning, language, or formatting of the technical content.
01/20/2012	2.0	Major	Significantly changed the technical content.
04/11/2012	2.0	No change	No changes to the meaning, language, or formatting of the technical content.
07/16/2012	3.0	Major	Significantly changed the technical content.

Table of Contents

1 Introduction

This document specifies extensions to the DrawingML ([ISO/IEC-29500:2008]) Office Open XML File Formats structure, which is used in WordprocessingML, SpreadsheetML, and PresentationML ([ISO/IEC-29500:2008]) documents.

Sections 1.7 and 2 of this specification are normative and can contain the terms MAY, SHOULD, MUST, MUST NOT, and SHOULD NOT as defined in RFC 2119. All other sections and examples in this specification are informative.

1.1 Glossary

The following terms are defined in [MS-GLOS]:

GUID
XML

The following terms are defined in [MS-OFCGLOS]:

ActiveX control
binary large image or picture (BLIP)
cell reference
comment
control
drawing canvas
group shape
hue-saturation-luminance (HSL)
hyperlink
ink
Object Linking and Embedding (OLE)
red-green-blue (RGB)
shape
style
text box story
worksheet

The following terms are specific to this document:

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

1.2 References

References to Microsoft Open Specifications documentation do not include a publishing year because links are to the latest version of the technical documents, which are updated frequently. References to other documents include a publishing year when one is available.

1.2.1 Normative References

We conduct frequent surveys of the normative references to assure their continued availability. If you have any issue with finding a normative reference, please contact dochelp@microsoft.com. We will assist you in finding the relevant information. Please check the archive site, http://msdn2.microsoft.com/en-us/library/E4BD6494-06AD-4aed-9823-445E921C9624, as an additional source.

[EMMA] Baggia, P. et al., "EMMA: Extensible MultiModal Annotation markup language", February 2009, http://www.w3.org/TR/2009/REC-emma-20090210/

[InkML] Chee, Y. et al., "Ink Markup Language (InkML)", Working Draft, October 2006, http://www.w3.org/TR/2006/WD-InkML-20061023/

[ISO/IEC-29500:2008] International Organization for Standardization, "Information technology -- Document description and processing languages -- Office Open XML File Formats -- Parts 1-4", ISO/IEC 29500-1:2008, http://www.iso.org/iso/iso_catalogue/catalogue_tc/catalogue_detail.htm?csnumber=51463

[ISO/IEC-29500-1] International Organization for Standardization, "Information technology -- Document description and processing languages -- Office Open XML File Formats -- Part 1: Fundamentals and Markup Language Reference", ISO/IEC 29500-1:2008, http://www.iso.org/iso/iso_catalogue/catalogue_tc/catalogue_detail.htm?csnumber=51463

[ISO/IEC-29500-3] International Organization for Standardization, "Information technology -- Document description and processing languages -- Office Open XML File Formats -- Part 3: Markup Compatibility and Extensibility", ISO/IEC 29500-3:2008, http://www.iso.org/iso/catalogue_detail?csnumber=51461

[ISO/IEC-29500-4] International Organization for Standardization, "Information technology -- Document description and processing languages -- Office Open XML File Formats -- Part 4: Transitional Migration Features", ISO/IEC 29500-4:2008, http://www.iso.org/iso/iso_catalogue/catalogue_tc/catalogue_detail.htm?csnumber=51462

[MathML2.0] Ausbrooks, R., et al., "Mathematical Markup Language (MathML) Version 2.0 (Second Edition)", W3C Recommendation, October 2003, http://www.w3.org/TR/2003/REC-MathML2-20031021/

[MS-DOCX] Microsoft Corporation, "Word Extensions to the Office Open XML File Format (.docx) Specification".

[MS-ODRAW] Microsoft Corporation, "Office Drawing Binary File Format Structure Specification".

[MS-PPTX] Microsoft Corporation, "PowerPoint Extensions to the Office Open XML File Format (.pptx) Specification".

[MS-XLSB] Microsoft Corporation, "Excel Binary File Format (.xlsb) Structure Specification".

[MS-XLSX] Microsoft Corporation, "Excel Extensions to the Office Open XML SpreadsheetML File Format (.xlsx) Specification".

[RFC2119] Bradner, S., "Key words for use in RFCs to Indicate Requirement Levels", BCP 14, RFC 2119, March 1997, http://www.rfc-editor.org/rfc/rfc2119.txt

[RFC4122] Leach, P., Mealling, M., and Salz, R., "A Universally Unique Identifier (UUID) URN Namespace", RFC 4122, July 2005, http://www.ietf.org/rfc/rfc4122.txt

[XMLSCHEMA1] Thompson, H.S., Ed., Beech, D., Ed., Maloney, M., Ed., and Mendelsohn, N., Ed., "XML Schema Part 1: Structures", W3C Recommendation, May 2001, http://www.w3.org/TR/2001/REC-xmlschema-1-20010502/

[XMLSCHEMA2] Biron, P.V., Ed. and Malhotra, A., Ed., "XML Schema Part 2: Datatypes", W3C Recommendation, May 2001, http://www.w3.org/TR/2001/REC-xmlschema-2-20010502/

1.2.2 Informative References

[ISO/IEC-29500-2] International Organization for Standardization, "Information technology -- Document description and processing languages -- Office Open XML File Formats -- Part 2: Open Packaging Conventions", ISO/IEC 29500-2:2008, http://www.iso.org/iso/iso_catalogue/catalogue_tc/catalogue_detail.htm?csnumber=51459

[MS-GLOS] Microsoft Corporation, "Windows Protocols Master Glossary".

[MS-OFCGLOS] Microsoft Corporation, "Microsoft Office Master Glossary".

1.3 Structure Overview (Synopsis)

The structures specified in this format provide an extended XML vocabulary for the DrawingML file format structure. The extended elements and attributes enable the format to indicate further information about a document, or content and formatting of parts of the document beyond the elements and attributes of the Office Open XML File Formats as described in [ISO/IEC-29500:2008]. Because these elements and attributes are meant as extensions, their intent and usage varies.

The extensions specified in this format are integrated into Office Open XML file formats by means of the Markup Compatibility and Extensibility features described in [ISO/IEC-29500-3]. Specifically, the **Ignorable** attribute, the **AlternateContent** element, and application-defined extension elements maintain compatibility with Office Open XML File Formats implementations when integrating the extensions from this format. Using these extensions as specified in this document results in Office Open XML file formats conformance.

The following sections provide an overview of the functionality supported by these extensions.

1.3.1 Charts

Chart extensions add a number of features to charts ([ISO/IEC-29500-1] section 21.2). Following are the new extensions:

- The **invertSolidFillFmt** extension for the **ser** element described in [ISO/IEC-29500-1] section 21.2.2.170 and the **ser** element described in [ISO/IEC-29500-1] section 21.2.2.174 specify the color of the negative data points of the chart series ([ISO/IEC-29500-1] section 21.2).
- The **pivotOptions** extension for the **chartspace** element ([ISO/IEC-29500-1] section 21.2.2.29) specifies which pivot controls appear on the chart ([ISO/IEC-29500-1] section 21.2).
- The **style** extension for the **chartspace** element ([ISO/IEC-29500-1] section 21.2.2.29) specifies the new styles of the chart ([ISO/IEC-29500-1] section 21.2).
- The **filteredLineSeries** extension for the **lineChart** element ([ISO/IEC-29500-1] section 21.2.2.97) and the **line3DChart** ([ISO/IEC-29500-1] section 21.2.2.96) specifies a series that has been filtered from the chart ([ISO/IEC-29500-1] section 21.2).
- The **filteredScatterSeries** extension for the **scatterChart** element ([ISO/IEC-29500-1] section 21.2.2.161) specifies a series that has been filtered from the chart ([ISO/IEC-29500-1] section 21.2).
- The **filteredRadarSeries** extension for the **radarChart** element ([ISO/IEC-29500-1] section 21.2.2.153) specifies a series that has been filtered from the chart ([ISO/IEC-29500-1] section 21.2).

- The **filteredBarSeries** extension for the **barChart** element ([ISO/IEC-29500-1] section 21.2.2.16) and the **bar3DChart** ([ISO/IEC-29500-1] section 21.2.2.15) specifies a series that has been filtered from the chart ([ISO/IEC-29500-1] section 21.2).

- The **filteredAreaSeries** extension for the **areaChart** element ([ISO/IEC-29500-1] section 21.2.2.5) and the **area3DChart** ([ISO/IEC-29500-1] section 21.2.2.4) specifies a series that has been filtered from the chart ([ISO/IEC-29500-1] section 21.2).

- The **filteredBubbleSeries** extension for the **bubbleChart** element ([ISO/IEC-29500-1] section 21.2.2.97) specifies a series that has been filtered from the chart ([ISO/IEC-29500-1] section 21.2).

- The **filteredSurfaceSeries** extension for the **surfaceChart** element ([ISO/IEC-29500-1] section 21.2.2.204) and the **surface3DChart** ([ISO/IEC-29500-1] section 21.2.2.203) specifies a series that has been filtered from the chart ([ISO/IEC-29500-1] section 21.2).

- The **fullRef** extension for the **strRef** element ([ISO/IEC-29500-1] section 21.2.2.201) and the **numRef** ([ISO/IEC-29500-1] section 21.2.2.123) and the **multiLvlStrRef** ([ISO/IEC-29500-1] section 21.2.2.115) specifies the non-filtered data source reference for filtered out chart ([ISO/IEC-29500-1] section 21.2) series data.

- The **levelRef** extension for the **strRef** element ([ISO/IEC-29500-1] section 21.2.2.201) and the **numRef** ([ISO/IEC-29500-1] section 21.2.2.123) and the **multiLvlStrRef** ([ISO/IEC-29500-1] section 21.2.2.115) specifies the data source reference for the currently selected label level for a chart ([ISO/IEC-29500-1] section 21.2) category axis or a chart ([ISO/IEC-29500-1] section 21.2) series title.

- The **formulaRef** extension for the **strRef** element ([ISO/IEC-29500-1] section 21.2.2.201) and the **numRef** ([ISO/IEC-29500-1] section 21.2.2.123) and the **multiLvlStrRef** ([ISO/IEC-29500-1] section 21.2.2.115) specifies the data source reference of the parent element when the parent is part of an extension list.

- The **filteredSeriesTitle** extension for the **ser** element ([ISO/IEC-29500-1] section 21.2.2.168) and the **ser** element ([ISO/IEC-29500-1] section 21.2.2.170) and the **ser** element ([ISO/IEC-29500-1] section 21.2.2.174) and the **ser** element ([ISO/IEC-29500-1] section 21.2.2.171) and the **ser** element ([ISO/IEC-29500-1] section 21.2.2.172) and the **ser** element ([ISO/IEC-29500-1] section 21.2.2.169) and the **ser** element ([ISO/IEC-29500-1] section 21.2.2.167) and the **ser** element ([ISO/IEC-29500-1] section 21.2.2.173) specifies a chart ([ISO/IEC-29500-1] section 21.2) series title that has been filtered from the chart ([ISO/IEC-29500-1] section 21.2).

- The **filteredCategoryTitle** extension for the **ser** element ([ISO/IEC-29500-1] section 21.2.2.168) and the **ser** element ([ISO/IEC-29500-1] section 21.2.2.170) and the **ser** element ([ISO/IEC-29500-1] section 21.2.2.174) and the **ser** element ([ISO/IEC-29500-1] section 21.2.2.171) and the **ser** element ([ISO/IEC-29500-1] section 21.2.2.172) and the **ser** element ([ISO/IEC-29500-1] section 21.2.2.169) and the **ser** element ([ISO/IEC-29500-1] section 21.2.2.167) and the **ser** element ([ISO/IEC-29500-1] section 21.2.2.173) specifies a chart ([ISO/IEC-29500-1] section 21.2) category title that has been filtered from the chart ([ISO/IEC-29500-1] section 21.2).

- The **pivotSource** extension for the **chartspace** element ([ISO/IEC-29500-1] section 21.2.2.29) specifies the source Non-Worksheet PivotTable ([MS-XLSX] section 2.3.3 and [MS-XLSB] section 2.2.5.5 for the chart ([ISO/IEC-29500-1] section 21.2).

- The **numFmt** extension for the **catAx** element ([ISO/IEC-29500-1] section 21.2.2.25), **dateAx** element ([ISO/IEC-29500-1] section 21.2.2.39), **serAx** element ([ISO/IEC-29500-1] section 21.2.2.175) and **valAx** element ([ISO/IEC-29500-1] section 21.2.2.226) that specifies the

number formatting for the chart category axis, date axis, series axis and value axis ([ISO/IEC-29500-1] section 21.2) whose **pivotSource** element specifies a Non-Worksheet PivotTable ([MS-XLSX] section 2.3.3 and [MS-XLSB] section 2.2.5.5).

The **showLeaderLines** extension for the **dLbls** element ([ISO/IEC-29500-1] section 21.2.2.49) specifies whether leader lines will be rendered for **Datalabels** (section 2.2.1.2) in a chart of any type.

- The **leaderLines** extension for the **dLbls** element ([ISO/IEC-29500-1] section 21.2.2.49) specifies the formatting of leader lines for **Datalabels** in a chart of any type.
- The **datalabelsRange** extension for the **ser** element ([ISO/IEC-29500-1] section 21.2.2.168) and the **ser** element ([ISO/IEC-29500-1] section 21.2.2.170) and the **ser** element ([ISO/IEC-29500-1] section 21.2.2.174) and the **ser** element ([ISO/IEC-29500-1] section 21.2.2.171) and the **ser** element ([ISO/IEC-29500-1] section 21.2.2.172) and the **ser** element ([ISO/IEC-29500-1] section 21.2.2.169) and the **ser** element ([ISO/IEC-29500-1] section 21.2.2.167) and the **ser** element ([ISO/IEC-29500-1] section 21.2.2.173) specifies the reference to the formula from which the values of on a chart series ([ISO/IEC-29500-1] section 21.2) are obtained.
- The **categoryFilterExceptions** extension for the **ser** element ([ISO/IEC-29500-1] section 21.2.2.168) and the **ser** element ([ISO/IEC-29500-1] section 21.2.2.170) and the **ser** element ([ISO/IEC-29500-1] section 21.2.2.174) and the **ser** element ([ISO/IEC-29500-1] section 21.2.2.171) and the **ser** element ([ISO/IEC-29500-1] section 21.2.2.172) and the **ser** element ([ISO/IEC-29500-1] section 21.2.2.169) and the **ser** element ([ISO/IEC-29500-1] section 21.2.2.167) and the **ser** element ([ISO/IEC-29500-1] section 21.2.2.173) specifies special formatting properties of data points that have been filtered out from the chart series ([ISO/IEC-29500-1] section 21.2).
- The **dlblFieldTable** extension for the **dLbls** element ([ISO/IEC-29500-1] section 21.2.2.49) or the **dLbl** element ([ISO/IEC-29500-1] section 21.2.2.47) specifies the list of formulas from which the value of individual data fields in the **Datalabel** (section 2.2.1.3) is obtained.
- The **xForSave** extension for the **dLbl** element ([ISO/IEC-29500-1] section 21.2.2.47) specifies if this **Datalabel** was created as an exception entry only for saving, but is treated the same as the prototype **Datalabel** in the collection.
- The **showDataLabelsRange** extension for the **dLbls** element ([ISO/IEC-29500-1] section 21.2.2.49) or the **dLbl** element ([ISO/IEC-29500-1] section 21.2.2.47) specifies if the value of the **Datalabel** should contain the range field which allows values to be specified from a formula for multiple **Datalabels**.
- The **tx** extension for the **dLbls** element ([ISO/IEC-29500-1] section 21.2.2.49) specifies the custom text associated with the **Datalabels** collection, which determines the value of each **Datalabel** in that collection.
- The **spPr** extension for the **dLbls** element ([ISO/IEC-29500-1] section 21.2.2.49) or the **dLbl** element ([ISO/IEC-29500-1] section 21.2.2.47) specifies the shape geometry for the **Datalabel**.
- The **layout** extension for the **dLbls** element ([ISO/IEC-29500-1] section 21.2.2.49) or the **dLbl** element ([ISO/IEC-29500-1] section 21.2.2.47) specifies the custom size of the **Datalabel**.
- The **autoCat** extension for the **strLit** element ([ISO/IEC-29500-1] section 21.2.2.200) specifies if the category captions for the chart series were automatically generated and saved out as literal data.

1.3.2 Content Parts and Ink

Ink is stored in documents as an extension by using a part referenced by the relationship **id** attribute of a content part element. Some content part elements are described in [ISO/IEC-29500-1] section 17.3.3.2, 19.3.1.14, and 20.5.2.12. Other content part elements are themselves extensions (2.2.2). The content of the part contains XML that conforms to a subset of the syntax and semantics for the Ink Markup Language as described in [InkML], the W3C EMMA recommendation specification [EMMA], and other extended elements (2.1.4).

1.3.3 Pictures

Embedded raster images (bitmaps) can be edited and replaced by the processed results. Unless the document author disables storing image editing data, the original bitmap and the processing parameters applied are stored in the **imgProps** extension (2.3.1) to enable non-destructive editing of the bitmap. For backward compatibility and performance, applications do not display changes made to the image-editing data for the embedded bitmaps unless the user edits them with the application UI or through the Object Model.

Bitmap pictures are resampled and compressed when inserted and saved based on document DPI. Individual bitmaps can be set to override the default document compression setting by using the **useLocalDpi** extension (2.3.2).

A user can insert embedded html, including online videos, into Word by storing the embedded html and related data into the **webVideoPr** extension (2.3.677).

1.3.4 Diagrams

The last successful layout for a diagram is stored in documents as an extension by using a Diagram Layout part. The part is referenced by the relationship **id** attribute of a **DataModelExt** extension to the Data Model. For more information, see [ISO/IEC-29500-1] section 21.4.2.10. The content of the part contains XML as defined by Diagram Layout (section 2.1.3).

The **DataModelExt** contains a version URI that represents the minimum version required to run the layout. If an application version is insufficient to perform layout, the Diagram Layout can be used to display the diagram.

The **recolorImg** extension specifies recoloring images in the diagram according to the color style currently applied. This gives images a more integrated look.

The **cNvPr** extension adds non-visual drawing properties to points in the diagram. This enables adding **hyperlinks** and alternative text for use by assistive technologies or applications that do not display the diagram shapes.

1.3.5 Math

Math extensions represent mathematical expressions in DrawingML content. Mathematical equations in objects represented in DrawingML are stored in **AlternateContent** elements. These **AlternateContent** elements contain DrawingML and the math-specific element, **m**. The expression of mathematical content in DrawingML objects is similar to the representation of math in WordprocessingML ([ISO/IEC-29500-1] section 22.1) with the distinction that the math content in DrawingML is modified by properties specified in the DrawingML namespace, rather than in WordprocessingML.

1.3.6 SpreadsheetML Drawing

ActiveX control objects, Embedded **OLE** and form **control** embedded objects in SpreadsheetML are each associated with a **shape** in DrawingML. The shape in DrawingML is a placeholder that specifies the position of the embedded object in the worksheet drawing tree that in turn specifies the embedded object z-order and grouping information in relation to other drawing objects.

Visible text and visible text-related properties of form control embedded objects are specified by the **txBody** element of the placeholder shape. For more information, see [ISO/IEC-29500-1] section 20.5.2.34.

An implementing application can replace this shape with any other placeholder shape when saving.

1.3.7 WordprocessingML Drawing

WordprocessingML drawing extensions integrate graphical objects into WordprocessingML documents. See 2.2.7 for a discussion of how these objects are integrated and how interoperation with clients that conform to the Office Open XML file formats, as described in [ISO/IEC-29500:2008], is achieved.

The primary graphical objects introduced are the following:

- Shapes are represented by the **wsp** element of type **CT_WordprocessingShape (**section 2.5.76).
- Groups of graphical objects are represented by the **wgp** element of type **CT_WordprocessingGroup (**section 2.5.78).
- Canvases are represented by the **wpc** element of type **CT_WordprocessingCanvas (**section 2.5.79).
- **Ink** objects are represented by the contentPart element of type **CT_WordContentPart (**section 2.5.38).

Groups and canvases are similar in structure, but have different behavior. Both groups and canvases can contain any graphical object as a **graphic** element as described in [ISO/IEC-29500-1] section 20.1.2.2.16 in addition to other shapes, pictures, groups, and ink.

Additionally, the picture type defined for WordprocessingML as described in [ISO/IEC-29500-1] section 20.2.2.5 has been extended to enable styling information to be applied.

Moreover, the picture non-visual picture properties represented by the element **cNvPicPr** of type **CT_NonVisualPictureProperties** (as specified in [ISO/IEC-29500-1] section 19.3.1.11) was extended to represent properties for a control or object using a CT_ObjectPr element defined as objectPr.

1.3.8 Legacy Objects

The picture non visual picture properties represented by the element **cNvPicPr** of type **CT_NonVisualPictureProperties** (as specified in [ISO/IEC-29500-1] section 19.3.1.11) was extended to represent properties for a legacy signature line object using a CT_SignatureLine element defined as signatureLine.

Additionally, the non-visual group drawing shape properties represented by the element **cNvGrpSpPr** of type **CT_NonVisualGroupDrawingShapeProps** (as specified in [ISO/IEC-29500-1] section 19.3.1.10) was extended to specify if a group was originally a legacy group object using a CT_NonVisualGroupProps element defined as nonVisualGroupProps.

1.4 Relationship to Protocols and Other Structures

The Office Drawing extensions to Office Open XML file formats as described in [ISO/IEC-29500:2008] are a specified set of extensions to Office Open XML DrawingML, as described in [ISO/IEC-29500-1]. This specification is dependent on the structures and concepts defined in the following references:

- [ISO/IEC-29500-1] for baseline DrawingML persistence format
- [ISO/IEC-29500-2] for open packaging conventions
- [ISO/IEC-29500-3] for markup compatibility and extensibility
- [ISO/IEC-29500-4] for backward-compatibility considerations
- [MS-DOCX] for WordprocessingML extensions
- [MS-XLSX] for SpreadsheetML extensions
- [MS-PPTX] for PresentationML extensions

1.5 Applicability Statement

This document specifies a persistence format for extensions, as described in [ISO/IEC-29500-1], to the Office Open XML file formats for DrawingML ([ISO/IEC-29500:2008]) content in WordprocessingML, SpreadsheetML, and PresentationML ([ISO/IEC-29500:2008]) documents. The extensions specified in this document enable expressing additional content and properties, and are not applicable as a stand-alone file format. Each structure specified in this document is integrated with the Office Open XML file formats as described in [ISO/IEC-29500-1] for DrawingML content as specified in the section for that structure. All structures are integrated into DrawingML content to maintain compatibility with implementations of the Office Open XML file formats as described in [ISO/IEC-29500-1].

The extensions specified in this document do not require any other extensions to be used and do not prohibit any other extensions from being used in the same document.

1.6 Versioning and Localization

None.

1.7 Vendor-Extensible Fields

None.

2 Structures

2.1 Part Enumerations

The following subsections enumerate the parts, content types, source relationships, and part contents used by extensions specified in this document.

2.1.1 Chart Colors

The following table shows the content type and source relationship of a Chart Colors part.<1>

Part components	Value
Content Type	application/vnd.ms-office.chartcolorstyle+xml
Source Relationship	http://schemas.microsoft.com/office/2011/relationships/chartColorStyle

An instance of this part specifies the colors that are used to resolve placeholder colors in an instance of a Chart Style part.

A Chart Colors part MUST be a sibling to a Chart Part ([ISO/IEC-29500-1] section 14.2.1).

2.1.2 Chart Style

The following table shows the content type and source relationship of a Chart Style part.<2>

Part components	Value
Content Type	application/vnd.ms-office.chartstyle+xml
Source Relationship	http://schemas.microsoft.com/office/2011/relationships/chartStyle

An instance of this part specifies the formatting properties for all elements on a chart.

A Chart Style part MUST be a sibling to a Chart Part ([ISO/IEC-29500-1] section 14.2.1).

2.1.3 Diagram Layout

The following table shows the content type and source relationship of a Diagram Layout part.

Part components	Value
Content Type	application/vnd.ms-office.drawingml.diagramDrawing+xml
Source Relationship	http://schemas.microsoft.com/office/2007/relationships/diagramDrawing

An instance of this part specifies the last successful layout of a diagram.

A Diagram Layout part MUST be the target of an relationship from a WordprocessingML Main Document ([ISO/IEC-29500-1] section 11.3.10); a SpreadsheetML Drawings part ([ISO/IEC-29500-1] section 12.3.8), PresentationML Handout Master ([ISO/IEC-29500-1] section 13.3.3), Notes Master ([ISO/IEC-29500-1] section 13.3.4), Notes Slide ([ISO/IEC-29500-1] section 13.3.5), Slide ([ISO/IEC-29500-1] section 13.3.8), Slide Layout ([ISO/IEC-29500-1] section 13.3.9), or Slide Master ([ISO/IEC-29500-1] section 13.3.10) part.

A Diagram Data part is permitted to have explicit relationships to an Image Part ([ISO/IEC-29500-1] section 15.2.14) and a Hyperlink ([ISO/IEC-29500-1] section 15.3).

The content of the Diagram Layout<3> part is **XML**. The root element of this part is drawing.

2.1.4 Ink Content Part

The following table shows the content type and source relationship of an Ink Content part.

Part components	Value
Content Type	application/inkml+xml
Source Relationship	http://schemas.openxmlformats.org/officeDocument/2006/relationships/customXml

An instance of this part specifies an **Ink** object.

An Ink Content part MUST be the target of an explicit relationship with a Document part containing a **contentPart** element ([ISO/IEC-29500-1] section 17.3.3.2), WordprocessingML Drawing **contentPart** (2.3.4) or **lockedCanvas** element ([ISO/IEC-29500-1] section 20.3.2.1) with **contentPart** element (2.3.9), a Slide part containing a **contentPart** element ([ISO/IEC-29500-1] section 19.3.1.14), a Worksheet Drawing part containing a **contentPart** element ([ISO/IEC-29500-1] section 20.5.2.12) or SpreadsheetML group **contentPart** element (2.3.10), or a Chart Drawing part containing a **contentPart** element (2.3.24).

The content of the Ink part is XML as specified by a subset of syntax and semantics for the Ink Markup Language as specified in [InkML]. The following table defines the subset of constructs supported as specified in [InkML]. The sections in the first column are references to the sections of [InkML]. The second column indicates the level of support for the construct.

InkML Structural Element	Description
ink	The root element of this part MUST be **ink**, and it MUST be in the http://www.w3.org/2003/InkML namespace.
traceFormat	MUST be a child of an **inkSource** to be recognized. It MAY<4> be a child of other elements specified in [InkML], but its presence in elements other than **inkSource** is ignored and not persisted.
intermittentChannels	MAY<5> appear as a child element of **traceFormat** elements, but is ignored and not persisted.
channel	One or more **channel** elements MUST appear as child elements of a **traceFormat** element. The **type** attribute MAY<6> be any string, but strings other than the following strings are ignored: X, Y, Z, S, T, SN, F, TP, BP, OTx, OTy, OA, OE, OR, RP, RR, RY, TW, TH, and TC. If the channel type "T" is used, the channel values MUST be integers that represent milliseconds. The **orientation** attribute MAY<7> be present, but is ignored. The **respectTo** attribute MAY<8> be present, but is ignored. The **units** attribute MAY<9> be any string, but any value other than the following value is ignored: dev, in, cm, deg, rad, s, lb, and g.
trace	There MAY<10> be one or more **trace** elements at the root level of the part, or as child elements of **traceGroup** elements.

InkML Structural Element	Description
	The **type** attribute MAY<11> be present, but is ignored and not persisted. The **continuation** attribute MAY<12> be present, but is ignored and not persisted. The **priorRef** attribute MAY<13> be present, but is ignored and not persisted. The **contextRef** attribute MUST be present and MUST reference the **id** of a **context** element defined in this part. The **brushRef** attribute MUST be present and MUST reference the **id** of a **brush** element defined in this part. The **duration** attribute MAY<14> be present, but is ignored and not persisted. The **timeOffset** attribute MAY<15> be present, but is ignored and not persisted. The contents of a **trace** element MUST be a string that conforms to the syntax and semantics for the Ink Markup Language as specified in [InkML] section 3.2.1.
traceGroup	There MAY<16> be one or more **traceGroup** elements at the root level of the part, or as child elements of other **traceGroup** elements. The **contextRef** attribute MAY<17> be present, but is ignored and not persisted. The **brushRef** attribute MAY<18> be present, but is ignored and not persisted. The **annotation** element MAY<19> be present as a child element, but is ignored and not persisted. The **annotationXML** element MAY<20> be present as a child element. If present, it MUST contain an **emma:emma** element conforming to the format described in the following section on the Extensible MultiModal Annotation markup language (EMMA) as specified in the [EMMA] specification. Any other content is ignored and not persisted.
traceView	The **traceView** element MAY<21> be present, but is ignored and not persisted.
context	MUST be a child of a **definitions** element to be recognized. It MAY<22> be a child of other elements, but its presence in elements other than **definitions** is ignored and not persisted. The **contextRef** attribute MAY<23> be present, but is ignored and not persisted. The **canvasRef** attribute MAY<24> be present, but is ignored and not persisted. The **canvasTransformRef** attribute MAY<25> be present, but is ignored and not persisted. The **traceFormatRef** attribute MAY<26> be present, but is ignored and not persisted. The **inkSourceRef** attribute MAY<27> be present, but is ignored and not persisted. The **brushRef** attribute MAY<28> be present, but is ignored and not persisted. The **timestampRef** attribute MAY<29> be present, but is ignored and not persisted. The **canvas** element MAY<30> be present as a child element, but is ignored and not persisted. The **canvasTransform** element MAY<31> be present as a child element, but is ignored and not persisted. The **timestamp** element MAY<32> be present as a child element, but is

InkML Structural Element	Description
	ignored and not persisted.
inkSource	The **xml:id** attribute MUST be present.
sampleRate	MAY<33> be present as a child element, but is ignored and not persisted.
latency	MAY<34> be present as a child element, but is ignored and not persisted.
activeArea	MAY<35> be present as a child element, but is ignored and not persisted.
srcProperty	MAY<36> be present as a child element, but is ignored and not persisted.
channelProperties	MAY<37> be present as a child element.
channelProperty	MAY<38> appear as a child of **channelProperties** elements. The **channel** attribute MUST specify a channel previously defined in a **traceFormat**. The **name** attribute MAY<39> contain any name, but only the value "resolution" is regarded and persisted. All other values are ignored and not persisted.
brush	MAY<40> have a **brushRef** attribute, but it is ignored and not persisted.
brushProperty	The **brushProperty** element MUST have a **name** attribute. The value of name MAY<41> be any string, but only the values width, height, color, transparency, tip, rasterOp, antiAliased, fitToCurve, and ignorePressure are used. Any other value causes the **brushProperty** element to be ignored. The optional **value** and **units** attributes MUST conform to certain parameters depending on the **name** attribute value. If the **value** or **units** values do not conform to the following list, then a default value/unit is used. **width** Width of the brush. The **value** attribute MUST be an xsd:decimal, and the **units** attribute MUST be a length unit as specified in [InkML] section 6.4. Default is .053 cm. **height** Height of the brush. The **value** attribute MUST be an xsd:decimal, and the **units** attribute MUST be a length unit as specified in [InkML] section 6.4. Default is .001 cm. **color** Color of brush in RGB. The **value** attribute MUST be a string that begins with a '#' character followed by six hexadecimal digits. The **units** attribute MUST NOT be present. Default is #000000. **transparency** Transparency of brush. The **value** attribute MUST be an xsd:int in the range of 0-255. The **units** attribute MUST NOT be present. Default is 0. **tip** The type of pen tip.

InkML Structural Element	Description
	The **value** attribute MUST be either ellipse or rectangle. The **units** attribute MUST NOT be present. Default is **ellipse**. **rasterOp** A value that defines how the colors of the pen and background interact. The **value** attribute MUST be noOperation, copyPen, maskPen, black, maskNotPen, maskPenNot, mergeNotPen, mergePen, mergePenNot, not, notCopyPen, notMaskPen, notMergePen, notXOrPen, white, or xOrPen. The **units** attribute MUST NOT be present. The default value is copyPen. **antiAliased** A value that indicates if the drawn ink is anti-aliased. The **value** attribute MUST be a xsd:boolean. The **units** attribute MUST NOT be present. Default is true. **fitToCurve** A value that indicates if the ink is rendered as a series of curves versus as lines between pen sample points. The **value** attribute MUST be a xsd:boolean. The **units** attribute MUST NOT be present. Default is false. **ignorePressure** A value that indicates if pressure from the pen tip is ignored. The **value** attribute MUST be a xsd:boolean. The **units** attribute MUST NOT be present. Default is false.
timestamp	MAY<42> be present, but is ignored and not persisted.
canvas	MAY<43> be present, but is ignored and not persisted.
canvasTransform	MAY<44> be present, but is ignored and not persisted.
mapping	MAY<45> be present, but is ignored and not persisted.
bind	MAY<46> be present, but is ignored and not persisted.
table	MAY<47> be present, but is ignored and not persisted.
matrix	MAY<48> be present, but is ignored and not persisted.
definitions	MAY<49> contain child **trace** elements, but they are ignored and not persisted. The **trace** element is regarded as a child element of only **ink** or **traceGroup** parent elements. MAY<50> contain child **traceGroup** elements, but they are ignored and not persisted. The **traceGroup** element is regarded as a child element of only **ink** or other **traceGroup** parent elements. MAY<51> contain child **inkSource** elements, but they are ignored and not persisted. The **inkSource** element is regarded as a child element of only **context** parent elements. MAY<52> contain child **traceFormat** elements, but they are ignored and not persisted. The **traceFormat** element is regarded as a child element of only

InkML Structural Element	Description
	inkSource parent elements.
annotation	MAY<53> be present, but is ignored and not persisted.
annotationXML	If present as a child element of a **traceGroup** element, it MUST contain an **emma:emma** element that conforms to the subset of the EMMA as specified in [EMMA]. Otherwise, it is ignored and not persisted.

The **annotationXML** elements of a **traceGroup** element if present MUST contain XML that conforms to a subset of the EMMA as specified in [EMMA]. The following table defines the subset of constructs that are supported as specified in [EMMA]. The sections in the first column are references to the sections of [EMMA]. The second column indicates the level of support for the construct.

EMMA structural element	Description
Root element: **emma:emma**	The root element of the part MUST be **emma**, and it MUST be in the http://www.w3.org/2003/04/emma namespace.
Interpretation element: **emma:interpretation**	The first child element MUST be an **emma:interpretation** element, and it MUST contain a **context** element. The **id** attribute of the **emma:interpretation** element MAY<54> be present. If present, this attribute MUST be a **GUID**. The **emma:mode** attribute MUST be present and MUST be set to "ink".
emma:one-of element	The second child element of **emma:emma** is an **emma:one-of** element, it MUST contain one or more **emma:interpretation** elements, and the child elements MUST be **emma:literal** elements that contain plain text. The series of literal interpretations specifies the recognized text of the ink object. The order of the **emma:interpretation** elements MUST be sorted in order of confidence, from highest to lowest. The **disjunction-type** attribute MUST be present and MUST be set to "recognition".
emma:group element	The **emma:emma** element MAY<55> contain an **emma:group** element, but its contents are ignored and not persisted.
emma:sequence element	The **emma:emma** element MAY<56> contain an **emma:sequence** element, but its contents are ignored and not persisted.
Lattice markup: **emma:lattice**, **emma:arc**, and **emma:node** elements	The **emma:interpretation** element MAY<57> contain an **emma:lattice** element, but its contents are ignored and not persisted.

2.2 Extensions

This section specifies the elements from the Office Open XML file formats as specified in [ISO/IEC-29500-1] that are extended by this format. Either the **Ignorable** attribute ([ISO/IEC-29500-3] section 10.1.1), the **Alternate-Content** elements ([ISO/IEC-29500-3] section 10.2), or the **extLst** element ([ISO/IEC-29500-1] section 20.1.2.2.15, [ISO/IEC-29500-1] section 21.2.2.64, or [ISO/IEC-29500-1] section 21.4.2.13) MUST be used to maintain compatibility with Office Open XML file formats as specified in [ISO/IEC-29500:2008].

2.2.1 Charts

The **chartspace** element ([ISO/IEC-29500-1] section 21.2.2.29) is extended by the addition of an **AlternateContent** child element ([ISO/IEC-29500-3] section 10.2.1), for which the structure is specified in the following table.

AlternateContent components	Child element
Choice: http://schemas.microsoft.com/office/drawing/2007/8/2/chart	**style**
Fallback	**style** ([ISO/IEC-29500-1] section 21.2.2.202)

The **extLst** child element ([ISO/IEC-29500-1] section 21.2.2.64) of the **ser** element ([ISO/IEC-29500-1] section 21.2.2.170) is extended by the addition of an **ext** child element, for which the structure is specified in the following table.

Extension URI	Child element
{6F2FDCE9-48DA-4B69-8628-5D25D57E5C99}	**invertSolidFillFmt**

The **extLst** child element ([ISO/IEC-29500-1] section 21.2.2.64) of the **ser** element ([ISO/IEC-29500-1] section 21.2.2.174) is extended by the addition of an **ext** child element, for which the structure is specified in the following table.

Extension URI	Child element
{6F2FDCE9-48DA-4B69-8628-5D25D57E5C99}	**invertSolidFillFmt**

The **extLst** child element ([ISO/IEC-29500-1] section 21.2.2.64) of the **chartspace** element ([ISO/IEC-29500-1] section 21.2.2.27) is extended by the addition of an **ext** child element, for which the structure is specified in the following table.

Extension URI	Child element
{781A3756-C4B2-4CAC-9D66-4F8BD8637D16}	**pivotOptions**

The **extLst** child element ([ISO/IEC-29500-1] section 21.2.2.64) of the **chartspace** element ([ISO/IEC-29500-1] section 21.2.2.27) is extended by the addition of an **ext** child element, for which the structure is specified in the following table.<58>

Extension URI	Child element
{723BEF56-08C2-4564-9609-F4CBC75E7E54}	**pivotSource**
{723BEF56-08C2-4564-9609-F4CBC75E7E54}	**pivotOptions**

The **extLst** child element ([ISO/IEC-29500-1] section 21.2.2.64) of the **dateAx** element ([ISO/IEC-29500-1] section 21.2.2.39) is extended by the addition of an **ext** child element, for which the structure is specified in the following table.<59>

Extension URI	Child element
{F40574EE-89B7-4290-83BB-5DA773EAF853}	**numFmt**

The **extLst** child element ([ISO/IEC-29500-1] section 21.2.2.64) of the **catAx** element ([ISO/IEC-29500-1] section 21.2.2.25) is extended by the addition of an **ext** child element, for which the structure is specified in the following table.<60>

Extension URI	Child element
{F40574EE-89B7-4290-83BB-5DA773EAF853}	**numFmt**

The **extLst** child element ([ISO/IEC-29500-1] section 21.2.2.64) of the **serAx** element ([ISO/IEC-29500-1] section 21.2.2.175) is extended by the addition of an **ext** child element, for which the structure is specified in the following table.<61>

Extension URI	Child element
{F40574EE-89B7-4290-83BB-5DA773EAF853}	**numFmt**

The **extLst** child element ([ISO/IEC-29500-1] section 21.2.2.64) of the **valAx** element ([ISO/IEC-29500-1] section 21.2.2.226) is extended by the addition of an **ext** child element, for which the structure is specified in the following table.<62>

Extension URI	Child element
{F40574EE-89B7-4290-83BB-5DA773EAF853}	**numFmt**

See [ISO/IEC-29500-1] section 10.1.2 for more details about extension lists.

2.2.1.1 Filtering

The **extLst** child element ([ISO/IEC-29500-1] section 21.2.2.64) of the **ser** element ([ISO/IEC-29500-1] section 21.2.2.168) is extended by the addition of an **ext** child element, for which the structure is specified in the following table.<63>

Extension URI	Child element
{02D57815-91ED-43cb-92C2-25804820EDAC}	**filteredSeriesTitle**
{02D57815-91ED-43cb-92C2-25804820EDAC}	**filteredCategoryTitle**

The **extLst** child element ([ISO/IEC-29500-1] section 21.2.2.64) of the **ser** element ([ISO/IEC-29500-1] section 21.2.2.170) is extended by the addition of an **ext** child element, for which the structure is specified in the following table.<64>

Extension URI	Child element
{02D57815-91ED-43cb-92C2-25804820EDAC}	**filteredSeriesTitle**
{02D57815-91ED-43cb-92C2-25804820EDAC}	**filteredCategoryTitle**

The **extLst** child element ([ISO/IEC-29500-1] section 21.2.2.64) of the **ser** element ([ISO/IEC-29500-1] section 21.2.2.174) is extended by the addition of an **ext** child element, for which the structure is specified in the following table.<65>

Extension URI	Child element
{02D57815-91ED-43cb-92C2-25804820EDAC}	**filteredSeriesTitle**
{02D57815-91ED-43cb-92C2-25804820EDAC}	**filteredCategoryTitle**

The **extLst** child element ([ISO/IEC-29500-1] section 21.2.2.64) of the **ser** element ([ISO/IEC-29500-1] section 21.2.2.171) is extended by the addition of an **ext** child element, for which the structure is specified in the following table.<66>

Extension URI	Child element
{02D57815-91ED-43cb-92C2-25804820EDAC}	**filteredSeriesTitle**
{02D57815-91ED-43cb-92C2-25804820EDAC}	**filteredCategoryTitle**

The **extLst** child element ([ISO/IEC-29500-1] section 21.2.2.64) of the **ser** element ([ISO/IEC-29500-1] section 21.2.2.172) is extended by the addition of an **ext** child element, for which the structure is specified in the following table.<67>

Extension URI	Child element
{02D57815-91ED-43cb-92C2-25804820EDAC}	**filteredSeriesTitle**
{02D57815-91ED-43cb-92C2-25804820EDAC}	**filteredCategoryTitle**

The **extLst** child element ([ISO/IEC-29500-1] section 21.2.2.64) of the **ser** element ([ISO/IEC-29500-1] section 21.2.2.169) is extended by the addition of an **ext** child element, for which the structure is specified in the following table.<68>

Extension URI	Child element
{02D57815-91ED-43cb-92C2-25804820EDAC}	**filteredSeriesTitle**
{02D57815-91ED-43cb-92C2-25804820EDAC}	**filteredCategoryTitle**

The **extLst** child element ([ISO/IEC-29500-1] section 21.2.2.64) of the **ser** element ([ISO/IEC-29500-1] section 21.2.2.167) is extended by the addition of an **ext** child element, for which the structure is specified in the following table.<69>

Extension URI	Child element
{02D57815-91ED-43cb-92C2-25804820EDAC}	**filteredSeriesTitle**
{02D57815-91ED-43cb-92C2-25804820EDAC}	**filteredCategoryTitle**

The **extLst** child element ([ISO/IEC-29500-1] section 21.2.2.64) of the **ser** element ([ISO/IEC-29500-1] section 21.2.2.173) is extended by the addition of an **ext** child element, for which the structure is specified in the following table.<70>

Extension URI	Child element
{02D57815-91ED-43cb-92C2-25804820EDAC}	**filteredSeriesTitle**
{02D57815-91ED-43cb-92C2-25804820EDAC}	**filteredCategoryTitle**

The **extLst** child element ([ISO/IEC-29500-1] section 21.2.2.64) of the **lineChart** element ([ISO/IEC-29500-1] section 21.2.2.97) is extended by the addition of an **ext** child element, for which the structure is specified in the following table.<71>

Extension URI	Child element
{02D57815-91ED-43cb-92C2-25804820EDAC}	**filteredLineSeries**

The **extLst** child element ([ISO/IEC-29500-1] section 21.2.2.64) of the **line3DChart** element ([ISO/IEC-29500-1] section 21.2.2.96) is extended by the addition of an **ext** child element, for which the structure is specified in the following table.<72>

Extension URI	Child element
{02D57815-91ED-43cb-92C2-25804820EDAC}	**filteredLineSeries**

The **extLst** child element ([ISO/IEC-29500-1] section 21.2.2.64) of the **scatterChart** element ([ISO/IEC-29500-1] section 21.2.2.161) is extended by the addition of an **ext** child element, for which the structure is specified in the following table.<73>

Extension URI	Child element
{02D57815-91ED-43cb-92C2-25804820EDAC}	**filteredScatterSeries**

The **extLst** child element ([ISO/IEC-29500-1] section 21.2.2.64) of the **radarChart** element ([ISO/IEC-29500-1] section 21.2.2.153) is extended by the addition of an **ext** child element, for which the structure is specified in the following table.<74>

Extension URI	Child element
{02D57815-91ED-43cb-92C2-25804820EDAC}	**filteredRadarSeries**

The **extLst** child element ([ISO/IEC-29500-1] section 21.2.2.64) of the **barChart** element ([ISO/IEC-29500-1] section 21.2.2.16) is extended by the addition of an **ext** child element, for which the structure is specified in the following table.<75>

Extension URI	Child element
{02D57815-91ED-43cb-92C2-25804820EDAC}	**filteredBarSeries**

The **extLst** child element ([ISO/IEC-29500-1] section 21.2.2.64) of the **bar3DChart** element ([ISO/IEC-29500-1] section 21.2.2.15) is extended by the addition of an **ext** child element, for which the structure is specified in the following table.<76>

Extension URI	Child element
{02D57815-91ED-43cb-92C2-25804820EDAC}	**filteredBarSeries**

The **extLst** child element ([ISO/IEC-29500-1] section 21.2.2.64) of the **areaChart** element ([ISO/IEC-29500-1] section 21.2.2.5) is extended by the addition of an **ext** child element, for which the structure is specified in the following table.<77>

Extension URI	Child element
{02D57815-91ED-43cb-92C2-25804820EDAC}	**filteredAreaSeries**

The **extLst** child element ([ISO/IEC-29500-1] section 21.2.2.64) of the **area3DChart** element ([ISO/IEC-29500-1] section 21.2.2.4) is extended by the addition of an **ext** child element, for which the structure is specified in the following table.<78>

Extension URI	Child element
{02D57815-91ED-43cb-92C2-25804820EDAC}	**filteredAreaSeries**

The **extLst** child element ([ISO/IEC-29500-1] section 21.2.2.64) of the **bubbleChart** element ([ISO/IEC-29500-1] section 21.2.2.20) is extended by the addition of an **ext** child element, for which the structure is specified in the following table.<79>

Extension URI	Child element
{02D57815-91ED-43cb-92C2-25804820EDAC}	**filteredBubbleSeries**

The **extLst** child element ([ISO/IEC-29500-1] section 21.2.2.64) of the **surfaceChart** element ([ISO/IEC-29500-1] section 21.2.2.204) is extended by the addition of an **ext** child element, for which the structure is specified in the following table.<80>

Extension URI	Child element
{02D57815-91ED-43cb-92C2-25804820EDAC}	**filteredSurfaceSeries**

The **extLst** child element ([ISO/IEC-29500-1] section 21.2.2.64) of the **surface3DChart** element ([ISO/IEC-29500-1] section 21.2.2.203) is extended by the addition of an **ext** child element, for which the structure is specified in the following table.<81>

Extension URI	Child element
{02D57815-91ED-43cb-92C2-25804820EDAC}	**filteredSurfaceSeries**

The **extLst** child element ([ISO/IEC-29500-1] section 21.2.2.64) of the **numRef** element ([ISO/IEC-29500-1] section 21.2.2.123) is extended by the addition of an **ext** child element, for which the structure is specified in the following table.<82>

Extension URI	Child element
{02D57815-91ED-43cb-92C2-25804820EDAC}	**fullRef**
{02D57815-91ED-43cb-92C2-25804820EDAC}	**levelRef**
{02D57815-91ED-43cb-92C2-25804820EDAC}	**formulaRef**

The **extLst** child element ([ISO/IEC-29500-1] section 21.2.2.64) of the **strRef** element ([ISO/IEC-29500-1] section 21.2.2.201) is extended by the addition of an **ext** child element, for which the structure is specified in the following table.<83>

Extension URI	Child element
{02D57815-91ED-43cb-92C2-25804820EDAC}	**fullRef**
{02D57815-91ED-43cb-92C2-25804820EDAC}	**levelRef**
{02D57815-91ED-43cb-92C2-25804820EDAC}	**formulaRef**

The **extLst** child element ([ISO/IEC-29500-1] section 21.2.2.64) of the **multiLvlStrRef** element ([ISO/IEC-29500-1] section 21.2.2.115) is extended by the addition of an **ext** child element, for which the structure is specified in the following table.<84>

Extension URI	Child element
{02D57815-91ED-43cb-92C2-25804820EDAC}	**fullRef**
{02D57815-91ED-43cb-92C2-25804820EDAC}	**levelRef**
{02D57815-91ED-43cb-92C2-25804820EDAC}	**formulaRef**

2.2.1.2 Datalabels

The **extLst** child element ([ISO/IEC-29500-1] section 21.2.2.64) of the **dLbls** element ([ISO/IEC-29500-1] section 21.2.2.49) is extended by the addition of an **ext** child element, for which the structure is specified in the following table.<85>

Extension URI	Child element
{CE6537A1-D6FC-4f65-9D91-7224C49458BB}	**showLeaderLines**
{CE6537A1-D6FC-4f65-9D91-7224C49458BB}	**leaderLines**
{CE6537A1-D6FC-4f65-9D91-7224C49458BB}	**tx**
{CE6537A1-D6FC-4f65-9D91-7224C49458BB}	**dlblFieldTable**
{CE6537A1-D6FC-4f65-9D91-7224C49458BB}	**showDataLabelsRange**
{CE6537A1-D6FC-4f65-9D91-7224C49458BB}	**spPr**
{CE6537A1-D6FC-4f65-9D91-7224C49458BB}	**layout**

2.2.1.3 Datalabel

The **extLst** child element ([ISO/IEC-29500-1] section 21.2.2.64) of the **dLbl** element ([ISO/IEC-29500-1] section 21.2.2.47) is extended by the addition of an **ext** child element, for which the structure is specified in the following table.<86>

Extension URI	Child element
{CE6537A1-D6FC-4f65-9D91-7224C49458BB}	**dlblFieldTable**

Extension URI	Child element
{CE6537A1-D6FC-4f65-9D91-7224C49458BB}	**xForSave**
{CE6537A1-D6FC-4f65-9D91-7224C49458BB}	**showDataLabelsRange**
{CE6537A1-D6FC-4f65-9D91-7224C49458BB}	**spPr**
{CE6537A1-D6FC-4f65-9D91-7224C49458BB}	**layout**

2.2.2 Content Parts and Ink

An ink object can exist as a content part referenced by a **contentPart** element. See 2.1.4 for the syntax of the ink content part.

A **contentPart** element is specified in [ISO/IEC-29500-1] as an element in a WordprocessingML document ([ISO/IEC-29500-1] section 17.3.3.2), an element in a PresentationML slide ([ISO/IEC-29500-1] section 19.3.1.14), or an element in a SpreadsheetML drawing ([ISO/IEC-29500-1] section 20.5.2.12).

The following extensions define additional **contentPart** elements.

The DrawingML **grpSp** element ([ISO/IEC-29500-1] section 20.1.2.2.20) and **lockedCanvas** element ([ISO/IEC-29500-1] section 20.3.2.1) are extended by the addition of **AlternateContent** child elements ([ISO/IEC-29500-3] section 10.2.1), for which the structure is specified in the following table.

AlternateContent components	Child element
Choice: http://schemas.microsoft.com/office/drawing/2010/main	**contentPart**
Fallback	**sp** ([ISO/IEC-29500-1] section 20.1.2.2.33)

The SpreadsheetML **grpSp** element ([ISO/IEC-29500-1] section 20.5.2.17) is extended by the addition of an **AlternateContent** child element, for which the structure is specified in the following table:

AlternateContent components	Child element
Choice: http://schemas.microsoft.com/office/excel/2010/spreadsheetDrawing	**contentPart**
Fallback	**sp** ([ISO/IEC-29500-1] section 20.5.2.29)

The WordprocessingML **contentPart** is an optional child of **CT_WordprocessingCanvas** (**wpc**), and **CT_WordprocessingGroup** (**grpSp**, **wgp**), or as a child of **graphicData** ([ISO/IEC-29500-1] section 20.1.2.2.17) as specified in 2.2.7.6.

The PresentationML **contentPart** ([ISO/IEC-29500-1] section 19.3.1.14) is an optional child element of **CT_GroupShape** (**grpSp**, **spTree** ([ISO/IEC-29500-1] sections 19.3.1.22 and 19.3.1.45).

2.2.3 Pictures

The **extLst** child element of the **binary large image or picture (BLIP)** element ([ISO/IEC-29500-1] section 20.1.8.13) is extended by the addition of **ext** child elements, for which the structure is specified in the following table.

Extension URI	Child element
http://schemas.microsoft.com/office/drawing/2010/main	**imgProps**
http://schemas.microsoft.com/office/drawing/2010/main	**useLocalDpi**

See [ISO/IEC-29500-1] section 10.1.2 for more details about extension lists.

2.2.4 Diagrams

2.2.4.1 Diagram Layout

The **extLst** child element of the **dataModel** element ([ISO/IEC-29500-1] section 21.4.2.10) is extended by the addition of **ext** child elements, for which the structure is specified in the following table.

Extension URI	Child element
http://schemas.microsoft.com/office/drawing/2008/diagram	**dataModelExt**

See [ISO/IEC-29500-1] section 10.1.2 for more details about extension lists.

2.2.4.2 Image Recoloring

The **extLst** child element of the **dataModel** element ([ISO/IEC-29500-1] section 21.4.2.10) is extended by the addition of **ext** child elements, for which the structure is specified in the following table.

Extension URI	Child element
{C62137D5-CB1D-491b-B009-E17868A290BF}	**recolorImg**

See [ISO/IEC-29500-1] section 10.1.2 for more details about extension lists.

2.2.5 Math

Each of the objects added to DrawingML documents MUST be contained by other instances of extensions or MUST make use of extensibility mechanisms from Office Open XML file formats as specified in [ISO/IEC-29500:2008]. For compatibility with existing Office Open XML file formats implementations, all of the extensions are integrated into DrawingML through the use of **AlternateContent** elements as specified in [ISO/IEC-29500-3] section10.2.1.

AlternateContent components	Child elements
Choice: http://schemas.microsoft.com/office/drawing/2010/main	**m**
Fallback	**p:sp**, **p:graphicFrame, xdr:sp**. or **cdr:sp**

The **p:sp** element is specified in [ISO/IEC-29500-1] section 19.3.1.43, **p:graphicFrame** is specified in [ISO/IEC-29500-1] section 19.3.1.21, **xdr:sp** is specified in [ISO/IEC-29500-1] section 20.5.2.29, and **cdr:sp** is specified in [ISO/IEC-29500-1] section 21.3.2.22.

Content of the **m** element is specified by DrawingML ([ISO/IEC-29500-1] section 20.1) and the mathematics **OMML** ([ISO/IEC-29500-1] section 22.1), except as restricted and modified by the following table.

Element	Description
WordprocessingML child elements	MUST NOT appear in this extension.
cGp	MUST NOT appear in this extension.
cGpRule	MUST NOT appear in this extension.
cSp	MUST NOT appear in this extension.
eqArrPr	The child elements **rSp** ([ISO/IEC-29500-1] section 22.1.2.92) and **rSpRule** ([ISO/IEC-29500-1] section 22.1.2.93) MUST NOT appear as child elements of **eqArrPr**.
mathFont	Font substitution in the context of this extension conforms to the Office Open XML file formats as specified in [ISO/IEC-29500-1] section 21.1.2.5.
mathPr	The direct child element of the **m** element in the context of presentation properties MUST be **mathPr** ([ISO/IEC-29500-1] section 22.1.2.62). Such a **mathPr** MUST only contain **brkBin** ([ISO/IEC-29500-1] section 22.1.2.16) and **brkBinSub** ([ISO/IEC-29500-1] section 22.1.2.17).
mcJc	MUST NOT appear in this extension.
mcPr	The **mcJc** element ([ISO/IEC-29500-1] section 22.1.2.65) is not permitted as a child of this element.
mPr	The following are not permitted as child elements of **mPr** in this extension and MUST NOT appear: **cGp** ([ISO/IEC-29500-1] section 22.1.2.18), **cGpRule** ([ISO/IEC-29500-1] section 22.1.2.19), **cSp** ([ISO/IEC-29500-1] section 22.1.2.22), **rSp** ([ISO/IEC-29500-1] section 22.1.2.92), and **rSpRule** ([ISO/IEC-29500-1] section 22.1.2.93).
oMath	The direct child element of the **m** element in the context of a paragraph MUST be either **oMath** or **oMathPara**.
oMathPara	The direct child element of the m element in the context of a paragraph MUST be either **oMath** or **oMathPara**. Only one justification style is permitted per containing text paragraph. All but the first **jc** values of each **oMathPara**, are ignored.
r	The **rPr** element ([ISO/IEC-29500-1] section 21.1.2.3.9) is not required, and the **t** element ([ISO/IEC-29500-1] section 21.1.2.3.11) MUST appear as child elements of **m:r**.
rSp	MUST NOT appear in this extension.
rSpRule	MUST NOT appear in this extension.

2.2.6 SpreadsheetML Drawing

2.2.6.1 Camera Tool

The **extLst** child element of the **nvPicPr** element ([ISO/IEC-29500-1] section 20.5.2.22) is extended by the addition of **ext** child elements, for which the structure is specified in the following table.

Extension URI	Child element
{84589F7E-364E-4c9e-8A38-B11213B215E9}	**cameraTool**

See [ISO/IEC-29500-1] section 10.1.2 for more details about extension lists.

The **twoCellAnchor** element ([ISO/IEC-29500-1] section 20.5.2.33), **oneCellAnchor** element ([ISO/IEC-29500-1] section 20.5.2.24), **absoluteAnchor** element ([ISO/IEC-29500-1] section 20.5.2.1), **pic** element ([ISO/IEC-29500-1] section 20.5.2.25), or **grpSp** element ([ISO/IEC-29500-1] section 20.5.2.17) are extended by the addition of an **AlternateContent** child element ([ISO/IEC-29500-3] section 10.2.1), for which the structure is specified in the following table.

AlternateContent components	Child elements
Choice: http://schemas.microsoft.com/office/drawing/2010/main	**cameraTool**
Choice structure: <wsDr> <twoCellAnchor> or <oneCellAnchor> or <absoluteAnchor> <grpSp> - if inside a group <pic> <nvPicPr> <cNvPicPr> <extLst> <ext> <cameraTool> ...	
Fallback	Empty

The **wsDr** element is specified in [ISO/IEC-29500-1] section 20.5.2.35, **nvPicPr** is specified in [ISO/IEC-29500-1] section 20.5.2.22, and **cNvPicPr** is specified in [ISO/IEC-29500-1] section 20.5.2.7.

2.2.6.2 Legacy Object Wrapper

The **extLst** child element of the **cNvPr** element ([ISO/IEC-29500-1] section 20.5.2.8) is extended by the addition of **ext** child elements, for which the structure is specified in the following table.

Extension URI	Child element
{63B3BB69-23CF-44e3-9099-C40C66FF867C}	**compatExt**

See [ISO/IEC-29500-1] section 10.1.2 for more details about extension lists.

The **twoCellAnchor** element ([ISO/IEC-29500-1] section 20.5.2.33), **oneCellAnchor** element ([ISO/IEC-29500-1] section 20.5.2.24), **absoluteAnchor** element ([ISO/IEC-29500-1] section 20.5.2.1), **sp** element ([ISO/IEC-29500-1] section 20.5.2.29), or **grpSp** element ([ISO/IEC-29500-1] section 20.5.2.17) are extended by the addition of an **AlternateContent** child element ([ISO/IEC-29500-3] section 10.2.1), for which the structure is specified in the following table.

AlternateContent components	Child elements
Choice: http://schemas.microsoft.com/office/drawing/2010/main	**compatExt**

Choice structure:
 	
`<wsdr>`
`  <twoCellAnchor> or <oneCellAnchor> or <absoluteAnchor>`
`  <grpSp> - if inside a group`
`  <sp>`
`  <nvSpPr>`
`  <cNvPr>`
`  <extLst>`
`  <ext>`
`  <compatExt>`
`  ...`	

Fallback	Empty

The **wsDr** element is specified in [ISO/IEC-29500-1] section 20.5.2.35, **nvSpPr** is specified in [ISO/IEC-29500-1] section 20.5.2.23, and **cNvPr** is specified in [ISO/IEC-29500-1] section 20.5.2.8.

2.2.7 WordprocessingML Drawing

Each of the objects added to WordprocessingML documents MUST be contained by other instances of extensions or MUST make use of extensibility mechanisms from Office Open XML file formats as specified in [ISO/IEC-29500:2008]. For compatibility with existing Office Open XML file format implementations, all extensions are integrated into WordprocessingML through the use of **AlternateContent** elements as specified in [ISO/IEC-29500-3] section 10.2.1.

In all cases, the **AlternateContent** element MUST have only a single **Choice** element as specified in [ISO/IEC-29500-3] section 10.2.2 and a single **Fallback** element as specified in [ISO/IEC-29500-3] section 10.2.3 as child elements.

The parent element of the **AlternateContent** element MUST be an **r** (Text Run) element as specified in [ISO/IEC-29500-1] section 17.3.2.25.

The following sections associate the URIs used to indicate each **Choice** element with the URIs used in the descendent **graphicData** element, the contents of the **graphicData** (Graphic Object Data) element and the contents of the **Fallback** element as specified in [ISO/IEC-29500-1] section 20.1.2.2.17,. In all cases, the value of the **uri** attribute of the **graphicData** element MUST match the value of the URI of the ancestor **Choice** element.

Although the URI for the **Requires** attributes of the **Choice** element is specified in the following sections, the **Requires** attributes MUST evaluate to a prefix that resolves to the specified URI. The **Requires** attributes MUST NOT evaluate to the URI itself.

2.2.7.1 ActiveX and OLE Objects

This section specifies how the CT_ObjectPr type and objectPr are integrated into the Office Open XML file formats as specified in [ISO/IEC-29500:2008].<87>

AlternateContent components	Child elements
Choice: urn:schemas-microsoft-com:vml	**Object** ([ISO/IEC-29500-1]) section 17.3.3.19
Choice structure: <w:object> <v: ... > ...	
Fallback (no VML)	**Object** ([ISO/IEC-29500-1]) section 17.3.3.19
Fallback structure: <w:object> <w:drawing> ... <a:graphic xmlns:a="http://purl.oclc.org/ooxml/drawingml/main" <a:graphicData uri="http://purl.oclc.org/ooxml/drawingml/picture"> <pic:pic xmlns:pic="http://purl.oclc.org/ooxml/drawingml/picture"> <pic:nvPicPr> <pic:cNvPicPr> <a:extLst> <a:ext> <a15:objectPr .../>	

The **drawing** element is specified in [ISO/IEC-29500-1] section 17.3.3.9, **graphic** is specified in [ISO/IEC-29500-1] section 20.1.2.2.16, **graphicData** is specified in [ISO/IEC-29500-1] section 20.1.2.2.17, **pic** is specified in [ISO/IEC-29500-1] section 19.3.1.37, and **nvPicPr** is specified in [ISO/IEC-29500-1] section 19.3.1.32.

The **extLst** child element ([ISO/IEC-29500-1] section 21.2.2.64) of the **cNvPicPr** element ([ISO/IEC-29500-1] section 19.3.1.11) is extended by the addition of an **ext** child element, for which the structure is specified in the following table.

Extension URI	Child element
{837473B0-CC2E-450a-ABE3-18F120FF3D37}	**objectPr**

2.2.7.2 Background Fill

This section specifies how the CT_BackgroundPr type and backgroundPr are integrated into the Office Open XML file formats as specified in [ISO/IEC-29500:2008].<88>

AlternateContent components	Child elements
Choice:	**background**

AlternateContent components	Child elements
urn:schemas-microsoft-com:vml	([ISO/IEC-29500-4]) section 14.1.2.2
Choice structure: <v:background ...> <v: ... >	
Fallback (no VML)	**drawing** ([ISO/IEC-29500-1]) section 17.3.3.9
Fallback structure: <w:drawing> <wp:inline ...> ... <wp:docPr ...> <a:extLst xmlns:a="http://purl.oclc.org/ooxml/drawingml/main"> <a:ext> <a15:backgroundPr xmlns:a15="http://schemas.microsoft.com/office/drawing/2012/main" .../>	

The **drawing** element is specified in [ISO/IEC-29500-1] section 17.3.3.9, **inline** is specified in [ISO/IEC-29500-1] section 20.4.2.8.

The **extLst** child element ([ISO/IEC-29500-1] section 21.2.2.64) of the **docPr** element ([ISO/IEC-29500-1] section 20.4.2.5) is extended by the addition of an **ext** child element, for which the structure is specified in the following table.

Extension URI	Child element
{A998136B-4AC2-44c3-8CCF-79AB77ABDD1D}	**backgroundPr**

2.2.7.3 DrawingML Shapes in WordprocessingML

This section specifies how the **CT_WordprocessingShape** type and **wsp** element are integrated into the Office Open XML file formats as specified in [ISO/IEC-29500:2008].

AlternateContent components	Child elements
Choice: http://schemas.microsoft.com/office/word/2010/wordprocessingShape	**wsp**
Choice structure: <drawing> <anchor> or <inline> <graphic> <graphicData uri="http://schemas.microsoft.com/office/word/2010/wordprocessingShape"> <wsp> ...	

AlternateContent components	Child elements
Fallback	**pict** (VML Object) ([ISO/IEC-29500-4])section 9.2.2.2

The **drawing** element is specified in [ISO/IEC-29500-1] section 17.3.3.9, **anchor** is specified in [ISO/IEC-29500-1] section 20.4.2.3, **inline** is specified in [ISO/IEC-29500-1] section 20.4.2.8, **graphic** is specified in [ISO/IEC-29500-1] section 20.1.2.2.16, and **graphicData** is specified in [ISO/IEC-29500-1] section 20.1.2.2.17.

2.2.7.4 DrawingML Groups in WordprocessingML

This section specifies how the **CT_WordprocessingGroup** type and the **wgp** element are integrated into [ISO/IEC-29500:2008].

AlternateContent components	Child elements
Choice: http://schemas.microsoft.com/office/word/2010/wordprocessingGroup	**wgp**
Choice structure: <drawing> <anchor> or <inline> <graphic> <graphicData uri="http://schemas.microsoft.com/office/word/2010/wordprocessingGroup"> <wgp> ...	
Fallback	[ISO/IEC-29500-4] section9.2.2.2 pict (VML Object)

The **drawing** element is specified in [ISO/IEC-29500-1] section 17.3.3.9, **anchor** is specified in [ISO/IEC-29500-1] section 20.4.2.3, **inline** is specified in [ISO/IEC-29500-1] section 20.4.2.8, **graphic** is specified in [ISO/IEC-29500-1] section 20.1.2.2.16, and **graphicData** is specified in [ISO/IEC-29500-1] section 20.1.2.2.17.

2.2.7.5 DrawingML Canvases in WordprocessingML

This section specifies how the **CT_WordprocessingCanvas** type and **wpc** element integrate into the Office Open XML file formats as specified in [ISO/IEC-29500:2008].

AlternateContent components	Child elements
Choice: http://schemas.microsoft.com/office/word/2010/wordprocessingCanvas	**wpc**
Choice structure: <drawing> <anchor> or <inline> <graphic> <graphicData uri="http://schemas.microsoft.com/office/word/2010/wordprocessingCanvas">	

AlternateContent components	Child elements
<wpc> ... 	
Fallback	**pict** (VML Object) ([ISO/IEC-29500-4] section 9.2.2.2)

The **drawing** element is specified in [ISO/IEC-29500-1] section 17.3.3.9, **anchor** is specified in [ISO/IEC-29500-1] section 20.4.2.3, **inline** is specified in [ISO/IEC-29500-1] section 20.4.2.8, **graphic** is specified in [ISO/IEC-29500-1] section 20.1.2.2.16, and **graphicData** is specified in [ISO/IEC-29500-1] section 20.1.2.2.17.

2.2.7.6 DrawingML Content Parts in WordprocessingML

This section specifies how the **CT_WordContentPart** type and **contentPart** element integrate into Office Open XML file formats as specified in [ISO/IEC-29500:2008].

AlternateContent components	Child elements
Choice: http://schemas.microsoft.com/office/word/2010/wordprocessingInk	**contentPart**
Choice structure: <drawing> <anchor> or <inline> <graphic> <graphicData uri="http://schemas.microsoft.com/office/word/2010/wordprocessingInk"> <contentPart> ...	
Fallback	**pict** (VML Object) ([ISO/IEC-29500-4] section 9.2.2.2)

The **drawing** element is specified in [ISO/IEC-29500-1] section 17.3.3.9, **anchor** is specified in [ISO/IEC-29500-1] section 20.4.2.3, **inline** is specified in [ISO/IEC-29500-1] section 20.4.2.8, **graphic** is specified in [ISO/IEC-29500-1] section 20.1.2.2.16, and **graphicData** is specified in [ISO/IEC-29500-1] section 20.1.2.2.17.

2.2.8 Themes

The **extLst** child element of the theme (**Theme**) element ([ISO/IEC-29500-1] section 20.1.6.9) is extended by the addition of **ext** child elements, for which the structure is specified in the following table.

Extension URI	Child element
http://schemas.microsoft.com/office/thememl/2012/main	**themeFamily**

See [ISO/IEC-29500-1] section 10.1.2 for more details about extension lists.

2.2.9 Legacy Objects

2.2.9.1 Legacy Groups

This section specifies how the CT_NonVisualGroupProps type and nonVisualGroupProps are integrated into the Office Open XML file formats as specified in [ISO/IEC-29500:2008].<89>

AlternateContent components	Child elements
Choice: urn:schemas-microsoft-com:vml	**Object** ([ISO/IEC-29500-1]) section 17.3.3.19

Choice structure:
 	
`<w:object>`
`  <v: ... >`
`  ...`	

Fallback (no VML)	**Object** ([ISO/IEC-29500-1]) section 17.3.3.19

Fallback structure:
 	
`<w:object>`
`  <w:drawing>`
`  ...`
`  <a:graphic xmlns:a="http://purl.oclc.org/ooxml/drawingml/main"`
`  <a:graphicData uri="http://purl.oclc.org/ooxml/drawingml/picture">`
`  <wpg:wgp>`
`  <wpg:cNvGrpSpPr>`
`  ...`
`  <a:extLst>`
`  <a:ext>`
`  <a15:nonVisualGroupProps`
`xmlns:a15="http://schemas.microsoft.com/office/drawing/2012/main" .../>`	

The **drawing** element is specified in [ISO/IEC-29500-1] section 17.3.3.9, **graphic** is specified in [ISO/IEC-29500-1] section 20.1.2.2.16, **graphicData** is specified in [ISO/IEC-29500-1] section 20.1.2.2.17, and **wpg** is an element from CT_WordprocessingCanvas.

The **extLst** child element ([ISO/IEC-29500-1] section 21.2.2.64) of the **cNvGrpSpPr** element ([ISO/IEC-29500-1] section 20.5.2.6) is extended by the addition of an **ext** child element, for which the structure is specified in the following table.

Extension URI	Child element
{F59B8463-F414-42e2-B3A4-FFEF48DC7170}	**nonVisualGroupProps**

2.2.9.2 Signature Lines

This section specifies how the CT_SignatureLine type and signatureLine are integrated into the Office Open XML file formats as specified in [ISO/IEC-29500:2008].<90>

AlternateContent components	Child elements
Choice: urn:schemas-microsoft-com:vml	**pict** ([ISO/IEC-29500-4]) section 9.2.2.2
Choice structure: <w:pict> <v: ... > ...	
Fallback (no VML)	**drawing** ([ISO/IEC-29500-1]) section 17.3.3.9
Fallback structure: <w:object> <w:drawing> ... <a:graphic xmlns:a="http://purl.oclc.org/ooxml/drawingml/main" <a:graphicData uri="http://purl.oclc.org/ooxml/drawingml/picture"> <pic:pic xmlns:pic="http://purl.oclc.org/ooxml/drawingml/picture"> <pic:nvPicPr> <pic:cNvPicPr> <a:extLst> <a:ext> <a15: signatureLine.../>	

graphic is specified in [ISO/IEC-29500-1] section 20.1.2.2.16, **graphicData** is specified in [ISO/IEC-29500-1] section 20.1.2.2.17, **pic** is specified in [ISO/IEC-29500-1] section 19.3.1.37, and **nvPicPr** is specified in [ISO/IEC-29500-1] section 19.3.1.32.

The **extLst** child element ([ISO/IEC-29500-1] section 21.2.2.64) of the **cNvPicPr** element ([ISO/IEC-29500-1] section 19.3.1.11) is extended by the addition of an **ext** child element, for which the structure is specified in the following table.

Extension URI	Child element
{F385189D-CB6C-4498-A905-10932F83BE7A}	**signatureLine**

2.3 Global Elements

2.3.1 imgProps

Target namespace: http://schemas.microsoft.com/office/drawing/2010/main

Element type: **CT_Photo**

An extension list child element of: binary large image or picture (BLIP) as specified in [ISO/IEC-29500-1] section 20.1.8.13

(For more details, see [ISO/IEC-29500-1] section 10.1.2)

Extension list Uri attribute: {BEBA8EAE-BF5A-486c-A8C5-ECC9F3942E4B}

A CT_Photo element that specifies properties that produce the embedded picture in the containing BLIP.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this element.

```
<xsd:element name="imgProps" type="CT_Photo"/>
```

See section 5.1 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.3.2 useLocalDpi

Target namespace: http://schemas.microsoft.com/office/drawing/2010/main

Element type: **CT_UseLocalDpi**

An extension list child element of: BLIP as specified in [ISO/IEC-29500-1] section 20.1.8.13.

For more details, see [ISO/IEC-29500-1] section 10.1.2.

Extension list URI attribute: {28A0092B-C50C-407e-A947-70E740481C1C}

A CT_UseLocalDpi element that specifies a flag indicating that the local BLIP compression setting overrides the document default compression setting.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this element.

```
<xsd:element name="useLocalDpi" type="CT_UseLocalDpi"/>
```

See section 5.1 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.3.3 m

Target namespace: http://schemas.microsoft.com/office/drawing/2010/main

A CT_TextMath element that specifies either math content in a text paragraph (when such an element is used inside of a text paragraph) or document-level math properties container (when it is used in presentation properties specified by PresentationML). The math content in a text paragraph can be either an inline math zone or a math paragraph.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this element.

```
<xsd:element name="m" type="CT_TextMath"/>
```

See section 5.1 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.3.4 contentPart

Target namespace: http://schemas.microsoft.com/office/word/2010/wordml

Referenced by: CT_WordprocessingGroup, CT_WordprocessingCanvas

A CT_WordContentPart element that specifies a reference to XML content in a format not specified in [ISO/IEC-29500-1].

This element serves the same purpose as the **contentPart** element in WordprocessingML ([ISO/IEC-29500-1] section 17.3.3.2), but appears under **graphicData** ([ISO/IEC-29500-1] section 20.1.2.2.17), CT_WordprocessingGroup, and CT_WordprocessingCanvas.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this element.

```
<xsd:element name="contentPart" type="CT_WordContentPart"/>
```

See section 5.3 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.3.5 drawing

Target namespace: http://schemas.microsoft.com/office/drawing/2008/diagram

A CT_Drawing element that specifies the last successful output of diagram layout. This element is the root element of the Diagram Layout part (see 2.1.3).

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this element.

```
<xsd:element name="drawing" type="CT_Drawing"/>
```

See section 5.6 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.3.6 dataModelExt

Target namespace: http://schemas.microsoft.com/office/drawing/2008/diagram

Element type: **CT_DataModelExtBlock**

An extension list child element of: **dataModel** as specified in [ISO/IEC-29500-1] section 21.4.2.10

*(*For more details, see [ISO/IEC-29500-1] section 10*.1.2.)*

Extension list URI attribute: http://schemas.microsoft.com/office/drawing/2008/diagram

An additional element of a **dataModel** that defines the explicit part location of the Diagram Drawing and the minimum application version required to layout this diagram.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this element.

```
<xsd:element name="dataModelExt" type="CT_DataModelExtBlock"/>
```

See section 5.6 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.3.7 context

Target namespace: http://schemas.microsoft.com/ink/2010/main

A CT_CtxNode element that specifies the context of a set of Ink traces stored in a **traceGroup** element as specified in [InkML].

This element MUST be a child of an **emma:interpretation** element ([EMMA] section 3.2). The **emma:interpretation** element must be a child of an **inkml::annotationXML** element ([InkML] section 6.3.2). The **inkml:annotationXML** element MUST be a child of an **inkml:traceGroup** element ([InkML] section 3.3.1).

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this element.

```
<xsd:element name="context" type="CT_CtxNode"/>
```

See section 5.7 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.3.8 isCanvas

Target namespace: http://schemas.microsoft.com/office/drawing/2010/main

Element type: **CT_IsGvmlCanvas**

An extension list child element of: **grpSp** (**Group shape**) as specified in [ISO/IEC-29500-1] section 20.1.2.2.20

(For more details, see [ISO/IEC-29500-1] section 10.1.2.)

Extension list URI attribute: {42C33886-CC25-47f2-ACA8-312CCD89CECE}

The **val** attribute of this element MUST be set to TRUE if the containing **grpSp** is a GVML representation of a **drawing canvas** from a word processing application.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this element.

```
<xsd:element name="isCanvas" type="CT_IsGvmlCanvas"/>
```

See section 5.1 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.3.9 contentPart

Target namespace: http://schemas.microsoft.com/office/drawing/2010/main

A CT_GvmlContentPart element that specifies a reference to XML content in a format not specified by [ISO/IEC-29500-1].

This element serves the same purpose as the **contentPart** element in PresentationML ([ISO/IEC-29500-1] section 19.3.1.14), but appears as an element in **CT_GvmlGroupShape** ([ISO/IEC-29500-1] section A.4.1).

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this element.

```
<xsd:element name="contentPart" type="CT_GvmlContentPart"/>
```

See section 5.1 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.3.10 contentPart

Target namespace: http://schemas.microsoft.com/office/excel/2010/spreadsheetDrawing

A CT_ContentPart element that specifies a reference to XML content in a format not specified by [ISO/IEC-29500-1].

This element serves the same purpose as the **contentPart** element in SpreadsheetML Drawing ([ISO/IEC-29500-1] section 20.5.2.12), but appears as an element in **CT_GroupShape** ([ISO/IEC-29500-1] section A.4.5).

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this element.

```
<xsd:element name="contentPart" type="CT_ContentPart"/>
```

See section 5.9 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.3.11 pivotOptions

Target namespace: http://schemas.microsoft.com/office/drawing/2007/8/2/chart

A **CT_PivotOptions** element that specifies the pivot controls that appear on the chart ([ISO/IEC-29500-1] section 21.2).

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this element.

```
<xsd:element name="pivotOptions" type="CT_PivotOptions"/>
```

See section 5.10 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.3.12 invertSolidFillFmt

Target namespace: http://schemas.microsoft.com/office/drawing/2007/8/2/chart

A **CT_InvertSolidFillFmt** element that specifies the color of the negative data points of the chart ([ISO/IEC-29500-1] section 21.2) series.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this element.

```
<xsd:element name="invertSolidFillFmt" type="CT_InvertSolidFillFmt"/>
```

See section 5.10 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.3.13 style

Target namespace: http://schemas.microsoft.com/office/drawing/2007/8/2/chart

A **CT_Style** element that specifies a chart **style** ([ISO/IEC-29500-1] section 21.2).

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this element.

```
<xsd:element name="style" type="CT_Style"/>
```

See section 5.10 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.3.14 pctPosHOffset

Target namespace: http://schemas.microsoft.com/office/word/2010/wordprocessingDrawing

Child element of: positionH (Horizontal positioning) as specified in [ISO/IEC-29500-1] section 20.4.2.10.

An **ST_Percentage** element as specified in [ISO/IEC-29500-4] section 12.1.2.2 and [ISO/IEC-29500-1] section 20.1.10.40 that specifies the horizontal offset.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this element.

```
<xsd:element name="pctPosHOffset" type="a:ST_Percentage"/>
```

See section 5.11 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.3.15 pctPosVOffset

Target namespace: http://schemas.microsoft.com/office/word/2010/wordprocessingDrawing

Child element of: **positionV** (Vertical positioning) as specified in [ISO/IEC-29500-1] section 20.4.2.11.

An **ST_Percentage** element as specified in [ISO/IEC-29500-4] section 12.1.2.2 and [ISO/IEC-29500-1] section 20.1.10.40 that specifies the vertical offset.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this element.

```
<xsd:element name="pctPosVOffset" type="a:ST_Percentage"/>
```

See section 5.11 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.3.16 sizeRelH

Target namespace: http://schemas.microsoft.com/office/word/2010/wordprocessingDrawing

Optional child element of: **anchor** as specified in [ISO/IEC-29500-1] section 20.4.2.3.

If present, this element specifies that the horizontal size (width) is relative. If absent, the horizontal size is absolute.

A **CT_SizeRelH** element that specifies the relative width of a floating DrawingML object in a WordprocessingML document.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this element.

```
<xsd:element name="sizeRelH" type="CT_SizeRelH"/>
```

See section 5.11 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.3.17 sizeRelV

Target namespace: http://schemas.microsoft.com/office/word/2010/wordprocessingDrawing

Optional child element of: **anchor** as specified in [ISO/IEC-29500-1] section 20.4.2.3.

If present, this element specifies that the vertical size (height) is relative. If absent, the vertical size is absolute.

A **CT_SizeRelV** element that specifies the relative height of a floating DrawingML object in a WordprocessingML document.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this element.

```
<xsd:element name="sizeRelV" type="CT_SizeRelV"/>
```

See section 5.11 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.3.18 cNvPr

Target namespace: http://schemas.microsoft.com/office/drawing/2010/diagram

A **CT_NonVisualDrawingProps** element ([ISO/IEC-29500-1] section A.4.1) that specifies the non-visual drawing properties of a point in the data model. This enables additional information that does not affect the appearance of the point to be stored.<91>

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this element.

```
<xsd:element name="cNvPr" type="a:CT_NonVisualDrawingProps"/>
```

See section 5.16 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.3.19 cameraTool

Target namespace: http://schemas.microsoft.com/office/drawing/2010/main

A CT_CameraTool element that specifies that a picture, as defined by the **pic** element as specified in [ISO/IEC-29500-1] section 20.2.2.5, is a camera object. A camera object is a picture that shows a live view of a cell range in the specified spreadsheet, including any graphic objects contained in the cell range and all formatting applied to the contents of the cell range. Updates to the contents of the cell range are reflected in the camera object. Shape properties, such as the position and size of the camera object, are defined by the parent **pic** element. The view of the cell range MUST be a rectangle. The view of the cell range MUST scale vertically and horizontally to fill the rectangle exactly.

See section 2.2.6.1 for information about how this element is integrated with the Open XML file formats as specified in- [ISO/IEC-29500:2008].

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this element.

```
<xsd:element name="cameraTool" type="CT_CameraTool"/>
```

See section 5.1 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.3.20 compatExt

Target namespace: http://schemas.microsoft.com/office/drawing/2010/main

A CT_CompatExt element that specifies a legacy drawing object. The legacy drawing object MUST be a form control or a legacy OLE or ActiveX control object.

The application MAY delete this legacy shape when loading.<92>

See section 2.2.6 for how this element integrates with the Open XML file formats -as specified in [ISO/IEC-29500-1].

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this element.

```
<xsd:element name="compatExt" type="CT_CompatExt"/>
```

See section 5.1 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.3.21 shadowObscured

Target namespace: http://schemas.microsoft.com/office/drawing/2010/main

Element type: **CT_ShadowObscured**

An extension list child element of: [ISO/IEC-29500-1] section 20.2.2.6

For more details, see [ISO/IEC-29500-1] section 10.1.2.

Extension list URI attribute: {53640926-AAD7-44d8-BBD7-CCE9431645EC}

A CT_ShadowObscured element that specifies whether a shadow is obscured by a shape with no fill.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this element.

```
<xsd:element name="shadowObscured" type="CT_ShadowObscured"/>
```

See section 5.1 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.3.22 hiddenFill

Target namespace: http://schemas.microsoft.com/office/drawing/2010/main

A **CT_FillProperties** element ([ISO/IEC-29500-1] section A.4.1) that stores the fill information of an object when the shape fill has been set to invisible. If shape fill has been set to visible this element is ignored.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this element.

```
<xsd:element name="hiddenFill" type="a:CT_FillProperties"/>
```

See section 5.1 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.3.23 hiddenLine

Target namespace: http://schemas.microsoft.com/office/drawing/2010/main

A **CT_LineProperties** element ([ISO/IEC-29500-1] section A.4.1) that stores the line information of an object when the line fill has been set to invisible. If line fill has been set to visible this element is ignored.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this element.

```
<xsd:element name="hiddenLine" type="a:CT_LineProperties"/>
```

See section 5.1 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.3.24 hiddenEffects

Target namespace: http://schemas.microsoft.com/office/drawing/2010/main

A **CT_EffectProperties** element ([ISO/IEC-29500-1] section A.4.1) that stores the effect information of an object when the effects have been set to invisible. If effects have been set to visible this element is ignored.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this element.

```
<xsd:element name="hiddenEffects" type="a:CT_EffectProperties"/>
```

See section 5.1 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.3.25 hiddenScene3d

Target namespace: http://schemas.microsoft.com/office/drawing/2010/main

A **CT_Scene3D** element ([ISO/IEC-29500-1] section A.4.1) that stores the 3-D scene information of a scene when the 3-D scene effects have been set to invisible. IF the 3-D scene effects have been set to visible this element is ignored.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this element.

```
<xsd:element name="hiddenScene3d" type="a:CT_Scene3D"/>
```

See section 5.1 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.3.26 hiddenSp3d

Target namespace: http://schemas.microsoft.com/office/drawing/2010/main

A **CT_Shape3D** element ([ISO/IEC-29500-1] section A.4.1) that stores the 3-D shape information of an object when the 3-D shape effects have been set to invisible. If the 3-D shape effects have been set to visible this element is ignored.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this element.

```
<xsd:element name="hiddenSp3d" type="a:CT_Shape3D"/>
```

See section 5.1 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.3.27 wsp

Target namespace: http://schemas.microsoft.com/office/word/2010/wordprocessingShape

Referenced by: CT_WordprocessingGroup, CT_WordprocessingCanvas

A CT_WordprocessingShape element that specifies a shape in WordprocessingML. See 2.2.7 for more details about how this element is integrated with the Open XML file formats as specified in [ISO/IEC-29500-1].

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this element.

```
<xsd:element name="wsp" type="CT_WordprocessingShape"/>
```

See section 5.2 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.3.28 style

Target namespace: http://schemas.microsoft.com/office/drawing/2010/picture

A **CT_ShapeStyle** element ([ISO/IEC-29500-1] section A.4.1).

Extension attribute on type: [ISO/IEC-29500-1] section 20.2.2.5

To maintain compatibility with Office Open XML file formats as specified in [ISO/IEC-29500:2008], the namespace of this attribute prefix MUST be specified in an **Ignorable** attribute ([ISO/IEC-29500-3] section 10.1.1).

This element specifies the style information for a picture.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this element.

```
<xsd:element name="style" type="a:CT_ShapeStyle"/>
```

See section 5.12 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.3.29 extLst

Target namespace: http://schemas.microsoft.com/office/drawing/2010/picture

A **CT_OfficeArtExtensionList** element ([ISO/IEC-29500-1] section A.4.1).

Extension attribute on type: **pic** (Picture) as specified in [ISO/IEC-29500-1] section20.2.2.5

To maintain compatibility with Office Open XML implementations as specified in [ISO/IEC-29500:2008], the namespace of this attribute prefix MUST be specified in an **Ignorable** attribute ([ISO/IEC-29500-3] section 10.1.1).

This element specifies a list of extensions for a picture.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this element.

```
<xsd:element name="extLst" type="a:CT_OfficeArtExtensionList"/>
```

See section 5.12 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.3.30 wgp

Target namespace: http://schemas.microsoft.com/office/word/2010/wordprocessingGroup

Referenced by: CT_WordprocessingCanvas

A CT_WordprocessingGroup element that specifies a group in WordprocessingML. See 2.2.7 for more details about how this element is integrated with the Open XML file formats as specified in [ISO/IEC-29500-1].

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this element.

```
<xsd:element name="wgp" type="CT_WordprocessingGroup"/>
```

See section 5.4 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.3.31 wpc

Target namespace: http://schemas.microsoft.com/office/word/2010/wordprocessingCanvas

A CT_WordprocessingCanvas element that specifies a drawing canvas in WordprocessingML. See section 2.2.7 for more details about how this element is integrated with [ISO/IEC-29500-1].

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this element.

```
<xsd:element name="wpc" type="CT_WordprocessingCanvas"/>
```

See section 5.5 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.3.32 recolorImg

Target namespace: http://schemas.microsoft.com/office/drawing/2010/diagram

A CT_Boolean element that specifies that images in the diagram are to be rendered as duotone, and thus rendered with the color specified by the **fillClrLst** ([ISO/IEC-29500-1] section 21.4.4.8) of the color transform on the diagram.

The following figures demonstrate the effect of this flag on a diagram with images in it.

Figure 1: recolorImg is set to "false" or not present

Figure 2: recolorImg is set to "true"

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this element.

```
<xsd:element name="recolorImg" type="CT_Boolean"/>
```

See section 5.16 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.3.33 contentPart

Target namespace: http://schemas.microsoft.com/office/drawing/2010/chartDrawing

A CT_ContentPart element that specifies a reference to XML content in a format not specified in [ISO/IEC-29500-1].

This element serves the same purpose as the **contentPart** element in SpreadsheetML Drawing ([ISO/IEC-29500-1] section 20.5.2.12), but appears under **CT_GroupShape** and **EG_ObjectChoices** ([ISO/IEC-29500-1] section A.5.1) to enable content parts in charts.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this element.

```
<xsd:element name="contentPart" type="CT_ContentPart"/>
```

See section 5.8 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.3.34 pivotSource

Target namespace: http://schemas.microsoft.com/office/drawing/2012/chart

A **CT_PivotSource** ([ISO/IEC-29500-4] section A.5.1) element<93> that specifies the source pivot table for a pivot chart. MUST exist only if the pivot table associated with the chart ([ISO/IEC-29500-1] section 21.2) is a Non-WorkSheet PivotTable ([MS-XLSX] section 2.3.3 and [MS-XLSB] section 2.2.5.5).

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this element.

```
<xsd:element name="pivotSource" type="c:CT_PivotSource"/>
```

See section 5.13 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.3.35 numFmt

Target namespace: http://schemas.microsoft.com/office/drawing/2012/chart

A **CT_NumFmt** ([ISO/IEC-29500-1] section A.5.1) element<94> that specifies number formatting for elements of type CT_CatAx ([ISO/IEC-29500-1] section A.5.1), CT_DateAx ([ISO/IEC-29500-1] section A.5.1), CT_SerAx ([ISO/IEC-29500-1] section A.5.1) and CT_ValAx ([ISO/IEC-29500-1] section A.5.1). MUST NOT exist if the **CT_ExtensionList** ([ISO/IEC-29500-1] section A.3) element of the parent **CT_ChartSpace** element ([ISO/IEC-29500-4] section A.5.1) does not have a child **CT_PivotSource** element ([ISO/IEC-29500-4] section A.5.1).

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this element.

```
<xsd:element name="numFmt" type="c:CT_NumFmt"/>
```

See section 5.13 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.3.36 fullRef

Target namespace: http://schemas.microsoft.com/office/drawing/2012/chart

A CT_FullRef element<95> that specifies the non-filtered data source reference for filtered out chart ([ISO/IEC-29500-1] section 21.2) series data.

This reference is in the form of a book, sheet, and cell reference. This reference does not include the equals sign.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this element.

```
<xsd:element name="fullRef" type="CT_FullRef"/>
```

See section 5.13 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.3.37 levelRef

Target namespace: http://schemas.microsoft.com/office/drawing/2012/chart

A CT_LevelRef element<96> that specifies the data source reference for the currently selected label level for a chart ([ISO/IEC-29500-1] section 21.2) category axis or a chart ([ISO/IEC-29500-1] section 21.2) series title.

This reference is in the form of a book, sheet, and cell reference. This reference does not include the equals sign.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this element.

```
<xsd:element name="levelRef" type="CT_LevelRef"/>
```

See section 5.13 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.3.38 filteredSeriesTitle

Target namespace: http://schemas.microsoft.com/office/drawing/2012/chart

A CT_FilteredSeriesTitle element<97> that specifies a chart ([ISO/IEC-29500-1] section 21.2) series title that has been filtered from the chart ([ISO/IEC-29500-1] section 21.2).

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this element.

```
<xsd:element name="filteredSeriesTitle" type="CT_FilteredSeriesTitle"/>
```

See section 5.13 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.3.39 filteredCategoryTitle

Target namespace: http://schemas.microsoft.com/office/drawing/2012/chart

A CT_FilteredCategoryTitle element<98> that specifies a chart ([ISO/IEC-29500-1] section 21.2) category title that has been filtered from the chart ([ISO/IEC-29500-1] section 21.2).

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this element.

```
<xsd:element name="filteredCategoryTitle" type="CT_FilteredCategoryTitle"/>
```

See section 5.13 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.3.40 filteredAreaSeries

Target namespace: http://schemas.microsoft.com/office/drawing/2012/chart

A CT_FilteredAreaSer element<99> that specifies a chart area series ([ISO/IEC-29500-1] section 21.2.2.168) that has been filtered from the chart ([ISO/IEC-29500-1] section 21.2).

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this element.

```
<xsd:element name="filteredAreaSeries" type="CT_FilteredAreaSer"/>
```

See section 5.13 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.3.41 filteredBarSeries

Target namespace: http://schemas.microsoft.com/office/drawing/2012/chart

A CT_FilteredBarSer element<100> that specifies a chart bar series ([ISO/IEC-29500-1] section 21.2.2.170) that has been filtered from the chart ([ISO/IEC-29500-1] section 21.2).

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this element.

```
<xsd:element name="filteredBarSeries" type="CT_FilteredBarSer"/>
```

See section 5.13 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.3.42 filteredBubbleSeries

Target namespace: http://schemas.microsoft.com/office/drawing/2012/chart

A CT_FilteredBubbleSer element<101> that specifies a chart bubble series ([ISO/IEC-29500-1] section 21.2.2.174) that has been filtered from the chart ([ISO/IEC-29500-1] section 21.2).

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this element.

```
<xsd:element name="filteredBubbleSeries" type="CT_FilteredBubbleSer"/>
```

See section 5.13 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.3.43 filteredLineSeries

Target namespace: http://schemas.microsoft.com/office/drawing/2012/chart

A CT_FilteredLineSer element<102> that specifies a chart line series ([ISO/IEC-29500-1] section 21.2.2.171) that has been filtered from the chart ([ISO/IEC-29500-1] section 21.2).

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this element.

```
<xsd:element name="filteredLineSeries" type="CT_FilteredLineSer"/>
```

See section 5.13 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.3.44 filteredPieSeries

Target namespace: http://schemas.microsoft.com/office/drawing/2012/chart

A CT_FilteredPieSer element<103> that specifies a chart pie series ([ISO/IEC-29500-1] section 21.2.2.172) that has been filtered from the chart ([ISO/IEC-29500-1] section 21.2).

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this element.

```
<xsd:element name="filteredPieSeries" type="CT_FilteredPieSer"/>
```

See section 5.13 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.3.45 filteredRadarSeries

Target namespace: http://schemas.microsoft.com/office/drawing/2012/chart

A CT_FilteredRadarSer element<104> that specifies a chart radar series ([ISO/IEC-29500-1] section 21.2.2.169) that has been filtered from the chart ([ISO/IEC-29500-1] section 21.2).

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this element.

```
<xsd:element name="filteredRadarSeries" type="CT_FilteredRadarSer"/>
```

See section 5.13 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.3.46 filteredScatterSeries

Target namespace: http://schemas.microsoft.com/office/drawing/2012/chart

A CT_FilteredScatterSer element<105> that specifies a chart scatter series ([ISO/IEC-29500-1] section 21.2.2.167) that has been filtered from the chart ([ISO/IEC-29500-1] section 21.2).

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this element.

```
<xsd:element name="filteredScatterSeries" type="CT_FilteredScatterSer"/>
```

See section 5.13 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.3.47 filteredSurfaceSeries

Target namespace: http://schemas.microsoft.com/office/drawing/2012/chart

A CT_FilteredSurfaceSer element<106> that specifies a chart surface series ([ISO/IEC-29500-1] section 21.2.2.173) that has been filtered from the chart ([ISO/IEC-29500-1] section 21.2).

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this element.

```
<xsd:element name="filteredSurfaceSeries" type="CT_FilteredSurfaceSer"/>
```

See section 5.13 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.3.48 backgroundPr

Target namespace: http://schemas.microsoft.com/office/drawing/2012/main

A CT_BackgroundPr element<107> that specifies the properties of the background of the document.

An extension list child element of: **CT_NonVisualDrawingProps (cNvPr)** as specified in [ISO/IEC-29500-1] section 19.3.1.12.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this element.

```
<xsd:element name="backgroundPr" type="CT_BackgroundPr"/>
```

See section 5.14 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.3.49 nonVisualGroupProps

Target namespace: http://schemas.microsoft.com/office/drawing/2012/main

A CT_NonVisualGroupProps element<108> that specifies non-visual properties of a group.

An extension list child element of: **CT_NonVisualGroupDrawingShapeProps (cNvGrpSpPr)** as specified in [ISO/IEC-29500-1] section 19.3.1.10.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this element.

```
<xsd:element name="nonVisualGroupProps" type="CT_NonVisualGroupProps"/>
```

See section 5.14 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.3.50 objectPr

Target namespace: http://schemas.microsoft.com/office/drawing/2012/main

A CT_ObjectPr element<109> that specifies object properties of a control or object.

An extension list child element of: **CT_NonVisualPictureProperties (cNvPicPr)** as specified in [ISO/IEC-29500-1] section 19.3.1.11.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this element.

```
<xsd:element name="objectPr" type="CT_ObjectPr"/>
```

See section 5.14 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.3.51 signatureLine

Target namespace: http://schemas.microsoft.com/office/drawing/2012/main

A CT_SignatureLine element<110> that specifies a signature line. A signature line provides a visual representation of a signature that is digitally signed.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this element.

```
<xsd:element name="signatureLine" type="CT_SignatureLine"/>
```

See section 5.14 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.3.52 chartStyle

Target namespace: http://schemas.microsoft.com/office/drawing/2012/chartStyle

A CT_ChartStyle element<111> that specifies the default formatting for all chart elements.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this element.

```
<xsd:element name="chartStyle" type="CT_ChartStyle"/>
```

See section 5.15 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.3.53 spPr

Target namespace: http://schemas.microsoft.com/office/drawing/2012/chart

The **spPr** element is a **CT_ShapeProperties** ([ISO/IEC-29500-1] section A.4.1) element<112> that specifies the shape geometry for a **Datalabel** (section 2.2.1.3).

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this element.

```
<xsd:element name="spPr" type="a:CT_ShapeProperties"/>
```

See section 5.13 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.3.54 layout

Target namespace: http://schemas.microsoft.com/office/drawing/2012/chart

layout<113> is a **CT_Layout** ([ISO/IEC-29500-1] section A.5.1) element<114> whose child element **manualLayout** ([ISO/IEC-29500-1] section A.5.1) specifies the manual layout for a **Datalabel** (section 2.2.1.3) or the parent **Datalabels** object (section 2.2.1.2).

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this element.

```
<xsd:element name="layout" type="c:CT_Layout"/>
```

See section 5.13 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.3.55 datalabelsRange

Target namespace: http://schemas.microsoft.com/office/drawing/2012/chart

datalabelsRange is a CT_SeriesDataLabelsRange element<115> that specifies the reference to the formula from which the values of dLbls element ([ISO/IEC-29500-1] section 21.2.2.49) on a chart series ([ISO/IEC-29500-1] section 21.2) are obtained.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this element.

```
<xsd:element name="datalabelsRange" type="CT_SeriesDataLabelsRange"/>
```

See section 5.13 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.3.56 dlblFieldTable

Target namespace: http://schemas.microsoft.com/office/drawing/2012/chart

The **dlblFieldTable** element is a **CT_DataLabelFieldTable** element<116> (section 2.5.99) that contains a list of **CT_DataLabelFieldTableEntry** entries (section 2.5.98). Each entry corresponds to a text field in a **Datalabel** (section 2.2.1.3) whose value is obtained from a formula reference.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this element.

```
<xsd:element name="dlblFieldTable" type="CT_DataLabelFieldTable"/>
```

See section 5.13 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.3.57 xForSave

Target namespace: http://schemas.microsoft.com/office/drawing/2012/chart

The **xForSave** element is a **CT_Boolean** (section 2.5.80) element<117> that specifies whether this **Datalabel** (section 2.2.1.3) was created solely for the purpose of saving. If it is true, it means that when the file is loaded back this **Datalabel** will be merged with the default **Datalabel** on that chart series ([ISO/IEC-29500-1] section 21.2).

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this element.

```
<xsd:element name="xForSave" type="c:CT_Boolean"/>
```

See section 5.13 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.3.58 showDataLabelsRange

Target namespace: http://schemas.microsoft.com/office/drawing/2012/chart

The **showDataLabelsRange** element is a **CT_Boolean** element<118> (section 2.5.80) that specifies whether the value from the **datalabelsrange** (section 2.3.55) is shown in this **Datalabel** (section 2.2.1.3). If set to true, the value from the **datalabelsrange** corresponding to the index of this **Datalabel** in the chart series ([ISO/IEC-29500-1] section 21.2) is shown in this **Datalabel**. The value will be shown as the first field in the **Datalabel's** text.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this element.

```
<xsd:element name="showDataLabelsRange" type="c:CT_Boolean"/>
```

See section 5.13 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.3.59 tx

Target namespace: http://schemas.microsoft.com/office/drawing/2012/chart

The **tx** element is a **CT_Tx** ([ISO/IEC-29500-1] section 21.2.2.215) element<119> that specifies the text string stored in the default **Datalabel** (section 2.2.1.3) of a chart series ([ISO/IEC-29500-1] section 21.2). This string represents the text that will be shown in every **Datalabel** on the series which does not have custom properties of its own.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this element.

```
<xsd:element name="tx" type="c:CT_Tx"/>
```

See section 5.13 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.3.60 showLeaderLines

Target namespace: http://schemas.microsoft.com/office/drawing/2012/chart

The **showLeaderLines** element is a **CT_Boolean** (section 2.5.80) element<120> that specifies whether leader lines, which are chart lines that connect data labels to their corresponding chart series points, are allowed to be displayed for this set of **Datalabels** (section 2.2.1.3). If leader lines are displayed, the formatting from the **leaderLines** (section 2.3.61) is used for the leader lines of these **Datalabels**.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this element.

```
<xsd:element name="showLeaderLines" type="c:CT_Boolean"/>
```

See section 5.13 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.3.61 leaderLines

Target namespace: http://schemas.microsoft.com/office/drawing/2012/chart

leaderLines is a **CT_ChartLines** ([ISO/IEC-29500-1] section A.5.1) element<121> that specifies the formatting of leader lines, which are chart lines that connect data labels to their corresponding chart series points.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this element.

```
<xsd:element name="leaderLines" type="c:CT_ChartLines"/>
```

See section 5.13 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.3.62 autoCat

Target namespace: http://schemas.microsoft.com/office/drawing/2012/chart

autoCat is a **CT_Boolean** element<122> (section 2.5.80) that specifies whether the captions of the data points in this chart series ([ISO/IEC-29500-1] section 21.2) were automatically generated. This element is present only if the chart series ([ISO/IEC-29500-1] section 21.2) has filtered data points in it.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this element.

```
<xsd:element name="autoCat" type="c:CT_Boolean"/>
```

See section 5.13 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.3.63 categoryFilterExceptions

Target namespace: http://schemas.microsoft.com/office/drawing/2012/chart

categoryFilterExceptions is a CT_CategoryFilterExceptions element<123> that contains a list of CT_CategoryFilterException entries. Each entry corresponds to a single data point in the chart series ([ISO/IEC-29500-1] section 21.2), that has been filtered out. Each entry specifies special formatting properties associated with that data point.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this element.

```
<xsd:element name="categoryFilterExceptions" type="CT_CategoryFilterExceptions"/>
```

See section 5.13 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.3.64 colorStyle

Target namespace: http://schemas.microsoft.com/office/drawing/2012/chartStyle

The **colorStyle** element<124> (section 2.5.91), which is of type **CT_ColorStyle**, specifies the color style for the chart.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this element.

```
<xsd:element name="colorStyle" type="CT_ColorStyle"/>
```

See section 5.15 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.3.65 themeFamily

Target namespace: http://schemas.microsoft.com/office/thememl/2012/main

A CT_ThemeFamily element that specifies the data about the applied theme.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this element.

```
<xsd:element name="themeFamily" type="CT_ThemeFamily"/>
```

See section 5.17 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.3.66 formulaRef

Target namespace: http://schemas.microsoft.com/office/drawing/2012/chart

A **CT_FormulaRef** element (section 2.5.104) that specifies the visible data source reference for filtered out chart ([ISO/IEC-29500-1] section 21.2) series data. This element specifies the reference for the series caption or values or category labels for a chart series that is filtered out from the chart.

This reference is in the form of a book, sheet, and cell reference. This reference does not include the equals sign.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this element.

```
<xsd:element name="formulaRef" type="CT_FormulaRef"/>
```

See section 5.13 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.3.67 webVideoPr

Target namespace: http://schemas.microsoft.com/office/word/2012/wordprocessingDrawing

A CT_WebVideoPr element that specifies the properties for displaying an online video to the user.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this element.

```
<xsd:element name="webVideoPr" type="CT_WebVideoPr"/>
```

See section 5.18 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.4 Global Attributes

2.4.1 editId

Target namespace: http://schemas.microsoft.com/office/word/2010/wordprocessingDrawing

An optional **ST_EditId** attribute of an anchor or inline element as specified in [ISO/IEC-29500-1] section 20.4.2.3 and [ISO/IEC-29500-1] section 20.4.2.8. If present, this attribute specifies whether the object has been edited relative to the corresponding object in another version of the same document. If this attribute is present on an anchor or inline element and that element is edited in a way other than editing the contents of any nested **txbxContent** element ([ISO/IEC-29500-4] section 9.8.1.1), the application MUST either change the value of this attribute or remove it. If present, the value of this attribute MUST be greater than zero and less than 0x80000000.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this attribute.

```
<xsd:attribute name="editId" type="ST_EditId"/>
```

See section 5.11 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.4.2 legacySpreadsheetColorIndex

Target namespace: http://schemas.microsoft.com/office/drawing/2010/main

Attribute type: ST_LegacySpreadsheetColorIndex

Extension attribute on type: **srgbClr** (RGB Color Model - Hex Variant) as specified in [ISO/IEC-29500-1] section 20.1.2.3.32

To maintain compatibility with implementations of Office Open XML file formats as specified in [ISO/IEC-29500:2008], the namespace prefix of this attribute MUST be specified in an **Ignorable** attribute ([ISO/IEC-29500-3] section 10.1.1).

This attribute is an index into a color table specified by the **indexedColors** element ([ISO/IEC-29500-1] section 18.8.27) defined in a SpreadsheetML document.

When present in the context of a spreadsheet application, this attribute overrides any other color information present under its parent **CT_SRgbColor** element. This attribute is ignored in all other contexts.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this attribute.

```
<xsd:attribute name="legacySpreadsheetColorIndex" type="ST_LegacySpreadsheetColorIndex"/>
```

See section 5.1 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.4.3 anchorId

Target namespace: http://schemas.microsoft.com/office/word/2010/wordprocessingDrawing

An optional ST_EditId attribute that specifies an identifier for the element this attribute is applied to. Values MUST be greater than 0 and less than 0x80000000. See [MS-DOCX] section 2.2.6 for how this attribute integrates with [ISO/IEC-29500-1].

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this attribute.

```
<xsd:attribute name="anchorId" type="ST_EditId"/>
```

See section 5.11 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.4.4 name

Target namespace: http://schemas.microsoft.com/office/thememl/2012/main

A string [TYPE HERE: Needs normative reference] attribute that specifies [TYPE HERE]

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this attribute.

```
<xsd:attribute name="name" type="xsd:string"/>
```

See section 5.17 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.5 Complex Types

2.5.1 CT_PictureEffectBlur

Target namespace: http://schemas.microsoft.com/office/drawing/2010/main

Referenced by: CT_PictureEffect

A complex type that specifies a blur effect applied to a picture.

The following figure demonstrates the effect applied to a picture with radius values of zero, 5, 10, 20, and 40, respectively.

Figure 3: Effect of changes to blur radius

Attributes:

radius: An **ST_ArtisticEffectParam100** attribute that specifies the blur radius.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this complex type.

```
<xsd:complexType name="CT_PictureEffectBlur">
  <xsd:attribute name="radius" type="ST_ArtisticEffectParam100" use="optional" default="10"/>
</xsd:complexType>
```

See section 5.1 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.5.2 CT_PictureEffectCement

Target namespace: http://schemas.microsoft.com/office/drawing/2010/main

Referenced by: CT_PictureEffect

A complex type that specifies a cement effect applied to a picture.

The following figure demonstrates the effect applied to a picture with **crackSpacing** values of zero, 25, 50, 75, and 100, respectively.

Figure 4: Effect of changes to crackSpacing

Attributes:

trans: An **ST_PositiveFixedPercentage** attribute ([ISO/IEC-29500-1] section A.4.1) that specifies the transparency of the effect. A value of zero percent specifies that the effect is applied fully. A value of 100 percent specifies that the effect is not applied.

crackSpacing: An **ST_ArtisticEffectParam100** attribute that specifies the appearance of the effect.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this complex type.

```
<xsd:complexType name="CT_PictureEffectCement">
  <xsd:attribute name="trans" type="a:ST_PositiveFixedPercentage" use="optional"
default="0"/>
  <xsd:attribute name="crackSpacing" type="ST_ArtisticEffectParam100" use="optional"
default="24"/>
</xsd:complexType>
```

See section 5.1 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.5.3 CT_PictureEffectChalkSketch

Target namespace: http://schemas.microsoft.com/office/drawing/2010/main

Referenced by: CT_PictureEffect

A complex type that specifies a chalk sketch effect applied to a picture.

The following figure demonstrates the effect applied to a picture with pressure values of zero, 1, 2, 3, and 4 respectively.

Figure 5: Effect of changes to pressure

Attributes:

trans: An **ST_PositiveFixedPercentage** attribute ([ISO/IEC-29500-1] section A.4.1) that specifies the transparency of the effect. A value of zero percent specifies that the effect is applied fully. A value of 100 percent specifies that the effect is not applied.

pressure: An **ST_ArtisticEffectParam4** attribute that specifies the appearance of the effect.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this complex type.

```
<xsd:complexType name="CT_PictureEffectChalkSketch">
  <xsd:attribute name="trans" type="a:ST_PositiveFixedPercentage" use="optional"
default="0"/>
  <xsd:attribute name="pressure" type="ST_ArtisticEffectParam4" use="optional" default="0"/>
</xsd:complexType>
```

See section 5.1 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.5.4 CT_PictureEffectCrisscrossEtching

Target namespace: http://schemas.microsoft.com/office/drawing/2010/main

Referenced by: CT_PictureEffect

A complex type that specifies a crisscross etching effect applied to a picture.

The following figure demonstrates the effect applied to a picture with pressure values of zero, 25, 50, 75, and 100, respectively.

Figure 6: Effect of changes to pressure

Attributes:

trans: An **ST_PositiveFixedPercentage** attribute ([ISO/IEC-29500-1] section A.4.1) that specifies the transparency of the effect. A value of zero percent specifies that the effect is applied fully. A value of 100 percent specifies that the effect is not applied.

pressure: An **ST_ArtisticEffectParam100** attribute that specifies the appearance of the effect.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this complex type.

```
<xsd:complexType name="CT_PictureEffectCrisscrossEtching">
  <xsd:attribute name="trans" type="a:ST_PositiveFixedPercentage" use="optional"
default="75"/>
  <xsd:attribute name="pressure" type="ST_ArtisticEffectParam100" use="optional"
default="30"/>
</xsd:complexType>
```

See section 5.1 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.5.5 CT_PictureEffectCutout

Target namespace: http://schemas.microsoft.com/office/drawing/2010/main

Referenced by: CT_PictureEffect

A complex type that specifies a cutout effect applied to a picture.

The following figure demonstrates the effect applied to a picture with **numberOfShades** values of zero, 2, 3, 4, and 6, respectively.

Figure 7: Effect of changes to numberOfShades

Attributes:

trans: An **ST_PositiveFixedPercentage** attribute ([ISO/IEC-29500-1] section A.4.1) that specifies the transparency of the effect. A value of zero percent specifies that the effect is applied fully. A value of 100 percent specifies that the effect is not applied.

numberOfShades: An **ST_ArtisticEffectParam6** attribute that specifies the appearance of the effect.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this complex type.

```
<xsd:complexType name="CT_PictureEffectCutout">
  <xsd:attribute name="trans" type="a:ST_PositiveFixedPercentage" use="optional"
default="0"/>
  <xsd:attribute name="numberOfShades" type="ST_ArtisticEffectParam6" use="optional"
default="2"/>
</xsd:complexType>
```

See section 5.1 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.5.6 CT_PictureEffectFilmGrain

Target namespace: http://schemas.microsoft.com/office/drawing/2010/main

Referenced by: CT_PictureEffect

A complex type that specifies a film grain effect applied to a picture.

The following figure demonstrates the effect applied to a picture with **grainSize** values of zero, 25, 50, 75, and 100, respectively.

Figure 8: Effect of changes to grainSize

Attributes:

trans: An **ST_PositiveFixedPercentage** attribute ([ISO/IEC-29500-1] section A.4.1) that specifies the transparency of the effect. A value of zero percent specifies that the effect is applied fully. A value of 100 percent specifies that the effect is not applied.

grainSize: An **ST_ArtisticEffectParam100** attribute that specifies the appearance of the effect.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this complex type.

```
<xsd:complexType name="CT_PictureEffectFilmGrain">
  <xsd:attribute name="trans" type="a:ST_PositiveFixedPercentage" use="optional"
default="0"/>
  <xsd:attribute name="grainSize" type="ST_ArtisticEffectParam100" use="optional"
default="40"/>
</xsd:complexType>
```

See section 5.1 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.5.7 CT_PictureEffectGlass

Target namespace: http://schemas.microsoft.com/office/drawing/2010/main

Referenced by: CT_PictureEffect

A complex type that specifies a glass effect applied to a picture.

The following figure demonstrates the effect applied to a picture with scaling values of zero, 25, 50, 75, and 100, respectively.

Figure 9: Effect of changes to scaling

Attributes:

trans: An **ST_PositiveFixedPercentage** attribute ([ISO/IEC-29500-1] section A.4.1) that specifies the transparency of the effect. A value of zero percent specifies that the effect is applied fully. A value of 100 percent specifies that the effect is not applied.

scaling: An **ST_ArtisticEffectParam100** attribute that specifies the appearance of the effect.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this complex type.

```
<xsd:complexType name="CT_PictureEffectGlass">
  <xsd:attribute name="trans" type="a:ST_PositiveFixedPercentage" use="optional"
default="0"/>
  <xsd:attribute name="scaling" type="ST_ArtisticEffectParam100" use="optional"
default="34"/>
</xsd:complexType>
```

See section 5.1 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.5.8 CT_PictureEffectGlowDiffused

Target namespace: http://schemas.microsoft.com/office/drawing/2010/main

Referenced by: CT_PictureEffect

A complex type that specifies a glow diffused effect applied to a picture.

The following figure demonstrates the effect applied to a picture with intensity values of zero, 2, 5, 7, and 10, respectively.

Figure 10: Effect of changes to intensity

Attributes:

trans: An **ST_PositiveFixedPercentage** attribute ([ISO/IEC-29500-1] section A.4.1) that specifies the transparency of the effect. A value of zero percent specifies that the effect is applied fully. A value of 100 percent specifies that the effect is not applied.

intensity: An **ST_ArtisticEffectParam10** attribute that specifies the appearance of the effect.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this complex type.

```
<xsd:complexType name="CT_PictureEffectGlowDiffused">
  <xsd:attribute name="trans" type="a:ST_PositiveFixedPercentage" use="optional"
default="0"/>
  <xsd:attribute name="intensity" type="ST_ArtisticEffectParam10" use="optional"
default="5"/>
</xsd:complexType>
```

See section 5.1 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.5.9 CT_PictureEffectGlowEdges

Target namespace: http://schemas.microsoft.com/office/drawing/2010/main

Referenced by: CT_PictureEffect

A complex type that specifies a glow edges effect applied to a picture.

The following figure demonstrates the effect applied to a picture with smoothness values of zero, 2, 5, 7, and 10, respectively.

Figure 11: Effect of changes to smoothness

Attributes:

trans: An **ST_PositiveFixedPercentage** attribute ([ISO/IEC-29500-1] section A.4.1) that specifies the transparency of the effect. A value of zero percent specifies that the effect is applied fully. A value of 100 percent specifies that the effect is not applied.

smoothness: An **ST_ArtisticEffectParam10** attribute that specifies the appearance of the effect.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this complex type.

```
<xsd:complexType name="CT_PictureEffectGlowEdges">
  <xsd:attribute name="trans" type="a:ST_PositiveFixedPercentage" use="optional"
default="15"/>
  <xsd:attribute name="smoothness" type="ST_ArtisticEffectParam10" use="optional"
default="3"/>
</xsd:complexType>
```

See section 5.1 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.5.10 CT_PictureEffectLightScreen

Target namespace: http://schemas.microsoft.com/office/drawing/2010/main

Referenced by: CT_PictureEffect

A complex type that specifies a light screen effect applied to a picture.

The following figure demonstrates the effect applied to a picture with **gridSize** values of zero, 2, 5, 7, and 10, respectively.

Figure 12: Effect of changes to gridSize

Attributes:

trans: An **ST_PositiveFixedPercentage** attribute ([ISO/IEC-29500-1] section A.4.1) that specifies the transparency of the effect. A value of zero percent specifies that the effect is applied fully. A value of 100 percent specifies that the effect is not applied.

gridSize: An **ST_ArtisticEffectParam10** attribute that specifies the appearance of the effect.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this complex type.

```
<xsd:complexType name="CT_PictureEffectLightScreen">
  <xsd:attribute name="trans" type="a:ST_PositiveFixedPercentage" use="optional"
default="0"/>
  <xsd:attribute name="gridSize" type="ST_ArtisticEffectParam10" use="optional" default="4"/>
</xsd:complexType>
```

See section 5.1 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.5.11 CT_PictureEffectLineDrawing

Target namespace: http://schemas.microsoft.com/office/drawing/2010/main

Referenced by: CT_PictureEffect

A complex type that specifies a line drawing effect applied to a picture.

The following figure demonstrates the effect applied to a picture with **pencilSize** values of zero, 25, 50, 75, and 100, respectively.

Figure 13: Effect of changes to pencilSize

Attributes:

trans: An **ST_PositiveFixedPercentage** attribute ([ISO/IEC-29500-1] section A.4.1) that specifies the transparency of the effect. A value of zero percent specifies that the effect is applied fully. A value of 100 percent specifies that the effect is not applied.

pencilSize: An **ST_ArtisticEffectParam100** attribute that specifies the appearance of the effect.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this complex type.

```
<xsd:complexType name="CT_PictureEffectLineDrawing">
  <xsd:attribute name="trans" type="a:ST_PositiveFixedPercentage" use="optional"
default="25"/>
  <xsd:attribute name="pencilSize" type="ST_ArtisticEffectParam100" use="optional"
default="0"/>
</xsd:complexType>
```

See section 5.1 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.5.12 CT_PictureEffectMarker

Target namespace: http://schemas.microsoft.com/office/drawing/2010/main

Referenced by: CT_PictureEffect

A complex type that specifies a marker effect applied to a picture.

The following figure demonstrates the effect applied to a picture with size values of zero, 25, 50, 75, and 100, respectively.

Figure 14: Effect of changes to size

Attributes:

trans: An **ST_PositiveFixedPercentage** attribute ([ISO/IEC-29500-1] section A.4.1) that specifies the transparency of the effect. A value of zero percent specifies that the effect is applied fully. A value of 100 percent specifies that the effect is not applied.

size: An **ST_ArtisticEffectParam100** attribute that specifies the appearance of the effect.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this complex type.

```
<xsd:complexType name="CT_PictureEffectMarker">
  <xsd:attribute name="trans" type="a:ST_PositiveFixedPercentage" use="optional"
default="0"/>
  <xsd:attribute name="size" type="ST_ArtisticEffectParam100" use="optional" default="97"/>
</xsd:complexType>
```

See section 5.1 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.5.13 CT_PictureEffectMosiaicBubbles

Target namespace: http://schemas.microsoft.com/office/drawing/2010/main

Referenced by: CT_PictureEffect

A complex type that specifies a mosaic bubbles effect applied to a picture.

The following figure demonstrates the effect applied to a picture with pressure values of zero, 25, 50, 75, and 100, respectively.

Figure 15: Effect of changes to pressure

Attributes:

trans: An **ST_PositiveFixedPercentage** attribute ([ISO/IEC-29500-1] section A.4.1) that specifies the transparency of the effect. A value of zero percent specifies that the effect is applied fully. A value of 100 percent specifies that the effect is not applied.

pressure: An **ST_ArtisticEffectParam100** attribute that specifies the appearance of the effect.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this complex type.

```
<xsd:complexType name="CT_PictureEffectMosiaicBubbles">
  <xsd:attribute name="trans" type="a:ST_PositiveFixedPercentage" use="optional"
default="0"/>
  <xsd:attribute name="pressure" type="ST_ArtisticEffectParam100" use="optional"
default="14"/>
```

```
</xsd:complexType>
```

See section 5.1 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.5.14 CT_PictureEffectPaintBrush

Target namespace: http://schemas.microsoft.com/office/drawing/2010/main

Referenced by: CT_PictureEffect

A complex type that specifies a paint brush effect applied to a picture.

The following figure demonstrates the effect applied to a picture with **brushSize** values of zero, 2, 5, 7, and 10, respectively.

Figure 16: Effect of changes to brushSize

Attributes:

trans: An **ST_PositiveFixedPercentage** attribute ([ISO/IEC-29500-1] section A.4.1) that specifies the transparency of the effect. A value of zero percent specifies that the effect is applied fully. A value of 100 percent specifies that the effect is not applied.

brushSize: An **ST_ArtisticEffectParam10** attribute that specifies the appearance of the effect.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this complex type.

```
<xsd:complexType name="CT_PictureEffectPaintBrush">
  <xsd:attribute name="trans" type="a:ST_PositiveFixedPercentage" use="optional"
default="0"/>
  <xsd:attribute name="brushSize" type="ST_ArtisticEffectParam10" use="optional"
default="2"/>
</xsd:complexType>
```

See section 5.1 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.5.15 CT_PictureEffectPaintStrokes

Target namespace: http://schemas.microsoft.com/office/drawing/2010/main

Referenced by: CT_PictureEffect

A complex type that specifies a paint strokes effect applied to a picture.

The following figure demonstrates the effect applied to a picture with intensity values of zero, 2, 5, 7, and 10, respectively.

Figure 17: Effect of changes to intensity

Attributes:

trans: An **ST_PositiveFixedPercentage** attribute ([ISO/IEC-29500-1] section A.4.1) that specifies the transparency of the effect. A value of zero percent specifies that the effect is applied fully. A value of 100 percent specifies that the effect is not applied.

intensity: An **ST_ArtisticEffectParam10** attribute that specifies the appearance of the effect.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this complex type.

```
<xsd:complexType name="CT_PictureEffectPaintStrokes">
  <xsd:attribute name="trans" type="a:ST_PositiveFixedPercentage" use="optional"
default="0"/>
  <xsd:attribute name="intensity" type="ST_ArtisticEffectParam10" use="optional"
default="5"/>
</xsd:complexType>
```

See section 5.1 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.5.16 CT_PictureEffectPastelsSmooth

Target namespace: http://schemas.microsoft.com/office/drawing/2010/main

Referenced by: CT_PictureEffect

A complex type that specifies a pastel smooth effect applied to a picture.

The following figure demonstrates the effect applied to a picture with scaling values of zero, 25, 50, 75, and 100, respectively.

Figure 18: Effect of changes to scaling

Attributes:

trans: An **ST_PositiveFixedPercentage** attribute ([ISO/IEC-29500-1] section A.4.1) that specifies the transparency of the effect. A value of zero percent specifies that the effect is applied fully. A value of 100 percent specifies that the effect is not applied.

scaling: An **ST_ArtisticEffectParam100** attribute that specifies the appearance of the effect.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this complex type.

```
<xsd:complexType name="CT_PictureEffectPastelsSmooth">
  <xsd:attribute name="trans" type="a:ST_PositiveFixedPercentage" use="optional"
default="0"/>
  <xsd:attribute name="scaling" type="ST_ArtisticEffectParam100" use="optional"
default="34"/>
</xsd:complexType>
```

See section 5.1 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.5.17 CT_PictureEffectPencilGrayscale

Target namespace: http://schemas.microsoft.com/office/drawing/2010/main

Referenced by: CT_PictureEffect

A complex type that specifies a pencil grayscale effect applied to a picture.

The following figure demonstrates the effect applied to a picture with **pencilSize** values of zero, 25, 50, 75, and 100, respectively.

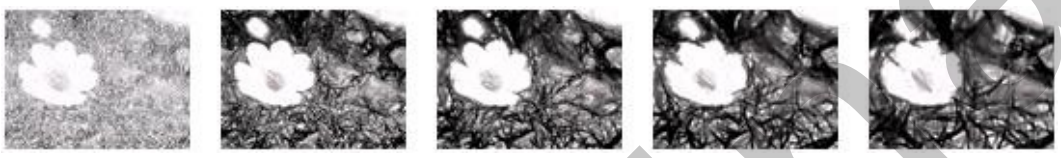

Figure 19: Effect of changes to pencilSize

Attributes:

trans: An **ST_PositiveFixedPercentage** attribute ([ISO/IEC-29500-1] section A.4.1) that specifies the transparency of the effect. A value of zero percent specifies that the effect is applied fully. A value of 100 percent specifies that the effect is not applied.

pencilSize: An **ST_ArtisticEffectParam100** attribute that specifies the appearance of the effect.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this complex type.

```
<xsd:complexType name="CT_PictureEffectPencilGrayscale">
  <xsd:attribute name="trans" type="a:ST_PositiveFixedPercentage" use="optional"
default="0"/>
  <xsd:attribute name="pencilSize" type="ST_ArtisticEffectParam100" use="optional"
default="27"/>
</xsd:complexType>
```

See section 5.1 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.5.18 CT_PictureEffectPencilSketch

Target namespace: http://schemas.microsoft.com/office/drawing/2010/main

Referenced by: CT_PictureEffect

A complex type that specifies a pencil sketch effect applied to a picture.

The following figure demonstrates the effect applied to a picture with pressure values of zero, 25, 50, 75, and 100, respectively.

Figure 20: Effect of changes to pressure

Attributes:

trans: An **ST_PositiveFixedPercentage** attribute ([ISO/IEC-29500-1] section A.4.1) that specifies the transparency of the effect. A value of zero percent specifies that the effect is applied fully. A value of 100 percent specifies that the effect is not applied.

pressure: An **ST_ArtisticEffectParam100** attribute that specifies the appearance of the effect.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this complex type.

```
<xsd:complexType name="CT_PictureEffectPencilSketch">
  <xsd:attribute name="trans" type="a:ST_PositiveFixedPercentage" use="optional"
default="0"/>
  <xsd:attribute name="pressure" type="ST_ArtisticEffectParam100" use="optional"
default="22"/>
</xsd:complexType>
```

See section 5.1 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.5.19 CT_PictureEffectPhotocopy

Target namespace: http://schemas.microsoft.com/office/drawing/2010/main

Referenced by: CT_PictureEffect

A complex type that specifies a photocopy effect applied to a picture.

The following figure demonstrates the effect applied to a picture with **detail** values of zero, 2, 5, 7, and 10, respectively.

Figure 21: Effect of changes to detail

Attributes:

trans: An **ST_PositiveFixedPercentage** attribute ([ISO/IEC-29500-1] section A.4.1) that specifies the transparency of the effect. A value of zero percent specifies that the effect is applied fully. A value of 100 percent specifies that the effect is not applied.

detail: An **ST_ArtisticEffectParam10** attribute that specifies the appearance of the effect.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this complex type.

```
<xsd:complexType name="CT_PictureEffectPhotocopy">
  <xsd:attribute name="trans" type="a:ST_PositiveFixedPercentage" use="optional"
default="30"/>
  <xsd:attribute name="detail" type="ST_ArtisticEffectParam10" use="optional" default="3"/>
</xsd:complexType>
```

See section 5.1 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.5.20 CT_PictureEffectPlasticWrap

Target namespace: http://schemas.microsoft.com/office/drawing/2010/main

Referenced by: CT_PictureEffect

A complex type that specifies a plastic wrap effect applied to a picture.

The following figure demonstrates the effect applied to a picture with smoothness values of zero, 2, 5, 7, and 10, respectively.

Figure 22: Effect of changes to smoothness

Attributes:

trans: An **ST_PositiveFixedPercentage** attribute ([ISO/IEC-29500-1] section A.4.1) that specifies the transparency of the effect. A value of zero percent specifies that the effect is applied fully. A value of 100 percent specifies that the effect is not applied.

smoothness: An **ST_ArtisticEffectParam10** attribute that specifies the appearance of the effect.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this complex type.

```
<xsd:complexType name="CT_PictureEffectPlasticWrap">
  <xsd:attribute name="trans" type="a:ST_PositiveFixedPercentage" use="optional"
default="0"/>
  <xsd:attribute name="smoothness" type="ST_ArtisticEffectParam10" use="optional"
default="5"/>
</xsd:complexType>
```

See section 5.1 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.5.21 CT_PictureEffectTexturizer

Target namespace: http://schemas.microsoft.com/office/drawing/2010/main

Referenced by: CT_PictureEffect

A complex type that specifies a texture effect applied to a picture.

The following figure demonstrates the effect applied to a picture with scaling values of zero, 25, 50, 75, and 100, respectively.

Figure 23: Effect of changes to scaling

Attributes:

trans: An **ST_PositiveFixedPercentage** attribute ([ISO/IEC-29500-1] section A.4.1) that specifies the transparency of the effect. A value of zero percent specifies that the effect is applied fully. A value of 100 percent specifies that the effect is not applied.

scaling: An **ST_ArtisticEffectParam100** attribute that specifies the appearance of the effect.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this complex type.

```
<xsd:complexType name="CT_PictureEffectTexturizer">
  <xsd:attribute name="trans" type="a:ST_PositiveFixedPercentage" use="optional"
default="0"/>
  <xsd:attribute name="scaling" type="ST_ArtisticEffectParam100" use="optional"
default="34"/>
</xsd:complexType>
```

See section 5.1 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.5.22 CT_PictureEffectWatercolorSponge

Target namespace: http://schemas.microsoft.com/office/drawing/2010/main

Referenced by: CT_PictureEffect

A complex type that specifies a watercolor sponge effect applied to a picture.

The following figure demonstrates the effect applied to a picture with **brushSize** values of zero, 2, 5, 7, and 10, respectively.

Figure 24: Effect of changes to brushSize

Attributes:

trans: An **ST_PositiveFixedPercentage** attribute ([ISO/IEC-29500-1] section A.4.1) that specifies the transparency of the effect. A value of zero percent specifies that the effect is applied fully. A value of 100 percent specifies that the effect is not applied.

brushSize: An **ST_ArtisticEffectParam10** attribute that specifies the appearance of the effect.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this complex type.

```
<xsd:complexType name="CT_PictureEffectWatercolorSponge">
  <xsd:attribute name="trans" type="a:ST_PositiveFixedPercentage" use="optional"
default="0"/>
  <xsd:attribute name="brushSize" type="ST_ArtisticEffectParam10" use="optional"
default="2"/>
</xsd:complexType>
```

See section 5.1 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.5.23 CT_PictureEffectBackgroundRemovalForegroundMark

Target namespace: http://schemas.microsoft.com/office/drawing/2010/main

Referenced by: CT_PictureEffectBackgroundRemoval

A complex type that specifies a line segment that marks a region to include in a picture.

Attributes:

x1: An **ST_PositiveFixedPercentage** attribute ([ISO/IEC-29500-1] section A.4.1) that specifies the first x coordinate of the foreground mark, relative to the width of a picture.

y1: An **ST_PositiveFixedPercentage** attribute ([ISO/IEC-29500-1] section A.4.1) that specifies the first y coordinate of the foreground mark, relative to the height of a picture.

x2: An **ST_PositiveFixedPercentage** attribute ([ISO/IEC-29500-1] section A.4.1) that specifies the second x coordinate of the foreground mark, relative to the width of a picture.

y2: An **ST_PositiveFixedPercentage** attribute ([ISO/IEC-29500-1] section A.4.1) that specifies the second y coordinate of the foreground mark, relative to the height of a picture.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this complex type.

```
<xsd:complexType name="CT_PictureEffectBackgroundRemovalForegroundMark">
  <xsd:attribute name="x1" type="a:ST_PositiveFixedPercentage" use="required"/>
  <xsd:attribute name="y1" type="a:ST_PositiveFixedPercentage" use="required"/>
  <xsd:attribute name="x2" type="a:ST_PositiveFixedPercentage" use="required"/>
  <xsd:attribute name="y2" type="a:ST_PositiveFixedPercentage" use="required"/>
</xsd:complexType>
```

See section 5.1 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.5.24 CT_PictureEffectBackgroundRemovalBackgroundMark

Target namespace: http://schemas.microsoft.com/office/drawing/2010/main

Referenced by: CT_PictureEffectBackgroundRemoval

A complex type that specifies a line segment that marks a region to exclude from a picture.

Attributes:

x1: An **ST_PositiveFixedPercentage** attribute ([ISO/IEC-29500-1] section A.4.1) that specifies the first x coordinate of the background mark, relative to the width of a picture.

y1: An **ST_PositiveFixedPercentage** attribute ([ISO/IEC-29500-1] section A.4.1) that specifies the first y coordinate of the background mark, relative to the height of a picture**.**

x2: An **ST_PositiveFixedPercentage** attribute ([ISO/IEC-29500-1] section A.4.1) that specifies the second x coordinate of the background mark, relative to the width of a picture**.**

y2: An **ST_PositiveFixedPercentage** attribute ([ISO/IEC-29500-1] section A.4.1) that specifies the second y coordinate of the background mark, relative to the height of a picture.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this complex type.

```
<xsd:complexType name="CT_PictureEffectBackgroundRemovalBackgroundMark">
  <xsd:attribute name="x1" type="a:ST_PositiveFixedPercentage" use="required"/>
  <xsd:attribute name="y1" type="a:ST_PositiveFixedPercentage" use="required"/>
  <xsd:attribute name="x2" type="a:ST_PositiveFixedPercentage" use="required"/>
  <xsd:attribute name="y2" type="a:ST_PositiveFixedPercentage" use="required"/>
</xsd:complexType>
```

See section 5.1 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.5.25 CT_PictureEffectBackgroundRemoval

Target namespace: http://schemas.microsoft.com/office/drawing/2010/main

Referenced by: CT_PictureEffect

A complex type that specifies a background removal effect applied to a picture. A marquee defines the rectangular region limiting the pixels that are considered to be in the foreground of a picture. Foreground and background marks further specify regions to include and exclude.

Child Elements:

foregroundMark: A **CT_PictureEffectBackgroundRemovalForegroundMark** element that specifies a line segment that marks a region to include in a picture.

backgroundMark: A **CT_PictureEffectBackgroundRemovalBackgroundMark** element that specifies a line segment that marks a region to exclude from a picture.

Attributes:

t: An **ST_PositiveFixedPercentage** attribute ([ISO/IEC-29500-1] section A.4.1) that specifies the top position of the marquee, relative to the height of a picture.

b: An **ST_PositiveFixedPercentage** attribute ([ISO/IEC-29500-1] section A.4.1) that specifies the bottom position of the marquee, relative to the height of a picture.

l: An **ST_PositiveFixedPercentage** attribute ([ISO/IEC-29500-1] section A.4.1) that specifies the left position of the marquee, relative to the width of a picture.

r: An **ST_PositiveFixedPercentage** attribute ([ISO/IEC-29500-1] section A.4.1) that specifies the right position of the marquee, relative to the width of a picture.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this complex type.

```
<xsd:complexType name="CT_PictureEffectBackgroundRemoval">
  <xsd:sequence>
    <xsd:element name="foregroundMark" type="CT_PictureEffectBackgroundRemovalForegroundMark"
minOccurs="0" maxOccurs="unbounded"/>
    <xsd:element name="backgroundMark" type="CT_PictureEffectBackgroundRemovalBackgroundMark"
minOccurs="0" maxOccurs="unbounded"/>
  </xsd:sequence>
  <xsd:attribute name="t" type="a:ST_PositiveFixedPercentage" use="required"/>
  <xsd:attribute name="b" type="a:ST_PositiveFixedPercentage" use="required"/>
  <xsd:attribute name="l" type="a:ST_PositiveFixedPercentage" use="required"/>
  <xsd:attribute name="r" type="a:ST_PositiveFixedPercentage" use="required"/>
</xsd:complexType>
```

See section 5.1 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.5.26 CT_PictureEffectBrightnessContrast

Target namespace: http://schemas.microsoft.com/office/drawing/2010/main

Referenced by: CT_PictureEffect

A complex type that specifies a brightness and contrast effect applied to a picture.

The following figure demonstrates the effect applied to a picture with brightness values of –40 percent, –20 percent, zero percent, +20 percent, and +40 percent, respectively.

Figure 25: Effect of changes to brightness

The following figure demonstrates the effect applied to a picture with contrast values of –40 percent, –20 percent, zero percent, +20 percent, and +40 percent, respectively.

Figure 26: Effect of changes to contrast

Attributes:

bright: An **ST_FixedPercentage** attribute ([ISO/IEC-29500-1] section A.4.1) that specifies the percent to change the brightness**.**

contrast: An **ST_FixedPercentage** attribute ([ISO/IEC-29500-1] section A.4.1) that specifies the percent to change the contrast.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this complex type.

```
<xsd:complexType name="CT_PictureEffectBrightnessContrast">
  <xsd:attribute name="bright" type="a:ST_FixedPercentage" use="optional" default="0"/>
  <xsd:attribute name="contrast" type="a:ST_FixedPercentage" use="optional" default="0"/>
</xsd:complexType>
```

See section 5.1 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.5.27 CT_PictureEffectColorTemperature

Target namespace: http://schemas.microsoft.com/office/drawing/2010/main

Referenced by: CT_PictureEffect

A complex type that specifies a color temperature effect applied to a picture.

The following figure demonstrates the effect applied to a picture with **colorTemperature** values of 3500, 4500, 6500, 8500, and 10500, respectively.

Figure 27: Effect of changes to colorTemperature

Attributes:

colorTemp: An **ST_ColorTemperature** attribute that specifies the color temperature of the light source in a picture.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this complex type.

```
<xsd:complexType name="CT_PictureEffectColorTemperature">
  <xsd:attribute name="colorTemp" type="ST_ColorTemperature" use="optional" default="6500"/>
</xsd:complexType>
```

See section 5.1 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.5.28 CT_PictureEffectSaturation

Target namespace: http://schemas.microsoft.com/office/drawing/2010/main

Referenced by: CT_PictureEffect

A complex type that specifies a saturation effect applied to a picture.

The following figure demonstrates the effect applied to a picture with saturation values of zero percent, 50 percent, 100 percent, 200 percent, and 400 percent, respectively.

Figure 28: Effect of changes to saturation

Attributes:

sat: An **ST_SaturationAmount** attribute that specifies the amount of saturation applied to a picture.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this complex type.

```
<xsd:complexType name="CT_PictureEffectSaturation">
  <xsd:attribute name="sat" type="ST_SaturationAmount" use="optional" default="100"/>
</xsd:complexType>
```

See section 5.1 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.5.29 CT_PictureEffectSharpenSoften

Target namespace: http://schemas.microsoft.com/office/drawing/2010/main

Referenced by: CT_PictureEffect

A complex type that specifies a sharpen and soften effect applied to a picture.

The following figure demonstrates the effect applied to a picture with **sharpenSoften** values of –100 percent, –50 percent, zero percent, +50 percent, and +100 percent, respectively.

Figure 29: Effect of changes to sharpenSoften

Attributes:

amount: An **ST_FixedPercentage** attribute ([ISO/IEC-29500-1] section A.4.1) that specifies the amount to sharpen (if positive) or the amount to blur (if negative).

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this complex type.

```
<xsd:complexType name="CT_PictureEffectSharpenSoften">
  <xsd:attribute name="amount" type="a:ST_FixedPercentage" use="optional" default="0"/>
</xsd:complexType>
```

See section 5.1 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.5.30 CT_PictureEffect

Target namespace: http://schemas.microsoft.com/office/drawing/2010/main

Referenced by: CT_PictureLayer

A complex type that specifies an effect applied to a picture. Exactly one child element MUST exist to specify the type of effect.

Child Elements:

artisticBlur: A **CT_PictureEffectBlur** element that specifies the blur picture effect.

artisticCement: A **CT_PictureEffectCement** element that specifies the cement picture effect.

artisticChalkSketch: A **CT_PictureEffectChalkSketch** element that specifies the chalk sketch picture effect.

artisticCrisscrossEtching: A **CT_PictureEffectCrisscrossEtching** element that specifies the crisscross etching picture effect.

artisticCutout: A **CT_PictureEffectCutout** element that specifies the cutout picture effect.

artisticFilmGrain: A **CT_PictureEffectFilmGrain** element that specifies the film grain picture effect.

artisticGlass: A **CT_PictureEffectGlass** element that specifies the glass picture effect.

artisticGlowDiffused: A **CT_PictureEffectGlowDiffused** element that specifies the glow diffused picture effect.

artisticGlowEdges: A **CT_PictureEffectGlowEdges** element that specifies the glow edges picture effect.

artisticLightScreen: A **CT_PictureEffectLightScreen** element that specifies the light screen picture effect.

artisticLineDrawing: A **CT_PictureEffectLineDrawing** element that specifies the line-drawing picture effect.

artisticMarker: A **CT_PictureEffectMarker** element that specifies the marker picture effect.

artisticMosaicBubbles: A **CT_PictureEffectMosaicBubbles** element that specifies the mosaic bubbles picture effect.

artisticPaintStrokes: A **CT_PictureEffectPaintStrokes** element that specifies the paint strokes picture effect.

artisticPaintBrush: A **CT_PictureEffectPaintBrush** element that specifies the paint-brush picture effect.

artisticPastelsSmooth: A **CT_PictureEffectPastelsSmooth** element that specifies the pastel smooth picture effect.

artisticPencilGrayscale: A **CT_PictureEffectPencilGrayscale** element that specifies the pencil grayscale picture effect.

artisticPencilSketch: A **CT_PictureEffectPencilSketch** element that specifies the pencil-sketch picture effect.

artisticPhotocopy: A **CT_PictureEffectPhotocopy** element that specifies the photocopy picture effect.

artisticPlasticWrap: A **CT_PictureEffectPlasticWrap** element that specifies the plastic wrap picture effect.

artisticTexturizer: A **CT_PictureEffectTexturizer** element that specifies the texture picture effect.

artisticWatercolorSponge: A **CT_PictureEffectWatercolorSponge** element that specifies the watercolor-sponge picture effect.

backgroundRemoval: A **CT_PictureEffectBackgroundRemoval** element that specifies the background-removal picture effect.

brightnessContrast: A **CT_PictureEffectBrightnessContrast** element that specifies the brightness and contrast picture effect.

colorTemperature: A **CT_PictureEffectColorTemperature** element that specifies the color-tone picture effect.

saturation: A **CT_PictureEffectSaturation** element that specifies the color-saturation picture effect.

sharpenSoften: A **CT_PictureEffectSharpenSoften** element that specifies the sharpen and soften picture effect.

Attributes:

visible: A Boolean attribute ([XMLSCHEMA2] section 3.2.2) that specifies whether this picture effect is rendered.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this complex type.

```
<xsd:complexType name="CT_PictureEffect">
  <xsd:choice minOccurs="1" maxOccurs="1">
    <xsd:element name="artisticBlur" type="CT_PictureEffectBlur" minOccurs="1"
maxOccurs="1"/>
    <xsd:element name="artisticCement" type="CT_PictureEffectCement" minOccurs="1"
maxOccurs="1"/>
    <xsd:element name="artisticChalkSketch" type="CT_PictureEffectChalkSketch" minOccurs="1"
maxOccurs="1"/>
    <xsd:element name="artisticCrisscrossEtching" type="CT_PictureEffectCrisscrossEtching"
minOccurs="1" maxOccurs="1"/>
    <xsd:element name="artisticCutout" type="CT_PictureEffectCutout" minOccurs="1"
maxOccurs="1"/>
    <xsd:element name="artisticFilmGrain" type="CT_PictureEffectFilmGrain" minOccurs="1"
maxOccurs="1"/>
    <xsd:element name="artisticGlass" type="CT_PictureEffectGlass" minOccurs="1"
maxOccurs="1"/>
    <xsd:element name="artisticGlowDiffused" type="CT_PictureEffectGlowDiffused"
minOccurs="1" maxOccurs="1"/>
    <xsd:element name="artisticGlowEdges" type="CT_PictureEffectGlowEdges" minOccurs="1"
maxOccurs="1"/>
```

```
    <xsd:element name="artisticLightScreen" type="CT_PictureEffectLightScreen" minOccurs="1"
maxOccurs="1"/>
    <xsd:element name="artisticLineDrawing" type="CT_PictureEffectLineDrawing" minOccurs="1"
maxOccurs="1"/>
    <xsd:element name="artisticMarker" type="CT_PictureEffectMarker" minOccurs="1"
maxOccurs="1"/>
    <xsd:element name="artisticMosiaicBubbles" type="CT_PictureEffectMosiaicBubbles"
minOccurs="1" maxOccurs="1"/>
    <xsd:element name="artisticPaintStrokes" type="CT_PictureEffectPaintStrokes"
minOccurs="1" maxOccurs="1"/>
    <xsd:element name="artisticPaintBrush" type="CT_PictureEffectPaintBrush" minOccurs="1"
maxOccurs="1"/>
    <xsd:element name="artisticPastelsSmooth" type="CT_PictureEffectPastelsSmooth"
minOccurs="1" maxOccurs="1"/>
    <xsd:element name="artisticPencilGrayscale" type="CT_PictureEffectPencilGrayscale"
minOccurs="1" maxOccurs="1"/>
    <xsd:element name="artisticPencilSketch" type="CT_PictureEffectPencilSketch"
minOccurs="1" maxOccurs="1"/>
    <xsd:element name="artisticPhotocopy" type="CT_PictureEffectPhotocopy" minOccurs="1"
maxOccurs="1"/>
    <xsd:element name="artisticPlasticWrap" type="CT_PictureEffectPlasticWrap" minOccurs="1"
maxOccurs="1"/>
    <xsd:element name="artisticTexturizer" type="CT_PictureEffectTexturizer" minOccurs="1"
maxOccurs="1"/>
    <xsd:element name="artisticWatercolorSponge" type="CT_PictureEffectWatercolorSponge"
minOccurs="1" maxOccurs="1"/>
    <xsd:element name="backgroundRemoval" type="CT_PictureEffectBackgroundRemoval"
minOccurs="1" maxOccurs="1"/>
    <xsd:element name="brightnessContrast" type="CT_PictureEffectBrightnessContrast"
minOccurs="1" maxOccurs="1"/>
    <xsd:element name="colorTemperature" type="CT_PictureEffectColorTemperature"
minOccurs="1" maxOccurs="1"/>
    <xsd:element name="saturation" type="CT_PictureEffectSaturation" minOccurs="1"
maxOccurs="1"/>
    <xsd:element name="sharpenSoften" type="CT_PictureEffectSharpenSoften" minOccurs="1"
maxOccurs="1"/>
  </xsd:choice>
  <xsd:attribute name="visible" type="xsd:boolean" use="optional" default="true"/>
</xsd:complexType>
```

See section 5.1 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.5.31 CT_PictureLayer

Target namespace: http://schemas.microsoft.com/office/drawing/2010/main

Referenced by: CT_Photo

A complex type that specifies a relationship to an original picture and contains optional effects applied to the picture in the order applied.

Child Elements:

imgEffect: A **CT_PictureEffect** element that specifies an effect applied to the picture.

Attributes:

r:embed: An **ST_RelationshipId** attribute ([ISO/IEC-29500-1] section 22.8.2.1) that specifies the relationship identifier that is used to determine the location of the picture.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this complex type.

```
<xsd:complexType name="CT_PictureLayer">
  <xsd:sequence>
    <xsd:element name="imgEffect" type="CT_PictureEffect" minOccurs="0"
maxOccurs="unbounded"/>
  </xsd:sequence>
  <xsd:attribute ref="r:embed" use="optional" default=""/>
</xsd:complexType>
```

See section 5.1 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.5.32 CT_Photo

Target namespace: http://schemas.microsoft.com/office/drawing/2010/main

Referenced by: imgProps

A complex type that specifies properties used to produce the embedded picture in the containing binary large image or picture (BLIP).

Child Elements:

imgLayer: A **CT_PictureLayer** element that specifies a relationship to an original picture and contains optional effects applied to the picture in the order applied.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this complex type.

```
<xsd:complexType name="CT_Photo">
  <xsd:sequence>
    <xsd:element name="imgLayer" type="CT_PictureLayer" minOccurs="1" maxOccurs="1"/>
  </xsd:sequence>
</xsd:complexType>
```

See section 5.1 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.5.33 CT_UseLocalDpi

Target namespace: http://schemas.microsoft.com/office/drawing/2010/main

Referenced by: useLocalDpi

A complex type that specifies a flag indicating that the local BLIP compression setting overrides the document default compression setting.

Attributes:

val: A Boolean attribute ([XMLSCHEMA2] section 3.2.2) that specifies whether the **cstate** attribute ([ISO/IEC-29500-1] section 20.1.10.12) of the containing BLIP overrides the document default compression setting as specified in [MS-PPTX] section 2.3.28, [MS-DOCX] section 2.3.24, and [MS-XLSX] section 2.6.10.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this complex type.

```
<xsd:complexType name="CT_UseLocalDpi">
  <xsd:attribute name="val" type="xsd:boolean" use="optional" default="true"/>
</xsd:complexType>
```

See section 5.1 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.5.34 CT_TextMath

Target namespace: http://schemas.microsoft.com/office/drawing/2010/main

Referenced by: m

This type contains either a math zone or document-level math properties. Math zone content can be either an inline math zone or a math paragraph.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this complex type.

```
<xsd:complexType name="CT_TextMath"/>
```

See section 5.1 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.5.35 CT_ContentPartLocking

Target namespace: http://schemas.microsoft.com/office/drawing/2010/main

Referenced by: CT_NonVisualInkContentPartProperties

Contains various locking properties that prevent or restrict certain changes to the content part properties or restrict how a content part can be manipulated by the user. Restrictions are enforced only at the UI and Object Model levels.

Child Elements:

extLst: A **CT_OfficeArtExtensionList** element ([ISO/IEC-29500-1] section A.4.1) that specifies the extension list in which all future extensions of element type **ext** is defined. The extension list, along with corresponding future extensions, is used to extend the storage capabilities of the DrawingML framework. This enables various types of data to be stored natively in the framework.

Attributes:

noGrp: A Boolean attribute that specifies that the generating application does not enable shape grouping for the corresponding content part. That is, it cannot be combined with other shapes to form a group of shapes. The default value is FALSE.

noSelect: A Boolean attribute that specifies that the generating application does not enable selecting the corresponding content part. No picture, shapes, or text attached to this content part can be selected if this attribute has been specified. The default value is FALSE.

noRot: A Boolean attribute that specifies that the corresponding content part cannot be rotated. The default value is FALSE.

noChangeAspect: A Boolean attribute that specifies that the generating application does not enable aspect ratio changes for the corresponding content part. The default value is FALSE.

noMove: A Boolean attribute that specifies that the generating application does not enable position changes for the corresponding content part. The default value is FALSE.

noResize: A Boolean attribute that specifies that the generating application does not enable size changes for the corresponding content part. The default value is FALSE.

noEditPoints: A Boolean attribute that specifies that the generating application does not enable shape point changes for the corresponding content part. The default value is FALSE.

noAdjustHandles: A Boolean attribute that specifies that the generating application does not show adjust handles for the corresponding content part. The default value is FALSE.

noChangeArrowheads: A Boolean attribute that specifies that the generating application does not enable arrowhead changes for the corresponding content part. The default value is FALSE.

noChangeShapeType: A Boolean attribute that specifies that the generating application does not enable shape type changes for the corresponding content part. The default value is FALSE.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this complex type.

```
<xsd:complexType name="CT_ContentPartLocking">
  <xsd:sequence>
    <xsd:element name="extLst" type="a:CT_OfficeArtExtensionList" minOccurs="0"
maxOccurs="1"/>
  </xsd:sequence>
  <xsd:attributeGroup ref="a:AG_Locking"/>
</xsd:complexType>
```

See section 5.1 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.5.36 CT_NonVisualInkContentPartProperties

Target namespace: http://schemas.microsoft.com/office/drawing/2010/main

Referenced by: CT_ContentPartNonVisual, CT_GvmlContentPartNonVisual, CT_WordContentPartNonVisual, CT_ContentPartNonVisual

A complex type that specifies non-visual ink properties for a content part. This provides additional information that does not affect the appearance of ink in the content part to be stored.

Child Elements:

cpLocks: A CT_ContentPartLocking element that specifies various locking properties that prevent or restrict changes to the content part properties or restrict how a content part can be manipulated by the user.

extLst: A **CT_OfficeArtExtensionList** element ([ISO/IEC-29500-1] section A.4.1) that specifies the extension list in which all future extensions of element type **ext** are defined. The extension list, along with corresponding future extensions, is used to extend the storage capabilities of the DrawingML framework. This enables new types of data to be stored natively within the framework.

Attributes:

isComment: A Boolean attribute ([XMLSCHEMA2] section 3.2.2) that specifies whether the ink shape is a **comment** or an annotation. If true, the ink is a comment; otherwise, it is an annotation.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this complex type.

```
<xsd:complexType name="CT_NonVisualInkContentPartProperties">
  <xsd:sequence>
    <xsd:element name="cpLocks" type="CT_ContentPartLocking" minOccurs="0" maxOccurs="1"/>
    <xsd:element name="extLst" type="a:CT_OfficeArtExtensionList" minOccurs="0"
maxOccurs="1"/>
  </xsd:sequence>
  <xsd:attribute name="isComment" type="xsd:boolean" use="optional" default="true"/>
</xsd:complexType>
```

See section 5.1 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.5.37 CT_WordContentPartNonVisual

Target namespace: http://schemas.microsoft.com/office/word/2010/wordml

Referenced by: CT_WordContentPart

A complex type that specifies non-visual properties for CT_WordContentPart.

Child Elements:

cNvPr: A **CT_NonVisualDrawingProps** element ([ISO/IEC-29500-1] section A.4.1) that specifies the non-visual drawing properties for the content part. This provides additional information that does not affect the appearance of the content part to be stored.

cNvContentPartPr: A CT_NonVisualInkContentPartProperties element that specifies non-visual ink properties for the content part. This provides additional information that does not affect the appearance of ink in the content part to be stored.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this complex type.

```
<xsd:complexType name="CT_WordContentPartNonVisual">
  <xsd:sequence>
    <xsd:element name="cNvPr" type="a:CT_NonVisualDrawingProps" minOccurs="0" maxOccurs="1"/>
    <xsd:element name="cNvContentPartPr" type="a14:CT_NonVisualInkContentPartProperties"
minOccurs="0" maxOccurs="1"/>
  </xsd:sequence>
</xsd:complexType>
```

See section 5.3 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.5.38 CT_WordContentPart

Target namespace: http://schemas.microsoft.com/office/word/2010/wordml

Referenced by: contentPart, CT_WordprocessingGroup, CT_WordprocessingCanvas

A complex type that specifies a reference to XML content in a format not specified by [ISO/IEC-29500-1].

This element serves the same purpose as the **contentPart** element in WordprocessingML ([ISO/IEC-29500-1] section 17.3.3.2), but appears under **graphicData** ([ISO/IEC-29500-1] section 20.1.2.2.17), **CT_WordprocessingGroup**, and **CT_WordprocessingCanvas**.

Child Elements:

nvContentPartPr: A CT_WordContentPartNonVisual element that specifies non-visual properties for the content part.

xfrm: A **CT_Transform2D** element ([ISO/IEC-29500-1] section A.4.1) that specifies the 2-D transform for the content part.

extLst: A **CT_OfficeArtExtensionList** element ([ISO/IEC-29500-1] section A.4.1) that specifies the extension list in which all future extensions of element type **ext** is defined. The extension list, along with corresponding future extensions, is used to extend the storage capabilities of the DrawingML framework. This enables various new types of data to be stored natively in the framework.

Attributes:

bwMode: An **ST_BlackWhiteMode** attribute ([ISO/IEC-29500-1] section 20.1.10.10)

that specifies how to interpret color information contained within a content part to achieve a color, black and white, or grayscale rendering of the content part. This attribute specifies only the rendering mode applied to the content part; it does not affect how the actual color information is persisted.

r:id: An **ST_RelationshipId** attribute ([ISO/IEC-29500-1] section 22.8.2.1) that specifies the relationship identifier to a content part.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this complex type.

```
<xsd:complexType name="CT_WordContentPart">
  <xsd:sequence>
    <xsd:element name="nvContentPartPr" type="CT_WordContentPartNonVisual" minOccurs="0"
maxOccurs="1"/>
    <xsd:element name="xfrm" type="a:CT_Transform2D" minOccurs="0" maxOccurs="1"/>
    <xsd:element name="extLst" type="a:CT_OfficeArtExtensionList" minOccurs="0"
maxOccurs="1"/>
  </xsd:sequence>
  <xsd:attribute name="bwMode" type="a:ST_BlackWhiteMode" use="optional"/>
  <xsd:attribute ref="r:id" use="required"/>
</xsd:complexType>
```

See section 5.3 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.5.39 CT_ShapeNonVisual

Target namespace: http://schemas.microsoft.com/office/drawing/2008/diagram

Referenced by: CT_Shape

This element specifies all non-visual properties for a shape. This element is a container for the non-visual identification properties, shape properties, and application properties of a shape. This complex type provides additional information that does not affect the appearance of the shape to be stored.

Child Elements:

cNvPr: A **CT_NonVisualDrawingProps** element ([ISO/IEC-29500-1] section A.4.1) that specifies non-visual drawing properties for the shape.

cNvSpPr: A **CT_NonVisualDrawingShapeProps** element ([ISO/IEC-29500-1] section A.4.1) that specifies all non-visual shape drawing properties of the shape.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this complex type.

```
<xsd:complexType name="CT_ShapeNonVisual">
  <xsd:sequence>
    <xsd:element name="cNvPr" type="a:CT_NonVisualDrawingProps" minOccurs="1" maxOccurs="1"/>
    <xsd:element name="cNvSpPr" type="a:CT_NonVisualDrawingShapeProps" minOccurs="1"
maxOccurs="1"/>
  </xsd:sequence>
</xsd:complexType>
```

See section 5.6 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.5.40 CT_Shape

Target namespace: http://schemas.microsoft.com/office/drawing/2008/diagram

Referenced by: CT_GroupShape

This element specifies the existence of a single shape. A shape can use either a preset or a custom geometry, defined by using the DrawingML framework. In addition to a geometry, each shape can have both visual and non-visual properties. Text and corresponding styling information can also be attached to a shape. This shape is specified along with all other shapes in group shape elements.

Child Elements:

nvSpPr: A **CT_ShapeNonVisual** element that specifies non-visual shape properties associated with the shape.

spPr: A **CT_ShapeProperties** element ([ISO/IEC-29500-1] section A.4.1) that specifies visual shape properties of the shape

style: A **CT_ShapeStyle** element ([ISO/IEC-29500-1] section A.4.1) that specifies the style of the shape.

txBody: A **CT_TextBody** element ([ISO/IEC-29500-1] section A.4.1) that specifies the shape text associated with the shape

txXfrm: A **CT_Transform2D** element ([ISO/IEC-29500-1] section A.4.1) that specifies a 2-D transform to be applied to the text body of the shape.

extLst: A **CT_OfficeArtExtensionList** element ([ISO/IEC-29500-1] section A.4.1) that enables future extensions to the shape.

Attributes:

modelId: An **ST_ModelId** attribute ([ISO/IEC-29500-1] section 21.4.7.43) that specifies the identifier of the **DataModel** element that this shape represents.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this complex type.

```
<xsd:complexType name="CT_Shape">
  <xsd:sequence>
    <xsd:element name="nvSpPr" type="CT_ShapeNonVisual" minOccurs="1" maxOccurs="1"/>
    <xsd:element name="spPr" type="a:CT_ShapeProperties" minOccurs="1" maxOccurs="1"/>
    <xsd:element name="style" type="a:CT_ShapeStyle" minOccurs="0" maxOccurs="1"/>
    <xsd:element name="txBody" type="a:CT_TextBody" minOccurs="0" maxOccurs="1"/>
    <xsd:element name="txXfrm" type="a:CT_Transform2D" minOccurs="0" maxOccurs="1"/>
    <xsd:element name="extLst" type="a:CT_OfficeArtExtensionList" minOccurs="0"
maxOccurs="1"/>
  </xsd:sequence>
  <xsd:attribute name="modelId" type="d:ST_ModelId" use="required"/>
</xsd:complexType>
```

See section 5.6 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.5.41 CT_GroupShapeNonVisual

Target namespace: http://schemas.microsoft.com/office/drawing/2008/diagram

Referenced by: CT_GroupShape

This element specifies all non-visual properties for a group shape. This element is a container for the non-visual shape properties of a group shape. This provides additional information that does not affect the appearance of the group shape to be stored.

Child Elements:

cNvPr: A **CT_NonVisualDrawingProps** element ([ISO/IEC-29500-1] section A.4.1) that specifies non-visual drawing properties.

cNvGrpSpPr: A **CT_NonVisualGroupDrawingShapeProps** element ([ISO/IEC-29500-1] section A.4.1) that specifies all non-visual group shape drawing properties.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this complex type.

```
<xsd:complexType name="CT_GroupShapeNonVisual">
  <xsd:sequence>
    <xsd:element name="cNvPr" type="a:CT_NonVisualDrawingProps" minOccurs="1" maxOccurs="1"/>
    <xsd:element name="cNvGrpSpPr" type="a:CT_NonVisualGroupDrawingShapeProps" minOccurs="1"
maxOccurs="1"/>
  </xsd:sequence>
</xsd:complexType>
```

See section 5.6 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.5.42 CT_GroupShape

Target namespace: http://schemas.microsoft.com/office/drawing/2008/diagram

Referenced by: CT_GroupShape, CT_Drawing

This element specifies a group shape that represents one or more shapes grouped together. This shape is to be treated as if it were a regular shape, but instead of being described by a single geometry, it is made up of all the shape geometries encompassed within it. Within a group shape, each shape in the group is specified as it normally would be. However, a single transform can apply to the group of shapes as though it were a single shape.

Child Elements:

nvGrpSpPr: A **CT_GroupShapeNonVisual** element that specifies the non-visual properties of the group shape.

grpSpPr: A **CT_GroupShapeProperties** element ([ISO/IEC-29500-1] section A.4.1) that specifies group shape properties.

sp: A **CT_Shape** element that specifies a shape that is a child of this group.

grpSp: A **CT_GroupShape** element that specifies a group shape that is a child of this group.

extLst: A **CT_OfficeArtExtensionList** element ([ISO/IEC-29500-1] section A.4.1) that enables future extensions to the group shape.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this complex type.

```
<xsd:complexType name="CT_GroupShape">
  <xsd:sequence>
    <xsd:element name="nvGrpSpPr" type="CT_GroupShapeNonVisual" minOccurs="1" maxOccurs="1"/>
    <xsd:element name="grpSpPr" type="a:CT_GroupShapeProperties" minOccurs="1"
maxOccurs="1"/>
    <xsd:choice minOccurs="0" maxOccurs="unbounded">
      <xsd:element name="sp" type="CT_Shape"/>
      <xsd:element name="grpSp" type="CT_GroupShape"/>
    </xsd:choice>
    <xsd:element name="extLst" type="a:CT_OfficeArtExtensionList" minOccurs="0"
maxOccurs="1"/>
  </xsd:sequence>
</xsd:complexType>
```

See section 5.6 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.5.43 CT_Drawing

Target namespace: http://schemas.microsoft.com/office/drawing/2008/diagram

Referenced by: drawing

This element specifies a visual representation of the last successful layout for a diagram.

Child Elements:

spTree: A **CT_GroupShape** element that specifies the top-level group shape that represents the last layout.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this complex type.

```
<xsd:complexType name="CT_Drawing">
```

```
  <xsd:sequence>
    <xsd:element name="spTree" type="CT_GroupShape" minOccurs="1" maxOccurs="1"/>
  </xsd:sequence>
</xsd:complexType>
```

See section 5.6 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.5.44 CT_DataModelExtBlock

Target namespace: http://schemas.microsoft.com/office/drawing/2008/diagram

Referenced by: dataModelExt

This element specifies a relationship identifier to the Diagram Drawing part, as well as a URI that is used to determine the minimum application version required to run layout on the diagram.

Attributes:

relId: A **string** attribute ([XMLSCHEMA2] section 3.2.1) that specifies the identifier of the part that contains the Diagram Drawing object.

minVer: An **anyURI** attribute ([XMLSCHEMA2] section 3.2.17) that specifies the minimum version required to display the layout.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this complex type.

```
<xsd:complexType name="CT_DataModelExtBlock">
  <xsd:attribute name="relId" type="xsd:string"/>
  <xsd:attribute name="minVer" type="xsd:anyURI"/>
</xsd:complexType>
```

See section 5.6 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.5.45 CT_Property

Target namespace: http://schemas.microsoft.com/ink/2010/main

Referenced by: CT_CtxNode

An element of this type stores an arbitrary piece of binary data. The format of the data MUST be represented as an **xsd:hexBinary** ([XMLSCHEMA2] section 3.2.15).

Attributes:

type: An **ST_Guid** attribute that specifies the moniker of the custom data.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this complex type.

```
<xsd:complexType name="CT_Property">
  <xsd:simpleContent>
    <xsd:extension base="xsd:hexBinary">
      <xsd:attribute name="type" type="ST_Guid"/>
    </xsd:extension>
```

```
    </xsd:simpleContent>
  </xsd:complexType>
```

See section 5.7 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.5.46 CT_CtxLink

Target namespace: http://schemas.microsoft.com/ink/2010/main

Referenced by: CT_CtxNode

An element of this type defines a semantic relationship from one Ink context node to another.

Attributes:

direction: An **ST_Dir** attribute that specifies the direction of the semantic link: to, from, or with. The "to" or "from" directions apply to ink that represent connectors or arrows, whereas "with" implies no direction, such as an underline on a word.

ref: An **ST_Ref** attribute that specifies the identifier of the other context node or shape being linked to, from, or with this context node. If it is an **xsd:int**, it MUST reference a shape identifier elsewhere in the drawing. If it is an **ST_Guid**, it MUST reference another context node in the document.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this complex type.

```
<xsd:complexType name="CT_CtxLink">
  <xsd:attribute name="direction" type="ST_Dir"/>
  <xsd:attribute name="ref" type="ST_Ref"/>
</xsd:complexType>
```

See section 5.7 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.5.47 CT_CtxNode

Target namespace: http://schemas.microsoft.com/ink/2010/main

Referenced by: context

The **CT_CtxNode** defines an Ink context node and its properties. A context node is a logical collection of Ink traces. When Ink is drawn by the user, the Ink traces are analyzed and organized into a hierarchy of context nodes. Each context node has a type (specified by the **type** attribute) and can have zero or more child content nodes. For example, a **writingRegion** content node can have one or more **paragraph** content nodes. In addition, context nodes can have relational links to each other. For example, if a word is underlined, the context node representing the ink word and the context node representing the underline are linked.

For example, the following figure shows ink that is analyzed as shown in the following code example.

Figure 30: Example ink text

```
<context type="writingRegion"/>
  ...
  <context type="paragraph"/>
    ...
    <context type="line"/>
      ...
      <context type="inkWord"/>
      ...
      <context type="inkWord">
         <destinationLink direction="with" ref="id of inkDrawing below"/>
      </context>

<context type="inkDrawing" semanticType="underline">
  <sourceLink direction="with" ref="id of inkWord above"/>
<context>
```

Child Elements:

property: A **CT_Property** element that specifies a user-defined binary data property.

sourceLink: A **CT_CtxLink** element that specifies a semantic link from another content node.

destinationLink: A **CT_CtxLink** element that specifies a semantic link to another context node.

Attributes:

id: An **ST_Guid** attribute that specifies a GUID for this context node.

type: An **ST_CtxNodeType** attribute that specifies the type of this context node.

rotatedBoundingBox: An ST_Points attribute that specifies a rectangular region encompassed by this context node. Applies to all context node types.

alignmentLevel: An **xsd:int** attribute ([XMLSCHEMA2] section 3.3.17) that specifies the alignment level of a paragraph type context node. If this attribute is present, the value of the type attribute MUST be set to "paragraph".

contentType: An **xsd:int** attribute ([XMLSCHEMA2] section 3.3.17) that specifies the content type of the context node. If this attribute is present, the value of the type attribute MUST be set to "paragraph".

ascender: An ST_Points attribute that specifies the ascender. If this attribute is present, the value of the type attribute MUST be set to "line".

descender: An ST_Points attribute that specifies the descender. If this attribute is present, the value of the type attribute MUST be set to "line".

baseline: An ST_Points attribute that specifies the baseline of a line. If this attribute is present, the value of the type attribute MUST be set to "line".

midline: An ST_Points attribute that specifies the midline of a line. If this attribute is present, the value of the type attribute MUST be set to "line".

customRecognizerId: An **ST_Guid** attribute that specifies the globally unique identifier (GUID) that represents the custom ink recognizer. If this attribute is present, the value of the type attribute MUST be set to "customRecognizer".

mathML: An **xsd:string** attribute ([XMLSCHEMA2] section 3.2.1) that specifies a string of Math Markup Language ([MathML2.0]). If this attribute is present, the value of the type attribute MUST be set to "mathEquation".

mathStruct: An **xsd:string** attribute ([XMLSCHEMA2] section 3.2.1) that specifies a math **struct**. If this attribute is present, the value of the type attribute MUST be set to "mathStruct".

mathSymbol: An **xsd:string** attribute ([XMLSCHEMA2] section 3.2.1) that specifies a math symbol. If this attribute is present, the value of the type attribute MUST be set to "mathSymbol".

beginModifierType: An **xsd:string** attribute ([XMLSCHEMA2] section 3.2.1) that specifies the beginning modifier type. If this attribute is present, the value of the type attribute MUST be set to "inkDrawing", "nonInkDrawing", or "mixedDrawing".

endModifierType: An **xsd:string** attribute ([XMLSCHEMA2] section 3.2.1) that specifies the ending modifier type. If this attribute is present, the value of the type attribute MUST be set to "inkDrawing", "nonInkDrawing", or "mixedDrawing".

rotationAngle: An **xsd:int** attribute ([XMLSCHEMA2] section 3.3.17) that specifies the rotation angle of the drawing, in degrees. If this attribute is present, the value of the type attribute MUST be set to "inkDrawing", "nonInkDrawing", or "mixedDrawing".

hotPoints: An **ST_Points** attribute that specifies coordinates of the hot points of the drawing. If this attribute is present, the value of the type attribute MUST be set to "inkDrawing", "nonInkDrawing", or "mixedDrawing".

centroid: An **ST_Point** attribute that specifies the center point of the drawing. If this attribute is present, the value of the type attribute MUST be set to "inkDrawing", "nonInkDrawing", or "mixedDrawing".

semanticType: An **ST_SemanticType** attribute that specifies the semantic type of the writing region or drawing. If this attribute is present, the value of the type attribute MUST be set to "writingRegion", "inkDrawing", "nonInkDrawing", or "mixedDrawing".

shapeName: An **xsd:string** attribute ([XMLSCHEMA2] section 3.2.1) that specifies the shape name. If this attribute is present, the value of the type attribute MUST be set to "inkDrawing", "nonInkDrawing", or "mixedDrawing".

shapeGeometry: An **ST_Points** attribute that specifies coordinates of the line segments of a drawing. If this attribute is present, the value of the type attribute MUST be set to "nonInkDrawing".

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this complex type.

```
<xsd:complexType name="CT_CtxNode">
  <xsd:sequence>
    <xsd:element name="property" type="CT_Property" minOccurs="0" maxOccurs="unbounded"/>
    <xsd:element name="sourceLink" type="CT_CtxLink" minOccurs="0" maxOccurs="unbounded"/>
    <xsd:element name="destinationLink" type="CT_CtxLink" minOccurs="0"
maxOccurs="unbounded"/>
```

```
    </xsd:sequence>
    <xsd:attribute name="id" type="ST_Guid" use="optional"/>
    <xsd:attribute name="type" type="ST_CtxNodeType" use="required"/>
    <xsd:attribute name="rotatedBoundingBox" type="ST_Points" use="optional"/>
    <xsd:attribute name="alignmentLevel" type="xsd:int" use="optional" default="0"/>
    <xsd:attribute name="contentType" type="xsd:int" use="optional" default="0"/>
    <xsd:attribute name="ascender" type="ST_Points" use="optional" default="0,0"/>
    <xsd:attribute name="descender" type="ST_Points" use="optional" default="0,0"/>
    <xsd:attribute name="baseline" type="ST_Points" use="optional" default="0,0"/>
    <xsd:attribute name="midline" type="ST_Points" use="optional" default="0,0"/>
    <xsd:attribute name="customRecognizerId" type="ST_Guid" use="optional"/>
    <xsd:attribute name="mathML" type="xsd:string" use="optional" default=""/>
    <xsd:attribute name="mathStruct" type="xsd:string" use="optional" default=""/>
    <xsd:attribute name="mathSymbol" type="xsd:string" use="optional" default=""/>
    <xsd:attribute name="beginModifierType" type="xsd:string" use="optional" default=""/>
    <xsd:attribute name="endModifierType" type="xsd:string" use="optional" default=""/>
    <xsd:attribute name="rotationAngle" type="xsd:int" use="optional" default="0"/>
    <xsd:attribute name="hotPoints" type="ST_Points" use="optional"/>
    <xsd:attribute name="centroid" type="ST_Point" use="optional"/>
    <xsd:attribute name="semanticType" type="ST_SemanticType" use="optional" default="none"/>
    <xsd:attribute name="shapeName" type="xsd:string" use="optional" default=""/>
    <xsd:attribute name="shapeGeometry" type="ST_Points" use="optional"/>
  </xsd:complexType>
```

See section 5.7 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.5.48 CT_IsGvmlCanvas

Target namespace: http://schemas.microsoft.com/office/drawing/2010/main

Referenced by: isCanvas

Defines a property with a Boolean value. This property determines whether the container of an instance of this complex type is a GVML representation of a drawing canvas used in a word processing application**.**

Attributes:

val: A Boolean attribute ([XMLSCHEMA2] section 3.2.2) that specifies whether the container instance of the complex type having this attribute is a GVML representation of a drawing canvas used in a word processing application**.**

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this complex type.

```
  <xsd:complexType name="CT_IsGvmlCanvas">
    <xsd:attribute name="val" type="xsd:boolean" use="required"/>
  </xsd:complexType>
```

See section 5.1 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.5.49 CT_GvmlContentPartNonVisual

Target namespace: http://schemas.microsoft.com/office/drawing/2010/main

Referenced by: CT_GvmlContentPart

A complex type which specifies non-visual properties for a **CT_GvmlContentPart**.

Child Elements:

cNvPr: A **CT_NonVisualDrawingProps** element ([ISO/IEC-29500-1] section A.4.1) that specifies the non-visual drawing properties for the content part. This element provides additional information that does not affect the appearance of the content part to be stored.

cNvContentPartPr: A CT_NonVisualInkContentPartProperties element that specifies non-visual ink properties for the content part. This provides additional information that does not affect the appearance of ink in the content part to be stored.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this complex type.

```
<xsd:complexType name="CT_GvmlContentPartNonVisual">
  <xsd:sequence>
    <xsd:element name="cNvPr" type="a:CT_NonVisualDrawingProps" minOccurs="1" maxOccurs="1"/>
    <xsd:element name="cNvContentPartPr" type="CT_NonVisualInkContentPartProperties"
minOccurs="0" maxOccurs="1"/>
  </xsd:sequence>
</xsd:complexType>
```

See section 5.1 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.5.50 CT_GvmlContentPart

Target namespace: http://schemas.microsoft.com/office/drawing/2010/main

Referenced by: contentPart

A complex type that specifies a reference to XML content in a format not specified in [ISO/IEC-29500-1].

The relationship type of the explicit relationship specified by this element MUST be of type http://schemas.openxmlformats.org/officeDocument/2006/customXml and have a **TargetMode** attribute set to "Internal". If an application cannot process the content of the content type specified by the targeted part, the application ignores the content and continues to process the file.

Child Elements:

nvContentPartPr: A CT_GvmlContentPartNonVisual element that specifies non-visual properties of the content part.

xfrm: A **CT_Transform2D** element ([ISO/IEC-29500-1] section A.4.1) that specifies the 2-D transform for the content part.

extLst: A **CT_OfficeArtExtensionList** element ([ISO/IEC-29500-1] section A.4.1) that specifies the extension list in which all future extensions of element type **ext** are defined. The extension list, along with corresponding future extensions, is used to extend the storage capabilities of the DrawingML framework. This enables various new types of data to be stored natively in the framework.

Attributes:

bwMode: An **ST_BlackWhiteMode** attribute ([ISO/IEC-29500-1] section 20.1.10.10) that specifies how to interpret color information contained within a content part to achieve a color, black

and white, or grayscale rendering of the content part. This attribute specifies only the rendering mode applied to the content part; it does not affect how the actual color information is persisted.

r:id: An **ST_RelationshipId** attribute ([ISO/IEC-29500-1] section 22.8.2.1) that specifies the relationship identifier to a content part.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this complex type.

```
<xsd:complexType name="CT_GvmlContentPart">
  <xsd:sequence>
    <xsd:element name="nvContentPartPr" type="CT_GvmlContentPartNonVisual" minOccurs="0"
maxOccurs="1"/>
    <xsd:element name="xfrm" type="a:CT_Transform2D" minOccurs="0" maxOccurs="1"/>
    <xsd:element name="extLst" type="a:CT_OfficeArtExtensionList" minOccurs="0"
maxOccurs="1"/>
  </xsd:sequence>
  <xsd:attribute name="bwMode" type="a:ST_BlackWhiteMode" use="optional"/>
  <xsd:attribute ref="r:id" use="required"/>
</xsd:complexType>
```

See section 5.1 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.5.51 CT_ApplicationNonVisualDrawingProps

Target namespace: http://schemas.microsoft.com/office/excel/2010/spreadsheetDrawing

Referenced by: CT_ContentPart

A complex type that specifies SpreadsheetML Drawing-specific non-visual properties of a content part.

Attributes:

macro: A string ([XMLSCHEMA2] section 3.2.1) that specifies the name of the custom function associated with the content part.

The format of this string is application-defined and SHOULD be ignored if not understood.<125>

fPublished: A Boolean attribute ([XMLSCHEMA2] section 3.2.2) that specifies whether the content part is published with the worksheet when sent to the server.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this complex type.

```
<xsd:complexType name="CT_ApplicationNonVisualDrawingProps">
  <xsd:attribute name="macro" type="xsd:string" use="optional"/>
  <xsd:attribute name="fPublished" type="xsd:boolean" use="optional" default="false"/>
</xsd:complexType>
```

See section 5.9 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.5.52 CT_ContentPartNonVisual

Target namespace: http://schemas.microsoft.com/office/excel/2010/spreadsheetDrawing

Referenced by: CT_ContentPart

A complex type that specifies non-visual properties of a **contentPart** element ([ISO/IEC-29500-1] section 20.5.2.12).

Child Elements:

cNvPr: A **CT_NonVisualDrawingProps** element ([ISO/IEC-29500-1] section A.4.1) that specifies the non-visual drawing properties of the content part. This enables additional information that does not affect the appearance of the content part to be stored.

cNvContentPartPr: A CT_NonVisualInkContentPartProperties element that specifies non-visual ink properties of the content part. This enables additional information that does not affect the appearance of ink in the content part to be stored.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this complex type.

```
<xsd:complexType name="CT_ContentPartNonVisual">
  <xsd:sequence>
    <xsd:element name="cNvPr" type="a:CT_NonVisualDrawingProps" minOccurs="1" maxOccurs="1"/>
    <xsd:element name="cNvContentPartPr" type="a14:CT_NonVisualInkContentPartProperties"
minOccurs="0" maxOccurs="1"/>
  </xsd:sequence>
</xsd:complexType>
```

See section 5.9 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.5.53 CT_ContentPart

Target namespace: http://schemas.microsoft.com/office/excel/2010/spreadsheetDrawing

Referenced by: contentPart

A complex type that specifies a reference to XML content in a format not specified in [ISO/IEC-29500-1].

This element serves the same purpose as the **contentPart** element in SpreadsheetML Drawing ([ISO/IEC-29500-1] section 20.5.2.12), but appears under **CT_GroupShape** ([ISO/IEC-29500-1] section A.4.5) to enable content parts nested in a group shape.

Child Elements:

nvContentPartPr: A CT_ContentPartNonVisual element that specifies non-visual properties of the content part.

nvPr: A CT_ApplicationNonVisualDrawingProps element that specifies non-visual SpreadsheetML Drawing-specific properties.

xfrm: A **CT_Transform2D** element ([ISO/IEC-29500-1] section A.4.1) that specifies the 2-D transform for the content part.

extLst: A **CT_OfficeArtExtensionList** element ([ISO/IEC-29500-1] section A.4.1) that specifies the extension list in which all future extensions of element type **ext** are defined. The extension list, along with corresponding future extensions, is used to extend the storage capabilities of the DrawingML framework. This enables various new types of data to be stored natively in the framework.

Attributes:

r:id: An **ST_RelationshipId** attribute ([ISO/IEC-29500-1] section 22.8.2.1) that specifies the relationship identifier to a content part.

bwMode: An **ST_BlackWhiteMode** attribute ([ISO/IEC-29500-1] section 20.1.10.10) that specifies how to interpret color information contained within a content part to achieve a color, black and white, or grayscale rendering of the content part. This attribute specifies only the rendering mode applied to the content part; it does not affect how the actual color information is persisted.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this complex type.

```
<xsd:complexType name="CT_ContentPart">
  <xsd:sequence>
    <xsd:element name="nvContentPartPr" type="CT_ContentPartNonVisual" minOccurs="0"
maxOccurs="1"/>
    <xsd:element name="nvPr" type="CT_ApplicationNonVisualDrawingProps" minOccurs="0"
maxOccurs="1"/>
    <xsd:element name="xfrm" type="a:CT_Transform2D" minOccurs="0" maxOccurs="1"/>
    <xsd:element name="extLst" type="a:CT_OfficeArtExtensionList" minOccurs="0"
maxOccurs="1"/>
  </xsd:sequence>
  <xsd:attribute ref="r:id" use="required"/>
  <xsd:attribute name="bwMode" type="a:ST_BlackWhiteMode" use="optional" default="auto"/>
</xsd:complexType>
```

See section 5.9 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.5.54 CT_BooleanTrue

Target namespace: http://schemas.microsoft.com/office/drawing/2007/8/2/chart

A complex type that specifies a Boolean value that defaults to TRUE.

Attributes:

val: A Boolean attribute ([XMLSCHEMA2] section 3.2.2) that specifies the value for the property. This MUST be set to one of the following: zero, 1, TRUE, or FALSE.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this complex type.

```
<xsd:complexType name="CT_BooleanTrue">
  <xsd:attribute name="val" type="xsd:boolean" use="optional" default="true"/>
</xsd:complexType>
```

See section 5.10 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.5.55 CT_BooleanFalse

Target namespace: http://schemas.microsoft.com/office/drawing/2007/8/2/chart

Referenced by: CT_PivotOptions

A complex type that specifies a Boolean value that defaults to FALSE.

Attributes:

val: A Boolean attribute ([XMLSCHEMA2] section 3.2.2) that specifies the value for the property. This MUST be set to one of the following: zero, 1, TRUE, or FALSE.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this complex type.

```
<xsd:complexType name="CT_BooleanFalse">
  <xsd:attribute name="val" type="xsd:boolean" use="optional" default="false"/>
</xsd:complexType>
```

See section 5.10 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.5.56 CT_InvertSolidFillFmt

Target namespace: http://schemas.microsoft.com/office/drawing/2007/8/2/chart

Referenced by: invertSolidFillFmt

A complex type that specifies the color of the negative data points of the chart series ([ISO/IEC-29500-1] section 21.2).

MUST NOT exist if the parent **CT_BarSer** element ([ISO/IEC-29500-4] section A.5.1) or parent **CT_BubbleSer** element ([ISO/IEC-29500-4] section A.5.1) has a child **CT_ShapeProperties** element ([ISO/IEC-29500-4] section A.4.1) that does not have a child **CT_SolidColorFillProperties** element ([ISO/IEC-29500-4] section A.4.1).

MUST NOT exist if not a descendant of a **CT_BarChart** element ([ISO/IEC-29500-4] section A.5.1), **CT_Bar3DChart** element ([ISO/IEC-29500-4] section A.5.1), or **CT_BubbleChart** element ([ISO/IEC-29500-4] section A.5.1).

MUST NOT exist if the parent **CT_BarSer** element or parent **CT_BubbleSer** element has a child **invertIfNegative**.

Child Elements:

spPr: A **CT_ShapeProperties** element that specifies the solid color of the negative data points of the chart series ([ISO/IEC-29500-1] section 21.2). MUST have a child **CT_SolidColorFillProperties** element.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this complex type.

```
<xsd:complexType name="CT_InvertSolidFillFmt">
  <xsd:sequence>
    <xsd:element name="spPr" type="a:CT_ShapeProperties" minOccurs="1" maxOccurs="1"/>
  </xsd:sequence>
</xsd:complexType>
```

See section 5.10 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.5.57 CT_PivotOptions

Target namespace: http://schemas.microsoft.com/office/drawing/2007/8/2/chart

Referenced by: pivotOptions

A complex type that specifies the pivot controls that appear on the chart ([ISO/IEC-29500-1] section 21.2).

Child Elements:

dropZoneFilter: A **CT_BooleanFalse** element that specifies whether a control for each **PivotTable** field ([ISO/IEC-29500-1] section 18.10) on the **PivotTable** page axis ([ISO/IEC-29500-1] section 18.10) of the source **PivotTable** appears on the chart when **dropZonesVisible** is set to TRUE. MUST NOT exist if the parent **CT_ChartSpace** element ([ISO/IEC-29500-4] section A.5.1) does not have a child **CT_PivotSource** element ([ISO/IEC-29500-4] section A.5.1).

dropZoneCategories: A **CT_BooleanFalse** element that specifies whether a control for each **PivotTable** field on the **PivotTable** row axis of the source **PivotTable** appears on the chart when **dropZonesVisible** is set to TRUE. MUST NOT exist if the parent **CT_ChartSpace** element does not have a child **CT_PivotSource** element.

dropZoneData: A **CT_BooleanFalse** element that specifies whether a control for each **PivotTable** field on the **PivotTable** data axis of the source **PivotTable** appears on the chart when **dropZonesVisible** is set to TRUE. MUST NOT exist if the parent **CT_ChartSpace** element does not have a child **CT_PivotSource** element.

dropZoneSeries: A **CT_BooleanFalse** element that specifies whether a control for each **PivotTable** field on the **PivotTable** column axis of the source **PivotTable** appears on the chart when **dropZonesVisible** is set to TRUE. MUST NOT exist if the parent **CT_ChartSpace** element does not have a child **CT_PivotSource** element.

dropZonesVisible: A **CT_BooleanFalse** element that specifies whether any pivot controls can appear on the pivot chart. For example, if **dropZoneFilter** and **dropZoneCategories** are set to TRUE and **dropZoneData** and **dropZoneSeries** are set to FALSE, if **dropZonesVisible** is set to TRUE, controls corresponding to **PivotTable** fields on the **PivotTable** page axis and **PivotTable** row axis appear on the chart, and if **dropZonesVisible** is set to FALSE, no controls appears on the chart. MUST NOT exist if the **parent CT_ChartSpace** element does not have a child **CT_PivotSource** element.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this complex type.

```
<xsd:complexType name="CT_PivotOptions">
  <xsd:sequence>
    <xsd:element name="dropZoneFilter" type="CT_BooleanFalse" minOccurs="0" maxOccurs="1"/>
    <xsd:element name="dropZoneCategories" type="CT_BooleanFalse" minOccurs="0"
maxOccurs="1"/>
    <xsd:element name="dropZoneData" type="CT_BooleanFalse" minOccurs="0" maxOccurs="1"/>
    <xsd:element name="dropZoneSeries" type="CT_BooleanFalse" minOccurs="0" maxOccurs="1"/>
    <xsd:element name="dropZonesVisible" type="CT_BooleanFalse" minOccurs="0" maxOccurs="1"/>
  </xsd:sequence>
</xsd:complexType>
```

See section 5.10 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.5.58 CT_Style

Target namespace: http://schemas.microsoft.com/office/drawing/2007/8/2/chart

Referenced by: style

A complex type that specifies a chart style ([ISO/IEC-29500-1] section 21.2).

If this element exists, the **CT_Style** element ([ISO/IEC-29500-4] section A.5.1) that is a descendent of the **CT_ChartSpace** element ([ISO/IEC-29500-4] section A.5.1) that is the ancestor of this element MUST exist, SHOULD<126> be ignored, and MUST have a **val** attribute equal to the **val** attribute of this element minus 100.

Attributes:

val: An **ST_Style** attribute that specifies a chart style.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this complex type.

```
<xsd:complexType name="CT_Style">
  <xsd:attribute name="val" type="ST_Style" use="required"/>
</xsd:complexType>
```

See section 5.10 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.5.59 CT_SizeRelH

Target namespace: http://schemas.microsoft.com/office/word/2010/wordprocessingDrawing

Referenced by: sizeRelH

Specifies the relative width of a floating DrawingML object in a WordprocessingML document.

Child Elements:

pctWidth: An **ST_Percentage** element (as specified in [ISO/IEC-29500-4] section 12.1.2.2 and [ISO/IEC-29500-1] section 20.1.10.40) that specifies the width.<127>

Attributes:

relativeFrom: An **ST_SizeRelFromH** attribute that specifies the base on which the relative width is calculated.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this complex type.

```
<xsd:complexType name="CT_SizeRelH">
  <xsd:sequence>
    <xsd:element name="pctWidth" type="a:ST_PositivePercentage" minOccurs="1" maxOccurs="1"/>
  </xsd:sequence>
  <xsd:attribute name="relativeFrom" type="ST_SizeRelFromH" use="required"/>
</xsd:complexType>
```

See section 5.11 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.5.60 CT_SizeRelV

Target namespace: http://schemas.microsoft.com/office/word/2010/wordprocessingDrawing

Referenced by: sizeRelV

Specifies the relative height of a floating DrawingML object in a WordprocessingML document.

Child Elements:

pctHeight: An **ST_Percentage** element (as specified in [ISO/IEC-29500-4] section 12.1.2.2 and [ISO/IEC-29500-1] section 20.1.10.40) that specifies the height.<128>

Attributes:

relativeFrom: An **ST_SizeRelFromV** attribute that specifies the base on which the relative height is calculated.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this complex type.

```
<xsd:complexType name="CT_SizeRelV">
  <xsd:sequence>
    <xsd:element name="pctHeight" type="a:ST_PositivePercentage" minOccurs="1"
maxOccurs="1"/>
  </xsd:sequence>
  <xsd:attribute name="relativeFrom" type="ST_SizeRelFromV" use="required"/>
</xsd:complexType>
```

See section 5.11 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.5.61 CT_FullRef

Target namespace: http://schemas.microsoft.com/office/drawing/2012/chart

Referenced by: fullRef

CT_FullRef is a complex type that specifies the complete data source reference for a chart ([ISO/IEC-29500-1] section 21.2) with filtered series data.<129>

This reference is in the form of a book, sheet, and cell reference. This reference does not include the equals sign.

Child Elements:

sqref: A **string** element ([XMLSCHEMA2] section 3.2.1) that specifies the data source reference for the chart data. This reference MUST follow the ABNF grammar rules defined in Formulas ([MS-XLSX] section 2.2.2) with the following restrictions:

- MUST follow the single-sheet-reference rule.
- MUST NOT use the A1-relative-column and A1-relative-row rules.
- MUST ONLY use A1-absolute-column and A1-absolute-row.

Contains the full set of cell references for the chart, including both filtered and unfiltered data.

An application can adjust these **cell references** when the **worksheet** layout changes, even when the containing **ext** element ([ISO/IEC-29500-1] section 18.2.7) is not recognized by the application.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this complex type.

```
<xsd:complexType name="CT_FullRef">
  <xsd:sequence>
    <xsd:element name="sqref" type="xsd:string" minOccurs="1" maxOccurs="1"/>
  </xsd:sequence>
</xsd:complexType>
```

See section 5.13 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.5.62 CT_LevelRef

Target namespace: http://schemas.microsoft.com/office/drawing/2012/chart

Referenced by: levelRef

The **CT_LevelRef** is a complex type that specifies the data source reference for the currently selected label level within a hierarchical set of labels for a chart ([ISO/IEC-29500-1] section 21.2) category axis or a chart series title.<130>

This reference is in the form of a book, sheet, and cell reference. This reference does not include the equals sign.

Child Elements:

sqref: A **string** element ([XMLSCHEMA2] section 3.2.1) that specifies the data source reference for the chart data for the associated caption level. This reference MUST follow the ABNF grammar rules defined in Formulas ([MS-XLSX] section 2.2.2) with the following restrictions:

- MUST follow the single-sheet-reference rule.
- MUST NOT use the A1-relative-column and A1-relative-row rules.
- MUST ONLY use A1-absolute-column and A1-absolute-row.

An application can adjust these cell references when the worksheet layout changes, even when the containing **ext** element ([ISO/IEC-29500-1] section 18.2.7) is not recognized by the application.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this complex type.

```
<xsd:complexType name="CT_LevelRef">
  <xsd:sequence>
    <xsd:element name="sqref" type="xsd:string" minOccurs="1" maxOccurs="1"/>
  </xsd:sequence>
</xsd:complexType>
```

See section 5.13 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.5.63 CT_FilteredSeriesTitle

Target namespace: http://schemas.microsoft.com/office/drawing/2012/chart

Referenced by: filteredSeriesTitle

A complex type that specifies a chart ([ISO/IEC-29500-1] section 21.2) series title that has been filtered from the chart ([ISO/IEC-29500-1] section 21.2) and the chart series ([ISO/IEC-29500-1] section 21.2) has an automatically generated title.<131>

Child Elements:

tx: A CT_Tx ([ISO/IEC-29500-1] section 21.2.2.215) element that specifies text for a series name, without rich text formatting, that has been filtered from the chart.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this complex type.

```
<xsd:complexType name="CT_FilteredSeriesTitle">
  <xsd:sequence>
    <xsd:element name="tx" type="c:CT_Tx" minOccurs="1" maxOccurs="1"/>
  </xsd:sequence>
</xsd:complexType>
```

See section 5.13 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.5.64 CT_FilteredCategoryTitle

Target namespace: http://schemas.microsoft.com/office/drawing/2012/chart

Referenced by: filteredCategoryTitle

A complex type that specifies a chart ([ISO/IEC-29500-1] section 21.2) category title that has been filtered from the chart ([ISO/IEC-29500-1] section 21.2) and the category titles for this chart ([ISO/IEC-29500-1] section 21.2) are automatically generated numbers.<132>

Child Elements:

cat: A CT_AxDataSource ([ISO/IEC-29500-1] section 21.2.2.24) element that specifies the data used for the category axis that has been filtered from the chart.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this complex type.

```
<xsd:complexType name="CT_FilteredCategoryTitle">
  <xsd:sequence>
    <xsd:element name="cat" type="c:CT_AxDataSource" minOccurs="1" maxOccurs="1"/>
  </xsd:sequence>
</xsd:complexType>
```

See section 5.13 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.5.65 CT_FilteredBarSer

Target namespace: http://schemas.microsoft.com/office/drawing/2012/chart

Referenced by: filteredBarSeries

A complex type that specifies a chart bar series ([ISO/IEC-29500-1] section 21.2.2.170) that has been filtered from the chart ([ISO/IEC-29500-1] section 21.2).<133>

Child Elements:

ser: A CT_BarSer ([ISO/IEC-29500-1] section 21.2.2.170) element that specifies a chart bar series ([ISO/IEC-29500-1] section 21.2.2.170) that has been filtered from the chart ([ISO/IEC-29500-1] section 21.2).

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this complex type.

```
<xsd:complexType name="CT_FilteredBarSer">
  <xsd:sequence>
    <xsd:element name="ser" type="c:CT_BarSer" minOccurs="1" maxOccurs="1"/>
  </xsd:sequence>
</xsd:complexType>
```

See section 5.13 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.5.66 CT_FilteredLineSer

Target namespace: http://schemas.microsoft.com/office/drawing/2012/chart

Referenced by: filteredLineSeries

A complex type that specifies a chart line series ([ISO/IEC-29500-1] section 21.2.2.171) that has been filtered from the chart ([ISO/IEC-29500-1] section 21.2).<134>

Child Elements:

ser: A CT_LineSer ([ISO/IEC-29500-1] section 21.2.2.171) element that specifies a chart line series ([ISO/IEC-29500-1] section 21.2.2.171) that has been filtered from the chart ([ISO/IEC-29500-1] section 21.2).

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this complex type.

```
<xsd:complexType name="CT_FilteredLineSer">
  <xsd:sequence>
    <xsd:element name="ser" type="c:CT_LineSer" minOccurs="1" maxOccurs="1"/>
  </xsd:sequence>
</xsd:complexType>
```

See section 5.13 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.5.67 CT_FilteredScatterSer

Target namespace: http://schemas.microsoft.com/office/drawing/2012/chart

Referenced by: filteredScatterSeries

A complex type that specifies a chart scatter series ([ISO/IEC-29500-1] section 21.2.2.167) that has been filtered from the chart ([ISO/IEC-29500-1] section 21.2).<135>

Child Elements:

ser: A CT_ScatterSer ([ISO/IEC-29500-1] section 21.2.2.167) element that specifies a chart scatter series ([ISO/IEC-29500-1] section 21.2.2.167) that has been filtered from the chart ([ISO/IEC-29500-1] section 21.2).

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this complex type.

```
<xsd:complexType name="CT_FilteredScatterSer">
  <xsd:sequence>
    <xsd:element name="ser" type="c:CT_ScatterSer" minOccurs="1" maxOccurs="1"/>
  </xsd:sequence>
</xsd:complexType>
```

See section 5.13 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.5.68 CT_FilteredAreaSer

Target namespace: http://schemas.microsoft.com/office/drawing/2012/chart

Referenced by: filteredAreaSeries

A complex type that specifies a chart area series ([ISO/IEC-29500-1] section 21.2.2.168) that has been filtered from the chart ([ISO/IEC-29500-1] section 21.2).<136>

Child Elements:

ser: A CT_AreaSer ([ISO/IEC-29500-1] section 21.2.2.168) element that specifies a chart area series ([ISO/IEC-29500-1] section 21.2.2.168) that has been filtered from the chart ([ISO/IEC-29500-1] section 21.2).

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this complex type.

```
<xsd:complexType name="CT_FilteredAreaSer">
  <xsd:sequence>
    <xsd:element name="ser" type="c:CT_AreaSer" minOccurs="1" maxOccurs="1"/>
  </xsd:sequence>
</xsd:complexType>
```

See section 5.13 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.5.69 CT_FilteredPieSer

Target namespace: http://schemas.microsoft.com/office/drawing/2012/chart

Referenced by: filteredPieSeries

A complex type that specifies a chart pie series ([ISO/IEC-29500-1] section 21.2.2.172) that has been filtered from the chart ([ISO/IEC-29500-1] section 21.2).<137>

Child Elements:

ser: A CT_PieSer ([ISO/IEC-29500-1] section 21.2.2.172) element that specifies a chart pie series ([ISO/IEC-29500-1] section 21.2.2.172) that has been filtered from the chart ([ISO/IEC-29500-1] section 21.2).

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this complex type.

```
<xsd:complexType name="CT_FilteredPieSer">
  <xsd:sequence>
    <xsd:element name="ser" type="c:CT_PieSer" minOccurs="1" maxOccurs="1"/>
  </xsd:sequence>
</xsd:complexType>
```

See section 5.13 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.5.70 CT_FilteredBubbleSer

Target namespace: http://schemas.microsoft.com/office/drawing/2012/chart

Referenced by: filteredBubbleSeries

A complex type that specifies a chart bubble series ([ISO/IEC-29500-1] section 21.2.2.174) that has been filtered from the chart ([ISO/IEC-29500-1] section 21.2).<138>

Child Elements:

ser: A **CT_BubbleSer** ([ISO/IEC-29500-1] section 21.2.2.174) element that specifies a chart bubble series ([ISO/IEC-29500-1] section 21.2.2.174) that has been filtered from the chart ([ISO/IEC-29500-1] section 21.2).

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this complex type.

```
<xsd:complexType name="CT_FilteredBubbleSer">
  <xsd:sequence>
    <xsd:element name="ser" type="c:CT_BubbleSer" minOccurs="1" maxOccurs="1"/>
  </xsd:sequence>
</xsd:complexType>
```

See section 5.13 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.5.71 CT_CameraTool

Target namespace: http://schemas.microsoft.com/office/drawing/2010/main

Referenced by: cameraTool

A complex type that specifies camera tool properties.

Attributes:

cellRange: An **xsd:string** ([XMLSCHEMA2] section 3.2.1) that uses standard cell reference syntax as specified in [ISO/IEC-29500-1] section 18.17.2.3. This specifies the cell range of the camera tool. The cell range MUST use the A1 style reference, instead of the R1C1 reference. The cell range MUST be used when defining the camera tool.

spid: An **xsd:string** ([XMLSCHEMA2] section 3.2.1) that specifies the shape identifier of a legacy drawing object. If string is "0" there is no legacy shape. However the legacy drawing object MUST

be deleted if the current drawing element is to be used. Otherwise, two camera tool objects are present.

This string has the following characteristics:

- If string is not the default value it MUST begin with "_x0000_" followed by one character and a number that specifies the identifier: _x0000_[c]<shape id>
  - The character [c] MUST be set to 's'.
  - Shape identifiers MUST be in the range from 1025 through 268435456.
  - Shape identifiers are clustered, and each cluster has 1024 values. The first cluster ranges from 1025 through 2048.
  - Shape identifiers in the same cluster SHOULD only exist in one worksheet.
- It MUST NOT contain Numeric Character Reference (NCR) characters.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this complex type.

```
<xsd:complexType name="CT_CameraTool">
  <xsd:attribute name="cellRange" type="xsd:string"/>
  <xsd:attribute name="spid" use="optional" default="0" type="xsd:string"/>
</xsd:complexType>
```

See section 5.1 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.5.72 CT_CompatExt

Target namespace: http://schemas.microsoft.com/office/drawing/2010/main

Referenced by: compatExt

A complex type that specifies a legacy drawing object.

Attributes:

spid: An **xsd:string** attribute ([XMLSCHEMA2] section 3.2.1) that specifies the shape identifier of a legacy drawing object.

This string has the following characteristics:

- It begins with "_x0000_" followed by one character and a number that specifies the identifier: _x0000_[c]<shape id>
  - The character [c] MUST be set to 's'.
  - Shape identifiers MUST be in the range from 1025 through 268435456.
  - Shape identifiers are clustered, and each cluster has 1024 values. The first cluster ranges from 1025 through 2048.
  - Shape identifiers in the same cluster exist in only one worksheet.
- It MUST NOT contain NCR characters.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this complex type.

```
<xsd:complexType name="CT_CompatExt">
  <xsd:attribute name="spid" type="xsd:string"/>
</xsd:complexType>
```

See section 5.1 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.5.73 CT_ShadowObscured

Target namespace: http://schemas.microsoft.com/office/drawing/2010/main

Referenced by: shadowObscured

A complex type that specifies whether the shadow is obscured by a shape with no fill.

Attributes:

val: A Boolean attribute ([XMLSCHEMA2] section 3.2.2) that specifies whether the shadow is fully obscured by the shape when the containing shape has no fill. For more details, see [MS-ODRAW] section 2.3.13.22 and [ISO/IEC-29500-1] section 19.3.1.44.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this complex type.

```
<xsd:complexType name="CT_ShadowObscured">
  <xsd:attribute name="val" type="xsd:boolean" use="optional" default="false"/>
</xsd:complexType>
```

See section 5.1 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.5.74 CT_TextboxInfo

Target namespace: http://schemas.microsoft.com/office/word/2010/wordprocessingShape

Referenced by: CT_WordprocessingShape

This type contains all the text contents of a CT_WordprocessingShape and associates that textual information, referred to as a **text box story**, with a story identifier. An element of this type MUST be present only in the CT_WordprocessingShape element that is the first in a series of CT_WordprocessingShape elements that refer to the same text box story.

Child Elements:

w12:txbxContent: A **CT_TxbxContent** ([ISO/IEC-29500-4] section A.1) element. This element specifies the text contents.

extLst: A **CT_OfficeArtExtensionList** ([ISO/IEC-29500-1] section A.4.1) element to hold future extensions to the parent element of this **extLst** element

Attributes:

id: An **unsignedShort** ([XMLSCHEMA2] section 3.3.23) attribute that specifies the identity of the text box story begun by a **CT_TextboxInfo** element. This value MUST be unique across a document for each instance of **CT_TextboxInfo**.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this complex type.

```
<xsd:complexType name="CT_TextboxInfo">
  <xsd:sequence>
    <xsd:element ref="w12:txbxContent" minOccurs="0" maxOccurs="1"/>
    <xsd:element name="extLst" type="a:CT_OfficeArtExtensionList" minOccurs="0"
maxOccurs="1"/>
  </xsd:sequence>
  <xsd:attribute name="id" type="xsd:unsignedShort" use="optional" default="0"/>
</xsd:complexType>
```

See section 5.2 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.5.75 CT_LinkedTextboxInformation

Target namespace: http://schemas.microsoft.com/office/word/2010/wordprocessingShape

Referenced by: CT_WordprocessingShape

This type contains all the information necessary for a CT_WordprocessingShape to participate in a text box story. An element of this type MUST NOT be present on the first CT_WordprocessingShape element in a series of CT_WordprocessingShape elements that are part of the same text box story. An element of this type MUST be present on all subsequent CT_WordprocessingShape elements.

Child Elements:

extLst: A **CT_OfficeArtExtensionList** ([ISO/IEC-29500-1] section A.4.1) element to hold future extensions to the parent element of this **extLst** element

Attributes:

id: An **unsignedShort** ([XMLSCHEMA2] section 3.3.23) attribute that specifies the text box story to which this text box belongs.

seq: An **unsignedShort** ([XMLSCHEMA2] section 3.3.23) attribute that specifies the position of the owning shape in the given text box story. This value MUST be unique across all **CT_LinkedTextboxInformation** instances with the same story identifier. This value MUST be greater than 0.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this complex type.

```
<xsd:complexType name="CT_LinkedTextboxInformation">
  <xsd:sequence>
    <xsd:element name="extLst" type="a:CT_OfficeArtExtensionList" minOccurs="0"
maxOccurs="1"/>
  </xsd:sequence>
  <xsd:attribute name="id" type="xsd:unsignedShort" use="required"/>
  <xsd:attribute name="seq" type="xsd:unsignedShort" use="required"/>
</xsd:complexType>
```

See section 5.2 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.5.76 CT_WordprocessingShape

Target namespace: http://schemas.microsoft.com/office/word/2010/wordprocessingShape

Referenced by: wsp, CT_WordprocessingGroup, CT_WordprocessingCanvas

This type defines a shape in a WordprocessingML document.

Child Elements:

cNvPr: A **CT_NonVisualDrawingProps** element ([ISO/IEC-29500-1] section A.4.1) that specifies non-visual properties. This element MUST NOT be present when the **CT_WordprocessingShape** is contained directly by a **graphicData** (Graphic Object Data) element as specified in [ISO/IEC-29500-1] section 20.1.2.2.17. This element MUST be present when the **CT_WordprocessingShape** is not contained directly by a **graphicData** element as specified in [ISO/IEC-29500-1] section 20.1.2.2.17.<139>

cNvSpPr: A **CT_NonVisualDrawingShapeProps** element ([ISO/IEC-29500-1] section A.4.1) that specifies non-visual shape properties.

cNvCnPr: A **CT_NonVisualConnectorProperties** element ([ISO/IEC-29500-1] section A.4.1) that specifies non-visual connector properties.

spPr: A **CT_ShapeProperties** element ([ISO/IEC-29500-1] section A.4.1) that specifies the visual shape properties that can be applied to a shape.<140>

style: A **CT_ShapeStyle** element ([ISO/IEC-29500-1] section A.4.1) that specifies the style information for a shape.

extLst: A **CT_OfficeArtExtensionList** element ([ISO/IEC-29500-1] section A.4.1) to hold future extensions to the parent element of this **extLst** element.

txbx: A CT_TextboxInfo element that specifies the textual contents of the shape if the shape is the first in the series of shapes for the same text box story.

linkedTxbx: A CT_LinkedTextboxInformation element that specifies the textual contents of the shape if the shape is not the first in the series of shapes for the indicated text box story.

bodyPr: A **CT_TextBodyProperties** element ([ISO/IEC-29500-1] section A.4.1) that specifies the body properties for the text body in a shape.

Attributes:

normalEastAsianFlow: A Boolean attribute that specifies whether the text flow of the text contents of the shape ignores the text flow value specified by the **vert** attribute of the **bodyPr** element. If this flag is set to TRUE, the value of the **vert** attribute of the **bodyPr** element on this **CT_WordprocessingShape** MUST be ignored, and text flows in the manner specified by the value "tbV" for an **ST_TextDirection** (Text Flow Direction) type as specified in [ISO/IEC-29500-1] section17.18.93.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this complex type.

```
<xsd:complexType name="CT_WordprocessingShape">
  <xsd:sequence minOccurs="1" maxOccurs="1">
```

```
    <xsd:element name="cNvPr" type="a:CT_NonVisualDrawingProps" minOccurs="0" maxOccurs="1"/>
    <xsd:choice minOccurs="1" maxOccurs="1">
      <xsd:element name="cNvSpPr" type="a:CT_NonVisualDrawingShapeProps" minOccurs="1"
maxOccurs="1"/>
      <xsd:element name="cNvCnPr" type="a:CT_NonVisualConnectorProperties" minOccurs="1"
maxOccurs="1"/>
    </xsd:choice>
    <xsd:element name="spPr" type="a:CT_ShapeProperties" minOccurs="1" maxOccurs="1"/>
    <xsd:element name="style" type="a:CT_ShapeStyle" minOccurs="0" maxOccurs="1"/>
    <xsd:element name="extLst" type="a:CT_OfficeArtExtensionList" minOccurs="0"
maxOccurs="1"/>
    <xsd:choice minOccurs="0" maxOccurs="1">
      <xsd:element name="txbx" type="CT_TextboxInfo" minOccurs="1" maxOccurs="1"/>
      <xsd:element name="linkedTxbx" type="CT_LinkedTextboxInformation" minOccurs="1"
maxOccurs="1"/>
    </xsd:choice>
    <xsd:element name="bodyPr" type="a:CT_TextBodyProperties" minOccurs="1" maxOccurs="1"/>
  </xsd:sequence>
  <xsd:attribute name="normalEastAsianFlow" type="xsd:boolean" use="optional"
default="false"/>
</xsd:complexType>
```

See section 5.2 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.5.77 CT_GraphicFrame

Target namespace: http://schemas.microsoft.com/office/word/2010/wordprocessingGroup

Referenced by: CT_WordprocessingGroup, CT_WordprocessingCanvas

This type defines a container for a graphical object as specified in [ISO/IEC-29500-1] section 20.1.2.2.16 to be integrated in the context of the type defined by a CT_WordprocessingGroup.

Child Elements:

cNvPr: A **CT_NonVisualDrawingProps** element ([ISO/IEC-29500-1] section A.4.1) that specifies the non-visual properties of the current **CT_GraphicFrame**.

cNvFrPr: A **CT_NonVisualGraphicFrameProperties** element ([ISO/IEC-29500-1] section A.4.1) that specifies the non-visual frame properties of the current **CT_GraphicFrame**.

xfrm: A **CT_Transform2D** element ([ISO/IEC-29500-1] section A.4.1) that specifies the transformation of the current **CT_GraphicFrame**.

a:graphic: A **CT_GraphicalObject** element ([ISO/IEC-29500-1] section A.4.1) that specifies the graphical object content in the current **CT_GraphicFrame**.

extLst: A **CT_OfficeArtExtensionList** element ([ISO/IEC-29500-1] section A.4.1) to hold future extensions to the parent element of this **extLst** element.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this complex type.

```
<xsd:complexType name="CT_GraphicFrame">
  <xsd:sequence>
    <xsd:element name="cNvPr" type="a:CT_NonVisualDrawingProps" minOccurs="1" maxOccurs="1"/>
```

```
    <xsd:element name="cNvFrPr" type="a:CT_NonVisualGraphicFrameProperties" minOccurs="1"
maxOccurs="1"/>
    <xsd:element name="xfrm" type="a:CT_Transform2D" minOccurs="1" maxOccurs="1"/>
    <xsd:element ref="a:graphic" minOccurs="1" maxOccurs="1"/>
    <xsd:element name="extLst" type="a:CT_OfficeArtExtensionList" minOccurs="0"
maxOccurs="1"/>
  </xsd:sequence>
</xsd:complexType>
```

See section 5.4 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.5.78 CT_WordprocessingGroup

Target namespace: http://schemas.microsoft.com/office/word/2010/wordprocessingGroup

Referenced by: CT_WordprocessingGroup, wgp, CT_WordprocessingCanvas

This complex type defines the data that represents a group of graphical objects in WordprocessingML.

Child Elements:

cNvPr: A **CT_NonVisualDrawingProps** element ([ISO/IEC-29500-1] section A.4.1) that specifies the non-visual properties of the current **CT_WordprocessingGroup**. This element MUST NOT be present when the **CT_WordprocessingGroup** is contained directly by a **graphicData** (Graphic Object Data) element as specified in [ISO/IEC-29500-1] section 20.1.2.2.17. This element MUST be present when the **CT_WordprocessingGroup** is not contained directly by a **graphicData** element as specified in [ISO/IEC-29500-1] section 20.1.2.2.17.

cNvGrpSpPr: A **CT_NonVisualGroupDrawingShapeProps** element ([ISO/IEC-29500-1] section A.4.1) that specifies the non-visual group properties of the current **CT_WordprocessingGroup**.

grpSpPr: A **CT_GroupShapeProperties** element ([ISO/IEC-29500-1] section A.4.1) that specifies the properties that are common across all shapes in the current **CT_WordprocessingGroup**. If there are any conflicting properties between the group shape properties and shape properties, the individual shape properties SHOULD<141> take precedence.

wps:wsp: A CT_WordprocessingShape element that specifies a shape that is a child of the current **CT_WordprocessingGroup**.

grpSp: A CT_WordprocessingGroup element that specifies a group that is a child of the current **CT_WordprocessingGroup**.

graphicFrame: A CT_GraphicFrame element that specifies a graphical object that is a child of the current **CT_WordprocessingGroup**.<142>

pic:pic: A **CT_Picture** element ([ISO/IEC-29500-1] section A.4.2) that specifies a picture that is a child of the current **CT_WordprocessingGroup**.

w14:contentPart: A CT_WordContentPart element that specifies a content part that is a child of the current **CT_WordprocessingGroup**.

extLst: A **CT_OfficeArtExtensionList** element ([ISO/IEC-29500-1] section A.4.1) to hold future extensions to the parent element of this **extLst** element.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this complex type.

```
<xsd:complexType name="CT_WordprocessingGroup">
  <xsd:sequence minOccurs="1" maxOccurs="1">
    <xsd:element name="cNvPr" type="a:CT_NonVisualDrawingProps" minOccurs="0" maxOccurs="1"/>
    <xsd:element name="cNvGrpSpPr" type="a:CT_NonVisualGroupDrawingShapeProps" minOccurs="1"
maxOccurs="1"/>
    <xsd:element name="grpSpPr" type="a:CT_GroupShapeProperties" minOccurs="1"
maxOccurs="1"/>
    <xsd:choice minOccurs="0" maxOccurs="unbounded">
      <xsd:element ref="wps:wsp"/>
      <xsd:element name="grpSp" type="CT_WordprocessingGroup"/>
      <xsd:element name="graphicFrame" type="CT_GraphicFrame"/>
      <xsd:element ref="pic:pic"/>
      <xsd:element ref="w14:contentPart"/>
    </xsd:choice>
    <xsd:element name="extLst" type="a:CT_OfficeArtExtensionList" minOccurs="0"
maxOccurs="1"/>
  </xsd:sequence>
</xsd:complexType>
```

See section 5.4 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.5.79 CT_WordprocessingCanvas

Target namespace: http://schemas.microsoft.com/office/word/2010/wordprocessingCanvas

Referenced by: wpc

This type defines a drawing canvas in a WordprocessingML document.

Child Elements:

bg: A **CT_BackgroundFormatting** element ([ISO/IEC-29500-1] section A.4.1) that specifies formatting applied to the background of a drawing canvas.

whole: A **CT_WholeE2oFormatting** element ([ISO/IEC-29500-1] section A.4.1) that specifies line formatting properties applied to a drawing canvas and any reflection effect applied to a drawing canvas that includes reflection of the objects in the drawing canvas.

wps:wsp: A CT_WordprocessingShape element that specifies a shape in a drawing canvas.

pic:pic: A **CT_Picture** element ([ISO/IEC-29500-1] section A.4.2) that specifies a picture in a drawing canvas.

w14:contentPart: A CT_WordContentPart element that specifies a graphical object represented by arbitrary XML stored in a referenced part.

wpg:wgp: A CT_WordprocessingGroup element that specifies a groups of graphical objects.

graphicFrame: A CT_GraphicFrame element that specifies a graphical object that is a child of the current **CT_WordprocessingCanvas**.<143>

extLst: A **CT_OfficeArtExtensionList** element ([ISO/IEC-29500-1] section A.4.1) to hold future extensions to the parent element of this **extLst** element.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this complex type.

```
<xsd:complexType name="CT_WordprocessingCanvas">
  <xsd:sequence minOccurs="1" maxOccurs="1">
    <xsd:element name="bg" type="a:CT_BackgroundFormatting" minOccurs="0" maxOccurs="1"/>
    <xsd:element name="whole" type="a:CT_WholeE2oFormatting" minOccurs="0" maxOccurs="1"/>
    <xsd:choice minOccurs="0" maxOccurs="unbounded">
      <xsd:element ref="wps:wsp"/>
      <xsd:element ref="pic:pic"/>
      <xsd:element ref="w14:contentPart"/>
      <xsd:element ref="wpg:wgp"/>
      <xsd:element name="graphicFrame" type="wpg:CT_GraphicFrame"/>
    </xsd:choice>
    <xsd:element name="extLst" type="a:CT_OfficeArtExtensionList" minOccurs="0"
maxOccurs="1"/>
  </xsd:sequence>
</xsd:complexType>
```

See section 5.5 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.5.80 CT_Boolean

Target namespace: http://schemas.microsoft.com/office/drawing/2010/diagram

Referenced by: recolorImg

Defines a property with a Boolean value.

Attributes:

val: Specifies a binary value for the property defined by the parent **XML** element. The default is FALSE.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this complex type.

```
<xsd:complexType name="CT_Boolean">
  <xsd:attribute name="val" type="xsd:boolean" use="optional" default="false"/>
</xsd:complexType>
```

See section 5.16 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.5.81 CT_ApplicationNonVisualDrawingProps

Target namespace: http://schemas.microsoft.com/office/drawing/2010/chartDrawing

Referenced by: CT_ContentPart

A complex type that specifies Chart DrawingML-specific non-visual properties of a content part.

Attributes:

macro: A string ([XMLSCHEMA2] section 3.2.1) that specifies the name of the custom function associated with the content part.

The format of this string is application-defined and SHOULD be ignored if not understood.<144>

fPublished: A Boolean attribute ([XMLSCHEMA2] section 3.2.2) that specifies whether the content part is published with the chart when sent to the server.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this complex type.

```
<xsd:complexType name="CT_ApplicationNonVisualDrawingProps">
  <xsd:attribute name="macro" type="xsd:string" use="optional"/>
  <xsd:attribute name="fPublished" type="xsd:boolean" use="optional" default="false"/>
</xsd:complexType>
```

See section 5.8 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.5.82 CT_ContentPartNonVisual

Target namespace: http://schemas.microsoft.com/office/drawing/2010/chartDrawing

Referenced by: CT_ContentPart

A complex type that specifies non-visual properties of a CT_ContentPart element.

Child Elements:

cNvPr: A **CT_NonVisualDrawingProps** ([ISO/IEC-29500-1] section A.4.1) element that specifies the non-visual drawing properties for the content part. This allows for additional information that does not affect the appearance of the content part to be stored.

cNvContentPartPr: A CT_NonVisualInkContentPartProperties element that specifies non-visual ink properties of the content part. This enables additional information that does not affect the appearance of ink in the content part to be stored.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this complex type.

```
<xsd:complexType name="CT_ContentPartNonVisual">
  <xsd:sequence>
    <xsd:element name="cNvPr" type="a:CT_NonVisualDrawingProps" minOccurs="1" maxOccurs="1"/>
    <xsd:element name="cNvContentPartPr" type="a14:CT_NonVisualInkContentPartProperties"
minOccurs="0" maxOccurs="1"/>
  </xsd:sequence>
</xsd:complexType>
```

See section 5.8 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.5.83 CT_ContentPart

Target namespace: http://schemas.microsoft.com/office/drawing/2010/chartDrawing

Referenced by: contentPart

A complex type that specifies a reference to XML content in a format not specified in [ISO/IEC-29500-1].

This element serves the same purpose as the **contentPart** element in SpreadsheetML Drawing ([ISO/IEC-29500-1] section 20.5.2.12), but appears under **CT_GroupShape** and **EG_ObjectChoices** ([ISO/IEC-29500-1] section A.5.1) to enable content parts in charts.

Child Elements:

nvContentPartPr: A CT_ContentPartNonVisual element that specifies non-visual properties of the content part.

nvPr: A CT_ApplicationNonVisualDrawingProps element that specifies non-visual Chart DrawingML-specific properties.

xfrm: A CT_Transform2D element ([ISO/IEC-29500-1] section A.4.1) that specifies the 2-D transform for the content part.

extLst: A CT_OfficeArtExtensionList element ([ISO/IEC-29500-1] section A.4.1) that specifies the extension list in which all future extensions of element type **ext** are defined. The extension list, along with corresponding future extensions, is used to extend the storage capabilities of the DrawingML framework. This enables various new types of data to be stored natively in the framework.

Attributes:

r:id: An ST_RelationshipId attribute ([ISO/IEC-29500-1] section 22.8.2.1) that specifies the relationship identifier to a content part.

bwMode: An ST_BlackWhiteMode attribute ([ISO/IEC-29500-1] section 20.1.10.10) that specifies how to interpret color information contained within a content part to achieve a color, black and white, or grayscale rendering of the content part. This attribute specifies only the rendering mode applied to the content part; it does not affect how the actual color information is persisted

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this complex type.

```
<xsd:complexType name="CT_ContentPart">
  <xsd:sequence>
    <xsd:element name="nvContentPartPr" type="CT_ContentPartNonVisual" minOccurs="0"
maxOccurs="1"/>
    <xsd:element name="nvPr" type="CT_ApplicationNonVisualDrawingProps" minOccurs="0"
maxOccurs="1"/>
    <xsd:element name="xfrm" type="a:CT_Transform2D" minOccurs="0" maxOccurs="1"/>
    <xsd:element name="extLst" type="a:CT_OfficeArtExtensionList" minOccurs="0"
maxOccurs="1"/>
  </xsd:sequence>
  <xsd:attribute ref="r:id" use="required"/>
  <xsd:attribute name="bwMode" type="a:ST_BlackWhiteMode" use="optional" default="auto"/>
</xsd:complexType>
```

See section 5.8 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.5.84 CT_FilteredRadarSer

Target namespace: http://schemas.microsoft.com/office/drawing/2012/chart

Referenced by: filteredRadarSeries

A complex type that specifies a chart radar series ([ISO/IEC-29500-1] section 21.2.2.169) that has been filtered from the chart ([ISO/IEC-29500-1] section 21.2).<145>

Child Elements:

ser: A CT_RadarSer ([ISO/IEC-29500-1] section 21.2.2.169) element that specifies a chart radar series ([ISO/IEC-29500-1] section 21.2.2.169) that has been filtered from the chart ([ISO/IEC-29500-1] section 21.2).

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this complex type.

```
<xsd:complexType name="CT_FilteredRadarSer">
  <xsd:sequence>
    <xsd:element name="ser" type="c:CT_RadarSer" minOccurs="1" maxOccurs="1"/>
  </xsd:sequence>
</xsd:complexType>
```

See section 5.13 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.5.85 CT_FilteredSurfaceSer

Target namespace: http://schemas.microsoft.com/office/drawing/2012/chart

Referenced by: filteredSurfaceSeries

The **CT_FilteredSurfaceSer** complex type specifies a **chart surface series** ([ISO/IEC-29500-1] section 21.2.2.173) that has been filtered from the **chart** ([ISO/IEC-29500-1] section 21.2).<146>

Child Elements:

ser: A **CT_SurfaceSer** ([ISO/IEC-29500-1] section 21.2.2.173) element that specifies a **chart area series** ([ISO/IEC-29500-1] section 21.2.2.173) that has been filtered from the **chart** ([ISO/IEC-29500-1] section 21.2).

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this complex type.

```
<xsd:complexType name="CT_FilteredSurfaceSer">
  <xsd:sequence>
    <xsd:element name="ser" type="c:CT_SurfaceSer" minOccurs="1" maxOccurs="1"/>
  </xsd:sequence>
</xsd:complexType>
```

See section 5.13 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.5.86 CT_BackgroundPr

Target namespace: http://schemas.microsoft.com/office/drawing/2012/main

Referenced by: backgroundPr

This complex type describes the visual properties of the background of a WordprocessingML document.<147>

Attributes:

bwMode: An **ST_BlackWhiteMode** ([ISO/IEC-29500-1] section 20.1.10.10) attribute that specifies in what types of colors the background should be rendered.

bwPure: An **ST_BlackWhiteMode** ([ISO/IEC-29500-1] section 20.1.10.10) attribute that specifies how the background should be rendered using pure black and white color.

This is subordinate to **bwMode**. If **bwmMode** is "auto" then the value for **bwNormal** or **bwPure** is used depending on what the output format is. An application may define for itself what, if any, difference there is between normal black and white and pure black and white.

bwNormal: An **ST_BlackWhiteMode** ([ISO/IEC-29500-1] section 20.1.10.10) attribute that specifies how the background should be rendered using normal black and white color.

This is subordinate to **bwMode**. If **bwMode** is set to "auto" then the value for **bwNormal** or **bwPure** is used depending on what the output format is. An application may define for itself what, if any, difference there is between normal black and white and pure black and white.

targetScreenSize: An ST_TargetScreenSz attribute that specifies the target resolution used for documents with a gradient or picture-filled background.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this complex type.

```
<xsd:complexType name="CT_BackgroundPr">
  <xsd:attribute name="bwMode" type="a:ST_BlackWhiteMode"/>
  <xsd:attribute name="bwPure" type="a:ST_BlackWhiteMode"/>
  <xsd:attribute name="bwNormal" type="a:ST_BlackWhiteMode"/>
  <xsd:attribute name="targetScreenSize" type="ST_TargetScreenSz"/>
</xsd:complexType>
```

See section 5.14 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.5.87 CT_NonVisualGroupProps

Target namespace: http://schemas.microsoft.com/office/drawing/2012/main

Referenced by: nonVisualGroupProps

This complex type specifies non-visual properties of a group of shapes.<148>

Attributes:

isLegacyGroup: A **boolean** ([XMLSCHEMA2] section 3.2.2) attribute that specifies if the group is a legacy group.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this complex type.

```
<xsd:complexType name="CT_NonVisualGroupProps">
  <xsd:attribute name="isLegacyGroup" type="xsd:boolean"/>
</xsd:complexType>
```

See section 5.14 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.5.88 CT_ObjectPr

Target namespace: http://schemas.microsoft.com/office/drawing/2012/main

Referenced by: objectPr

This complex type specifies the object properties of a control or an object.<149>

Attributes:

objectId: A **string** ([XMLSCHEMA2] section 3.2.1) attribute that specifies a unique ID identifying the OLE Object.

isActiveX: A **boolean** ([XMLSCHEMA2] section 3.2.2) attribute that specifies whether the object is an ActiveX object.

linkType: A **string** ([XMLSCHEMA2] section 3.2.1) attribute that specifies the type of image that shall be requested from the application which hosts embedded object data for a linked object.

The following are the possible values for this attribute:

Value	Meaning
Bitmap	(Bitmap Image) Specifies that a bitmap shall be requested.
EnhancedMetaFile	(Enhanced Metafile Image) Specifies that an enhanced metafile shall be requested.
Picture	(Other Image) Specifies that any image format may be requested.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this complex type.

```
<xsd:complexType name="CT_ObjectPr">
  <xsd:attribute name="objectId" type="xsd:string"/>
  <xsd:attribute name="isActiveX" type="xsd:boolean"/>
  <xsd:attribute name="linkType" type="xsd:string"/>
</xsd:complexType>
```

See section 5.14 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.5.89 CT_SignatureLine

Target namespace: http://schemas.microsoft.com/office/drawing/2012/main

Referenced by: signatureLine

This complex type specifies the properties of signature lines.<150>

Attributes:

isSignatureLine: A **boolean** ([XMLSCHEMA2] section 3.2.2) attribute that specifies whether the image is a signature line object.

id: An **ST_Guid** ([ISO/IEC-29500-1] section 22.9.2.4) attribute that specifies the GUID of the signature line object.

provId: An **ST_Guid** ([ISO/IEC-29500-1] section 22.9.2.4) attribute that specifies the GUID of the provider that creates the signature line object.

signingInstructionsSet: A **boolean** ([XMLSCHEMA2] section 3.2.2) that specifies whether there is data in the **signingInstructions** attribute of the signature line object.

allowComments: A **boolean** ([XMLSCHEMA2] section 3.2.2) attribute that specifies whether the user can attach comments at signing time.

showSignDate: A **boolean** ([XMLSCHEMA2] section 3.2.2) attribute that specifies whether the signed image generated should include the signing date.

suggestedSigner: A **string** ([XMLSCHEMA2] section 3.2.1) attribute that specifies the name of the suggested signer.

suggestedSigner2: A **string** ([XMLSCHEMA2] section 3.2.1) attribute that specifies the title or additional information about the suggested signer.

suggestedSignerEmail: A **string** ([XMLSCHEMA2] section 3.2.1) attribute that specifies the e-mail address of the suggested signer.

signingInstructions: A **string** ([XMLSCHEMA2] section 3.2.1) attribute that specifies the signing instruction that is displayed to the signer.

addlXml: A **string** ([XMLSCHEMA2] section 3.2.1) attribute that specifies an optional XML text used to store additional info about the signature line object.

sigProvUrl: A **string** ([XMLSCHEMA2] section 3.2.1) attribute that specifies the URL of the provider.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this complex type.

```
<xsd:complexType name="CT_SignatureLine">
  <xsd:attribute name="isSignatureLine" type="xsd:boolean"/>
  <xsd:attribute name="id" type="a:ST_Guid"/>
  <xsd:attribute name="provId" type="a:ST_Guid"/>
  <xsd:attribute name="signingInstructionsSet" type="xsd:boolean"/>
  <xsd:attribute name="allowComments" type="xsd:boolean"/>
  <xsd:attribute name="showSignDate" type="xsd:boolean"/>
  <xsd:attribute name="suggestedSigner" type="xsd:string"/>
  <xsd:attribute name="suggestedSigner2" type="xsd:string"/>
  <xsd:attribute name="suggestedSignerEmail" type="xsd:string"/>
  <xsd:attribute name="signingInstructions" type="xsd:string"/>
  <xsd:attribute name="addlXml" type="xsd:string"/>
  <xsd:attribute name="sigProvUrl" type="xsd:string"/>
</xsd:complexType>
```

See section 5.14 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.5.90 CT_ColorStyleVariation

Target namespace: http://schemas.microsoft.com/office/drawing/2012/chartStyle

Referenced by: CT_ColorStyle

The complex type specifies a list of transforms that are appended to all colors in a CT_ColorStyle to produce a variation of the color style.<151>

Child Elements:

tint: A **CT_PositiveFixedPercentage** ([ISO/IEC-29500-1] section A.4.1) element that specifies a lighter version of its input color. See ([ISO/IEC-29500-1] section 20.1.2.3.34).

shade: A **CT_PositiveFixedPercentage** ([ISO/IEC-29500-1] section A.4.1) element that specifies a darker version of its input color. See ([ISO/IEC-29500-1] section 20.1.2.3.31).

comp: A **CT_ComplementTransform** ([ISO/IEC-29500-1] section A.4.1) element that specifies the complement of its input color. See ([ISO/IEC-29500-1] section 20.1.2.3.7).

inv: A **CT_InverseTransform** ([ISO/IEC-29500-1] section A.4.1) element that specifies the inverse of its input color. See ([ISO/IEC-29500-1] section 20.1.2.3.17).

gray: A **CT_GrayscaleTransform** ([ISO/IEC-29500-1] section A.4.1) element that specifies a grayscale of its input color. See ([ISO/IEC-29500-1] section 20.1.2.3.9).

alpha: A **CT_PositiveFixedPercentage** ([ISO/IEC-29500-1] section A.4.1) element that specifies its input color with the specified opacity, but with its color unchanged. See ([ISO/IEC-29500-1] section 20.1.2.3.1).

alphaOff: A **CT_FixedPercentage** ([ISO/IEC-29500-1] section A.4.1) element that specifies a more or less opaque version of its input color. See ([ISO/IEC-29500-1] section 20.1.2.3.3).

alphaMod: A **CT_PositivePercentage** ([ISO/IEC-29500-1] section A.4.1) element that specifies a more or less opaque version of its input color. See ([ISO/IEC-29500-1] section 20.1.2.3.2).

hue: A **CT_PositiveFixedAngle** ([ISO/IEC-29500-1] section A.4.1) element that specifies the input color with the specified hue, but with its saturation and luminance unchanged. See ([ISO/IEC-29500-1] section 20.1.2.3.14).

hueOff: A **CT_Angle** ([ISO/IEC-29500-1] section A.4.1) element that specifies the input color with its hue shifted, but with its saturation and luminance unchanged. See ([ISO/IEC-29500-1] section 20.1.2.3.16).

hueMod: A **CT_PositivePercentage** ([ISO/IEC-29500-1] section A.4.1) element that specifies the input color with its hue modulated by the given percentage. See ([ISO/IEC-29500-1] section 20.1.2.3.15).

sat: A **CT_Percentage** ([ISO/IEC-29500-1] section A.4.1) element that specifies the input color with the specified saturation, but with its hue and luminance unchanged. See ([ISO/IEC-29500-1] section 20.1.2.3.26).

satOff: A **CT_Percentage** ([ISO/IEC-29500-1] section A.4.1) element that specifies the input color with its saturation shifted, but with its hue and luminance unchanged. See ([ISO/IEC-29500-1] section 20.1.2.3.28).

satMod: A **CT_Percentage** ([ISO/IEC-29500-1] section A.4.1) element that specifies the input color with its saturation modulated by the given percentage. See ([ISO/IEC-29500-1] section 20.1.2.3.27).

lum: A **CT_Percentage** ([ISO/IEC-29500-1] section A.4.1) element that specifies the input color with the specified luminance, but with its hue and saturation unchanged. See ([ISO/IEC-29500-1] section 20.1.2.3.19).

lumOff: A **CT_Percentage** ([ISO/IEC-29500-1] section A.4.1) element that specifies the input color with its luminance shifted, but with its hue and saturation unchanged. See ([ISO/IEC-29500-1] section 20.1.2.3.21).

lumMod: A **CT_Percentage** ([ISO/IEC-29500-1] section A.4.1) element that specifies the input color with its luminance modulated by the given percentage. See ([ISO/IEC-29500-1] section 20.1.2.3.20).

red: A **CT_Percentage** ([ISO/IEC-29500-1] section A.4.1) element that specifies the input color with the specified red component, but with its green and blue components unchanged. See ([ISO/IEC-29500-1] section 20.1.2.3.23).

redOff: A **CT_Percentage** ([ISO/IEC-29500-1] section A.4.1) element that specifies the input color with its red component shifted, but with its green and blue components unchanged. See ([ISO/IEC-29500-1] section 20.1.2.3.25).

redMod: A **CT_Percentage** ([ISO/IEC-29500-1] section A.4.1) element that specifies the input color with its red component modulated by the given percentage. See ([ISO/IEC-29500-1] section 20.1.2.3.24).

green: A **CT_Percentage** ([ISO/IEC-29500-1] section A.4.1) element that specifies the input color with the specified green component, but with its red and blue components unchanged. See ([ISO/IEC-29500-1] section 20.1.2.3.10).

greenOff: A **CT_Percentage** ([ISO/IEC-29500-1] section A.4.1) element that specifies the input color with its green component shifted, but with its red and blue components unchanged. See ([ISO/IEC-29500-1] section 20.1.2.3.12).

greenMod: A **CT_Percentage** ([ISO/IEC-29500-1] section A.4.1) element that specifies the input color with its green component modulated by the given percentage. See ([ISO/IEC-29500-1] section 20.1.2.3.11).

blue: A **CT_Percentage** ([ISO/IEC-29500-1] section A.4.1) element that specifies the input color with the specified blue component, but with its red and green components unchanged. See ([ISO/IEC-29500-1] section 20.1.2.3.4).

blueOff: A **CT_Percentage** ([ISO/IEC-29500-1] section A.4.1) element that specifies the input color with its blue component shifted, but with its red and green components unchanged. See ([ISO/IEC-29500-1] section 20.1.2.3.6).

blueMod: A **CT_Percentage** ([ISO/IEC-29500-1] section A.4.1) element that specifies the input color with its blue component modulated by the given percentage. See ([ISO/IEC-29500-1] section 20.1.2.3.5).

gamma: A **CT_GammaTransform** ([ISO/IEC-29500-1] section A.4.1) element that specifies the sRGB gamma shift of its input color. See ([ISO/IEC-29500-1] section 20.1.2.3.8).

invGamma: A **CT_InverseGammaTransform** ([ISO/IEC-29500-1] section A.4.1) element that specifies the inverse sRGB gamma shift of its input color. See ([ISO/IEC-29500-1] section 20.1.2.3.18).

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this complex type.

```
<xsd:complexType name="CT_ColorStyleVariation">
  <xsd:sequence>
    <xsd:group ref="a:EG_ColorTransform" minOccurs="0" maxOccurs="unbounded"/>
```

```
    </xsd:sequence>
  </xsd:complexType>
```

See section 5.15 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.5.91 CT_ColorStyle

Target namespace: http://schemas.microsoft.com/office/drawing/2012/chartStyle

Referenced by: colorStyle

The complex type specifies colors used to resolve **CT_StyleColor** (section 2.5.92) colors in a **CT_ChartStyle (**section 2.5.102).<152> The color style consists of a list of colors, a list of variations and a method for iterating the total set of colors.

The total set of colors is all contained colors repeated each time with each variation applied. A color style can contain 6 colors and 7 variations. This yields a total of 42 colors with the first 6 having the first variation applied, the second 6 having the second variation applied and so on. If no variations are present, then the total color set is just the contained colors with no extra variations.

To retrieve a color given an index, a method is applied to map that index into the total set of colors.

Child Elements:

scrgbClr: A **CT_ScRgbColor** ([ISO/IEC-29500-1] section A.4.1) element that specifies a color using the **red-green-blue (RGB)** color model. See ([ISO/IEC-29500-1] section 20.1.2.3.30).

srgbClr: A **CT_SRgbColor** ([ISO/IEC-29500-1] section A.4.1) element that specifies a color using the RGB color model. See ([ISO/IEC-29500-1] section 20.1.2.3.32).

hslClr: A **CT_HslColor** ([ISO/IEC-29500-1] section A.4.1) element that specifies a color using the **HSL** color model. See ([ISO/IEC-29500-1] section 20.1.2.3.13).

sysClr: A **CT_SystemColor** ([ISO/IEC-29500-1] section A.4.1) element that specifies a color bound to predefined operating system elements. See ([ISO/IEC-29500-1] section 20.1.2.3.33).

schemeClr: A **CT_SchemeColor** ([ISO/IEC-29500-1] section A.4.1) element that specifies a color bound to a user's theme. See ([ISO/IEC-29500-1] section 20.1.2.3.29).

prstClr: A **CT_PresetColor** ([ISO/IEC-29500-1] section A.4.1) element that specifies a color which is bound to one of a predefined collection of colors. See ([ISO/IEC-29500-1] section 20.1.2.3.22).

variation: A CT_ColorStyleVariation element that specifies a variation applied to all colors to create a longer set of colors without having to explicitly list them all.

extLst: A **CT_OfficeArtExtensionList** ([ISO/IEC-29500-1] section A.4.1) element that specifies the extension list in which all future extensions of element type **ext** is defined. The extension list, along with corresponding future extensions, is used to extend the storage capabilities of the DrawingML framework. This enables various types of data to be stored natively in the framework.

Attributes:

meth: An ST_ColorStyleMethod attribute that specifies the method for mapping an index for an element in a chart to the total set of colors contained in this **CT_ColorStyle**.

id: An **unsignedInt** ([XMLSCHEMA2] section 3.3.22) attribute that specifies the identifier for this **CT_ColorStyle**.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this complex type.

```
<xsd:complexType name="CT_ColorStyle">
  <xsd:sequence>
    <xsd:group ref="a:EG_ColorChoice" minOccurs="1" maxOccurs="unbounded"/>
    <xsd:element name="variation" type="CT_ColorStyleVariation" minOccurs="0"
maxOccurs="unbounded"/>
    <xsd:element name="extLst" type="a:CT_OfficeArtExtensionList" minOccurs="0"
maxOccurs="1"/>
  </xsd:sequence>
  <xsd:attribute name="meth" type="ST_ColorStyleMethod" use="required"/>
  <xsd:attribute name="id" type="xsd:unsignedInt" use="optional"/>
</xsd:complexType>
```

See section 5.15 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.5.92 CT_StyleColor

Target namespace: http://schemas.microsoft.com/office/drawing/2012/chartStyle

Referenced by: CT_StyleReference, CT_FontReference

The complex type specifies a color which is retrieved from **CT_ColorStyle** (section 2.5.91).<153>

Child Elements:

tint: A **CT_PositiveFixedPercentage** ([ISO/IEC-29500-1] section A.4.1) element that specifies a lighter version of its input color. See ([ISO/IEC-29500-1] section 20.1.2.3.34).

shade: A **CT_PositiveFixedPercentage** ([ISO/IEC-29500-1] section A.4.1) element that specifies a darker version of its input color. See ([ISO/IEC-29500-1] section 20.1.2.3.31).

comp: A **CT_ComplementTransform** ([ISO/IEC-29500-1] section A.4.1) element that specifies the complement of its input color. See ([ISO/IEC-29500-1] section 20.1.2.3.7).

inv: A **CT_InverseTransform** ([ISO/IEC-29500-1] section A.4.1) element that specifies the inverse of its input color. See ([ISO/IEC-29500-1] section 20.1.2.3.17).

gray: A **CT_GrayscaleTransform** ([ISO/IEC-29500-1] section A.4.1) element that specifies a grayscale of its input color. See ([ISO/IEC-29500-1] section 20.1.2.3.9).

alpha: A **CT_PositiveFixedPercentage** ([ISO/IEC-29500-1] section A.4.1) element that specifies its input color with the specified opacity, but with its color unchanged. See ([ISO/IEC-29500-1] section 20.1.2.3.1).

alphaOff: A **CT_FixedPercentage** ([ISO/IEC-29500-1] section A.4.1) element that specifies a more or less opaque version of its input color. See ([ISO/IEC-29500-1] section 20.1.2.3.3).

alphaMod: A **CT_PositivePercentage** ([ISO/IEC-29500-1] section A.4.1) element that specifies a more or less opaque version of its input color. See ([ISO/IEC-29500-1] section 20.1.2.3.2).

hue: A **CT_PositiveFixedAngle** ([ISO/IEC-29500-1] section A.4.1) element that specifies the input color with the specified hue, but with its saturation and luminance unchanged. See ([ISO/IEC-29500-1] section 20.1.2.3.14).

hueOff: A **CT_Angle** ([ISO/IEC-29500-1] section A.4.1) element that specifies the input color with its hue shifted, but with its saturation and luminance unchanged. See ([ISO/IEC-29500-1] section 20.1.2.3.16).

hueMod: A **CT_PositivePercentage** ([ISO/IEC-29500-1] section A.4.1) element that specifies the input color with its hue modulated by the given percentage. See ([ISO/IEC-29500-1] section 20.1.2.3.15).

sat: A **CT_Percentage** ([ISO/IEC-29500-1] section A.4.1) element that specifies the input color with the specified saturation, but with its hue and luminance unchanged. See ([ISO/IEC-29500-1] section 20.1.2.3.26).

satOff: A **CT_Percentage** ([ISO/IEC-29500-1] section A.4.1) element that specifies the input color with its saturation shifted, but with its hue and luminance unchanged. See ([ISO/IEC-29500-1] section 20.1.2.3.28).

satMod: A **CT_Percentage** ([ISO/IEC-29500-1] section A.4.1) element that specifies the input color with its saturation modulated by the given percentage. See ([ISO/IEC-29500-1] section 20.1.2.3.27).

lum: A **CT_Percentage** ([ISO/IEC-29500-1] section A.4.1) element that specifies the input color with the specified luminance, but with its hue and saturation unchanged. See ([ISO/IEC-29500-1] section 20.1.2.3.19).

lumOff: A **CT_Percentage** ([ISO/IEC-29500-1] section A.4.1) element that specifies the input color with its luminance shifted, but with its hue and saturation unchanged. See ([ISO/IEC-29500-1] section 20.1.2.3.21).

lumMod: A **CT_Percentage** ([ISO/IEC-29500-1] section A.4.1) element that specifies the input color with its luminance modulated by the given percentage. See ([ISO/IEC-29500-1] section 20.1.2.3.20).

red: A **CT_Percentage** ([ISO/IEC-29500-1] section A.4.1) element that specifies the input color with the specified red component, but with its green and blue components unchanged. See ([ISO/IEC-29500-1] section 20.1.2.3.23).

redOff: A **CT_Percentage** ([ISO/IEC-29500-1] section A.4.1) element that specifies the input color with its red component shifted, but with its green and blue components unchanged. See ([ISO/IEC-29500-1] section 20.1.2.3.25).

redMod: A **CT_Percentage** ([ISO/IEC-29500-1] section A.4.1) element that specifies the input color with its red component modulated by the given percentage. See ([ISO/IEC-29500-1] section 20.1.2.3.24).

green: A **CT_Percentage** ([ISO/IEC-29500-1] section A.4.1) element that specifies the input color with the specified green component, but with its red and blue components unchanged. See ([ISO/IEC-29500-1] section 20.1.2.3.10).

greenOff: A **CT_Percentage** ([ISO/IEC-29500-1] section A.4.1) element that specifies the input color with its green component shifted, but with its red and blue components unchanged. See ([ISO/IEC-29500-1] section 20.1.2.3.12).

greenMod: A **CT_Percentage** ([ISO/IEC-29500-1] section A.4.1) element that specifies the input color with its green component modulated by the given percentage. See ([ISO/IEC-29500-1] section 20.1.2.3.11).

blue: A **CT_Percentage** ([ISO/IEC-29500-1] section A.4.1) element that specifies the input color with the specified blue component, but with its red and green components unchanged. See ([ISO/IEC-29500-1] section 20.1.2.3.4).

blueOff: A **CT_Percentage** ([ISO/IEC-29500-1] section A.4.1) element that specifies the input color with its blue component shifted, but with its red and green components unchanged. See ([ISO/IEC-29500-1] section 20.1.2.3.6).

blueMod: A **CT_Percentage** ([ISO/IEC-29500-1] section A.4.1) element that specifies the input color with its blue component modulated by the given percentage. See ([ISO/IEC-29500-1] section 20.1.2.3.5).

gamma: A **CT_GammaTransform** ([ISO/IEC-29500-1] section A.4.1) element that specifies the sRGB gamma shift of its input color. See ([ISO/IEC-29500-1] section 20.1.2.3.8).

invGamma: A **CT_InverseGammaTransform** ([ISO/IEC-29500-1] section A.4.1) element that specifies the inverse sRGB gamma shift of its input color. See ([ISO/IEC-29500-1] section 20.1.2.3.18).

Attributes:

val: An ST_StyleColorVal attribute that specifies the value which is used to determine the index of the color in a **CT_ColorStyle**.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this complex type.

```
<xsd:complexType name="CT_StyleColor">
  <xsd:sequence>
    <xsd:group ref="a:EG_ColorTransform" minOccurs="0" maxOccurs="unbounded"/>
  </xsd:sequence>
  <xsd:attribute name="val" type="ST_StyleColorVal"/>
</xsd:complexType>
```

See section 5.15 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.5.93 CT_StyleReference

Target namespace: http://schemas.microsoft.com/office/drawing/2012/chartStyle

Referenced by: CT_StyleEntry

A reference to the document's theme style matrix.<154> This element is identical to **CT_StyleMatrixReference** ([ISO/IEC-29500-1] section A.4.1) but also allows for a **CT_StyleColor** (section 2.5.92) element and a modifier list**.**

Child Elements:

scrgbClr: A **CT_ScRgbColor** ([ISO/IEC-29500-1] section A.4.1) element that specifies a color using the red-green-blue (RGB) color model. See ([ISO/IEC-29500-1] section 20.1.2.3.30).

srgbClr: A **CT_SRgbColor** ([ISO/IEC-29500-1] section A.4.1) element that specifies a color using the RGB color model. See ([ISO/IEC-29500-1] section 20.1.2.3.32).

hslClr: A **CT_HslColor** ([ISO/IEC-29500-1] section A.4.1) element that specifies a color using the HSL color model. See ([ISO/IEC-29500-1] section 20.1.2.3.13).

sysClr: A **CT_SystemColor** ([ISO/IEC-29500-1] section A.4.1) element that specifies a color bound to predefined operating system elements. See ([ISO/IEC-29500-1] section 20.1.2.3.33).

schemeClr: A **CT_SchemeColor** ([ISO/IEC-29500-1] section A.4.1) element that specifies a color bound to a user's theme. See ([ISO/IEC-29500-1] section 20.1.2.3.29).

prstClr: A **CT_PresetColor** ([ISO/IEC-29500-1] section A.4.1) element that specifies a color which is bound to one of a predefined collection of colors. See ([ISO/IEC-29500-1] section 20.1.2.3.22).

styleClr: A CT_StyleColor element that specifies a color calculated from a **CT_ColorStyle**.

Attributes:

idx: An **ST_StyleMatrixColumnIndex** ([ISO/IEC-29500-1] section 20.1.10.57) attribute that specifies the style matrix index of the style referred to.

mods: An ST_StyleReferenceModifierList attribute that specifies a list of modifiers for this reference.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this complex type.

```
<xsd:complexType name="CT_StyleReference">
  <xsd:sequence>
    <xsd:group ref="a:EG_ColorChoice" minOccurs="0" maxOccurs="1"/>
    <xsd:element name="styleClr" type="CT_StyleColor" minOccurs="0" maxOccurs="1"/>
  </xsd:sequence>
  <xsd:attribute name="idx" type="a:ST_StyleMatrixColumnIndex" use="required"/>
  <xsd:attribute name="mods" type="ST_StyleReferenceModifierList" use="optional"/>
</xsd:complexType>
```

See section 5.15 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.5.94 CT_FontReference

Target namespace: http://schemas.microsoft.com/office/drawing/2012/chartStyle

Referenced by: CT_StyleEntry

A reference to the document's font scheme.<155> This element is identical to **CT_FontReference** ([ISO/IEC-29500-1] section A.4.1) but also allows for a **CT_StyleColor** (section 2.5.92) element and a modifier list**.**

Child Elements:

scrgbClr: A **CT_ScRgbColor** ([ISO/IEC-29500-1] section A.4.1) element that specifies a color using the red-green-blue (RGB) color model. See ([ISO/IEC-29500-1] section 20.1.2.3.30).

srgbClr: A **CT_SRgbColor** ([ISO/IEC-29500-1] section A.4.1) element that specifies a color using the RGB color model. See ([ISO/IEC-29500-1] section 20.1.2.3.32).

hslClr: A **CT_HslColor** ([ISO/IEC-29500-1] section A.4.1) element that specifies a color using the HSL color model. See ([ISO/IEC-29500-1] section 20.1.2.3.13).

sysClr: A **CT_SystemColor** ([ISO/IEC-29500-1] section A.4.1) element that specifies a color bound to predefined operating system elements. See ([ISO/IEC-29500-1] section 20.1.2.3.33).

schemeClr: A **CT_SchemeColor** ([ISO/IEC-29500-1] section A.4.1) element that specifies a color bound to a user's theme. See ([ISO/IEC-29500-1] section 20.1.2.3.29).

prstClr: A **CT_PresetColor** ([ISO/IEC-29500-1] section A.4.1) element that specifies a color which is bound to one of a predefined collection of colors. See ([ISO/IEC-29500-1] section 20.1.2.3.22).

styleClr: A CT_StyleColor element that specifies a color calculated from a CT_ColorStyle.

Attributes:

idx: An **ST_FontCollectionIndex** ([ISO/IEC-29500-1] section 20.1.10.25) attribute that specifies a font associated with the style.

mods: An ST_StyleReferenceModifierList attribute that specifies a list of modifiers for this reference.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this complex type.

```
<xsd:complexType name="CT_FontReference">
  <xsd:sequence>
    <xsd:group ref="a:EG_ColorChoice" minOccurs="0" maxOccurs="1"/>
    <xsd:element name="styleClr" type="CT_StyleColor" minOccurs="0" maxOccurs="1"/>
  </xsd:sequence>
  <xsd:attribute name="idx" type="a:ST_FontCollectionIndex" use="required"/>
  <xsd:attribute name="mods" type="ST_StyleReferenceModifierList" use="optional"/>
</xsd:complexType>
```

See section 5.15 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.5.95 CT_MarkerLayout

Target namespace: http://schemas.microsoft.com/office/drawing/2012/chartStyle

Referenced by: CT_ChartStyle

The complex type specifies additional properties for data points that have markers.<156>

Attributes:

symbol: An ST_MarkerStyle attribute that specifies a style for markers on a chart.

size: An ST_MarkerSize attribute that specifies the size for markers on a chart.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this complex type.

```
<xsd:complexType name="CT_MarkerLayout">
  <xsd:attribute name="symbol" type="ST_MarkerStyle" use="optional"/>
  <xsd:attribute name="size" type="ST_MarkerSize" use="optional"/>
</xsd:complexType>
```

See section 5.15 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.5.96 CT_StyleEntry

Target namespace: http://schemas.microsoft.com/office/drawing/2012/chartStyle

Referenced by: CT_ChartStyle

This complex type specifies the default formatting for a single type of element on a chart.<157> This element allows for properties to be explicitly specified or hold references to the document's theme.

Child Elements:

lnRef: A CT_StyleReference element that specifies a reference to a line style within the style matrix.

lineWidthScale: A **double** ([XMLSCHEMA1] section 2.1) element that specifies a multiplier to apply to the line width.

fillRef: A CT_StyleReference element that specifies a reference to a fill style within the style matrix.

effectRef: A CT_StyleReference element that specifies a reference to an effect style within the style matrix.

fontRef: A CT_FontReference element that specifies a reference to a themed font.

spPr: A **CT_ShapeProperties** ([ISO/IEC-29500-1] section A.4.1) element that specifies visual shape properties of the part of the chart associated with this **CT_StyleEntry**. These properties override properties that are specified by **fillRef**, **lnRef** and **effectRef**.

If a **CT_SchemeColor** ([ISO/IEC-29500-1] section A.4.1) element within this element's child **CT_FillProperties** ([ISO/IEC-29500-1] section A.4.1) element has a value of **phClr**, then the color is resolved by replacing it with the color specified by **fillRef**.

If a **CT_SchemeColor** ([ISO/IEC-29500-1] section A.4.1) element within this element's child **CT_LineProperties** ([ISO/IEC-29500-1] section A.4.1) element has a value of **phClr**, then the color is resolved by replacing it with the color specified by **lnRef**.

If a **CT_SchemeColor** ([ISO/IEC-29500-1] section A.4.1) element within this element's child **CT_EffectProperties** ([ISO/IEC-29500-1] section A.4.1) or **CT_Shape3D** ([ISO/IEC-29500-1] section A.4.1) element has a value of **phClr**, then the color is resolved by replacing it with the color specified by **effectRef**.

defRPr: A **CT_TextCharacterProperties** ([ISO/IEC-29500-1] section A.4.1) element that specifies the default text character properties for a text body on a chart which is associated with this **CT_StyleEntry**. If a **CT_SchemeColo**r ([ISO/IEC-29500-1] section A.4.1) element within this element has a value of **phClr**, then the color is resolved by replacing it with the color specified by **fontRef**.

bodyPr: A **CT_TextBodyProperties** ([ISO/IEC-29500-1] section A.4.1) element that specifies the body properties for a text body on a chart that is associated with this **CT_StyleEntry**.

extLst: A **CT_OfficeArtExtensionList** ([ISO/IEC-29500-1] section A.4.1) element that specifies the extension list in which all future extensions of element type **ext** is defined. The extension list, along with corresponding future extensions, is used to extend the storage capabilities of the DrawingML framework. This enables various types of data to be stored natively in the framework.

Attributes:

mods: An ST_StyleEntryModifierList attribute that specifies modifiers for this style entry.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this complex type.

```
<xsd:complexType name="CT_StyleEntry">
  <xsd:sequence>
    <xsd:element name="lnRef" type="CT_StyleReference" minOccurs="1" maxOccurs="1"/>
    <xsd:element name="lineWidthScale" type="xsd:double" minOccurs="0" maxOccurs="1"
default="1.0"/>
    <xsd:element name="fillRef" type="CT_StyleReference" minOccurs="1" maxOccurs="1"/>
    <xsd:element name="effectRef" type="CT_StyleReference" minOccurs="1" maxOccurs="1"/>
    <xsd:element name="fontRef" type="CT_FontReference" minOccurs="1" maxOccurs="1"/>
    <xsd:element name="spPr" type="a:CT_ShapeProperties" minOccurs="0" maxOccurs="1"/>
    <xsd:element name="defRPr" type="a:CT_TextCharacterProperties" minOccurs="0"
maxOccurs="1"/>
    <xsd:element name="bodyPr" type="a:CT_TextBodyProperties" minOccurs="0" maxOccurs="1"/>
    <xsd:element name="extLst" type="a:CT_OfficeArtExtensionList" minOccurs="0"
maxOccurs="1"/>
  </xsd:sequence>
  <xsd:attribute name="mods" type="ST_StyleEntryModifierList" use="optional"/>
</xsd:complexType>
```

See section 5.15 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.5.97 CT_SeriesDataLabelsRange

Target namespace: http://schemas.microsoft.com/office/drawing/2012/chart

Referenced by: datalabelsRange

The **CT_SeriesDataLabelsRange** is a complex type that specifies the formula from which the values of the **Datalabels** (section 2.2.1.3) on a chart series ([ISO/IEC-29500-1] section 21.2) are obtained.<158>

Child Elements:

f: It is a **string** ([XMLSCHEMA2] section 3.2.1) element that specifies the reference from which the values of the **Datalabels** on a chart series ([ISO/IEC-29500-1] section 21.2) are obtained. This reference MUST follow the ABNF grammar rules defined in the Formulas section ([MS-XLSX] section 2.2.2) with the following restrictions:

- MUST follow the single-sheet-reference rule OR the external-name rule.
- MUST NOT use the A1-relative-column and A1-relative-row rules. MUST use ONLY A1-absolute-column and A1-absolute-row
- MUST NOT use the bang-name rule.
- If the string contains a "#REF!", it MUST be the ONLY value in the string.

dlblRangeCache: It is a **CT_StrData** ([ISO/IEC-29500-1] section A.5.1) element that contains the values to be inserted in each of the **Datalabels** in the parent chart series ([ISO/IEC-29500-1] section 21.2). This is a cache of values obtained from the reference formula specified by the

element **f** in this complex type. Each value corresponds to one **Datalabel** in the series. The values are assigned to **Datalabels** in the order of their index.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this complex type.

```
<xsd:complexType name="CT_SeriesDataLabelsRange">
  <xsd:sequence>
    <xsd:element name="f" type="xsd:string" minOccurs="1" maxOccurs="1"/>
    <xsd:element name="dlblRangeCache" type="c:CT_StrData" minOccurs="0" maxOccurs="1"/>
  </xsd:sequence>
</xsd:complexType>
```

See section 5.13 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.5.98 CT_DataLabelFieldTableEntry

Target namespace: http://schemas.microsoft.com/office/drawing/2012/chart

Referenced by: CT_DataLabelFieldTable

The **CT_DataLabelFieldTableEntry** is a complex type that specifies the formula reference used to obtain the text value of a cell reference field in the parent **dLbl** element ([ISO/IEC-29500-1] section 21.2.2.47).<159> A **Datalabel** (section 2.2.1.3) can contain more than one field pointing to formula references. This complex type associates one field in the **Datalabel** with the formula reference to which it refers.

Child Elements:

txfldGUID: A **string** ([XMLSCHEMA2] section 3.2.1) element that specifies the GUID (identifier) of the cell-reference field in the **Datalabel** text. This element is used to identify which field in the **Datalabel** text this entry corresponds to.

f: A **string** element ([XMLSCHEMA2] section 3.2.1) that specifies the formula reference of the text field in the **Datalabel** text whose GUID is identified by the **txfldGUID** element.

dlblFieldTableCache: A CT_StrData element ([ISO/IEC-29500-1] section A.5.1) that contains the value to be inserted into the ancestor **Datalabel**. This is a cached value obtained from the reference formula specified by the **f** element in the parent **Datalabel** field table entry.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this complex type.

```
<xsd:complexType name="CT_DataLabelFieldTableEntry">
  <xsd:sequence>
    <xsd:element name="txfldGUID" type="xsd:string" minOccurs="1" maxOccurs="1"/>
    <xsd:element name="f" type="xsd:string" minOccurs="1" maxOccurs="1"/>
    <xsd:element name="dlblFieldTableCache" type="c:CT_StrData" minOccurs="0" maxOccurs="1"/>
  </xsd:sequence>
</xsd:complexType>
```

See section 5.13 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.5.99 CT_DataLabelFieldTable

Target namespace: http://schemas.microsoft.com/office/drawing/2012/chart

Referenced by: dlblFieldTable

The **CT_DataLabelFieldTable** is a complex type that contains one or more **CT_DataLabelFieldTableEntry** entries (section 2.5.98) which specify the formula references of each of the cell-reference text fields in the parent **Datalabel** text (section 2.2.1.3).<160> Each **Datalabel** can have one or more of these cell-reference fields. This complex type contains one entry for each cell-reference field, identifying the field it references using the GUID of the field. This is pointed to by the **txfldGUID** element of **CT_DataLabelFieldTableEntry**.

Child Elements:

dlblFTEntry: A **CT_DataLabelFieldTableEntry** element that specifies the formula reference for a single cell-reference field in the **Datalabel** text. This formula reference points to the text value of the field.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this complex type.

```
<xsd:complexType name="CT_DataLabelFieldTable">
  <xsd:sequence>
    <xsd:element name="dlblFTEntry" type="CT_DataLabelFieldTableEntry" minOccurs="0"
maxOccurs="unbounded"/>
  </xsd:sequence>
</xsd:complexType>
```

See section 5.13 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.5.100 CT_CategoryFilterException

Target namespace: http://schemas.microsoft.com/office/drawing/2012/chart

Referenced by: CT_CategoryFilterExceptions

CT_CategoryFilterException is a complex type that contains information about special formatting properties associated with a single data point in a chart series ([ISO/IEC-29500-1] section 21.2).<161> This complex type is used to save special data point properties of points that are filtered out of the chart series ([ISO/IEC-29500-1] section 21.2). An entry of this type MUST contain exactly one **sqref** element followed by one or more child elements.

Child Elements:

sqref: A **string** element ([XMLSCHEMA2] section 3.2.1) that specifies the cell reference of the data corresponding to this data point in the chart series ([ISO/IEC-29500-1] section 21.2). This element is required. This reference MUST follow the ABNF grammar rules defined in the Formulas section ([MS-XLSX] section 2.2.2) with the following restrictions:

- MUST follow the single-sheet-reference rule.
- MUST NOT use the A1-area, A1-relative-column and A1-relative-row rules. MUST use ONLY A1-cell, A1-absolute-column and A1-absolute-row (since a data point in a series can correspond to only one cell, it should not use area references).

An application can adjust this cell reference when the worksheet layout changes, even when the containing **ext** element ([ISO/IEC-29500-1] section 18.2.7) is not recognized by the application.

spPr: A CT_ShapeProperties element ([ISO/IEC-29500-1] section A.4.1) that specifies the formatting (like fill or line properties) to be shown on this data point.

explosion: A CT_UnsignedInt element ([ISO/IEC-29500-1] section A.5.1) that specifies the amount this data point shall be moved from the center of the pie in a pie chart series.

invertIfNegative: A **CT_Boolean** element (section 2.5.80) that specifies if the invert color should be shown when this data point has a negative value.

bubble3D: A **CT_Boolean** element that specifies if this data point has a 3D bubble.

marker: A CT_Marker element ([ISO/IEC-29500-1] section A.5.1) that specifies the properties of the line marker associated with this data point.

dLbl: A CT_DLbl element ([ISO/IEC-29500-1] section A.5.1) that specifies the properties of the **Datalabel** (section 2.2.1.3) associated with this data point.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this complex type.

```
<xsd:complexType name="CT_CategoryFilterException">
  <xsd:sequence>
    <xsd:element name="sqref" type="xsd:string" minOccurs="1" maxOccurs="1"/>
    <xsd:element name="spPr" type="a:CT_ShapeProperties" minOccurs="0" maxOccurs="1"/>
    <xsd:element name="explosion" type="c:CT_UnsignedInt" minOccurs="0" maxOccurs="1"/>
    <xsd:element name="invertIfNegative" type="c:CT_Boolean" minOccurs="0" maxOccurs="1"/>
    <xsd:element name="bubble3D" type="c:CT_Boolean" minOccurs="0" maxOccurs="1"/>
    <xsd:element name="marker" type="c:CT_Marker" minOccurs="0" maxOccurs="1"/>
    <xsd:element name="dLbl" type="c:CT_DLbl" minOccurs="0" maxOccurs="1"/>
  </xsd:sequence>
</xsd:complexType>
```

See section 5.13 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.5.101 CT_CategoryFilterExceptions

Target namespace: http://schemas.microsoft.com/office/drawing/2012/chart

Referenced by: categoryFilterExceptions

CT_CategoryFilteredExceptions is a complex type that contains one or more entries of type CT_CategoryFilterException.<162> Each entry specifies special formatting properties associated with a single data point in a chart series ([ISO/IEC-29500-1] section 21.2), that has been filtered out.

Child Elements:

categoryFilterException: It is a CT_CategoryFilterException element that specifies special formatting properties associated with a single data point in a chart series ([ISO/IEC-29500-1] section 21.2), which has been filtered out.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this complex type.

```
<xsd:complexType name="CT_CategoryFilterExceptions">
  <xsd:sequence>
    <xsd:element name="categoryFilterException" type="CT_CategoryFilterException"
minOccurs="1" maxOccurs="unbounded"/>
  </xsd:sequence>
</xsd:complexType>
```

See section 5.13 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.5.102 CT_ChartStyle

Target namespace: http://schemas.microsoft.com/office/drawing/2012/chartStyle

Referenced by: chartStyle

A complex type that specifies visual and text properties for all elements present on a chart.<163>

Child Elements:

axisTitle: A CT_StyleEntry element that specifies default formatting for an axis title.

categoryAxis: A CT_StyleEntry element that specifies default formatting for a category axis.

chartArea: A CT_StyleEntry element that specifies default formatting for a chart area.

dataLabel: A CT_StyleEntry element that specifies default formatting for a data label.

dataLabelCallout: A CT_StyleEntry element that specifies default formatting for a data label callout.

dataPoint: A CT_StyleEntry element that specifies default formatting for a data point on a 2-D chart of type column, bar, filled radar, stock, bubble, pie, doughnut, and area as well as 3-D bubble.

dataPoint3D: A CT_StyleEntry element that specifies default formatting for a data point on a 3-D chart of type column, bar, line, pie, area and surface.

dataPointLine: A CT_StyleEntry element that specifies default formatting for a data point on a 2-D chart of type line, scatter and radar.

dataPointMarker: A CT_StyleEntry element that specifies default formatting for markers.

dataPointMarkerLayout: A CT_MarkerLayout element that specifies additional marker properties not present in **dataPointMarker**.

dataPointWireframe: A CT_StyleEntry element that specifies default formatting for a data point on a surface wireframe chart.

dataTable: A CT_StyleEntry element that specifies default formatting for a data table.

downBar: A CT_StyleEntry element that specifies default formatting for a down bar.

dropLine: A CT_StyleEntry element that specifies default formatting for a drop line.

errorBar: A CT_StyleEntry element that specifies default formatting for an error bar.

floor: A CT_StyleEntry element that specifies default formatting for a floor.

gridlineMajor: A CT_StyleEntry element that specifies default formatting for a major gridline.

gridlineMinor: A CT_StyleEntry element that specifies default formatting for a minor gridline.

hiLoLine: A CT_StyleEntry element that specifies default formatting for a high low line.

leaderLine: A CT_StyleEntry element that specifies default formatting for a leader line.

legend: A CT_StyleEntry element that specifies default formatting for a legend.

plotArea: A CT_StyleEntry element that specifies default formatting for a plot area on a 2-D chart.

plotArea3D: A CT_StyleEntry element that specifies default formatting for a 3-D chart.

seriesAxis: A CT_StyleEntry element that specifies default formatting for a series axis.

seriesLine: A CT_StyleEntry element that specifies default formatting for a series line.

title: A CT_StyleEntry element that specifies default formatting for a chart title.

trendline: A CT_StyleEntry element that specifies default formatting for a trend line.

trendlineLabel: A CT_StyleEntry element that specifies default formatting for a trend line label.

upBar: A CT_StyleEntry element that specifies default formatting for an up bar.

valueAxis: A CT_StyleEntry element that specifies default formatting for a value axis.

wall: A CT_StyleEntry element that specifies default formatting for a wall.

extLst: A **CT_OfficeArtExtensionList** ([ISO/IEC-29500-1] section A.4.1) element that specifies the extension list in which all future extensions of element type **ext** are defined. The extension list, along with corresponding future extensions, is used to extend the storage capabilities of the DrawingML framework. This enables new types of data to be stored natively within the framework.

Attributes:

id: An **unsignedInt** ([XMLSCHEMA2] section 3.3.22) attribute that specifies the identifier for this **CT_ChartStyle**.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this complex type.

```
<xsd:complexType name="CT_ChartStyle">
  <xsd:sequence>
    <xsd:element name="axisTitle" type="CT_StyleEntry" minOccurs="1" maxOccurs="1"/>
    <xsd:element name="categoryAxis" type="CT_StyleEntry" minOccurs="1" maxOccurs="1"/>
    <xsd:element name="chartArea" type="CT_StyleEntry" minOccurs="1" maxOccurs="1"/>
    <xsd:element name="dataLabel" type="CT_StyleEntry" minOccurs="1" maxOccurs="1"/>
    <xsd:element name="dataLabelCallout" type="CT_StyleEntry" minOccurs="0" maxOccurs="1"/>
    <xsd:element name="dataPoint" type="CT_StyleEntry" minOccurs="1" maxOccurs="1"/>
    <xsd:element name="dataPoint3D" type="CT_StyleEntry" minOccurs="1" maxOccurs="1"/>
    <xsd:element name="dataPointLine" type="CT_StyleEntry" minOccurs="1" maxOccurs="1"/>
    <xsd:element name="dataPointMarker" type="CT_StyleEntry" minOccurs="1" maxOccurs="1"/>
    <xsd:element name="dataPointMarkerLayout" type="CT_MarkerLayout" minOccurs="0"
maxOccurs="1"/>
    <xsd:element name="dataPointWireframe" type="CT_StyleEntry" minOccurs="1" maxOccurs="1"/>
    <xsd:element name="dataTable" type="CT_StyleEntry" minOccurs="1" maxOccurs="1"/>
    <xsd:element name="downBar" type="CT_StyleEntry" minOccurs="1" maxOccurs="1"/>
    <xsd:element name="dropLine" type="CT_StyleEntry" minOccurs="1" maxOccurs="1"/>
    <xsd:element name="errorBar" type="CT_StyleEntry" minOccurs="1" maxOccurs="1"/>
```

```
    <xsd:element name="floor" type="CT_StyleEntry" minOccurs="1" maxOccurs="1"/>
    <xsd:element name="gridlineMajor" type="CT_StyleEntry" minOccurs="1" maxOccurs="1"/>
    <xsd:element name="gridlineMinor" type="CT_StyleEntry" minOccurs="1" maxOccurs="1"/>
    <xsd:element name="hiLoLine" type="CT_StyleEntry" minOccurs="1" maxOccurs="1"/>
    <xsd:element name="leaderLine" type="CT_StyleEntry" minOccurs="1" maxOccurs="1"/>
    <xsd:element name="legend" type="CT_StyleEntry" minOccurs="1" maxOccurs="1"/>
    <xsd:element name="plotArea" type="CT_StyleEntry" minOccurs="1" maxOccurs="1"/>
    <xsd:element name="plotArea3D" type="CT_StyleEntry" minOccurs="1" maxOccurs="1"/>
    <xsd:element name="seriesAxis" type="CT_StyleEntry" minOccurs="1" maxOccurs="1"/>
    <xsd:element name="seriesLine" type="CT_StyleEntry" minOccurs="1" maxOccurs="1"/>
    <xsd:element name="title" type="CT_StyleEntry" minOccurs="1" maxOccurs="1"/>
    <xsd:element name="trendline" type="CT_StyleEntry" minOccurs="1" maxOccurs="1"/>
    <xsd:element name="trendlineLabel" type="CT_StyleEntry" minOccurs="1" maxOccurs="1"/>
    <xsd:element name="upBar" type="CT_StyleEntry" minOccurs="1" maxOccurs="1"/>
    <xsd:element name="valueAxis" type="CT_StyleEntry" minOccurs="1" maxOccurs="1"/>
    <xsd:element name="wall" type="CT_StyleEntry" minOccurs="1" maxOccurs="1"/>
    <xsd:element name="extLst" type="a:CT_OfficeArtExtensionList" minOccurs="0"
maxOccurs="1"/>
  </xsd:sequence>
  <xsd:attribute name="id" type="xsd:unsignedInt" use="optional"/>
</xsd:complexType>
```

See section 5.15 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.5.103 CT_ThemeFamily

Target namespace: http://schemas.microsoft.com/office/thememl/2012/main

Referenced by: themeFamily

CT_ThemeFamily contains information about the currently applied theme.

Child Elements:

extLst: A **CT_OfficeArtExtensionList** [ISO/IEC-29500-1] element that specifies the extension list in which all future extensions of element type **ext** is defined.

Attributes:

name: A string attribute that specifies the name of applied theme.

id: An **ST_Guid** ([ISO/IEC-29500-1] section 22.9.2.4) attribute that specifies the GUID of the applied theme.

vid: An **ST_Guid** attribute that specifies the GUID of the applied variant.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this complex type.

```
<xsd:complexType name="CT_ThemeFamily">
  <xsd:sequence>
    <xsd:element name="extLst" type="a:CT_OfficeArtExtensionList" minOccurs="0"
maxOccurs="1"/>
  </xsd:sequence>
  <xsd:attribute name="name" type="xsd:string" use="required"/>
  <xsd:attribute name="id" type="a:ST_Guid" use="required"/>
  <xsd:attribute name="vid" type="a:ST_Guid" use="required"/>
```

```
</xsd:complexType>
```

See section 5.17 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.5.104 CT_FormulaRef

Target namespace: http://schemas.microsoft.com/office/drawing/2012/chart

Referenced by: formulaRef

The **CT_FormulaRef** complex type specifies the data source reference for a chart ([ISO/IEC-29500-1] section 21.2) with filtered series data.<164>

This reference is in the form of a book, sheet, and cell reference. This reference does not include the equals sign.

Child Elements:

sqref: A **string** element ([XMLSCHEMA2] section 3.2.1) that specifies the data source reference for the chart data. This reference MUST follow the ABNF grammar rules defined in Formulas ([MS-XLSX] section 2.2.2) with the following restrictions:

- MUST follow the ref-nospace-expression rule.
- MUST NOT use the bang-reference, bang-name, sheet-range-reference, or local-cell-reference production rules
- MUST NOT use the A1-relative-column and A1-relative-row rules.
- MUST ONLY use A1-absolute-column and A1-absolute-row.

Contains the data source reference for the series caption or values, or category labels of a filtered out series in the chart.

An application can adjust these cell references when the worksheet layout changes, even when the containing **ext** element ([ISO/IEC-29500-1] section 18.2.7) is not recognized by the application.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this complex type.

```
<xsd:complexType name="CT_FormulaRef">
  <xsd:sequence>
    <xsd:element name="sqref" type="xsd:string" minOccurs="1" maxOccurs="1"/>
  </xsd:sequence>
</xsd:complexType>
```

See section 5.13 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.5.105 CT_WebVideoPr

Target namespace: http://schemas.microsoft.com/office/word/2012/wordprocessingDrawing

Referenced by: webVideoPr

A complex type that specifies the properties used to render HTML into the containing binary large image or picture (BLIP).

Attributes:

embeddedHtml: An xsd:string attribute (**[XMLSCHEMA2]** section 3.2.1) that specifies the embedded HTML to be rendered within the BLIP. This attribute SHOULD NOT be omitted if the video playback experience is to be fully preserved.

h: An xsd:unsignedInt [XMLSCHEMA1] section 3.3.22) attribute that specifies the height of the rendered html page in pixels. This attribute SHOULD NOT be omitted if the video playback experience is to be fully preserved.

w: An xsd:unsignedInt ([XMLSCHEMA1] section 3.3.22) attribute that specifies the width of the rendered html page in pixels. This attribute SHOULD NOT be omitted if the video playback experience is to be fully preserved.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this complex type.

```
<xsd:complexType name="CT_WebVideoPr">
  <xsd:attribute name="embeddedHtml" type="xsd:string" use="optional" default=""/>
  <xsd:attribute name="h" type="xsd:unsignedInt" use="optional" default="0"/>
  <xsd:attribute name="w" type="xsd:unsignedInt" use="optional" default="0"/>
</xsd:complexType>
```

See section 5.18 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.6 Simple Types

2.6.1 ST_ArtisticEffectParam100

Target namespace: http://schemas.microsoft.com/office/drawing/2010/main

Referenced by: CT_PictureEffectBlur, CT_PictureEffectCement, CT_PictureEffectCrisscrossEtching, CT_PictureEffectFilmGrain, CT_PictureEffectGlass, CT_PictureEffectLineDrawing, CT_PictureEffectMarker, CT_PictureEffectMosaicBubbles, CT_PictureEffectPastelsSmooth, CT_PictureEffectPencilGrayscale, CT_PictureEffectPencilSketch, CT_PictureEffectTexturizer

A simple type that specifies a parameter value for an artistic picture effect in the range from zero through 100.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this simple type.

```
<xsd:simpleType name="ST_ArtisticEffectParam100">
  <xsd:restriction base="xsd:int">
    <xsd:minInclusive value="0"/>
    <xsd:maxInclusive value="100"/>
  </xsd:restriction>
</xsd:simpleType>
```

See section 5.1 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.6.2 ST_ArtisticEffectParam10

Target namespace: http://schemas.microsoft.com/office/drawing/2010/main

Referenced by: CT_PictureEffectGlowDiffused, CT_PictureEffectGlowEdges, CT_PictureEffectLightScreen, CT_PictureEffectPaintBrush, CT_PictureEffectPaintStrokes, CT_PictureEffectPhotocopy, CT_PictureEffectPlasticWrap, CT_PictureEffectWatercolorSponge

A simple type that specifies a parameter value for an artistic picture effect in the range from zero through 10.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this simple type.

```
<xsd:simpleType name="ST_ArtisticEffectParam10">
  <xsd:restriction base="xsd:int">
    <xsd:minInclusive value="0"/>
    <xsd:maxInclusive value="10"/>
  </xsd:restriction>
</xsd:simpleType>
```

See section 5.1 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.6.3 ST_ArtisticEffectParam6

Target namespace: http://schemas.microsoft.com/office/drawing/2010/main

Referenced by: CT_PictureEffectCutout

A simple type that specifies a parameter value for an artistic picture effect in the range from zero through 6.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this simple type.

```
<xsd:simpleType name="ST_ArtisticEffectParam6">
  <xsd:restriction base="xsd:int">
    <xsd:minInclusive value="0"/>
    <xsd:maxInclusive value="6"/>
  </xsd:restriction>
</xsd:simpleType>
```

See section 5.1 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.6.4 ST_ArtisticEffectParam4

Target namespace: http://schemas.microsoft.com/office/drawing/2010/main

Referenced by: CT_PictureEffectChalkSketch

A simple type that specifies a parameter value for an artistic picture effect in the range from zero through 4.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this simple type.

```
<xsd:simpleType name="ST_ArtisticEffectParam4">
  <xsd:restriction base="xsd:int">
    <xsd:minInclusive value="0"/>
    <xsd:maxInclusive value="4"/>
  </xsd:restriction>
</xsd:simpleType>
```

See section 5.1 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.6.5 ST_ColorTemperature

Target namespace: http://schemas.microsoft.com/office/drawing/2010/main

Referenced by: CT_PictureEffectColorTemperature

A simple type that specifies a color temperature value in the range from 1500 through 11500.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this simple type.

```
<xsd:simpleType name="ST_ColorTemperature">
  <xsd:restriction base="xsd:int">
    <xsd:minInclusive value="1500"/>
    <xsd:maxInclusive value="11500"/>
  </xsd:restriction>
</xsd:simpleType>
```

See section 5.1 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.6.6 ST_SaturationAmount

Target namespace: http://schemas.microsoft.com/office/drawing/2010/main

Referenced by: CT_PictureEffectSaturation

A simple type that specifies the amount of saturation in the range from zero percent through 400 percent, in one-thousandths of a percent. For more details, see [ISO/IEC-29500-1] section 20.1.10.40.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this simple type.

```
<xsd:simpleType name="ST_SaturationAmount">
  <xsd:restriction base="a:ST_Percentage">
    <xsd:minInclusive value="0"/>
    <xsd:maxInclusive value="400000"/>
  </xsd:restriction>
</xsd:simpleType>
```

See section 5.1 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.6.7 ST_KnownCtxNodeType

Target namespace: http://schemas.microsoft.com/ink/2010/main

Referenced by: ST_CtxNodeType

This type specifies an enumeration of Ink content node types. Possible values are described in the following table.

Value	Meaning
root	A root-level content node. This can be used as the parent of all other context nodes in a collection of ink traces.
unclassifiedInk	The ink of this context node cannot be identified as a particular type.
writingRegion	A context node that is the parent of **paragraph** context nodes.
analysisHint	A context node that contains analysis hint information.
object	A context node that might contain non-ink data of an unknown type.
inkDrawing	A context node that contains ink strokes that make up an arbitrary drawing and does not contain writing.
image	A context node that contains non-ink image data.
paragraph	A context node that is the parent of **line** context nodes and the child of **writingRegion** context nodes.
line	A context node that is the parent of **inkWord** or **inkBullet** context nodes and the child of **paragraph** context nodes.
inkBullet	A context node that is the child of a **line** context node and contains ink traces that represent bullet symbols in a bulleted list.
inkWord	A context node that is the child of a **line** context node and contains ink traces that represent written words.
textWord	A context node that is the child of a **line** context node and contains textual words, rather than ink-based words.
customRecognizer	A context node that uses a custom recognizer.
mathRegion	A context node that is the parent of **mathEquation** context nodes.
mathEquation	A context node that contains ink traces that represent a mathematical equation. It has child context nodes of type **mathStruct**.
mathStruct	A context node that contains portions of a mathematical equations. Supported child context nodes are **mathSymbol**, **mathIndentifier**, **mathOperator**, and **mathNumber** elements.
mathSymbol	A context node that represents a mathematical symbol, such as a degree symbol (°).
mathIdentifier	A context node that represents a mathematical identifier such as a function name.
mathOperator	A context node that represents a mathematical operator such as a plus sign.
mathNumber	A context node that represents a number in a mathematical equation.
nonInkDrawing	A context node that represents an arbitrary drawing made up of non-ink geometry.
groupNode	A context node that represents an arbitrary group of other context nodes.

Value	Meaning
mixedDrawing	A context node that represents a mixture of ink and non-ink drawing traces.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this simple type.

```
<xsd:simpleType name="ST_KnownCtxNodeType">
  <xsd:restriction base="xsd:string">
    <xsd:enumeration value="root"/>
    <xsd:enumeration value="unclassifiedInk"/>
    <xsd:enumeration value="writingRegion"/>
    <xsd:enumeration value="analysisHint"/>
    <xsd:enumeration value="object"/>
    <xsd:enumeration value="inkDrawing"/>
    <xsd:enumeration value="image"/>
    <xsd:enumeration value="paragraph"/>
    <xsd:enumeration value="line"/>
    <xsd:enumeration value="inkBullet"/>
    <xsd:enumeration value="inkWord"/>
    <xsd:enumeration value="textWord"/>
    <xsd:enumeration value="customRecognizer"/>
    <xsd:enumeration value="mathRegion"/>
    <xsd:enumeration value="mathEquation"/>
    <xsd:enumeration value="mathStruct"/>
    <xsd:enumeration value="mathSymbol"/>
    <xsd:enumeration value="mathIdentifier"/>
    <xsd:enumeration value="mathOperator"/>
    <xsd:enumeration value="mathNumber"/>
    <xsd:enumeration value="nonInkDrawing"/>
    <xsd:enumeration value="groupNode"/>
    <xsd:enumeration value="mixedDrawing"/>
  </xsd:restriction>
</xsd:simpleType>
```

See section 5.7 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.6.8 ST_Guid

Target namespace: http://schemas.microsoft.com/ink/2010/main

Referenced by: CT_Property, ST_Ref, CT_CtxNode, ST_CtxNodeType

This type specifies the format of a 128-bit GUID. Values of this type MUST begin with an opening curly bracket character ({), followed by a string that conforms to the Internet standards track protocol as specified in [RFC4122], and end with a closing curly bracket (}).

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this simple type.

```
<xsd:simpleType name="ST_Guid">
  <xsd:restriction base="xsd:token">
    <xsd:pattern value="\{[0-9A-F]{8}-[0-9A-F]{4}-[0-9A-F]{4}-[0-9A-F]{4}-[0-9A-F]{12}\}"/>
  </xsd:restriction>
</xsd:simpleType>
```

See section 5.7 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.6.9 ST_Ref

Target namespace: http://schemas.microsoft.com/ink/2010/main

Referenced by: CT_CtxLink

This type defines a reference identifier used by context node links. MUST be either an **xsd:int** ([XMLSCHEMA1] section 3.3.17) or an **ST_Guid**.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this simple type.

```
<xsd:simpleType name="ST_Ref">
  <xsd:union memberTypes="msink:ST_Guid xsd:unsignedInt"/>
</xsd:simpleType>
```

See section 5.7 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.6.10 ST_CtxNodeType

Target namespace: http://schemas.microsoft.com/ink/2010/main

Referenced by: CT_CtxNode

This type defines a moniker of a context node type. MUST be either an **ST_KnownCtxNodeType** or an **ST_Guid**.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this simple type.

```
<xsd:simpleType name="ST_CtxNodeType">
  <xsd:union memberTypes="msink:ST_KnownCtxNodeType msink:ST_Guid"/>
</xsd:simpleType>
```

See section 5.7 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.6.11 ST_Dir

Target namespace: http://schemas.microsoft.com/ink/2010/main

Referenced by: CT_CtxLink

This type is an enumeration of context node link directions. Possible values are described in the following table.

Value	Meaning
to	The link is the source of a "to" directional link, such as the beginning of an arrow.
from	This link is the destination of a "from" directional link, such as the head of an arrow.
with	This is a link with no implied direction, such as the underlining of a word.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this simple type.

```
<xsd:simpleType name="ST_Dir">
  <xsd:restriction base="xsd:string">
    <xsd:enumeration value="to"/>
    <xsd:enumeration value="from"/>
    <xsd:enumeration value="with"/>
  </xsd:restriction>
</xsd:simpleType>
```

See section 5.7 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.6.12 ST_KnownSemanticType

Target namespace: http://schemas.microsoft.com/ink/2010/main

Referenced by: ST_SemanticType

This type specifies the semantic type of an Ink context node. Possible values are described in the following table.

Value	Meaning
none	The context node does not have a semantic type.
underline	The context node represents a straight line segment used for annotation to mark text that appears with a horizontal line under it.
strikethrough	The context node represents a straight line segment used for annotation to mark text that appears with a line through it.
highlight	The context node represents a highlight demarcating the underlying object to bring it to the attention of the reader.
scratchOut	The context node represents a wavy line segment used for erasing content.
verticalRange	The context node represents a vertical range consisting of one or more ink strokes that span multiple lines.
callout	The context node represents a callout consisting of one or more ink strokes connecting two objects to draw attention to a portion of a text or drawing.
enclosure	The context node represents one or more ink strokes that encircle a text, an image or an ink area for emphasis.
comment	The context node represents a comment.
container	The context node represents a container consisting of one or more ink strokes that make up a standard shape.
connector	The context node represents a connector consisting of one or more ink strokes used to connect two objects.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this simple type.

```
<xsd:simpleType name="ST_KnownSemanticType">
  <xsd:restriction base="xsd:string">
    <xsd:enumeration value="none"/>
    <xsd:enumeration value="underline"/>
    <xsd:enumeration value="strikethrough"/>
    <xsd:enumeration value="highlight"/>
    <xsd:enumeration value="scratchOut"/>
    <xsd:enumeration value="verticalRange"/>
    <xsd:enumeration value="callout"/>
    <xsd:enumeration value="enclosure"/>
    <xsd:enumeration value="comment"/>
    <xsd:enumeration value="container"/>
    <xsd:enumeration value="connector"/>
  </xsd:restriction>
</xsd:simpleType>
```

See section 5.7 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.6.13 ST_SemanticType

Target namespace: http://schemas.microsoft.com/ink/2010/main

Referenced by: CT_CtxNode

This type defines a moniker that identifies the semantic type of an Ink context node. MUST be either an **ST_KnownSemanticType** or an **xsd:unsignedInt** ([XMLSCHEMA1] section 3.3.22).

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this simple type.

```
<xsd:simpleType name="ST_SemanticType">
  <xsd:union memberTypes="ST_KnownSemanticType xsd:unsignedInt"/>
</xsd:simpleType>
```

See section 5.7 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.6.14 ST_Point

Target namespace: http://schemas.microsoft.com/ink/2010/main

Referenced by: ST_Points, CT_CtxNode

This type defines a single coordinate. The coordinate space of both the x and y values is 1/1000 of 1 centimeter. The format of this value MUST be one or more numeric characters optionally preceded by a minus sign, followed by a comma, then one or more numeric characters optionally preceded by a minus sign.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this simple type.

```
<xsd:simpleType name="ST_Point">
  <xsd:restriction base="xsd:string">
    <xsd:pattern value="-?[0-9]+,-?[0-9]+"/>
  </xsd:restriction>
```

```
</xsd:simpleType>
```

See section 5.7 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.6.15 ST_Points

Target namespace: http://schemas.microsoft.com/ink/2010/main

Referenced by: CT_CtxNode

This value defines a series of zero or more coordinates. Each coordinate MUST conform to the **ST_Point** format and be delimited by white space characters.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this simple type.

```
<xsd:simpleType name="ST_Points">
  <xsd:list itemType="msink:ST_Point"/>
</xsd:simpleType>
```

See section 5.7 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.6.16 ST_Style

Target namespace: http://schemas.microsoft.com/office/drawing/2007/8/2/chart

Referenced by: CT_Style

A simple type that specifies a chart style ([ISO/IEC-29500-1] section 21.2).

The style definitions for this simple type are identical to the corresponding **ST_Style** style definitions ([ISO/IEC-29500-1] section 21.2.3.46), with the following exceptions:

- The number for each style in this simple type is 100 plus the corresponding style number in **ST_Style** ([ISO/IEC-29500-1] section 21.2.3.46).
- The **ST_Style** simple type ([ISO/IEC-29500-1] section 21.2.3.46) states, "If the chart does not have a font size set, then the default font size is 10." This is changed in this simple type to the following: If the chart does not have a font size set, the default font size for the chart is 10 points, and the default font size for the chart title is 18 points.
- The **ST_Style** simple type ([ISO/IEC-29500-1] section 21.2.3.46), table 2, column Axis & Major Gridlines has a value of "tx1" for styles 1 to 32. This is changed in this simple type to specify that styles 101 to 132 have a value of "75% tint of tx1".
- The **ST_Style** simple type ([ISO/IEC-29500-1] section 21.2.3.46), table 2, column Axis & Major Gridlines has a value of "dk1" for styles 33 to 48. This is changed in this simple type to specify that styles 133 to 148 have a value of "75% tint of dk1".
- The **ST_Style** simple type ([ISO/IEC-29500-1] section 21.2.3.46), table 2, column Minor Gridlines has a value of "50% tint of tx1" for styles 33 to 40. This is changed in this simple type to specify that styles 133 to 140 have a value of "50% tint of dk1".

- The **ST_Style** simple type ([ISO/IEC-29500-1] section 21.2.3.46), table 2, column Minor Gridlines has a value of "90% tint of tx1" for styles 41 to 48. This is changed in this simple type to specify that styles 141 to 148 have a value of "90% tint of dk1".
- The **ST_Style** simple type ([ISO/IEC-29500-1] section 21.2.3.46), table 2, column Other Lines has a value of "25% shade of dk1" for styles 35 to 40. This is changed in this simple type to specify that styles 135 to 140 have a value of "dk1".
- The **ST_Style** simple type ([ISO/IEC-29500-1] section 21.2.3.46), table 3, column Floor, Walls & Plot Area (2-D) has a value of "accent1-6" for styles 35 to 40. This is changed in this simple type to specify that styles 135 to 140 have a value of "20% tint of accent1-6".
- The **ST_Style** simple type ([ISO/IEC-29500-1] section 21.2.3.46), tables 4 and 5 do not specify the color of the effect. This is changed in this simple type to specify in tables 4 and 5 that the effect color is "dk1" if the style has an effect applied.
- The **ST_Style** simple type ([ISO/IEC-29500-1] section 21.2.3.46), table 5, column Line Color or Pattern has a value of "50% shade of dk1" for style 33. This is changed in this simple type to specify that style 133 has a value of "92.5% tint of dk1".

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this simple type.

```
<xsd:simpleType name="ST_Style">
  <xsd:restriction base="xsd:unsignedByte">
    <xsd:minInclusive value="101"/>
    <xsd:maxInclusive value="148"/>
  </xsd:restriction>
</xsd:simpleType>
```

See section 5.10 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.6.17 ST_SizeRelFromH

Target namespace: http://schemas.microsoft.com/office/word/2010/wordprocessingDrawing

Referenced by: CT_SizeRelH

A simple type that specifies the base on which the relative width is calculated. Possible values are described in the following table.

Value	Meaning
margin	Relative to margins of the current page.
page	Relative to edges of the current page.
leftMargin	Relative to the left margin of the current page.
rightMargin	Relative to the right margin of the current page.
insideMargin	Relative to the inside margin of the current page.
outsideMargin	Relative to the outside margin of the current page.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this simple type.

```
<xsd:simpleType name="ST_SizeRelFromH">
  <xsd:restriction base="xsd:token">
    <xsd:enumeration value="margin"/>
    <xsd:enumeration value="page"/>
    <xsd:enumeration value="leftMargin"/>
    <xsd:enumeration value="rightMargin"/>
    <xsd:enumeration value="insideMargin"/>
    <xsd:enumeration value="outsideMargin"/>
  </xsd:restriction>
</xsd:simpleType>
```

See section 5.11 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.6.18 ST_SizeRelFromV

Target namespace: http://schemas.microsoft.com/office/word/2010/wordprocessingDrawing

Referenced by: CT_SizeRelV

A simple type that specifies the base on which the relative height is calculated. Possible values are described in the following table.

Value	Meaning
margin	Relative to margins of the current page.
page	Relative to edges of the current page.
topMargin	Relative to the top margin of the current page.
bottomMargin	Relative to the bottom margin of the current page.
insideMargin	Relative to the inside margin of the current page.
outsideMargin	Relative to the outside margin of the current page.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this simple type.

```
<xsd:simpleType name="ST_SizeRelFromV">
  <xsd:restriction base="xsd:token">
    <xsd:enumeration value="margin"/>
    <xsd:enumeration value="page"/>
    <xsd:enumeration value="topMargin"/>
    <xsd:enumeration value="bottomMargin"/>
    <xsd:enumeration value="insideMargin"/>
    <xsd:enumeration value="outsideMargin"/>
  </xsd:restriction>
</xsd:simpleType>
```

See section 5.11 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.6.19 ST_EditId

Target namespace: http://schemas.microsoft.com/office/word/2010/wordprocessingDrawing

Referenced by: anchorId, editId

This simple type specifies a number value specified as a four-octet (eight-digit) hexadecimal number.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this simple type.

```
<xsd:simpleType name="ST_EditId">
  <xsd:restriction base="xsd:hexBinary">
    <xsd:length value="4"/>
  </xsd:restriction>
</xsd:simpleType>
```

See section 5.11 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.6.20 ST_LegacySpreadsheetColorIndex

Target namespace: http://schemas.microsoft.com/office/drawing/2010/main

Referenced by: legacySpreadsheetColorIndex

This type MUST be used only to define a **legacySpreadsheetColorIndex**.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this simple type.

```
<xsd:simpleType name="ST_LegacySpreadsheetColorIndex">
  <xsd:restriction base="xsd:int">
    <xsd:minInclusive value="0"/>
    <xsd:maxInclusive value="80"/>
  </xsd:restriction>
</xsd:simpleType>
```

See section 5.1 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.6.21 ST_TargetScreenSz

Target namespace: http://schemas.microsoft.com/office/drawing/2012/main

Referenced by: CT_BackgroundPr

This simple type specifies possible ideal minimum target screen sizes (width by height, specified in pixels) for how the document could be optimized.<165>

Value	Meaning
544x376	Specifies that the document should be optimized for a screen size of 544x376
640x480	Specifies that the document should be optimized for a screen size of 640x480

Value	Meaning
720x512	Specifies that the document should be optimized for a screen size of 720x512
800x600	Specifies that the document should be optimized for a screen size of 800x600
1024x768	Specifies that the document should be optimized for a screen size of 1024x768
1152x882	Specifies that the document should be optimized for a screen size of 1152x882
1152x900	Specifies that the document should be optimized for a screen size of 1152x900
1280x1024	Specifies that the document should be optimized for a screen size of 1280x1024
1600x1200	Specifies that the document should be optimized for a screen size of 1600x1200
1800x1440	Specifies that the document should be optimized for a screen size of 1800x1440
1920x1200	Specifies that the document should be optimized for a screen size of 1920x1200

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this simple type.

```
<xsd:simpleType name="ST_TargetScreenSz">
  <xsd:restriction base="xsd:token">
    <xsd:enumeration value="544x376"/>
    <xsd:enumeration value="640x480"/>
    <xsd:enumeration value="720x512"/>
    <xsd:enumeration value="800x600"/>
    <xsd:enumeration value="1024x768"/>
    <xsd:enumeration value="1152x882"/>
    <xsd:enumeration value="1152x900"/>
    <xsd:enumeration value="1280x1024"/>
    <xsd:enumeration value="1600x1200"/>
    <xsd:enumeration value="1800x1440"/>
    <xsd:enumeration value="1920x1200"/>
  </xsd:restriction>
</xsd:simpleType>
```

See section 5.14 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.6.22 ST_ColorStyleMethodEnum

Target namespace: http://schemas.microsoft.com/office/drawing/2012/chartStyle

Referenced by: ST_ColorStyleMethod

This simple type specifies how colors are picked from a **CT_ColorStyle (**section 2.5.91) given a zero based index and a count of objects being colored.<166>

Value	Meaning
cycle	The color picked from **CT_ColorStyle** is the index modulus the total set of colors in **CT_ColorStyle**.
withinLinear	The color picked from **CT_ColorStyle** is the first color with a brightness that varies from darker to lighter based on how close the index is from 0 and the count

Value	Meaning
	of objects being colored respectively.
acrossLinear	The color picked from **CT_ColorStyle** is the index modulus the total set of colors in **CT_ColorStyle**. The color has a brightness that varies from darker to lighter based on how close the index is from 0 and the count of objects being colored respectively.
withinLinearReversed	The color picked from **CT_ColorStyle** is the first color with a brightness that varies from lighter to darker based on how close the index is from 0 and the count of objects being colored respectively.
acrossLinearReversed	The color picked from **CT_ColorStyle** is the index modulus the total set of colors in **CT_ColorStyle**. The color has a brightness that varies from lighter to darker based on how close the index is from 0 and the count of objects being colored respectively.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this simple type.

```
<xsd:simpleType name="ST_ColorStyleMethodEnum">
  <xsd:restriction base="xsd:token">
    <xsd:enumeration value="cycle"/>
    <xsd:enumeration value="withinLinear"/>
    <xsd:enumeration value="acrossLinear"/>
    <xsd:enumeration value="withinLinearReversed"/>
    <xsd:enumeration value="acrossLinearReversed"/>
  </xsd:restriction>
</xsd:simpleType>
```

See section 5.15 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.6.23 ST_ColorStyleMethod

Target namespace: http://schemas.microsoft.com/office/drawing/2012/chartStyle

Referenced by: CT_ColorStyle

This simple type specifies the method for mapping an index for an element in a chart to the total set of colors contained in a **CT_ColorStyle**.<167> Methods are either the enumerations specified here, or unknown methods which are stored as strings. If an unknown method is specified, it is assumed that the method is an **ST_ColorStyleMethodEnum** (section 2.6.22) with a value of **cycle**.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this simple type.

```
<xsd:simpleType name="ST_ColorStyleMethod">
  <xsd:union memberTypes="ST_ColorStyleMethodEnum xsd:string"/>
</xsd:simpleType>
```

See section 5.15 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.6.24 ST_StyleReferenceModifierEnum

Target namespace: http://schemas.microsoft.com/office/drawing/2012/chartStyle

This simple type specifies a modifier to use when resolving a **CT_StyleReference** (section 2.5.93) which alters the resolved properties in the specified way.<168>

Value	Meaning
ignoreCSTransforms	When resolving a **CT_StyleColor** (section 2.5.92) in this **CT_StyleReference**, a color is retrieved from the **CT_ColorStyle**. With this modifier, the color retrieved will not have any transforms applied to it.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this simple type.

```
<xsd:simpleType name="ST_StyleReferenceModifierEnum">
  <xsd:restriction base="xsd:token">
    <xsd:enumeration value="ignoreCSTransforms"/>
  </xsd:restriction>
</xsd:simpleType>
```

See section 5.15 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.6.25 ST_StyleReferenceModifier

Target namespace: http://schemas.microsoft.com/office/drawing/2012/chartStyle

Referenced by: ST_StyleReferenceModifierList

This simple type specifies a modifier to use when resolving a **CT_StyleReference** (section 2.5.93) which alters the resolved properties in the specified way.<169> The modifier is either a known enumeration or an unknown modifier stored as a string. If it is an unknown modifier, no modification is made.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this simple type.

```
<xsd:simpleType name="ST_StyleReferenceModifier">
  <xsd:union memberTypes="ST_StyleReferenceModifierEnum xsd:string"/>
</xsd:simpleType>
```

See section 5.15 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.6.26 ST_StyleReferenceModifierList

Target namespace: http://schemas.microsoft.com/office/drawing/2012/chartStyle

Referenced by: CT_StyleReference, CT_FontReference

This simple type specifies a list of modifiers to use when resolving a **CT_StyleReference** (section 2.5.93) which alters the resolved properties in the specified way.<170> Modifiers are applied in order that they are listed.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this simple type.

```
<xsd:simpleType name="ST_StyleReferenceModifierList">
```

```
    <xsd:list itemType="ST_StyleReferenceModifier"/>
  </xsd:simpleType>
```

See section 5.15 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.6.27 ST_StyleColorEnum

Target namespace: http://schemas.microsoft.com/office/drawing/2012/chartStyle

Referenced by: ST_StyleColorVal

This simple type specifies the properties of a chart element that are used as the index when retrieving a color from the **CT_ColorStyle** (section 2.5.91).<171>

Value	Meaning
auto	The relative index of the element in the chart is used as the index into the **CT_ColorStyle**. For example, **auto** on a series element will make the first series retrieve the color at the first index; the second will retrieve the color at the second index and so on. Elements that do not have an index (such as a plot area) will retrieve the color at the first index.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this simple type.

```
<xsd:simpleType name="ST_StyleColorEnum">
  <xsd:restriction base="xsd:token">
    <xsd:enumeration value="auto"/>
  </xsd:restriction>
</xsd:simpleType>
```

See section 5.15 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.6.28 ST_StyleColorVal

Target namespace: http://schemas.microsoft.com/office/drawing/2012/chartStyle

Referenced by: CT_StyleColor

This simple type specifies what index to use when retrieving a color from **CT_ColorStyle** (section 2.5.91).<172>

If the type is **xsd:unsignedInt** ([XMLSCHEMA2] section 3.3.22), then that integer value is used as the index, zero being the first index.

If the type is **ST_StyleColorEnum (**section 2.6.27), the index is retrieved using the properties of the enumeration specified.

Finally, if the type is a string then the index is assumed to be zero.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this simple type.

```
<xsd:simpleType name="ST_StyleColorVal">
  <xsd:union memberTypes="xsd:unsignedInt ST_StyleColorEnum xsd:string"/>
```

```
</xsd:simpleType>
```

See section 5.15 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.6.29 ST_StyleEntryModifierEnum

Target namespace: http://schemas.microsoft.com/office/drawing/2012/chartStyle

This simple type specifies a modifier to use when resolving a **CT_StyleEntry** (section 2.5.96) that alters the properties in the specified way.<173>

Value	Meaning
allowNoFillOverride	The fill properties specified on this **CT_StyleEntry** can be replaced with no fill instead.
allowNoLineOverride	The line properties specified on this **CT_StyleEntry** can be replaced with no line instead.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this simple type.

```
<xsd:simpleType name="ST_StyleEntryModifierEnum">
  <xsd:restriction base="xsd:token">
    <xsd:enumeration value="allowNoFillOverride"/>
    <xsd:enumeration value="allowNoLineOverride"/>
  </xsd:restriction>
</xsd:simpleType>
```

See section 5.15 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.6.30 ST_StyleEntryModifier

Target namespace: http://schemas.microsoft.com/office/drawing/2012/chartStyle

Referenced by: ST_StyleEntryModifierList

This simple type specifies a modifier to use when resolving a **CT_StyleEntry** (section 2.5.96) that alters the properties in the specified way.<174> The modifier is either an enumeration or an unknown modifier. If the modifier is unknown, it is assumed to be a string and has no effect.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this simple type.

```
<xsd:simpleType name="ST_StyleEntryModifier">
  <xsd:union memberTypes="ST_StyleEntryModifierEnum xsd:string"/>
</xsd:simpleType>
```

See section 5.15 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.6.31 ST_StyleEntryModifierList

Target namespace: http://schemas.microsoft.com/office/drawing/2012/chartStyle

Referenced by: CT_StyleEntry

This simple type specifies a list modifiers to use when resolving a **CT_StyleEntry** (section 2.5.96) which alters the properties in the specified way.<175> The modifiers are applied in the order in which they appear.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this simple type.

```
<xsd:simpleType name="ST_StyleEntryModifierList">
  <xsd:list itemType="ST_StyleEntryModifier"/>
</xsd:simpleType>
```

See section 5.15 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.6.32 ST_MarkerStyle

Target namespace: http://schemas.microsoft.com/office/drawing/2012/chartStyle

Referenced by: CT_MarkerLayout

The simple type specifies a shape for a marker.<176> See ([ISO/IEC-29500-1] section 21.2.3.27) for visual representations.

Value	Meaning
circle	Specifies a circle shall be drawn at each data point.
dash	Specifies a dash shall be drawn at each data point.
diamond	Specifies a diamond shall be drawn at each data point.
dot	Specifies a dot shall be drawn at each data point.
plus	Specifies a plus shall be drawn at each data point.
square	Specifies a square shall be drawn at each data point.
star	Specifies a star shall be drawn at each data point.
triangle	Specifies a triangle shall be drawn at each data point.
x	Specifies an X shall be drawn at each data point.

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this simple type.

```
<xsd:simpleType name="ST_MarkerStyle">
  <xsd:restriction base="xsd:token">
    <xsd:enumeration value="circle"/>
    <xsd:enumeration value="dash"/>
    <xsd:enumeration value="diamond"/>
    <xsd:enumeration value="dot"/>
    <xsd:enumeration value="plus"/>
    <xsd:enumeration value="square"/>
    <xsd:enumeration value="star"/>
    <xsd:enumeration value="triangle"/>
```

```
      <xsd:enumeration value="x"/>
    </xsd:restriction>
  </xsd:simpleType>
```

See section 5.15 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

2.6.33 ST_MarkerSize

Target namespace: http://schemas.microsoft.com/office/drawing/2012/chartStyle

Referenced by: CT_MarkerLayout

The simple type specifies that its contents contain an integer between 2 and 72, inclusive, whose contents are a size in points.<177> See ([ISO/IEC-29500-1] section 21.2.3.26)

The following W3C XML Schema ([XMLSCHEMA1] section 2.1) fragment specifies the contents of this simple type.

```
<xsd:simpleType name="ST_MarkerSize">
  <xsd:restriction base="xsd:unsignedByte">
    <xsd:minInclusive value="2"/>
    <xsd:maxInclusive value="72"/>
  </xsd:restriction>
</xsd:simpleType>
```

See section 5.15 for the full W3C XML Schema ([XMLSCHEMA1] section 2.1).

3 Structure Examples

3.1 Chart

3.1.1 Chart Style

The following code example illustrates the relationship between **CT_Style** and **CT_Style** ([ISO/IEC-29500-1] section A.5.1), in particular how the **val** (in the example: 102) of the **CT_Style** must be set to 100 plus the **val** (in the example: 2) of the **CT_Style** ([ISO/IEC-29500-1] section A.5.1).

```
<mc:AlternateContent
  xmlns:mc="http://schemas.openxmlformats.org/markup-compatibility/2006">
  <mc:Choice
    xmlns:c14="http://schemas.microsoft.com/office/drawing/2007/8/2/chart"
    Requires="c14">
    <c14:style val="102"/>
  </mc:Choice>
  <mc:Fallback>
    <c:style val="2"/>
  </mc:Fallback>
</mc:AlternateContent>
```

3.2 Content Parts and Ink

Figure 31: Sample ink shape

The following code example represents the Ink content part that describes the example ink shown in the preceding figure. The **brush** definitions specify its size, shape, color, and coordinate space. Traces are gathered into a **traceGroup** hierarchy of **writingRegion**, **paragraph**, **line**, and **inkWord**, with the **inkWord** containing the results of ink recognition that was generated at runtime.

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<inkml:ink xmlns:inkml="http://www.w3.org/2003/InkML">
  <inkml:definitions>
    <inkml:context xml:id="ctx0">
      <inkml:inkSource xml:id="inkSrc0">
        <inkml:traceFormat>
          <inkml:channel name="X" type="integer" max="9600" units="cm"/>
          <inkml:channel name="Y" type="integer" max="7200" units="cm"/>
          <inkml:channel name="F" type="integer" max="256" units="dev"/>
        </inkml:traceFormat>
        <inkml:channelProperties>
          <inkml:channelProperty channel="X" name="resolution" value="367.8161"
units="1/cm"/>
          <inkml:channelProperty channel="Y" name="resolution" value="440.36697"
units="1/cm"/>
          <inkml:channelProperty channel="F" name="resolution" value="0" units="1/dev"/>
```

```
        </inkml:channelProperties>
      </inkml:inkSource>
      <inkml:timestamp xml:id="ts0" timeString="2010-01-10T13:10:12.822"/>
    </inkml:context>
    <inkml:brush xml:id="br0">
      <inkml:brushProperty name="width" value="0.06667" units="cm"/>
      <inkml:brushProperty name="height" value="0.06667" units="cm"/>
      <inkml:brushProperty name="color" value="#FF0000"/>
      <inkml:brushProperty name="fitToCurve" value="1"/>
    </inkml:brush>
  </inkml:definitions>
  <inkml:traceGroup>
    <inkml:annotationXML>
      <emma:emma xmlns:emma="http://www.w3.org/2003/04/emma" version="1.0">
        <emma:interpretation id="{8646EB18-6E67-4FFA-8739-E20C3C1A0F80}"
emma:medium="tactile" emma:mode="ink">
          <msink:context xmlns:msink="http://schemas.microsoft.com/ink/2010/main"
type="writingRegion" rotatedBoundingBox="4334,2653 13237,2575 13262,5384 4359,5462"/>
        </emma:interpretation>
      </emma:emma>
    </inkml:annotationXML>
    <inkml:traceGroup>
      <inkml:annotationXML>
        <emma:emma xmlns:emma="http://www.w3.org/2003/04/emma" version="1.0">
          <emma:interpretation id="{4A0797F9-1386-486A-B2BA-709708E24147}"
emma:medium="tactile" emma:mode="ink">
            <msink:context xmlns:msink="http://schemas.microsoft.com/ink/2010/main"
type="paragraph" rotatedBoundingBox="4334,2653 13237,2575 13262,5384 4359,5462"
alignmentLevel="1"/>
          </emma:interpretation>
        </emma:emma>
      </inkml:annotationXML>
      <inkml:traceGroup>
        <inkml:annotationXML>
          <emma:emma xmlns:emma="http://www.w3.org/2003/04/emma" version="1.0">
            <emma:interpretation id="{0430FEDC-2E4E-4A32-91D8-87424D412245}"
emma:medium="tactile" emma:mode="ink">
              <msink:context xmlns:msink="http://schemas.microsoft.com/ink/2010/main"
type="line" rotatedBoundingBox="4334,2653 13237,2575 13262,5384 4359,5462"/>
            </emma:interpretation>
          </emma:emma>
        </inkml:annotationXML>
        <inkml:traceGroup>
          <inkml:annotationXML>
            <emma:emma xmlns:emma="http://www.w3.org/2003/04/emma" version="1.0">
              <emma:interpretation id="{583A8050-3462-4BC6-915B-A797D921D61F}"
emma:medium="tactile" emma:mode="ink">
                <msink:context xmlns:msink="http://schemas.microsoft.com/ink/2010/main"
type="inkWord" rotatedBoundingBox="4334,2653 13237,2575 13262,5384 4359,5462"/>
              </emma:interpretation>
              <emma:one-of disjunction-type="recognition" id="oneOf0">
                <emma:interpretation id="interp0" emma:lang="en-US" emma:confidence="1">
                  <emma:literal>hello</emma:literal>
                </emma:interpretation>
                <emma:interpretation id="interp1" emma:lang="en-US" emma:confidence="0.5">
                  <emma:literal>hello </emma:literal>
                </emma:interpretation>
                <emma:interpretation id="interp2" emma:lang="en-US" emma:confidence="0.5">
                  <emma:literal> hello</emma:literal>
                </emma:interpretation>
```

```
                <emma:interpretation id="interp3" emma:lang="en-US" emma:confidence="0.5">
                  <emma:literal>he 11 o</emma:literal>
                </emma:interpretation>
                <emma:interpretation id="interp4" emma:lang="en-US" emma:confidence="0.5">
                  <emma:literal>he 110</emma:literal>
                </emma:interpretation>
              </emma:one-of>
            </emma:emma>
          </inkml:annotationXML>
          <inkml:trace contextRef="#ctx0" brushRef="#br0">-2 0 43,'0'0'14,"0"0"-6,0 0 1,8 23
2,-16 12-3,16 7 3,17 18-4,9 28-7,-9 0 4,8 14 3,-8 10 3,25 18-2,-17 18-1,1-18-1,6 18-2,18 24
0,-16 6-1,-9-1 0,-8 1 0,0-19-1,0-17 0,0-5 0,-8-8-1,0-16 0,8-30 0,-17 5 0,-8-34-1,0-12 1,0-25-
1,8 13 0,-8-36 0,9-30 0,-1-17 1,-16-6 0,8-24 1,8 6-1,-16 6 0,16-1 0,9-5-1,-1-17 1,9 0 0,16 4-
1,17 2 2,17 5 1,8 12-3,9 12 1,-17 18 0,7 5 0,1 12 1,9 24-1,-17 19 0,0 15 0,-10 32 0,2 22 0,-
25 13 0,-1 0 0,1-6 0,-9-13 0,9 1-1,-17-6-1,0-12-7,-8 7-10</inkml:trace>
          <inkml:trace contextRef="#ctx0" brushRef="#br0">2375 1858 106,'0'0'0,"0"0"4,0 0
4,48 11-1,-15 2 0,26 4-1,-1 7-1,17 5 0,9-11-1,7 5-1,-9-4-1,10 4 0,-17-11-2,0-12 0,0-18-2,-10-
11 0,2-13 0,-17-11-1,8 0 1,-25 6 0,1-19 1,-26 14 0,-8-2 1,-25 1-2,0 6 0,-17 5 1,1 18 0,-1-6
0,-8 30 1,8 6-1,-23 24 1,7 6 0,0 16 0,-9 2 0,-17 18 0,1 3 2,1 15 2,-1 10 1,33-5 0,17-12 1,7
0-1,10 0-2,32-1 0,35 1 1,24-17 1,25-1 0,23-12-2,-6-17-1,25-14-3,23-9-4,1-31-6,25-35-
9</inkml:trace>
          <inkml:trace contextRef="#ctx0" brushRef="#br0">4591 295 72,'0'0'4,"0"0"5,0 0-1,0 0
0,-8 6 0,8-6 1,8 24 1,1 23-1,7 7 0,9 22 0,-16 19 0,24 24 0,0 11-2,1-6-1,16 24-1,0 12-1,8-18-
1,-1 12-1,1-13 0,-8 2 0,0-19 0,0-36-1,0 2-2,-8-7-5,0-19-7,-9-4-12</inkml:trace>
          <inkml:trace contextRef="#ctx0" brushRef="#br0">5730 212 81,'0'0'1,"0"0"8,0 0 4,9
42-1,7 18-1,1 10 1,0 19 0,-1 30-1,16 16-2,-7 8 0,25-2-1,0 19-2,9-6-1,7 0-1,9-6-1,7 0-1,-7-7-
1,-8-28-2,0-12-5,-9-18-6,9-18-14</inkml:trace>
          <inkml:trace contextRef="#ctx0" brushRef="#br0">8281 1189 93,'0'0'3,"0"0"5,0 0 2,-
25-6-1,0-6-1,25 19-2,-34-7-1,9-19-1,8 31-1,-8-24 0,-41 12-1,16 12 0,-9 12-1,-6 11 1,15 13 1,0
6 0,-8 4 3,-1 8 0,9 11-1,-8 0 0,16 5-1,11 7 0,14 5-1,17 7 0,25-7 0,7-4-1,26 4 0,9 13-2,25-13
0,24-11 0,-1-12 0,2-18 0,0-12 0,-25-11-1,-19-30 0,10-23 0,9-31-1,0-28 0,-17-18 1,-2-13-1,-6-
18 1,-34-4 1,-8 5 0,-25 4 2,-16 8 0,-18 24 0,-24-7 1,1 12 0,-18 12 0,0 24-1,0 6-1,-17 12-3,-6
23-5,-36 12-16</inkml:trace>
        </inkml:traceGroup>
      </inkml:traceGroup>
    </inkml:traceGroup>
  </inkml:traceGroup>
</inkml:ink>
```

The following example shows a Document Part reference to the previous content part as used in a **PresentationML** slide.

```
<mc:AlternateContent xmlns:mc="http://schemas.openxmlformats.org/markup-compatibility/2006">
  <mc:Choice xmlns:p14="http://schemas.microsoft.com/office/powerpoint/2010/main"
Requires="p14">
    <p:contentPart p14:bwMode="auto" r:id="rId2">
      <p14:nvContentPartPr>
        <p14:cNvPr id="8" name="Ink 7"/>
        <p14:cNvContentPartPr/>
        <p14:nvPr/>
      </p14:nvContentPartPr>
      <p14:xfrm>
        <a:off x="1561526" y="971040"/>
        <a:ext cx="3210480" cy="1010160"/>
      </p14:xfrm>
    </p:contentPart>
  </mc:Choice>
  <mc:Fallback>
    <p:pic>
```

```
      <p:nvPicPr>
        <p:cNvPr id="8" name="Ink 7"/>
        <p:cNvPicPr/>
        <p:nvPr/>
      </p:nvPicPr>
      <p:blipFill>
        <a:blip r:embed="rId3"/>
        <a:stretch>
          <a:fillRect/>
        </a:stretch>
      </p:blipFill>
      <p:spPr>
        <a:xfrm>
          <a:off x="1561526" y="971040"/>
          <a:ext cx="3210480" cy="1010160"/>
        </a:xfrm>
        <a:prstGeom prst="rect">
          <a:avLst/>
        </a:prstGeom>
      </p:spPr>
    </p:pic>
  </mc:Fallback>
</mc:AlternateContent>
...
```

3.3 Pictures

In the binary large image or picture (BLIP) element ([ISO/IEC-29500-1] section 20.1.8.13) is an extension list that enables applications to store the original image and processing parameters for corrections and artistic effects applied to a picture. The following code example shows the XML specifying that an artistic effect, sharpen and soften effect, color temperature effect, saturation effect, and brightness and contrast effect are applied to a picture.

The part specified by the relationship **rId2** of the **blip** element is embedded. (This does not apply to linked BLIPs.) This bitmap is the result of performing operations on the original image specified by the related part **rId3** in JPEG XR format. (This does not apply to metafile BLIPs.)

```
<a:blip r:embed="rId2">
    <a:extLst>
        <a:ext uri="BEBA8EAE-BF5A-486c-A8C5-ECC9F3942E4B">
            <a14:imgProps xmlns:a14="http://schemas.microsoft.com/office/drawing/2010/main">
                <a14:imgLayer r:embed="rId3">
                    <a14:imgEffect>
                        <a14:artisticLineDrawing trans="75000" pencilSize="15"/>
                    </a14:imgEffect>
                    <a14:imgEffect>
                        <a14:sharpenSoften amount="25000"/>
                    </a14:imgEffect>
                    <a14:imgEffect>
                        <a14:colorTemperature colorTemp="7200"/>
                    </a14:imgEffect>
                    <a14:imgEffect>
                        <a14:saturation sat="200000"/>
                    </a14:imgEffect>
                    <a14:imgEffect>
                        <a14:brightnessContrast bright="20000" contrast="-20000"/>
                    </a14:imgEffect>
```

```
                </a14:imgLayer>
            </a14:imgProps>
        </a:ext>
        <a:ext uri="28A0092B-C50C-407e-A947-70E740481C1C">
            <a14:useLocalDpi
xmlns:a14="http://schemas.microsoft.com/office/drawing/2010/main" val="0"/>
        </a:ext>
    </a:extLst>
</a:blip>
```

3.4 Diagrams

3.4.1 Diagram Layout

The **spTree** element is comprised of multiple pieces. The **nvGrpSpPr** element defines non-visual shape properties that are applied to the entire group. The **grpSpPr** element defines visual shape properties that are applied to the group. The individual shapes and their properties are defined in the **sp** element.

```
<dsp:drawing xmlns:dsp="http://schemas.microsoft.com/office/drawing/2008/diagram"
  <dsp:spTree>
    <dsp:nvGrpSpPr>
      ...
    </dsp:nvGrpSpPr>
    <dsp:grpSpPr/>
    <dsp:sp modelId="{9DA1CD8D-C37F-4B77-84FB-F4D9D8E23A09}">
      ...
    </dsp:sp>
    <dsp:sp modelId="{8B78E849-5558-46E7-8E95-CEE131C38F3A}">
      ...
    </dsp:sp>
    <dsp:sp modelId="{8539B2C2-4636-4F97-BB0D-CD82F4D09B18}">
      ...
    </dsp:sp>
  </dsp:spTree>
</dsp:drawing>
```

3.4.2 Image Recoloring

The following code example demonstrates the structure of the data model for a **SmartArt** diagram. The **recolorImg** element is set to TRUE and causes the images associated with the **SmartArt** diagram to be recolored according to the assigned color scheme and theme.

```
<dgm:dataModel xmlns:dgm="http://schemas.openxmlformats.org/drawingml/2006/diagram"
xmlns:a="http://schemas.openxmlformats.org/drawingml/2006/main">
  <dgm:ptLst>
...
  </dgm:ptLst>
...
  <dgm:whole/>
  <dgm:extLst>
    <a:ext uri="http://schemas.microsoft.com/office/drawing/2008/diagram">
      <dsp:dataModelExt xmlns:dsp="http://schemas.microsoft.com/office/drawing/2008/diagram"
relId="rId6" minVer="http://schemas.openxmlformats.org/drawingml/2006/diagram"/>
    </a:ext>
```

```
    <a:ext uri="C62137D5-CB1D-491b-B009-E17868A290BF">
      <dgm14:recolorImg
xmlns:dgm14="http://schemas.microsoft.com/office/drawing/2010/diagram" val="1"/>
    </a:ext>
  </dgm:extLst>
</dgm:dataModel>
```

3.5 Math

The following code example demonstrates the use of an **AlternateContent** element ([ISO/IEC-29500-3] section 10.2.1) to wrap an equation and the fallback image of that equation. The following XML shows the contents of a shape containing an equation that is the letter pi:

```
<p:cSld>
    <p:spTree>
   ...
        <mc:AlternateContent xmlns:mc="http://schemas.openxmlformats.org/markup-
compatibility/2006">
            <mc:Choice xmlns:a14="http://schemas.microsoft.com/office/drawing/2010/main"
Requires="a14">
                <p:sp>
                    ...
                    <p:txBody>
                        ...
                        <a:p>
                            <a14:m>
                                <m:oMathPara
xmlns:m="http://schemas.openxmlformats.org/officeDocument/2006/math">
                                    <m:oMath
xmlns:m="http://schemas.openxmlformats.org/officeDocument/2006/math">
                                        <m:r>
                                            <a:rPr>
                                                <a:latin typeface="Cambria Math"/>
                                            </a:rPr>
                                            <m:t>□</m:t>
                                        </m:r>
                                    </m:oMath>
                                </m:oMathPara>
                            </a14:m>
                        </a:p>
                    </p:txBody>
                </p:sp>
            </mc:Choice>
            <mc:Fallback>
                <p:sp>
                    ...
                    <p:spPr>
                        ...
                        <a:blipFill>
                            <a:blip r:embed="rId2"/>
                        </a:blipFill>
                    </p:spPr>
                </p:sp>
            </mc:Fallback>
        </mc:AlternateContent>
    </p:spTree>
 </p:cSld>
```

```
</p:sld>
```

3.6 SpreadsheetML Drawing

3.6.1 Camera Tool

The following code example shows usage of an extended element to specify that a picture is a camera tool and is linked to a cell range. See 2.2.6.1 for more information. The following XML shows the contents of a camera tool object specified by a **pic** element ([ISO/IEC-29500-1] section 20.5.2.25).

```
<xdr:pic>
  <xdr:nvPicPr>
    <xdr:cNvPr id="1025" name="Picture 1"/>
    <xdr:cNvPicPr>
      <a:picLocks noChangeAspect="1" noChangeArrowheads="1"/>
      <a:extLst>
        <a:ext uri="84589F7E-364E-4c9e-8A38-B11213B215E9">
          <a14:cameraTool cellRange="$A$1:$E$12" spid="_x0000_s1026"/>
        </a:ext>
      </a:extLst>
    </xdr:cNvPicPr>
  </xdr:nvPicPr>
  <xdr:blipFill>
    …
  </xdr:blipFill>
  <xdr:spPr bwMode="auto">
    …
  </xdr:spPr>
</xdr:pic>
```

The camera tool properties are specified by the **cameraTool** element as an extension of the **nvPicPr** element ([ISO/IEC-29500-1] section 20.5.2.22). The value of the **cellRange** attribute in the **cameraTool** element is in the A1 cell range reference style, not the R1C1 cell range reference style.

3.6.2 Legacy Object Wrapper

The following code example shows usage of an extended element to specify a legacy VML drawing object. See 2.2.6.2 for more information. The following XML shows the contents of a legacy object wrapper specified by an **sp** element ([ISO/IEC-29500-1] section 20.5.2.29).

```
<xdr:sp macro="" textlink="">
  <xdr:nvSpPr>
    <xdr:cNvPr id="1025" name="Button 1" hidden="1">
      <a:extLst>
        <a:ext uri="63B3BB69-23CF-44e3-9099-C40C66FF867C">
          <a14:compatExt spid="_x0000_s1025"/>
        </a:ext>
      </a:extLst>
    </xdr:cNvPr>
    <xdr:cNvSpPr/>
  </xdr:nvSpPr>
  <xdr:spPr>
```

```
  …
  </xdr:spPr>
  <xdr:txBody>
  …
  </xdr:txBody>
</xdr:sp>
```

The linked legacy object is specified by the **compatExt** element as an extension of the **cNvPr** element ([ISO/IEC-29500-1] section 20.5.2.8).

3.7 WordprocessingML Drawing

3.7.1 Grouped Graphical Objects

The following code example illustrates a **SmartArt** diagram grouped with a picture.

```
<a:graphic xmlns:a="http://schemas.openxmlformats.org/drawingml/2006/main">
    <a:graphicData uri="http://schemas.microsoft.com/office/word/2010/wordprocessingGroup">
        <wpg:wgp>
            <wpg:cNvGrpSpPr/>
            <wpg:grpSpPr>
                …
            </wpg:grpSpPr>
            <pic:pic xmlns:pic="http://schemas.openxmlformats.org/drawingml/2006/picture">
                <pic:nvPicPr>
                    <pic:cNvPr id="7" name="Picture 7"/>
                    …
                </pic:nvPicPr>
                …
            </pic:pic>
            <wpg:graphicFrame>
                <wpg:cNvPr id="6" name="Diagram 6"/>
                <wpg:cNvFrPr/>
                …
                <a:graphic>
                    <a:graphicData
uri="http://schemas.openxmlformats.org/drawingml/2006/diagram">
                        <dgm:relIds
xmlns:dgm="http://schemas.openxmlformats.org/drawingml/2006/diagram"
xmlns:r="http://schemas.openxmlformats.org/officeDocument/2006/relationships" r:dm="rId8"
r:lo="rId9" r:qs="rId10" r:cs="rId11"/>
                    </a:graphicData>
                </a:graphic>
            </wpg:graphicFrame>
        </wpg:wgp>
    </a:graphicData>
</a:graphic>
```

3.7.2 Group and Linked Shapes within a Canvas

The following code example illustrates a drawing canvas that contains a shape and a group, which contains a picture and a shape. The two shapes are linked and share a text box story.

```
<a:graphic xmlns:a="http://schemas.openxmlformats.org/drawingml/2006/main">
    <a:graphicData uri="http://schemas.microsoft.com/office/word/2010/wordprocessingCanvas">
```

```
        <wpc:wpc>
            <wpc:bg/>
            <wpc:whole/>
            <wps:wsp>
                <wps:cNvPr id="3" name="Text Box 3"/>
                <wps:cNvSpPr txBox="1"/>
                <wps:spPr>
                    …
                </wps:spPr>
                <wps:style>
                    …
                </wps:style>
                <wps:txbx id="1">
                    <w:txbxContent>
                        …
                    </w:txbxContent>
                </wps:txbx>
                <wps:bodyPr … >
                    …
                </wps:bodyPr>
            </wps:wsp>
            <wpg:wgp>
                <wpg:cNvPr id="5" name="Group 5"/>
                <wpg:cNvGrpSpPr/>
                <wpg:grpSpPr>
                </wpg:grpSpPr>
                <pic:pic
xmlns:pic="http://schemas.openxmlformats.org/drawingml/2006/picture">
                    <pic:nvPicPr>
                        <pic:cNvPr id="2" name="Picture 2"/>
                        …
                    </pic:nvPicPr>
                    …
                </pic:pic>
                <wps:wsp>
                    <wps:cNvPr id="4" name="Text Box 4"/>
                    <wps:cNvSpPr txBox="1"/>
                    <wps:spPr>
                        …
                    </wps:spPr>
                    <wps:style>
                        …
                    </wps:style>
                    <wps:linkedTxbx id="1" seq="1"/>
                    <wps:bodyPr … >
                        …
                    </wps:bodyPr>
                </wps:wsp>
            </wpg:wgp>
        </wpc:wpc>
    </a:graphicData>
</a:graphic>
```

4 Security

4.1 Security Considerations for Implementers

None.

4.2 Index of Security Fields

None.

5 Appendix A: Full XML Schemas

For ease of implementation, this section provides the full XML schemas for the new elements, attributes, complex types, and simple types specified in the preceding sections. Any schema references to namespaces included in [ISO/IEC-29500:2008] refer specifically to the transitional schemas as described in [ISO/IEC-29500-4].

5.1 http://schemas.microsoft.com/office/drawing/2010/main

```
<xsd:schema targetNamespace="http://schemas.microsoft.com/office/drawing/2010/main"
elementFormDefault="qualified" xmlns="http://schemas.microsoft.com/office/drawing/2010/main"
xmlns:oxsd="http://oxsdSchemaUri" xmlns:xsd="http://www.w3.org/2001/XMLSchema"
xmlns:a="http://schemas.openxmlformats.org/drawingml/2006/main"
xmlns:a14="http://schemas.microsoft.com/office/drawing/2010/main"
xmlns:m="http://schemas.openxmlformats.org/officeDocument/2006/math"
xmlns:r="http://schemas.openxmlformats.org/officeDocument/2006/relationships">
  <xsd:import namespace="http://schemas.openxmlformats.org/drawingml/2006/main"
schemaLocation="oartdocprop.xsd"/>
  <xsd:import namespace="http://schemas.openxmlformats.org/officeDocument/2006/relationships"
schemaLocation="orel.xsd"/>
  <xsd:import schemaLocation="oartsp3dstyles.xsd"
namespace="http://schemas.openxmlformats.org/drawingml/2006/main"/>
  <xsd:import schemaLocation="oartsp3dscene.xsd"
namespace="http://schemas.openxmlformats.org/drawingml/2006/main"/>
  <xsd:import schemaLocation="oartspeffects.xsd"
namespace="http://schemas.openxmlformats.org/drawingml/2006/main"/>
  <xsd:import schemaLocation="oartsplineproperties.xsd"
namespace="http://schemas.openxmlformats.org/drawingml/2006/main"/>
  <xsd:import namespace="http://schemas.openxmlformats.org/drawingml/2006/main"
schemaLocation="oartbasetypes.xsd"/>
  <xsd:simpleType name="ST_LegacySpreadsheetColorIndex">
    <xsd:restriction base="xsd:int">
      <xsd:minInclusive value="0"/>
      <xsd:maxInclusive value="80"/>
    </xsd:restriction>
  </xsd:simpleType>
  <xsd:attribute name="legacySpreadsheetColorIndex" type="ST_LegacySpreadsheetColorIndex"/>
  <xsd:complexType name="CT_TextMath"/>
  <xsd:element name="m" type="CT_TextMath"/>
  <xsd:complexType name="CT_ContentPartLocking">
    <xsd:sequence>
      <xsd:element name="extLst" type="a:CT_OfficeArtExtensionList" minOccurs="0"
maxOccurs="1"/>
    </xsd:sequence>
    <xsd:attributeGroup ref="a:AG_Locking"/>
  </xsd:complexType>
  <xsd:complexType name="CT_NonVisualInkContentPartProperties">
    <xsd:sequence>
      <xsd:element name="cpLocks" type="CT_ContentPartLocking" minOccurs="0" maxOccurs="1"/>
      <xsd:element name="extLst" type="a:CT_OfficeArtExtensionList" minOccurs="0"
maxOccurs="1"/>
    </xsd:sequence>
    <xsd:attribute name="isComment" type="xsd:boolean" use="optional" default="true"/>
  </xsd:complexType>
  <xsd:complexType name="CT_CameraTool">
    <xsd:attribute name="cellRange" type="xsd:string"/>
    <xsd:attribute name="spid" use="optional" default="0" type="xsd:string"/>
  </xsd:complexType>
  <xsd:element name="cameraTool" type="CT_CameraTool"/>
```

```
  <xsd:complexType name="CT_CompatExt">
    <xsd:attribute name="spid" type="xsd:string"/>
  </xsd:complexType>
  <xsd:element name="compatExt" type="CT_CompatExt"/>
  <xsd:complexType name="CT_IsGvmlCanvas">
    <xsd:attribute name="val" type="xsd:boolean" use="required"/>
  </xsd:complexType>
  <xsd:complexType name="CT_GvmlContentPartNonVisual">
    <xsd:sequence>
      <xsd:element name="cNvPr" type="a:CT_NonVisualDrawingProps" minOccurs="1"
maxOccurs="1"/>
      <xsd:element name="cNvContentPartPr" type="CT_NonVisualInkContentPartProperties"
minOccurs="0" maxOccurs="1"/>
    </xsd:sequence>
  </xsd:complexType>
  <xsd:complexType name="CT_GvmlContentPart">
    <xsd:sequence>
      <xsd:element name="nvContentPartPr" type="CT_GvmlContentPartNonVisual" minOccurs="0"
maxOccurs="1"/>
      <xsd:element name="xfrm" type="a:CT_Transform2D" minOccurs="0" maxOccurs="1"/>
      <xsd:element name="extLst" type="a:CT_OfficeArtExtensionList" minOccurs="0"
maxOccurs="1"/>
    </xsd:sequence>
    <xsd:attribute name="bwMode" type="a:ST_BlackWhiteMode" use="optional"/>
    <xsd:attribute ref="r:id" use="required"/>
  </xsd:complexType>
  <xsd:element name="isCanvas" type="CT_IsGvmlCanvas"/>
  <xsd:element name="contentPart" type="CT_GvmlContentPart"/>
  <xsd:complexType name="CT_ShadowObscured">
    <xsd:attribute name="val" type="xsd:boolean" use="optional" default="false"/>
  </xsd:complexType>
  <xsd:element name="shadowObscured" type="CT_ShadowObscured"/>
  <xsd:element name="hiddenFill" type="a:CT_FillProperties"/>
  <xsd:element name="hiddenLine" type="a:CT_LineProperties"/>
  <xsd:element name="hiddenEffects" type="a:CT_EffectProperties"/>
  <xsd:element name="hiddenScene3d" type="a:CT_Scene3D"/>
  <xsd:element name="hiddenSp3d" type="a:CT_Shape3D"/>
  <xsd:simpleType name="ST_ArtisticEffectParam100">
    <xsd:restriction base="xsd:int">
      <xsd:minInclusive value="0"/>
      <xsd:maxInclusive value="100"/>
    </xsd:restriction>
  </xsd:simpleType>
  <xsd:simpleType name="ST_ArtisticEffectParam10">
    <xsd:restriction base="xsd:int">
      <xsd:minInclusive value="0"/>
      <xsd:maxInclusive value="10"/>
    </xsd:restriction>
  </xsd:simpleType>
  <xsd:simpleType name="ST_ArtisticEffectParam6">
    <xsd:restriction base="xsd:int">
      <xsd:minInclusive value="0"/>
      <xsd:maxInclusive value="6"/>
    </xsd:restriction>
  </xsd:simpleType>
  <xsd:simpleType name="ST_ArtisticEffectParam4">
    <xsd:restriction base="xsd:int">
      <xsd:minInclusive value="0"/>
      <xsd:maxInclusive value="4"/>
```

```
    </xsd:restriction>
  </xsd:simpleType>
  <xsd:complexType name="CT_PictureEffectBlur">
    <xsd:attribute name="radius" type="ST_ArtisticEffectParam100" use="optional"
default="10"/>
  </xsd:complexType>
  <xsd:complexType name="CT_PictureEffectCement">
    <xsd:attribute name="trans" type="a:ST_PositiveFixedPercentage" use="optional"
default="0"/>
    <xsd:attribute name="crackSpacing" type="ST_ArtisticEffectParam100" use="optional"
default="24"/>
  </xsd:complexType>
  <xsd:complexType name="CT_PictureEffectChalkSketch">
    <xsd:attribute name="trans" type="a:ST_PositiveFixedPercentage" use="optional"
default="0"/>
    <xsd:attribute name="pressure" type="ST_ArtisticEffectParam4" use="optional"
default="0"/>
  </xsd:complexType>
  <xsd:complexType name="CT_PictureEffectCrisscrossEtching">
    <xsd:attribute name="trans" type="a:ST_PositiveFixedPercentage" use="optional"
default="75"/>
    <xsd:attribute name="pressure" type="ST_ArtisticEffectParam100" use="optional"
default="30"/>
  </xsd:complexType>
  <xsd:complexType name="CT_PictureEffectCutout">
    <xsd:attribute name="trans" type="a:ST_PositiveFixedPercentage" use="optional"
default="0"/>
    <xsd:attribute name="numberOfShades" type="ST_ArtisticEffectParam6" use="optional"
default="2"/>
  </xsd:complexType>
  <xsd:complexType name="CT_PictureEffectFilmGrain">
    <xsd:attribute name="trans" type="a:ST_PositiveFixedPercentage" use="optional"
default="0"/>
    <xsd:attribute name="grainSize" type="ST_ArtisticEffectParam100" use="optional"
default="40"/>
  </xsd:complexType>
  <xsd:complexType name="CT_PictureEffectGlass">
    <xsd:attribute name="trans" type="a:ST_PositiveFixedPercentage" use="optional"
default="0"/>
    <xsd:attribute name="scaling" type="ST_ArtisticEffectParam100" use="optional"
default="34"/>
  </xsd:complexType>
  <xsd:complexType name="CT_PictureEffectGlowDiffused">
    <xsd:attribute name="trans" type="a:ST_PositiveFixedPercentage" use="optional"
default="0"/>
    <xsd:attribute name="intensity" type="ST_ArtisticEffectParam10" use="optional"
default="5"/>
  </xsd:complexType>
  <xsd:complexType name="CT_PictureEffectGlowEdges">
    <xsd:attribute name="trans" type="a:ST_PositiveFixedPercentage" use="optional"
default="15"/>
    <xsd:attribute name="smoothness" type="ST_ArtisticEffectParam10" use="optional"
default="3"/>
  </xsd:complexType>
  <xsd:complexType name="CT_PictureEffectLightScreen">
    <xsd:attribute name="trans" type="a:ST_PositiveFixedPercentage" use="optional"
default="0"/>
    <xsd:attribute name="gridSize" type="ST_ArtisticEffectParam10" use="optional"
default="4"/>
  </xsd:complexType>
  <xsd:complexType name="CT_PictureEffectLineDrawing">
```

```
    <xsd:attribute name="trans" type="a:ST_PositiveFixedPercentage" use="optional"
default="25"/>
    <xsd:attribute name="pencilSize" type="ST_ArtisticEffectParam100" use="optional"
default="0"/>
  </xsd:complexType>
  <xsd:complexType name="CT_PictureEffectMarker">
    <xsd:attribute name="trans" type="a:ST_PositiveFixedPercentage" use="optional"
default="0"/>
    <xsd:attribute name="size" type="ST_ArtisticEffectParam100" use="optional" default="97"/>
  </xsd:complexType>
  <xsd:complexType name="CT_PictureEffectMosiaicBubbles">
    <xsd:attribute name="trans" type="a:ST_PositiveFixedPercentage" use="optional"
default="0"/>
    <xsd:attribute name="pressure" type="ST_ArtisticEffectParam100" use="optional"
default="14"/>
  </xsd:complexType>
  <xsd:complexType name="CT_PictureEffectPaintBrush">
    <xsd:attribute name="trans" type="a:ST_PositiveFixedPercentage" use="optional"
default="0"/>
    <xsd:attribute name="brushSize" type="ST_ArtisticEffectParam10" use="optional"
default="2"/>
  </xsd:complexType>
  <xsd:complexType name="CT_PictureEffectPaintStrokes">
    <xsd:attribute name="trans" type="a:ST_PositiveFixedPercentage" use="optional"
default="0"/>
    <xsd:attribute name="intensity" type="ST_ArtisticEffectParam10" use="optional"
default="5"/>
  </xsd:complexType>
  <xsd:complexType name="CT_PictureEffectPastelsSmooth">
    <xsd:attribute name="trans" type="a:ST_PositiveFixedPercentage" use="optional"
default="0"/>
    <xsd:attribute name="scaling" type="ST_ArtisticEffectParam100" use="optional"
default="34"/>
  </xsd:complexType>
  <xsd:complexType name="CT_PictureEffectPencilGrayscale">
    <xsd:attribute name="trans" type="a:ST_PositiveFixedPercentage" use="optional"
default="0"/>
    <xsd:attribute name="pencilSize" type="ST_ArtisticEffectParam100" use="optional"
default="27"/>
  </xsd:complexType>
  <xsd:complexType name="CT_PictureEffectPencilSketch">
    <xsd:attribute name="trans" type="a:ST_PositiveFixedPercentage" use="optional"
default="0"/>
    <xsd:attribute name="pressure" type="ST_ArtisticEffectParam100" use="optional"
default="22"/>
  </xsd:complexType>
  <xsd:complexType name="CT_PictureEffectPhotocopy">
    <xsd:attribute name="trans" type="a:ST_PositiveFixedPercentage" use="optional"
default="30"/>
    <xsd:attribute name="detail" type="ST_ArtisticEffectParam10" use="optional" default="3"/>
  </xsd:complexType>
  <xsd:complexType name="CT_PictureEffectPlasticWrap">
    <xsd:attribute name="trans" type="a:ST_PositiveFixedPercentage" use="optional"
default="0"/>
    <xsd:attribute name="smoothness" type="ST_ArtisticEffectParam10" use="optional"
default="5"/>
  </xsd:complexType>
  <xsd:complexType name="CT_PictureEffectTexturizer">
    <xsd:attribute name="trans" type="a:ST_PositiveFixedPercentage" use="optional"
default="0"/>
```

```
    <xsd:attribute name="scaling" type="ST_ArtisticEffectParam100" use="optional"
default="34"/>
  </xsd:complexType>
  <xsd:complexType name="CT_PictureEffectWatercolorSponge">
    <xsd:attribute name="trans" type="a:ST_PositiveFixedPercentage" use="optional"
default="0"/>
    <xsd:attribute name="brushSize" type="ST_ArtisticEffectParam10" use="optional"
default="2"/>
  </xsd:complexType>
  <xsd:complexType name="CT_PictureEffectBackgroundRemovalForegroundMark">
    <xsd:attribute name="x1" type="a:ST_PositiveFixedPercentage" use="required"/>
    <xsd:attribute name="y1" type="a:ST_PositiveFixedPercentage" use="required"/>
    <xsd:attribute name="x2" type="a:ST_PositiveFixedPercentage" use="required"/>
    <xsd:attribute name="y2" type="a:ST_PositiveFixedPercentage" use="required"/>
  </xsd:complexType>
  <xsd:complexType name="CT_PictureEffectBackgroundRemovalBackgroundMark">
    <xsd:attribute name="x1" type="a:ST_PositiveFixedPercentage" use="required"/>
    <xsd:attribute name="y1" type="a:ST_PositiveFixedPercentage" use="required"/>
    <xsd:attribute name="x2" type="a:ST_PositiveFixedPercentage" use="required"/>
    <xsd:attribute name="y2" type="a:ST_PositiveFixedPercentage" use="required"/>
  </xsd:complexType>
  <xsd:complexType name="CT_PictureEffectBackgroundRemoval">
    <xsd:sequence>
      <xsd:element name="foregroundMark"
type="CT_PictureEffectBackgroundRemovalForegroundMark" minOccurs="0" maxOccurs="unbounded"/>
      <xsd:element name="backgroundMark"
type="CT_PictureEffectBackgroundRemovalBackgroundMark" minOccurs="0" maxOccurs="unbounded"/>
    </xsd:sequence>
    <xsd:attribute name="t" type="a:ST_PositiveFixedPercentage" use="required"/>
    <xsd:attribute name="b" type="a:ST_PositiveFixedPercentage" use="required"/>
    <xsd:attribute name="l" type="a:ST_PositiveFixedPercentage" use="required"/>
    <xsd:attribute name="r" type="a:ST_PositiveFixedPercentage" use="required"/>
  </xsd:complexType>
  <xsd:complexType name="CT_PictureEffectBrightnessContrast">
    <xsd:attribute name="bright" type="a:ST_FixedPercentage" use="optional" default="0"/>
    <xsd:attribute name="contrast" type="a:ST_FixedPercentage" use="optional" default="0"/>
  </xsd:complexType>
  <xsd:simpleType name="ST_ColorTemperature">
    <xsd:restriction base="xsd:int">
      <xsd:minInclusive value="1500"/>
      <xsd:maxInclusive value="11500"/>
    </xsd:restriction>
  </xsd:simpleType>
  <xsd:complexType name="CT_PictureEffectColorTemperature">
    <xsd:attribute name="colorTemp" type="ST_ColorTemperature" use="optional"
default="6500"/>
  </xsd:complexType>
  <xsd:simpleType name="ST_SaturationAmount">
    <xsd:restriction base="a:ST_Percentage">
      <xsd:minInclusive value="0"/>
      <xsd:maxInclusive value="400000"/>
    </xsd:restriction>
  </xsd:simpleType>
  <xsd:complexType name="CT_PictureEffectSaturation">
    <xsd:attribute name="sat" type="ST_SaturationAmount" use="optional" default="100"/>
  </xsd:complexType>
  <xsd:complexType name="CT_PictureEffectSharpenSoften">
    <xsd:attribute name="amount" type="a:ST_FixedPercentage" use="optional" default="0"/>
  </xsd:complexType>
```

```
  <xsd:complexType name="CT_PictureEffect">
    <xsd:choice minOccurs="1" maxOccurs="1">
      <xsd:element name="artisticBlur" type="CT_PictureEffectBlur" minOccurs="1"
maxOccurs="1"/>
      <xsd:element name="artisticCement" type="CT_PictureEffectCement" minOccurs="1"
maxOccurs="1"/>
      <xsd:element name="artisticChalkSketch" type="CT_PictureEffectChalkSketch"
minOccurs="1" maxOccurs="1"/>
      <xsd:element name="artisticCrisscrossEtching" type="CT_PictureEffectCrisscrossEtching"
minOccurs="1" maxOccurs="1"/>
      <xsd:element name="artisticCutout" type="CT_PictureEffectCutout" minOccurs="1"
maxOccurs="1"/>
      <xsd:element name="artisticFilmGrain" type="CT_PictureEffectFilmGrain" minOccurs="1"
maxOccurs="1"/>
      <xsd:element name="artisticGlass" type="CT_PictureEffectGlass" minOccurs="1"
maxOccurs="1"/>
      <xsd:element name="artisticGlowDiffused" type="CT_PictureEffectGlowDiffused"
minOccurs="1" maxOccurs="1"/>
      <xsd:element name="artisticGlowEdges" type="CT_PictureEffectGlowEdges" minOccurs="1"
maxOccurs="1"/>
      <xsd:element name="artisticLightScreen" type="CT_PictureEffectLightScreen"
minOccurs="1" maxOccurs="1"/>
      <xsd:element name="artisticLineDrawing" type="CT_PictureEffectLineDrawing"
minOccurs="1" maxOccurs="1"/>
      <xsd:element name="artisticMarker" type="CT_PictureEffectMarker" minOccurs="1"
maxOccurs="1"/>
      <xsd:element name="artisticMosiaicBubbles" type="CT_PictureEffectMosiaicBubbles"
minOccurs="1" maxOccurs="1"/>
      <xsd:element name="artisticPaintStrokes" type="CT_PictureEffectPaintStrokes"
minOccurs="1" maxOccurs="1"/>
      <xsd:element name="artisticPaintBrush" type="CT_PictureEffectPaintBrush" minOccurs="1"
maxOccurs="1"/>
      <xsd:element name="artisticPastelsSmooth" type="CT_PictureEffectPastelsSmooth"
minOccurs="1" maxOccurs="1"/>
      <xsd:element name="artisticPencilGrayscale" type="CT_PictureEffectPencilGrayscale"
minOccurs="1" maxOccurs="1"/>
      <xsd:element name="artisticPencilSketch" type="CT_PictureEffectPencilSketch"
minOccurs="1" maxOccurs="1"/>
      <xsd:element name="artisticPhotocopy" type="CT_PictureEffectPhotocopy" minOccurs="1"
maxOccurs="1"/>
      <xsd:element name="artisticPlasticWrap" type="CT_PictureEffectPlasticWrap"
minOccurs="1" maxOccurs="1"/>
      <xsd:element name="artisticTexturizer" type="CT_PictureEffectTexturizer" minOccurs="1"
maxOccurs="1"/>
      <xsd:element name="artisticWatercolorSponge" type="CT_PictureEffectWatercolorSponge"
minOccurs="1" maxOccurs="1"/>
      <xsd:element name="backgroundRemoval" type="CT_PictureEffectBackgroundRemoval"
minOccurs="1" maxOccurs="1"/>
      <xsd:element name="brightnessContrast" type="CT_PictureEffectBrightnessContrast"
minOccurs="1" maxOccurs="1"/>
      <xsd:element name="colorTemperature" type="CT_PictureEffectColorTemperature"
minOccurs="1" maxOccurs="1"/>
      <xsd:element name="saturation" type="CT_PictureEffectSaturation" minOccurs="1"
maxOccurs="1"/>
      <xsd:element name="sharpenSoften" type="CT_PictureEffectSharpenSoften" minOccurs="1"
maxOccurs="1"/>
    </xsd:choice>
    <xsd:attribute name="visible" type="xsd:boolean" use="optional" default="true"/>
  </xsd:complexType>
  <xsd:complexType name="CT_PictureLayer">
    <xsd:sequence>
```

```
      <xsd:element name="imgEffect" type="CT_PictureEffect" minOccurs="0"
maxOccurs="unbounded"/>
    </xsd:sequence>
    <xsd:attribute ref="r:embed" use="optional" default=""/>
  </xsd:complexType>
  <xsd:complexType name="CT_Photo">
    <xsd:sequence>
      <xsd:element name="imgLayer" type="CT_PictureLayer" minOccurs="1" maxOccurs="1"/>
    </xsd:sequence>
  </xsd:complexType>
  <xsd:element name="imgProps" type="CT_Photo"/>
  <xsd:complexType name="CT_UseLocalDpi">
    <xsd:attribute name="val" type="xsd:boolean" use="optional" default="true"/>
  </xsd:complexType>
  <xsd:element name="useLocalDpi" type="CT_UseLocalDpi"/>
</xsd:schema>
```

5.2 http://schemas.microsoft.com/office/word/2010/wordprocessingShape

```
<xsd:schema elementFormDefault="qualified"
targetNamespace="http://schemas.microsoft.com/office/word/2010/wordprocessingShape"
xmlns="http://schemas.microsoft.com/office/word/2010/wordprocessingShape"
xmlns:a="http://schemas.openxmlformats.org/drawingml/2006/main"
xmlns:w12="http://schemas.openxmlformats.org/wordprocessingml/2006/main"
xmlns:wne="http://schemas.microsoft.com/office/word/2006/wordml"
xmlns:oxsd="http://oxsdSchemaUri" xmlns:xsd="http://www.w3.org/2001/XMLSchema"
xmlns:rel="http://schemas.openxmlformats.org/officeDocument/2006/relationships">
  <xsd:import schemaLocation="oartsppproperties.xsd"
namespace="http://schemas.openxmlformats.org/drawingml/2006/main"/>
  <xsd:import schemaLocation="oartdocprop.xsd"
namespace="http://schemas.openxmlformats.org/drawingml/2006/main"/>
  <xsd:import schemaLocation="oartstylesheet.xsd"
namespace="http://schemas.openxmlformats.org/drawingml/2006/main"/>
  <xsd:import schemaLocation="orel.xsd"
namespace="http://schemas.openxmlformats.org/officeDocument/2006/relationships"/>
  <xsd:import schemaLocation="oartWordShapeTextbox.xsd"
namespace="http://schemas.openxmlformats.org/wordprocessingml/2006/main"/>
  <xsd:import schemaLocation="oartWordNonEcmaShapeTextbox.xsd"
namespace="http://schemas.microsoft.com/office/word/2006/wordml"/>
  <xsd:complexType name="CT_TextboxInfo">
    <xsd:sequence>
      <xsd:element ref="w12:txbxContent" minOccurs="0" maxOccurs="1"/>
      <xsd:element name="extLst" type="a:CT_OfficeArtExtensionList" minOccurs="0"
maxOccurs="1"/>
    </xsd:sequence>
    <xsd:attribute name="id" type="xsd:unsignedShort" use="optional" default="0"/>
  </xsd:complexType>
  <xsd:complexType name="CT_LinkedTextboxInformation">
    <xsd:sequence>
      <xsd:element name="extLst" type="a:CT_OfficeArtExtensionList" minOccurs="0"
maxOccurs="1"/>
    </xsd:sequence>
    <xsd:attribute name="id" type="xsd:unsignedShort" use="required"/>
    <xsd:attribute name="seq" type="xsd:unsignedShort" use="required"/>
  </xsd:complexType>
  <xsd:complexType name="CT_WordprocessingShape">
    <xsd:sequence minOccurs="1" maxOccurs="1">
      <xsd:element name="cNvPr" type="a:CT_NonVisualDrawingProps" minOccurs="0"
maxOccurs="1"/>
```

```
      <xsd:choice minOccurs="1" maxOccurs="1">
        <xsd:element name="cNvSpPr" type="a:CT_NonVisualDrawingShapeProps" minOccurs="1"
maxOccurs="1"/>
        <xsd:element name="cNvCnPr" type="a:CT_NonVisualConnectorProperties" minOccurs="1"
maxOccurs="1"/>
      </xsd:choice>
      <xsd:element name="spPr" type="a:CT_ShapeProperties" minOccurs="1" maxOccurs="1"/>
      <xsd:element name="style" type="a:CT_ShapeStyle" minOccurs="0" maxOccurs="1"/>
      <xsd:element name="extLst" type="a:CT_OfficeArtExtensionList" minOccurs="0"
maxOccurs="1"/>
      <xsd:choice minOccurs="0" maxOccurs="1">
        <xsd:element name="txbx" type="CT_TextboxInfo" minOccurs="1" maxOccurs="1"/>
        <xsd:element name="linkedTxbx" type="CT_LinkedTextboxInformation" minOccurs="1"
maxOccurs="1"/>
      </xsd:choice>
      <xsd:element name="bodyPr" type="a:CT_TextBodyProperties" minOccurs="1" maxOccurs="1"/>
    </xsd:sequence>
    <xsd:attribute name="normalEastAsianFlow" type="xsd:boolean" use="optional"
default="false"/>
  </xsd:complexType>
  <xsd:element name="wsp" type="CT_WordprocessingShape"/>
</xsd:schema>
```

5.3 http://schemas.microsoft.com/office/word/2010/wordml

```
<xsd:schema elementFormDefault="qualified"
targetNamespace="http://schemas.microsoft.com/office/word/2010/wordml"
xmlns="http://schemas.microsoft.com/office/word/2010/wordml"
xmlns:a="http://schemas.openxmlformats.org/drawingml/2006/main"
xmlns:a14="http://schemas.microsoft.com/office/drawing/2010/main"
xmlns:oxsd="http://oxsdSchemaUri" xmlns:xsd="http://www.w3.org/2001/XMLSchema"
xmlns:r="http://schemas.openxmlformats.org/officeDocument/2006/relationships">
  <xsd:import namespace="http://schemas.openxmlformats.org/officeDocument/2006/relationships"
schemaLocation="orel.xsd"/>
  <xsd:import namespace="http://schemas.openxmlformats.org/drawingml/2006/main"
schemaLocation="oartdocprop.xsd"/>
  <xsd:import namespace="http://schemas.microsoft.com/office/drawing/2010/main"
schemaLocation="oart14docprop.xsd"/>
  <xsd:complexType name="CT_WordContentPartNonVisual">
    <xsd:sequence>
      <xsd:element name="cNvPr" type="a:CT_NonVisualDrawingProps" minOccurs="0"
maxOccurs="1"/>
      <xsd:element name="cNvContentPartPr" type="a14:CT_NonVisualInkContentPartProperties"
minOccurs="0" maxOccurs="1"/>
    </xsd:sequence>
  </xsd:complexType>
  <xsd:complexType name="CT_WordContentPart">
    <xsd:sequence>
      <xsd:element name="nvContentPartPr" type="CT_WordContentPartNonVisual" minOccurs="0"
maxOccurs="1"/>
      <xsd:element name="xfrm" type="a:CT_Transform2D" minOccurs="0" maxOccurs="1"/>
      <xsd:element name="extLst" type="a:CT_OfficeArtExtensionList" minOccurs="0"
maxOccurs="1"/>
    </xsd:sequence>
    <xsd:attribute name="bwMode" type="a:ST_BlackWhiteMode" use="optional"/>
    <xsd:attribute ref="r:id" use="required"/>
  </xsd:complexType>
  <xsd:element name="contentPart" type="CT_WordContentPart"/>
```

```
</xsd:schema>
```

5.4 http://schemas.microsoft.com/office/word/2010/wordprocessingGroup

```
<xsd:schema elementFormDefault="qualified"
targetNamespace="http://schemas.microsoft.com/office/word/2010/wordprocessingGroup"
xmlns="http://schemas.microsoft.com/office/word/2010/wordprocessingGroup"
xmlns:a="http://schemas.openxmlformats.org/drawingml/2006/main"
xmlns:oxsd="http://oxsdSchemaUri" xmlns:xsd="http://www.w3.org/2001/XMLSchema"
xmlns:wps="http://schemas.microsoft.com/office/word/2010/wordprocessingShape"
xmlns:pic="http://schemas.openxmlformats.org/drawingml/2006/picture"
xmlns:w14="http://schemas.microsoft.com/office/word/2010/wordml">
  <xsd:import schemaLocation="oartspproperties.xsd"
namespace="http://schemas.openxmlformats.org/drawingml/2006/main"/>
  <xsd:import schemaLocation="oartdocprop.xsd"
namespace="http://schemas.openxmlformats.org/drawingml/2006/main"/>
  <xsd:import schemaLocation="oartstylesheet.xsd"
namespace="http://schemas.openxmlformats.org/drawingml/2006/main"/>
  <xsd:import schemaLocation="oarte2o.xsd"
namespace="http://schemas.openxmlformats.org/drawingml/2006/main"/>
  <xsd:import schemaLocation="oartwordshape.xsd"
namespace="http://schemas.microsoft.com/office/word/2010/wordprocessingShape"/>
  <xsd:import schemaLocation="picturee2o.xsd"
namespace="http://schemas.openxmlformats.org/drawingml/2006/picture"/>
  <xsd:import schemaLocation="oartwordcontentpart.xsd"
namespace="http://schemas.microsoft.com/office/word/2010/wordml"/>
  <xsd:complexType name="CT_GraphicFrame">
    <xsd:sequence>
      <xsd:element name="cNvPr" type="a:CT_NonVisualDrawingProps" minOccurs="1"
maxOccurs="1"/>
      <xsd:element name="cNvFrPr" type="a:CT_NonVisualGraphicFrameProperties" minOccurs="1"
maxOccurs="1"/>
      <xsd:element name="xfrm" type="a:CT_Transform2D" minOccurs="1" maxOccurs="1"/>
      <xsd:element ref="a:graphic" minOccurs="1" maxOccurs="1"/>
      <xsd:element name="extLst" type="a:CT_OfficeArtExtensionList" minOccurs="0"
maxOccurs="1"/>
    </xsd:sequence>
  </xsd:complexType>
  <xsd:complexType name="CT_WordprocessingGroup">
    <xsd:sequence minOccurs="1" maxOccurs="1">
      <xsd:element name="cNvPr" type="a:CT_NonVisualDrawingProps" minOccurs="0"
maxOccurs="1"/>
      <xsd:element name="cNvGrpSpPr" type="a:CT_NonVisualGroupDrawingShapeProps"
minOccurs="1" maxOccurs="1"/>
      <xsd:element name="grpSpPr" type="a:CT_GroupShapeProperties" minOccurs="1"
maxOccurs="1"/>
      <xsd:choice minOccurs="0" maxOccurs="unbounded">
        <xsd:element ref="wps:wsp"/>
        <xsd:element name="grpSp" type="CT_WordprocessingGroup"/>
        <xsd:element name="graphicFrame" type="CT_GraphicFrame"/>
        <xsd:element ref="pic:pic"/>
        <xsd:element ref="w14:contentPart"/>
      </xsd:choice>
      <xsd:element name="extLst" type="a:CT_OfficeArtExtensionList" minOccurs="0"
maxOccurs="1"/>
    </xsd:sequence>
  </xsd:complexType>
  <xsd:element name="wgp" type="CT_WordprocessingGroup"/>
</xsd:schema>
```

5.5 http://schemas.microsoft.com/office/word/2010/wordprocessingCanvas

```
<xsd:schema elementFormDefault="qualified"
targetNamespace="http://schemas.microsoft.com/office/word/2010/wordprocessingCanvas"
xmlns="http://schemas.microsoft.com/office/word/2010/wordprocessingCanvas"
xmlns:a="http://schemas.openxmlformats.org/drawingml/2006/main"
xmlns:w14="http://schemas.microsoft.com/office/word/2010/wordml"
xmlns:oxsd="http://oxsdSchemaUri" xmlns:xsd="http://www.w3.org/2001/XMLSchema"
xmlns:wpg="http://schemas.microsoft.com/office/word/2010/wordprocessingGroup"
xmlns:wps="http://schemas.microsoft.com/office/word/2010/wordprocessingShape"
xmlns:pic="http://schemas.openxmlformats.org/drawingml/2006/picture">
  <xsd:import schemaLocation="oartdocprop.xsd"
namespace="http://schemas.openxmlformats.org/drawingml/2006/main"/>
  <xsd:import schemaLocation="oarte2o.xsd"
namespace="http://schemas.openxmlformats.org/drawingml/2006/main"/>
  <xsd:import schemaLocation="oarte2oformat.xsd"
namespace="http://schemas.openxmlformats.org/drawingml/2006/main"/>
  <xsd:import schemaLocation="oartspproperties.xsd"
namespace="http://schemas.openxmlformats.org/drawingml/2006/main"/>
  <xsd:import schemaLocation="oartstylesheet.xsd"
namespace="http://schemas.openxmlformats.org/drawingml/2006/main"/>
  <xsd:import schemaLocation="oartwordgroup.xsd"
namespace="http://schemas.microsoft.com/office/word/2010/wordprocessingGroup"/>
  <xsd:import schemaLocation="oartwordshape.xsd"
namespace="http://schemas.microsoft.com/office/word/2010/wordprocessingShape"/>
  <xsd:import schemaLocation="oartwordcontentpart.xsd"
namespace="http://schemas.microsoft.com/office/word/2010/wordml"/>
  <xsd:import schemaLocation="picturee2o.xsd"
namespace="http://schemas.openxmlformats.org/drawingml/2006/picture"/>
  <xsd:complexType name="CT_WordprocessingCanvas">
    <xsd:sequence minOccurs="1" maxOccurs="1">
      <xsd:element name="bg" type="a:CT_BackgroundFormatting" minOccurs="0" maxOccurs="1"/>
      <xsd:element name="whole" type="a:CT_WholeE2oFormatting" minOccurs="0" maxOccurs="1"/>
      <xsd:choice minOccurs="0" maxOccurs="unbounded">
        <xsd:element ref="wps:wsp"/>
        <xsd:element ref="pic:pic"/>
        <xsd:element ref="w14:contentPart"/>
        <xsd:element ref="wpg:wgp"/>
        <xsd:element name="graphicFrame" type="wpg:CT_GraphicFrame"/>
      </xsd:choice>
      <xsd:element name="extLst" type="a:CT_OfficeArtExtensionList" minOccurs="0"
maxOccurs="1"/>
    </xsd:sequence>
  </xsd:complexType>
  <xsd:element name="wpc" type="CT_WordprocessingCanvas"/>
</xsd:schema>
```

5.6 http://schemas.microsoft.com/office/drawing/2008/diagram

```
<xsd:schema targetNamespace="http://schemas.microsoft.com/office/drawing/2008/diagram"
elementFormDefault="qualified" attributeFormDefault="unqualified"
xmlns:oxsd="http://oxsdSchemaUri" xmlns:xsd="http://www.w3.org/2001/XMLSchema"
xmlns:a="http://schemas.openxmlformats.org/drawingml/2006/main"
xmlns:d="http://schemas.openxmlformats.org/drawingml/2006/diagram"
xmlns:r="http://schemas.openxmlformats.org/officeDocument/2006/relationships"
xmlns="http://schemas.microsoft.com/office/drawing/2008/diagram">
  <xsd:import schemaLocation="orel.xsd"
namespace="http://schemas.openxmlformats.org/officeDocument/2006/relationships"/>
  <xsd:import schemaLocation="igxelementpropertyset.xsd"
namespace="http://schemas.openxmlformats.org/drawingml/2006/diagram"/>
```

```
  <xsd:import schemaLocation="oartspstyle.xsd"
namespace="http://schemas.openxmlformats.org/drawingml/2006/main"/>
  <xsd:import schemaLocation="oartdocprop.xsd"
namespace="http://schemas.openxmlformats.org/drawingml/2006/main"/>
  <xsd:import schemaLocation="oarte2o.xsd"
namespace="http://schemas.openxmlformats.org/drawingml/2006/main"/>
  <xsd:import schemaLocation="oarttx.xsd"
namespace="http://schemas.openxmlformats.org/drawingml/2006/main"/>
  <xsd:complexType name="CT_ShapeNonVisual">
    <xsd:sequence>
      <xsd:element name="cNvPr" type="a:CT_NonVisualDrawingProps" minOccurs="1"
maxOccurs="1"/>
      <xsd:element name="cNvSpPr" type="a:CT_NonVisualDrawingShapeProps" minOccurs="1"
maxOccurs="1"/>
    </xsd:sequence>
  </xsd:complexType>
  <xsd:complexType name="CT_Shape">
    <xsd:sequence>
      <xsd:element name="nvSpPr" type="CT_ShapeNonVisual" minOccurs="1" maxOccurs="1"/>
      <xsd:element name="spPr" type="a:CT_ShapeProperties" minOccurs="1" maxOccurs="1"/>
      <xsd:element name="style" type="a:CT_ShapeStyle" minOccurs="0" maxOccurs="1"/>
      <xsd:element name="txBody" type="a:CT_TextBody" minOccurs="0" maxOccurs="1"/>
      <xsd:element name="txXfrm" type="a:CT_Transform2D" minOccurs="0" maxOccurs="1"/>
      <xsd:element name="extLst" type="a:CT_OfficeArtExtensionList" minOccurs="0"
maxOccurs="1"/>
    </xsd:sequence>
    <xsd:attribute name="modelId" type="d:ST_ModelId" use="required"/>
  </xsd:complexType>
  <xsd:complexType name="CT_GroupShapeNonVisual">
    <xsd:sequence>
      <xsd:element name="cNvPr" type="a:CT_NonVisualDrawingProps" minOccurs="1"
maxOccurs="1"/>
      <xsd:element name="cNvGrpSpPr" type="a:CT_NonVisualGroupDrawingShapeProps"
minOccurs="1" maxOccurs="1"/>
    </xsd:sequence>
  </xsd:complexType>
  <xsd:complexType name="CT_GroupShape">
    <xsd:sequence>
      <xsd:element name="nvGrpSpPr" type="CT_GroupShapeNonVisual" minOccurs="1"
maxOccurs="1"/>
      <xsd:element name="grpSpPr" type="a:CT_GroupShapeProperties" minOccurs="1"
maxOccurs="1"/>
      <xsd:choice minOccurs="0" maxOccurs="unbounded">
        <xsd:element name="sp" type="CT_Shape"/>
        <xsd:element name="grpSp" type="CT_GroupShape"/>
      </xsd:choice>
      <xsd:element name="extLst" type="a:CT_OfficeArtExtensionList" minOccurs="0"
maxOccurs="1"/>
    </xsd:sequence>
  </xsd:complexType>
  <xsd:complexType name="CT_Drawing">
    <xsd:sequence>
      <xsd:element name="spTree" type="CT_GroupShape" minOccurs="1" maxOccurs="1"/>
    </xsd:sequence>
  </xsd:complexType>
  <xsd:element name="drawing" type="CT_Drawing"/>
  <xsd:complexType name="CT_DataModelExtBlock">
    <xsd:attribute name="relId" type="xsd:string"/>
    <xsd:attribute name="minVer" type="xsd:anyURI"/>
  </xsd:complexType>
```

```
  <xsd:element name="dataModelExt" type="CT_DataModelExtBlock"/>
</xsd:schema>
```

5.7 http://schemas.microsoft.com/ink/2010/main

```
<xsd:schema xmlns:xsd="http://www.w3.org/2001/XMLSchema" attributeFormDefault="unqualified"
elementFormDefault="qualified" targetNamespace="http://schemas.microsoft.com/ink/2010/main"
xmlns="http://schemas.microsoft.com/ink/2010/main"
xmlns:msink="http://schemas.microsoft.com/ink/2010/main" xmlns:oxsd="http://oxsdSchemaUri">
  <xsd:simpleType name="ST_KnownCtxNodeType">
    <xsd:restriction base="xsd:string">
      <xsd:enumeration value="root"/>
      <xsd:enumeration value="unclassifiedInk"/>
      <xsd:enumeration value="writingRegion"/>
      <xsd:enumeration value="analysisHint"/>
      <xsd:enumeration value="object"/>
      <xsd:enumeration value="inkDrawing"/>
      <xsd:enumeration value="image"/>
      <xsd:enumeration value="paragraph"/>
      <xsd:enumeration value="line"/>
      <xsd:enumeration value="inkBullet"/>
      <xsd:enumeration value="inkWord"/>
      <xsd:enumeration value="textWord"/>
      <xsd:enumeration value="customRecognizer"/>
      <xsd:enumeration value="mathRegion"/>
      <xsd:enumeration value="mathEquation"/>
      <xsd:enumeration value="mathStruct"/>
      <xsd:enumeration value="mathSymbol"/>
      <xsd:enumeration value="mathIdentifier"/>
      <xsd:enumeration value="mathOperator"/>
      <xsd:enumeration value="mathNumber"/>
      <xsd:enumeration value="nonInkDrawing"/>
      <xsd:enumeration value="groupNode"/>
      <xsd:enumeration value="mixedDrawing"/>
    </xsd:restriction>
  </xsd:simpleType>
  <xsd:simpleType name="ST_Guid">
    <xsd:restriction base="xsd:token">
      <xsd:pattern value="\{[0-9A-F]{8}-[0-9A-F]{4}-[0-9A-F]{4}-[0-9A-F]{4}-[0-9A-F]{12}\}"/>
    </xsd:restriction>
  </xsd:simpleType>
  <xsd:simpleType name="ST_Ref">
    <xsd:union memberTypes="msink:ST_Guid xsd:unsignedInt"/>
  </xsd:simpleType>
  <xsd:simpleType name="ST_CtxNodeType">
    <xsd:union memberTypes="msink:ST_KnownCtxNodeType msink:ST_Guid"/>
  </xsd:simpleType>
  <xsd:simpleType name="ST_Dir">
    <xsd:restriction base="xsd:string">
      <xsd:enumeration value="to"/>
      <xsd:enumeration value="from"/>
      <xsd:enumeration value="with"/>
    </xsd:restriction>
  </xsd:simpleType>
  <xsd:simpleType name="ST_KnownSemanticType">
    <xsd:restriction base="xsd:string">
      <xsd:enumeration value="none"/>
      <xsd:enumeration value="underline"/>
```

```
        <xsd:enumeration value="strikethrough"/>
        <xsd:enumeration value="highlight"/>
        <xsd:enumeration value="scratchOut"/>
        <xsd:enumeration value="verticalRange"/>
        <xsd:enumeration value="callout"/>
        <xsd:enumeration value="enclosure"/>
        <xsd:enumeration value="comment"/>
        <xsd:enumeration value="container"/>
        <xsd:enumeration value="connector"/>
      </xsd:restriction>
    </xsd:simpleType>
    <xsd:simpleType name="ST_SemanticType">
      <xsd:union memberTypes="ST_KnownSemanticType xsd:unsignedInt"/>
    </xsd:simpleType>
    <xsd:simpleType name="ST_Point">
      <xsd:restriction base="xsd:string">
        <xsd:pattern value="-?[0-9]+,-?[0-9]+"/>
      </xsd:restriction>
    </xsd:simpleType>
    <xsd:simpleType name="ST_Points">
      <xsd:list itemType="msink:ST_Point"/>
    </xsd:simpleType>
    <xsd:complexType name="CT_Property">
      <xsd:simpleContent>
        <xsd:extension base="xsd:hexBinary">
          <xsd:attribute name="type" type="ST_Guid"/>
        </xsd:extension>
      </xsd:simpleContent>
    </xsd:complexType>
    <xsd:complexType name="CT_CtxLink">
      <xsd:attribute name="direction" type="ST_Dir"/>
      <xsd:attribute name="ref" type="ST_Ref"/>
    </xsd:complexType>
    <xsd:complexType name="CT_CtxNode">
      <xsd:sequence>
        <xsd:element name="property" type="CT_Property" minOccurs="0" maxOccurs="unbounded"/>
        <xsd:element name="sourceLink" type="CT_CtxLink" minOccurs="0" maxOccurs="unbounded"/>
        <xsd:element name="destinationLink" type="CT_CtxLink" minOccurs="0"
  maxOccurs="unbounded"/>
      </xsd:sequence>
      <xsd:attribute name="id" type="ST_Guid" use="optional"/>
      <xsd:attribute name="type" type="ST_CtxNodeType" use="required"/>
      <xsd:attribute name="rotatedBoundingBox" type="ST_Points" use="optional"/>
      <xsd:attribute name="alignmentLevel" type="xsd:int" use="optional" default="0"/>
      <xsd:attribute name="contentType" type="xsd:int" use="optional" default="0"/>
      <xsd:attribute name="ascender" type="ST_Points" use="optional" default="0,0"/>
      <xsd:attribute name="descender" type="ST_Points" use="optional" default="0,0"/>
      <xsd:attribute name="baseline" type="ST_Points" use="optional" default="0,0"/>
      <xsd:attribute name="midline" type="ST_Points" use="optional" default="0,0"/>
      <xsd:attribute name="customRecognizerId" type="ST_Guid" use="optional"/>
      <xsd:attribute name="mathML" type="xsd:string" use="optional" default=""/>
      <xsd:attribute name="mathStruct" type="xsd:string" use="optional" default=""/>
      <xsd:attribute name="mathSymbol" type="xsd:string" use="optional" default=""/>
      <xsd:attribute name="beginModifierType" type="xsd:string" use="optional" default=""/>
      <xsd:attribute name="endModifierType" type="xsd:string" use="optional" default=""/>
      <xsd:attribute name="rotationAngle" type="xsd:int" use="optional" default="0"/>
      <xsd:attribute name="hotPoints" type="ST_Points" use="optional"/>
      <xsd:attribute name="centroid" type="ST_Point" use="optional"/>
      <xsd:attribute name="semanticType" type="ST_SemanticType" use="optional" default="none"/>
```

```
    <xsd:attribute name="shapeName" type="xsd:string" use="optional" default=""/>
    <xsd:attribute name="shapeGeometry" type="ST_Points" use="optional"/>
  </xsd:complexType>
  <xsd:element name="context" type="CT_CtxNode"/>
</xsd:schema>
```

5.8 http://schemas.microsoft.com/office/drawing/2010/chartDrawing

```
<xsd:schema elementFormDefault="qualified"
targetNamespace="http://schemas.microsoft.com/office/drawing/2010/chartDrawing"
xmlns="http://schemas.microsoft.com/office/drawing/2010/chartDrawing"
xmlns:xdr="http://schemas.openxmlformats.org/drawingml/2006/spreadsheetDrawing"
xmlns:xdr14="http://xldr14SchemaUri"
xmlns:a="http://schemas.openxmlformats.org/drawingml/2006/main"
xmlns:a14="http://schemas.microsoft.com/office/drawing/2010/main"
xmlns:r="http://schemas.openxmlformats.org/officeDocument/2006/relationships"
xmlns:oxsd="http://oxsdSchemaUri" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
  <xsd:import namespace="http://schemas.openxmlformats.org/officeDocument/2006/relationships"
schemaLocation="orel.xsd"/>
  <xsd:import namespace="http://schemas.openxmlformats.org/drawingml/2006/main"
schemaLocation="oartdocprop.xsd"/>
  <xsd:import namespace="http://schemas.microsoft.com/office/drawing/2010/main"
schemaLocation="oart14docprop.xsd"/>
  <xsd:complexType name="CT_ApplicationNonVisualDrawingProps">
    <xsd:attribute name="macro" type="xsd:string" use="optional"/>
    <xsd:attribute name="fPublished" type="xsd:boolean" use="optional" default="false"/>
  </xsd:complexType>
  <xsd:complexType name="CT_ContentPartNonVisual">
    <xsd:sequence>
      <xsd:element name="cNvPr" type="a:CT_NonVisualDrawingProps" minOccurs="1"
maxOccurs="1"/>
      <xsd:element name="cNvContentPartPr" type="a14:CT_NonVisualInkContentPartProperties"
minOccurs="0" maxOccurs="1"/>
    </xsd:sequence>
  </xsd:complexType>
  <xsd:complexType name="CT_ContentPart">
    <xsd:sequence>
      <xsd:element name="nvContentPartPr" type="CT_ContentPartNonVisual" minOccurs="0"
maxOccurs="1"/>
      <xsd:element name="nvPr" type="CT_ApplicationNonVisualDrawingProps" minOccurs="0"
maxOccurs="1"/>
      <xsd:element name="xfrm" type="a:CT_Transform2D" minOccurs="0" maxOccurs="1"/>
      <xsd:element name="extLst" type="a:CT_OfficeArtExtensionList" minOccurs="0"
maxOccurs="1"/>
    </xsd:sequence>
    <xsd:attribute ref="r:id" use="required"/>
    <xsd:attribute name="bwMode" type="a:ST_BlackWhiteMode" use="optional" default="auto"/>
  </xsd:complexType>
  <xsd:element name="contentPart" type="CT_ContentPart"/>
</xsd:schema>
```

5.9 http://schemas.microsoft.com/office/excel/2010/spreadsheetDrawing

```
<xsd:schema elementFormDefault="qualified"
targetNamespace="http://schemas.microsoft.com/office/excel/2010/spreadsheetDrawing"
xmlns="http://schemas.microsoft.com/office/excel/2010/spreadsheetDrawing"
xmlns:xdr="http://schemas.openxmlformats.org/drawingml/2006/spreadsheetDrawing"
xmlns:xdr14="http://xldr14SchemaUri"
```

```
xmlns:a="http://schemas.openxmlformats.org/drawingml/2006/main"
xmlns:a14="http://schemas.microsoft.com/office/drawing/2010/main"
xmlns:r="http://schemas.openxmlformats.org/officeDocument/2006/relationships"
xmlns:oxsd="http://oxsdSchemaUri" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
  <xsd:import namespace="http://schemas.openxmlformats.org/officeDocument/2006/relationships"
schemaLocation="orel.xsd"/>
  <xsd:import namespace="http://schemas.openxmlformats.org/drawingml/2006/main"
schemaLocation="oartdocprop.xsd"/>
  <xsd:import namespace="http://schemas.microsoft.com/office/drawing/2010/main"
schemaLocation="oart14docprop.xsd"/>
  <xsd:complexType name="CT_ApplicationNonVisualDrawingProps">
    <xsd:attribute name="macro" type="xsd:string" use="optional"/>
    <xsd:attribute name="fPublished" type="xsd:boolean" use="optional" default="false"/>
  </xsd:complexType>
  <xsd:complexType name="CT_ContentPartNonVisual">
    <xsd:sequence>
      <xsd:element name="cNvPr" type="a:CT_NonVisualDrawingProps" minOccurs="1"
maxOccurs="1"/>
      <xsd:element name="cNvContentPartPr" type="a14:CT_NonVisualInkContentPartProperties"
minOccurs="0" maxOccurs="1"/>
    </xsd:sequence>
  </xsd:complexType>
  <xsd:complexType name="CT_ContentPart">
    <xsd:sequence>
      <xsd:element name="nvContentPartPr" type="CT_ContentPartNonVisual" minOccurs="0"
maxOccurs="1"/>
      <xsd:element name="nvPr" type="CT_ApplicationNonVisualDrawingProps" minOccurs="0"
maxOccurs="1"/>
      <xsd:element name="xfrm" type="a:CT_Transform2D" minOccurs="0" maxOccurs="1"/>
      <xsd:element name="extLst" type="a:CT_OfficeArtExtensionList" minOccurs="0"
maxOccurs="1"/>
    </xsd:sequence>
    <xsd:attribute ref="r:id" use="required"/>
    <xsd:attribute name="bwMode" type="a:ST_BlackWhiteMode" use="optional" default="auto"/>
  </xsd:complexType>
  <xsd:element name="contentPart" type="CT_ContentPart"/>
</xsd:schema>
```

5.10 http://schemas.microsoft.com/office/drawing/2007/8/2/chart

```
<xsd:schema targetNamespace="http://schemas.microsoft.com/office/drawing/2007/8/2/chart"
elementFormDefault="qualified" attributeFormDefault="unqualified"
xmlns:a="http://schemas.openxmlformats.org/drawingml/2006/main"
xmlns:r="http://schemas.openxmlformats.org/officeDocument/2006/relationships"
xmlns:xsd="http://www.w3.org/2001/XMLSchema"
xmlns="http://schemas.microsoft.com/office/drawing/2007/8/2/chart" blockDefault="#all"
xmlns:cdr="http://schemas.openxmlformats.org/drawingml/2006/chartDrawing"
xmlns:c="http://schemas.openxmlformats.org/drawingml/2006/chart">
  <xsd:import namespace="http://schemas.openxmlformats.org/officeDocument/2006/relationships"
schemaLocation="orel.xsd"/>
  <xsd:import namespace="http://schemas.openxmlformats.org/drawingml/2006/main"
schemaLocation="oartspproperties.xsd"/>
  <xsd:import namespace="http://schemas.openxmlformats.org/drawingml/2006/main"
schemaLocation="oarttx.xsd"/>
  <xsd:import namespace="http://schemas.openxmlformats.org/drawingml/2006/main"
schemaLocation="oartstylesheet.xsd"/>
  <xsd:import namespace="http://schemas.openxmlformats.org/drawingml/2006/chartDrawing"
schemaLocation="ChartDrawing.xsd"/>
  <xsd:import namespace="http://schemas.openxmlformats.org/drawingml/2006/chart"
schemaLocation="Chart.xsd"/>
```

```
  <xsd:complexType name="CT_BooleanTrue">
    <xsd:attribute name="val" type="xsd:boolean" use="optional" default="true"/>
  </xsd:complexType>
  <xsd:complexType name="CT_BooleanFalse">
    <xsd:attribute name="val" type="xsd:boolean" use="optional" default="false"/>
  </xsd:complexType>
  <xsd:complexType name="CT_InvertSolidFillFmt">
    <xsd:sequence>
      <xsd:element name="spPr" type="a:CT_ShapeProperties" minOccurs="1" maxOccurs="1"/>
    </xsd:sequence>
  </xsd:complexType>
  <xsd:complexType name="CT_PivotOptions">
    <xsd:sequence>
      <xsd:element name="dropZoneFilter" type="CT_BooleanFalse" minOccurs="0" maxOccurs="1"/>
      <xsd:element name="dropZoneCategories" type="CT_BooleanFalse" minOccurs="0"
maxOccurs="1"/>
      <xsd:element name="dropZoneData" type="CT_BooleanFalse" minOccurs="0" maxOccurs="1"/>
      <xsd:element name="dropZoneSeries" type="CT_BooleanFalse" minOccurs="0" maxOccurs="1"/>
      <xsd:element name="dropZonesVisible" type="CT_BooleanFalse" minOccurs="0"
maxOccurs="1"/>
    </xsd:sequence>
  </xsd:complexType>
  <xsd:simpleType name="ST_Style">
    <xsd:restriction base="xsd:unsignedByte">
      <xsd:minInclusive value="101"/>
      <xsd:maxInclusive value="148"/>
    </xsd:restriction>
  </xsd:simpleType>
  <xsd:complexType name="CT_Style">
    <xsd:attribute name="val" type="ST_Style" use="required"/>
  </xsd:complexType>
  <xsd:element name="pivotOptions" type="CT_PivotOptions"/>
  <xsd:element name="invertSolidFillFmt" type="CT_InvertSolidFillFmt"/>
  <xsd:element name="style" type="CT_Style"/>
</xsd:schema>
```

5.11 http://schemas.microsoft.com/office/word/2010/wordprocessingDrawing

```
<xsd:schema
targetNamespace="http://schemas.microsoft.com/office/word/2010/wordprocessingDrawing"
elementFormDefault="qualified" xmlns:xsd="http://www.w3.org/2001/XMLSchema"
xmlns:oxsd="http://oxsdSchemaUri"
xmlns:a="http://schemas.openxmlformats.org/drawingml/2006/main"
xmlns="http://schemas.microsoft.com/office/word/2010/wordprocessingDrawing">
  <xsd:import schemaLocation="oarte2o.xsd"
namespace="http://schemas.openxmlformats.org/drawingml/2006/main"/>
  <xsd:import schemaLocation="oartdocprop.xsd"
namespace="http://schemas.openxmlformats.org/drawingml/2006/main"/>
  <xsd:simpleType name="ST_SizeRelFromH">
    <xsd:restriction base="xsd:token">
      <xsd:enumeration value="margin"/>
      <xsd:enumeration value="page"/>
      <xsd:enumeration value="leftMargin"/>
      <xsd:enumeration value="rightMargin"/>
      <xsd:enumeration value="insideMargin"/>
      <xsd:enumeration value="outsideMargin"/>
    </xsd:restriction>
  </xsd:simpleType>
```

```
  <xsd:simpleType name="ST_SizeRelFromV">
    <xsd:restriction base="xsd:token">
      <xsd:enumeration value="margin"/>
      <xsd:enumeration value="page"/>
      <xsd:enumeration value="topMargin"/>
      <xsd:enumeration value="bottomMargin"/>
      <xsd:enumeration value="insideMargin"/>
      <xsd:enumeration value="outsideMargin"/>
    </xsd:restriction>
  </xsd:simpleType>
  <xsd:complexType name="CT_SizeRelH">
    <xsd:sequence>
      <xsd:element name="pctWidth" type="a:ST_PositivePercentage" minOccurs="1"
maxOccurs="1"/>
    </xsd:sequence>
    <xsd:attribute name="relativeFrom" type="ST_SizeRelFromH" use="required"/>
  </xsd:complexType>
  <xsd:complexType name="CT_SizeRelV">
    <xsd:sequence>
      <xsd:element name="pctHeight" type="a:ST_PositivePercentage" minOccurs="1"
maxOccurs="1"/>
    </xsd:sequence>
    <xsd:attribute name="relativeFrom" type="ST_SizeRelFromV" use="required"/>
  </xsd:complexType>
  <xsd:element name="pctPosHOffset" type="a:ST_Percentage"/>
  <xsd:element name="pctPosVOffset" type="a:ST_Percentage"/>
  <xsd:element name="sizeRelH" type="CT_SizeRelH"/>
  <xsd:element name="sizeRelV" type="CT_SizeRelV"/>
  <xsd:simpleType name="ST_EditId">
    <xsd:restriction base="xsd:hexBinary">
      <xsd:length value="4"/>
    </xsd:restriction>
  </xsd:simpleType>
  <xsd:attribute name="anchorId" type="ST_EditId"/>
  <xsd:attribute name="editId" type="ST_EditId"/>
</xsd:schema>
```

5.12 http://schemas.microsoft.com/office/drawing/2010/picture

```
<xsd:schema elementFormDefault="qualified"
targetNamespace="http://schemas.microsoft.com/office/drawing/2010/picture"
xmlns="http://schemas.microsoft.com/office/drawing/2010/picture"
xmlns:a="http://schemas.openxmlformats.org/drawingml/2006/main"
xmlns:oxsd="http://oxsdSchemaUri" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
  <xsd:import schemaLocation="oartbasetypes.xsd"
namespace="http://schemas.openxmlformats.org/drawingml/2006/main"/>
  <xsd:import schemaLocation="oartspstyle.xsd"
namespace="http://schemas.openxmlformats.org/drawingml/2006/main"/>
  <xsd:element name="style" type="a:CT_ShapeStyle"/>
  <xsd:element name="extLst" type="a:CT_OfficeArtExtensionList"/>
</xsd:schema>
```

5.13 http://schemas.microsoft.com/office/drawing/2012/chart

```
<xsd:schema targetNamespace="http://schemas.microsoft.com/office/drawing/2012/chart"
elementFormDefault="qualified" attributeFormDefault="unqualified"
xmlns="http://schemas.microsoft.com/office/drawing/2012/chart"
```

```
xmlns:c="http://schemas.openxmlformats.org/drawingml/2006/chart"
xmlns:a="http://schemas.openxmlformats.org/drawingml/2006/main"
xmlns:xsd="http://www.w3.org/2001/XMLSchema" blockDefault="#all">
  <xsd:import namespace="http://schemas.openxmlformats.org/drawingml/2006/chart"
schemaLocation="chart.xsd"/>
  <xsd:import namespace="http://schemas.openxmlformats.org/drawingml/2006/main"
schemaLocation="oartsppproperties.xsd"/>
  <xsd:element name="pivotSource" type="c:CT_PivotSource"/>
  <xsd:element name="numFmt" type="c:CT_NumFmt"/>
  <xsd:element name="spPr" type="a:CT_ShapeProperties"/>
  <xsd:element name="layout" type="c:CT_Layout"/>
  <xsd:element name="fullRef" type="CT_FullRef"/>
  <xsd:complexType name="CT_FullRef">
    <xsd:sequence>
      <xsd:element name="sqref" type="xsd:string" minOccurs="1" maxOccurs="1"/>
    </xsd:sequence>
  </xsd:complexType>
  <xsd:complexType name="CT_LevelRef">
    <xsd:sequence>
      <xsd:element name="sqref" type="xsd:string" minOccurs="1" maxOccurs="1"/>
    </xsd:sequence>
  </xsd:complexType>
  <xsd:element name="levelRef" type="CT_LevelRef"/>
  <xsd:complexType name="CT_FormulaRef">
    <xsd:sequence>
      <xsd:element name="sqref" type="xsd:string" minOccurs="1" maxOccurs="1"/>
    </xsd:sequence>
  </xsd:complexType>
  <xsd:element name="formulaRef" type="CT_FormulaRef"/>
  <xsd:complexType name="CT_FilteredSeriesTitle">
    <xsd:sequence>
      <xsd:element name="tx" type="c:CT_Tx" minOccurs="1" maxOccurs="1"/>
    </xsd:sequence>
  </xsd:complexType>
  <xsd:element name="filteredSeriesTitle" type="CT_FilteredSeriesTitle"/>
  <xsd:complexType name="CT_FilteredCategoryTitle">
    <xsd:sequence>
      <xsd:element name="cat" type="c:CT_AxDataSource" minOccurs="1" maxOccurs="1"/>
    </xsd:sequence>
  </xsd:complexType>
  <xsd:element name="filteredCategoryTitle" type="CT_FilteredCategoryTitle"/>
  <xsd:complexType name="CT_FilteredBarSer">
    <xsd:sequence>
      <xsd:element name="ser" type="c:CT_BarSer" minOccurs="1" maxOccurs="1"/>
    </xsd:sequence>
  </xsd:complexType>
  <xsd:complexType name="CT_FilteredLineSer">
    <xsd:sequence>
      <xsd:element name="ser" type="c:CT_LineSer" minOccurs="1" maxOccurs="1"/>
    </xsd:sequence>
  </xsd:complexType>
  <xsd:complexType name="CT_FilteredScatterSer">
    <xsd:sequence>
      <xsd:element name="ser" type="c:CT_ScatterSer" minOccurs="1" maxOccurs="1"/>
    </xsd:sequence>
  </xsd:complexType>
  <xsd:complexType name="CT_FilteredAreaSer">
    <xsd:sequence>
      <xsd:element name="ser" type="c:CT_AreaSer" minOccurs="1" maxOccurs="1"/>
    </xsd:sequence>
```

```
  </xsd:complexType>
  <xsd:complexType name="CT_FilteredPieSer">
    <xsd:sequence>
      <xsd:element name="ser" type="c:CT_PieSer" minOccurs="1" maxOccurs="1"/>
    </xsd:sequence>
  </xsd:complexType>
  <xsd:complexType name="CT_FilteredBubbleSer">
    <xsd:sequence>
      <xsd:element name="ser" type="c:CT_BubbleSer" minOccurs="1" maxOccurs="1"/>
    </xsd:sequence>
  </xsd:complexType>
  <xsd:complexType name="CT_FilteredRadarSer">
    <xsd:sequence>
      <xsd:element name="ser" type="c:CT_RadarSer" minOccurs="1" maxOccurs="1"/>
    </xsd:sequence>
  </xsd:complexType>
  <xsd:complexType name="CT_FilteredSurfaceSer">
    <xsd:sequence>
      <xsd:element name="ser" type="c:CT_SurfaceSer" minOccurs="1" maxOccurs="1"/>
    </xsd:sequence>
  </xsd:complexType>
  <xsd:element name="filteredAreaSeries" type="CT_FilteredAreaSer"/>
  <xsd:element name="filteredBarSeries" type="CT_FilteredBarSer"/>
  <xsd:element name="filteredBubbleSeries" type="CT_FilteredBubbleSer"/>
  <xsd:element name="filteredLineSeries" type="CT_FilteredLineSer"/>
  <xsd:element name="filteredPieSeries" type="CT_FilteredPieSer"/>
  <xsd:element name="filteredRadarSeries" type="CT_FilteredRadarSer"/>
  <xsd:element name="filteredScatterSeries" type="CT_FilteredScatterSer"/>
  <xsd:element name="filteredSurfaceSeries" type="CT_FilteredSurfaceSer"/>
  <xsd:complexType name="CT_SeriesDataLabelsRange">
    <xsd:sequence>
      <xsd:element name="f" type="xsd:string" minOccurs="1" maxOccurs="1"/>
      <xsd:element name="dlblRangeCache" type="c:CT_StrData" minOccurs="0" maxOccurs="1"/>
    </xsd:sequence>
  </xsd:complexType>
  <xsd:element name="datalabelsRange" type="CT_SeriesDataLabelsRange"/>
  <xsd:complexType name="CT_CategoryFilterException">
    <xsd:sequence>
      <xsd:element name="sqref" type="xsd:string" minOccurs="1" maxOccurs="1"/>
      <xsd:element name="spPr" type="a:CT_ShapeProperties" minOccurs="0" maxOccurs="1"/>
      <xsd:element name="explosion" type="c:CT_UnsignedInt" minOccurs="0" maxOccurs="1"/>
      <xsd:element name="invertIfNegative" type="c:CT_Boolean" minOccurs="0" maxOccurs="1"/>
      <xsd:element name="bubble3D" type="c:CT_Boolean" minOccurs="0" maxOccurs="1"/>
      <xsd:element name="marker" type="c:CT_Marker" minOccurs="0" maxOccurs="1"/>
      <xsd:element name="dLbl" type="c:CT_DLbl" minOccurs="0" maxOccurs="1"/>
    </xsd:sequence>
  </xsd:complexType>
  <xsd:complexType name="CT_CategoryFilterExceptions">
    <xsd:sequence>
      <xsd:element name="categoryFilterException" type="CT_CategoryFilterException"
minOccurs="1" maxOccurs="unbounded"/>
    </xsd:sequence>
  </xsd:complexType>
  <xsd:element name="categoryFilterExceptions" type="CT_CategoryFilterExceptions"/>
  <xsd:complexType name="CT_DataLabelFieldTableEntry">
    <xsd:sequence>
      <xsd:element name="txfldGUID" type="xsd:string" minOccurs="1" maxOccurs="1"/>
      <xsd:element name="f" type="xsd:string" minOccurs="1" maxOccurs="1"/>
```

```
      <xsd:element name="dlblFieldTableCache" type="c:CT_StrData" minOccurs="0"
maxOccurs="1"/>
    </xsd:sequence>
  </xsd:complexType>
  <xsd:complexType name="CT_DataLabelFieldTable">
    <xsd:sequence>
      <xsd:element name="dlblFTEntry" type="CT_DataLabelFieldTableEntry" minOccurs="0"
maxOccurs="unbounded"/>
    </xsd:sequence>
  </xsd:complexType>
  <xsd:element name="dlblFieldTable" type="CT_DataLabelFieldTable"/>
  <xsd:element name="xForSave" type="c:CT_Boolean"/>
  <xsd:element name="showDataLabelsRange" type="c:CT_Boolean"/>
  <xsd:element name="tx" type="c:CT_Tx"/>
  <xsd:element name="showLeaderLines" type="c:CT_Boolean"/>
  <xsd:element name="leaderLines" type="c:CT_ChartLines"/>
  <xsd:element name="autoCat" type="c:CT_Boolean"/>
</xsd:schema>
```

5.14 http://schemas.microsoft.com/office/drawing/2012/main

```
<xsd:schema targetNamespace="http://schemas.microsoft.com/office/drawing/2012/main"
elementFormDefault="qualified" xmlns="http://schemas.microsoft.com/office/drawing/2012/main"
xmlns:xsd="http://www.w3.org/2001/XMLSchema" xmlns:oxsd="http://oxsdSchemaUri"
xmlns:a="http://schemas.openxmlformats.org/drawingml/2006/main">
  <xsd:import namespace="http://schemas.openxmlformats.org/drawingml/2006/main"
schemaLocation="oartbasetypes.xsd"/>
  <xsd:simpleType name="ST_TargetScreenSz">
    <xsd:restriction base="xsd:token">
      <xsd:enumeration value="544x376"/>
      <xsd:enumeration value="640x480"/>
      <xsd:enumeration value="720x512"/>
      <xsd:enumeration value="800x600"/>
      <xsd:enumeration value="1024x768"/>
      <xsd:enumeration value="1152x882"/>
      <xsd:enumeration value="1152x900"/>
      <xsd:enumeration value="1280x1024"/>
      <xsd:enumeration value="1600x1200"/>
      <xsd:enumeration value="1800x1440"/>
      <xsd:enumeration value="1920x1200"/>
    </xsd:restriction>
  </xsd:simpleType>
  <xsd:complexType name="CT_BackgroundPr">
    <xsd:attribute name="bwMode" type="a:ST_BlackWhiteMode"/>
    <xsd:attribute name="bwPure" type="a:ST_BlackWhiteMode"/>
    <xsd:attribute name="bwNormal" type="a:ST_BlackWhiteMode"/>
    <xsd:attribute name="targetScreenSize" type="ST_TargetScreenSz"/>
  </xsd:complexType>
  <xsd:element name="backgroundPr" type="CT_BackgroundPr"/>
  <xsd:complexType name="CT_NonVisualGroupProps">
    <xsd:attribute name="isLegacyGroup" type="xsd:boolean"/>
  </xsd:complexType>
  <xsd:element name="nonVisualGroupProps" type="CT_NonVisualGroupProps"/>
  <xsd:complexType name="CT_ObjectPr">
    <xsd:attribute name="objectId" type="xsd:string"/>
    <xsd:attribute name="isActiveX" type="xsd:boolean"/>
    <xsd:attribute name="linkType" type="xsd:string"/>
  </xsd:complexType>
```

```
  <xsd:element name="objectPr" type="CT_ObjectPr"/>
  <xsd:complexType name="CT_SignatureLine">
    <xsd:attribute name="isSignatureLine" type="xsd:boolean"/>
    <xsd:attribute name="id" type="a:ST_Guid"/>
    <xsd:attribute name="provId" type="a:ST_Guid"/>
    <xsd:attribute name="signingInstructionsSet" type="xsd:boolean"/>
    <xsd:attribute name="allowComments" type="xsd:boolean"/>
    <xsd:attribute name="showSignDate" type="xsd:boolean"/>
    <xsd:attribute name="suggestedSigner" type="xsd:string"/>
    <xsd:attribute name="suggestedSigner2" type="xsd:string"/>
    <xsd:attribute name="suggestedSignerEmail" type="xsd:string"/>
    <xsd:attribute name="signingInstructions" type="xsd:string"/>
    <xsd:attribute name="addlXml" type="xsd:string"/>
    <xsd:attribute name="sigProvUrl" type="xsd:string"/>
  </xsd:complexType>
  <xsd:element name="signatureLine" type="CT_SignatureLine"/>
</xsd:schema>
```

5.15 http://schemas.microsoft.com/office/drawing/2012/chartStyle

```
<xsd:schema targetNamespace="http://schemas.microsoft.com/office/drawing/2012/chartStyle"
elementFormDefault="qualified" attributeFormDefault="unqualified"
xmlns:a="http://schemas.openxmlformats.org/drawingml/2006/main"
xmlns:xsd="http://www.w3.org/2001/XMLSchema" xmlns:oxsd="http://oxsdSchemaUri"
xmlns="http://schemas.microsoft.com/office/drawing/2012/chartStyle">
  <xsd:import schemaLocation="oartbasetypes.xsd"
namespace="http://schemas.openxmlformats.org/drawingml/2006/main"/>
  <xsd:import schemaLocation="oartspstyle.xsd"
namespace="http://schemas.openxmlformats.org/drawingml/2006/main"/>
  <xsd:import schemaLocation="oarttx.xsd"
namespace="http://schemas.openxmlformats.org/drawingml/2006/main"/>
  <xsd:simpleType name="ST_ColorStyleMethodEnum">
    <xsd:restriction base="xsd:token">
      <xsd:enumeration value="cycle"/>
      <xsd:enumeration value="withinLinear"/>
      <xsd:enumeration value="acrossLinear"/>
      <xsd:enumeration value="withinLinearReversed"/>
      <xsd:enumeration value="acrossLinearReversed"/>
    </xsd:restriction>
  </xsd:simpleType>
  <xsd:simpleType name="ST_ColorStyleMethod">
    <xsd:union memberTypes="ST_ColorStyleMethodEnum xsd:string"/>
  </xsd:simpleType>
  <xsd:complexType name="CT_ColorStyleVariation">
    <xsd:sequence>
      <xsd:group ref="a:EG_ColorTransform" minOccurs="0" maxOccurs="unbounded"/>
    </xsd:sequence>
  </xsd:complexType>
  <xsd:simpleType name="ST_StyleReferenceModifierEnum">
    <xsd:restriction base="xsd:token">
      <xsd:enumeration value="ignoreCSTransforms"/>
    </xsd:restriction>
  </xsd:simpleType>
  <xsd:simpleType name="ST_StyleReferenceModifier">
    <xsd:union memberTypes="ST_StyleReferenceModifierEnum xsd:string"/>
  </xsd:simpleType>
  <xsd:simpleType name="ST_StyleReferenceModifierList">
    <xsd:list itemType="ST_StyleReferenceModifier"/>
```

```
  </xsd:simpleType>
  <xsd:complexType name="CT_ColorStyle">
    <xsd:sequence>
      <xsd:group ref="a:EG_ColorChoice" minOccurs="1" maxOccurs="unbounded"/>
      <xsd:element name="variation" type="CT_ColorStyleVariation" minOccurs="0"
maxOccurs="unbounded"/>
      <xsd:element name="extLst" type="a:CT_OfficeArtExtensionList" minOccurs="0"
maxOccurs="1"/>
    </xsd:sequence>
    <xsd:attribute name="meth" type="ST_ColorStyleMethod" use="required"/>
    <xsd:attribute name="id" type="xsd:unsignedInt" use="optional"/>
  </xsd:complexType>
  <xsd:element name="colorStyle" type="CT_ColorStyle"/>
  <xsd:simpleType name="ST_StyleColorEnum">
    <xsd:restriction base="xsd:token">
      <xsd:enumeration value="auto"/>
    </xsd:restriction>
  </xsd:simpleType>
  <xsd:simpleType name="ST_StyleColorVal">
    <xsd:union memberTypes="xsd:unsignedInt ST_StyleColorEnum xsd:string"/>
  </xsd:simpleType>
  <xsd:complexType name="CT_StyleColor">
    <xsd:sequence>
      <xsd:group ref="a:EG_ColorTransform" minOccurs="0" maxOccurs="unbounded"/>
    </xsd:sequence>
    <xsd:attribute name="val" type="ST_StyleColorVal"/>
  </xsd:complexType>
  <xsd:complexType name="CT_StyleReference">
    <xsd:sequence>
      <xsd:group ref="a:EG_ColorChoice" minOccurs="0" maxOccurs="1"/>
      <xsd:element name="styleClr" type="CT_StyleColor" minOccurs="0" maxOccurs="1"/>
    </xsd:sequence>
    <xsd:attribute name="idx" type="a:ST_StyleMatrixColumnIndex" use="required"/>
    <xsd:attribute name="mods" type="ST_StyleReferenceModifierList" use="optional"/>
  </xsd:complexType>
  <xsd:complexType name="CT_FontReference">
    <xsd:sequence>
      <xsd:group ref="a:EG_ColorChoice" minOccurs="0" maxOccurs="1"/>
      <xsd:element name="styleClr" type="CT_StyleColor" minOccurs="0" maxOccurs="1"/>
    </xsd:sequence>
    <xsd:attribute name="idx" type="a:ST_FontCollectionIndex" use="required"/>
    <xsd:attribute name="mods" type="ST_StyleReferenceModifierList" use="optional"/>
  </xsd:complexType>
  <xsd:simpleType name="ST_StyleEntryModifierEnum">
    <xsd:restriction base="xsd:token">
      <xsd:enumeration value="allowNoFillOverride"/>
      <xsd:enumeration value="allowNoLineOverride"/>
    </xsd:restriction>
  </xsd:simpleType>
  <xsd:simpleType name="ST_StyleEntryModifier">
    <xsd:union memberTypes="ST_StyleEntryModifierEnum xsd:string"/>
  </xsd:simpleType>
  <xsd:simpleType name="ST_StyleEntryModifierList">
    <xsd:list itemType="ST_StyleEntryModifier"/>
  </xsd:simpleType>
  <xsd:simpleType name="ST_MarkerStyle">
    <xsd:restriction base="xsd:token">
      <xsd:enumeration value="circle"/>
      <xsd:enumeration value="dash"/>
```

```
      <xsd:enumeration value="diamond"/>
      <xsd:enumeration value="dot"/>
      <xsd:enumeration value="plus"/>
      <xsd:enumeration value="square"/>
      <xsd:enumeration value="star"/>
      <xsd:enumeration value="triangle"/>
      <xsd:enumeration value="x"/>
    </xsd:restriction>
  </xsd:simpleType>
  <xsd:simpleType name="ST_MarkerSize">
    <xsd:restriction base="xsd:unsignedByte">
      <xsd:minInclusive value="2"/>
      <xsd:maxInclusive value="72"/>
    </xsd:restriction>
  </xsd:simpleType>
  <xsd:complexType name="CT_MarkerLayout">
    <xsd:attribute name="symbol" type="ST_MarkerStyle" use="optional"/>
    <xsd:attribute name="size" type="ST_MarkerSize" use="optional"/>
  </xsd:complexType>
  <xsd:complexType name="CT_StyleEntry">
    <xsd:sequence>
      <xsd:element name="lnRef" type="CT_StyleReference" minOccurs="1" maxOccurs="1"/>
      <xsd:element name="lineWidthScale" type="xsd:double" minOccurs="0" maxOccurs="1"
default="1.0"/>
      <xsd:element name="fillRef" type="CT_StyleReference" minOccurs="1" maxOccurs="1"/>
      <xsd:element name="effectRef" type="CT_StyleReference" minOccurs="1" maxOccurs="1"/>
      <xsd:element name="fontRef" type="CT_FontReference" minOccurs="1" maxOccurs="1"/>
      <xsd:element name="spPr" type="a:CT_ShapeProperties" minOccurs="0" maxOccurs="1"/>
      <xsd:element name="defRPr" type="a:CT_TextCharacterProperties" minOccurs="0"
maxOccurs="1"/>
      <xsd:element name="bodyPr" type="a:CT_TextBodyProperties" minOccurs="0" maxOccurs="1"/>
      <xsd:element name="extLst" type="a:CT_OfficeArtExtensionList" minOccurs="0"
maxOccurs="1"/>
    </xsd:sequence>
    <xsd:attribute name="mods" type="ST_StyleEntryModifierList" use="optional"/>
  </xsd:complexType>
  <xsd:complexType name="CT_ChartStyle">
    <xsd:sequence>
      <xsd:element name="axisTitle" type="CT_StyleEntry" minOccurs="1" maxOccurs="1"/>
      <xsd:element name="categoryAxis" type="CT_StyleEntry" minOccurs="1" maxOccurs="1"/>
      <xsd:element name="chartArea" type="CT_StyleEntry" minOccurs="1" maxOccurs="1"/>
      <xsd:element name="dataLabel" type="CT_StyleEntry" minOccurs="1" maxOccurs="1"/>
      <xsd:element name="dataLabelCallout" type="CT_StyleEntry" minOccurs="0" maxOccurs="1"/>
      <xsd:element name="dataPoint" type="CT_StyleEntry" minOccurs="1" maxOccurs="1"/>
      <xsd:element name="dataPoint3D" type="CT_StyleEntry" minOccurs="1" maxOccurs="1"/>
      <xsd:element name="dataPointLine" type="CT_StyleEntry" minOccurs="1" maxOccurs="1"/>
      <xsd:element name="dataPointMarker" type="CT_StyleEntry" minOccurs="1" maxOccurs="1"/>
      <xsd:element name="dataPointMarkerLayout" type="CT_MarkerLayout" minOccurs="0"
maxOccurs="1"/>
      <xsd:element name="dataPointWireframe" type="CT_StyleEntry" minOccurs="1"
maxOccurs="1"/>
      <xsd:element name="dataTable" type="CT_StyleEntry" minOccurs="1" maxOccurs="1"/>
      <xsd:element name="downBar" type="CT_StyleEntry" minOccurs="1" maxOccurs="1"/>
      <xsd:element name="dropLine" type="CT_StyleEntry" minOccurs="1" maxOccurs="1"/>
      <xsd:element name="errorBar" type="CT_StyleEntry" minOccurs="1" maxOccurs="1"/>
      <xsd:element name="floor" type="CT_StyleEntry" minOccurs="1" maxOccurs="1"/>
      <xsd:element name="gridlineMajor" type="CT_StyleEntry" minOccurs="1" maxOccurs="1"/>
      <xsd:element name="gridlineMinor" type="CT_StyleEntry" minOccurs="1" maxOccurs="1"/>
      <xsd:element name="hiLoLine" type="CT_StyleEntry" minOccurs="1" maxOccurs="1"/>
```

```
      <xsd:element name="leaderLine" type="CT_StyleEntry" minOccurs="1" maxOccurs="1"/>
      <xsd:element name="legend" type="CT_StyleEntry" minOccurs="1" maxOccurs="1"/>
      <xsd:element name="plotArea" type="CT_StyleEntry" minOccurs="1" maxOccurs="1"/>
      <xsd:element name="plotArea3D" type="CT_StyleEntry" minOccurs="1" maxOccurs="1"/>
      <xsd:element name="seriesAxis" type="CT_StyleEntry" minOccurs="1" maxOccurs="1"/>
      <xsd:element name="seriesLine" type="CT_StyleEntry" minOccurs="1" maxOccurs="1"/>
      <xsd:element name="title" type="CT_StyleEntry" minOccurs="1" maxOccurs="1"/>
      <xsd:element name="trendline" type="CT_StyleEntry" minOccurs="1" maxOccurs="1"/>
      <xsd:element name="trendlineLabel" type="CT_StyleEntry" minOccurs="1" maxOccurs="1"/>
      <xsd:element name="upBar" type="CT_StyleEntry" minOccurs="1" maxOccurs="1"/>
      <xsd:element name="valueAxis" type="CT_StyleEntry" minOccurs="1" maxOccurs="1"/>
      <xsd:element name="wall" type="CT_StyleEntry" minOccurs="1" maxOccurs="1"/>
      <xsd:element name="extLst" type="a:CT_OfficeArtExtensionList" minOccurs="0"
maxOccurs="1"/>
    </xsd:sequence>
    <xsd:attribute name="id" type="xsd:unsignedInt" use="optional"/>
  </xsd:complexType>
  <xsd:element name="chartStyle" type="CT_ChartStyle"/>
</xsd:schema>
```

5.16 http://schemas.microsoft.com/office/drawing/2010/diagram

```
<xsd:schema xmlns:xsd="http://www.w3.org/2001/XMLSchema" xmlns:o="http://oxsdSchemaUri"
xmlns:a="http://schemas.openxmlformats.org/drawingml/2006/main"
xmlns="http://schemas.microsoft.com/office/drawing/2010/diagram"
xmlns:oxsd="http://oxsdSchemaUri"
targetNamespace="http://schemas.microsoft.com/office/drawing/2010/diagram"
elementFormDefault="qualified" attributeFormDefault="unqualified">
  <xsd:import namespace="http://schemas.openxmlformats.org/drawingml/2006/main"
schemaLocation="oartbasetypes.xsd"/>
  <xsd:import namespace="http://schemas.openxmlformats.org/drawingml/2006/main"
schemaLocation="oartdocprop.xsd"/>
  <xsd:element name="cNvPr" type="a:CT_NonVisualDrawingProps"/>
  <xsd:complexType name="CT_Boolean">
    <xsd:attribute name="val" type="xsd:boolean" use="optional" default="false"/>
  </xsd:complexType>
  <xsd:element name="recolorImg" type="CT_Boolean"/>
</xsd:schema>
```

5.17 http://schemas.microsoft.com/office/thememl/2012/main

```
<xsd:schema targetNamespace="http://schemas.microsoft.com/office/thememl/2012/main"
elementFormDefault="qualified" xmlns="http://schemas.microsoft.com/office/thememl/2012/main"
xmlns:xsd="http://www.w3.org/2001/XMLSchema" xmlns:oxsd="http://oxsdSchemaUri"
xmlns:r="http://schemas.openxmlformats.org/officeDocument/2006/relationships"
xmlns:a="http://schemas.openxmlformats.org/drawingml/2006/main">
  <xsd:import namespace="http://schemas.openxmlformats.org/drawingml/2006/main"
schemaLocation="oartbasetypes.xsd"/>
  <xsd:import namespace="http://schemas.openxmlformats.org/drawingml/2006/main"
schemaLocation="oartbasestylesheet.xsd"/>
  <xsd:import namespace="http://schemas.openxmlformats.org/officeDocument/2006/relationships"
schemaLocation="orel.xsd"/>
  <xsd:complexType name="CT_ThemeFamily">
    <xsd:sequence>
      <xsd:element name="extLst" type="a:CT_OfficeArtExtensionList" minOccurs="0"
maxOccurs="1"/>
    </xsd:sequence>
    <xsd:attribute name="name" type="xsd:string" use="required"/>
```

```
    <xsd:attribute name="id" type="a:ST_Guid" use="required"/>
    <xsd:attribute name="vid" type="a:ST_Guid" use="required"/>
  </xsd:complexType>
  <xsd:element name="themeFamily" type="CT_ThemeFamily"/>
  <xsd:attribute name="name" type="xsd:string"/>
</xsd:schema>
```

5.18 http://schemas.microsoft.com/office/word/2012/wordprocessingDrawing

```
<xsd:schema
targetNamespace="http://schemas.microsoft.com/office/word/2012/wordprocessingDrawing"
elementFormDefault="qualified"
xmlns:r="http://schemas.openxmlformats.org/officeDocument/2006/relationships"
xmlns:xsd="http://www.w3.org/2001/XMLSchema" xmlns:oxsd="http://oxsdSchemaUri"
xmlns="http://schemas.microsoft.com/office/word/2012/wordprocessingDrawing"
xmlns:a="http://schemas.openxmlformats.org/drawingml/2006/main">
  <xsd:import namespace="http://schemas.openxmlformats.org/officeDocument/2006/relationships"
schemaLocation="orel.xsd"/>
  <xsd:import namespace="http://schemas.openxmlformats.org/drawingml/2006/main"
schemaLocation="oartbasetypes.xsd"/>
  <xsd:complexType name="CT_WebVideoPr">
    <xsd:attribute name="embeddedHtml" type="xsd:string" use="optional" default=""/>
    <xsd:attribute name="h" type="xsd:unsignedInt" use="optional" default="0"/>
    <xsd:attribute name="w" type="xsd:unsignedInt" use="optional" default="0"/>
  </xsd:complexType>
  <xsd:element name="webVideoPr" type="CT_WebVideoPr"/>
</xsd:schema>
```

6 Appendix B: Product Behavior

The information in this specification is applicable to the following Microsoft products or supplemental software. References to product versions include released service packs:

- The 2007 Microsoft® Office system
- Microsoft® Office 2010 suites
- Microsoft® Office 2013 Preview

Exceptions, if any, are noted below. If a service pack or Quick Fix Engineering (QFE) number appears with the product version, behavior changed in that service pack or QFE. The new behavior also applies to subsequent service packs of the product 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 2.1.1: This part is available only in Office 2013 Preview.

<2> Section 2.1.2: This part is available only in Office 2013 Preview.

<3> Section 2.1.3: The Diagram Layout extension is also present in the 2007 Office system Service Pack 2.

<4> Section 2.1.4: The presence of the **traceFormat** element anywhere other than **inkSource** is ignored by Office 2010.

<5> Section 2.1.4: The **intermittentChannels** element is ignored by Office 2010.

<6> Section 2.1.4: Any values other than X, Y, Z, S, T, SN, F, TP, BP, OTx, OTy, OA, OE, OR, RP, RR, RY, TW, TH, and TC are ignored by Office 2010.

<7> Section 2.1.4: The **orientation** attribute is ignored by Office 2010.

<8> Section 2.1.4: The **respectTo** attribute is ignored by Office 2010.

<9> Section 2.1.4: Any values other than dev, in, cm, deg, rad, s, lb, and g are ignored by Office 2010.

<10> Section 2.1.4: Office 2010 will read **trace** elements that are child elements of the **ink** elements or child elements of **traceGroup** elements, but it will always write trace elements as child elements of **traceGroup** elements.

<11> Section 2.1.4: The **type** attribute is ignored by Office 2010.

<12> Section 2.1.4: The **continuation** attribute is ignored by Office 2010.

<13> Section 2.1.4: The **priorRef** attribute is ignored by Office 2010.

<14> Section 2.1.4: The **duration** attribute is ignored by Office 2010.

<15> Section 2.1.4: The **timeOffset** attribute is ignored by Office 2010.

<16> Section 2.1.4: Office 2010 will read any arbitrary hierarchy of **traceGroup** elements. However, after loading an InkML Content Part, it is not guaranteed that the same hierarchy of traceGroup elements will be written when re-saved. The exact hierarchy of **traceGroup** elements is determined by Office 2010's proprietary ink analysis algorithms.

<17> Section 2.1.4: The **contextRef** attribute is ignored by Office 2010.

<18> Section 2.1.4: The **brushRef** attribute is ignored by Office 2010.

<19> Section 2.1.4: The **annotation** element is ignored by Office 2010.

<20> Section 2.1.4: The **annotationXML** element is optional, but if present it must contain an emma:emma element as described in section 2.1.4.

<21> Section 2.1.4: The **traceView** element is ignored by Office 2010.

<22> Section 2.1.4: The **context** element is ignored unless it is a child element of the **definitions** element.

<23> Section 2.1.4: The **contextRef** attribute is ignored by Office 2010.

<24> Section 2.1.4: The **canvasRef** attribute is ignored by Office 2010.

<25> Section 2.1.4: The **canvasTransformRef** attribute is ignored by Office 2010.

<26> Section 2.1.4: The **traceFormatRef** attribute is ignored by Office 2010.

<27> Section 2.1.4: The **inkSourceRef** attribute is ignored by Office 2010.

<28> Section 2.1.4: The **brushRef** attribute is ignored by Office 2010.

<29> Section 2.1.4: The **timestampRef** attribute is ignored by Office 2010.

<30> Section 2.1.4: The **canvas** element is ignored by Office 2010.

<31> Section 2.1.4: The **canvasTransform** element is ignored by Office 2010.

<32> Section 2.1.4: The **timestamp** element is ignored by Office 2010.

<33> Section 2.1.4: The **sampleRate** element is ignored by Office 2010.

<34> Section 2.1.4: The **latency** element is ignored by Office 2010.

<35> Section 2.1.4: The **activeArea** element is ignored by Office 2010.

<36> Section 2.1.4: The **srcProperty** element is ignored by Office 2010.

<37> Section 2.1.4: The **channelProperties** element is optional and may contain zero or more **channelProperty** elements. If absent, default properties are used that vary depending on the operating system and device drivers present.

<38> Section 2.1.4: The **channelProperty** element is optional and specifies properties of a given channel. If absent, default properties are used that vary depending on the operating system and device drivers present.

<39> Section 2.1.4: Only the property name "resolution" is used by Office 2010. All other property names are ignored.

<40> Section 2.1.4: The **brushRef** attribute is ignored by Office 2010.

<41> Section 2.1.4: Only the values width, height, color, transparency, tip, rasterOp, antiAliased, fitToCurve, and ignorePressure are recognized by Office 2010. Any other value causes the brushProperty element to be ignored.

<42> Section 2.1.4: The **timestamp** element is ignored by Office 2010.

<43> Section 2.1.4: The **canvas** element is ignored by Office 2010.

<44> Section 2.1.4: The **canvasTransform** element is ignored by Office 2010.

<45> Section 2.1.4: The **mapping** element is ignored by Office 2010.

<46> Section 2.1.4: The **bind** element is ignored by Office 2010.

<47> Section 2.1.4: The **table** element is ignored by Office 2010.

<48> Section 2.1.4: The **matrix** element is ignored by Office 2010.

<49> Section 2.1.4: The **trace** element as a child element of **definitions** is ignored by Office 2010.

<50> Section 2.1.4: The **traceGroup** element as a child element of **definitions** is ignored by Office 2010.

<51> Section 2.1.4: The **inkSource** element as a child element of **definitions** is ignored by Office 2010.

<52> Section 2.1.4: The **traceFormat** element as a child element of **definitions** is ignored by Office 2010.

<53> Section 2.1.4: The **annotation** element is ignored by Office 2010.

<54> Section 2.1.4: If the **id** attribute is present but the value is not a GUID, then the attribute is ignored and not round-tripped.

<55> Section 2.1.4: The **emma:group** element is ignored by Office 2010.

<56> Section 2.1.4: The **emma:sequence** element is ignored by Office 2010.

<57> Section 2.1.4: The **emma:lattice** element is ignored by Office 2010.

<58> Section 2.2.1: This extension is available only in Office 2013 Preview.

<59> Section 2.2.1: This extension is available only in Office 2013 Preview.

<60> Section 2.2.1: This extension is available only in Office 2013 Preview.

<61> Section 2.2.1: This extension is available only in Office 2013 Preview.

<62> Section 2.2.1: This extension is available only in Office 2013 Preview.

<63> Section 2.2.1.1: This extension is available only in Office 2013 Preview.

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<79> Section 2.2.1.1: This extension is available only in Office 2013 Preview.

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<81> Section 2.2.1.1: This extension is available only in Office 2013 Preview.

<82> Section 2.2.1.1: This extension is available only in Office 2013 Preview.

<83> Section 2.2.1.1: This extension is available only in Office 2013 Preview.

<84> Section 2.2.1.1: This extension is available only in Office 2013 Preview.

<85> Section 2.2.1.2: This extension is available only in Office 2013 Preview.

<86> Section 2.2.1.3: This extension is available only in Office 2013 Preview.

<87> Section 2.2.7.1: This integration is available only in Office 2013 Preview.

<88> Section 2.2.7.2: This integration is available only in Office 2013 Preview.

<89> Section 2.2.9.1: This integration is available only in Office 2013 Preview.

<90> Section 2.2.9.2: This integration is available only in Office 2013 Preview.

<91> Section 2.3.18: **CT_NonVisualDrawingProps** ([ISO/IEC-29500-1] section A.4.1) contains attributes **id** and **hidden**, which are ignored by Microsoft Office 2010 for diagram shapes.

<92> Section 2.3.20: Excel 2010 does not delete this shape when loading.

<93> Section 2.3.34: This element is available only in Office 2013 Preview.

<94> Section 2.3.35: This element is available only in Office 2013 Preview.

<95> Section 2.3.36: This element is available only in Office 2013 Preview.

<96> Section 2.3.37: This element is available only in Office 2013 Preview.

<97> Section 2.3.38: This element is available only in Office 2013 Preview.

<98> Section 2.3.39: This element is available only in Office 2013 Preview.

<99> Section 2.3.40: This element is available only in Office 2013 Preview.

<100> Section 2.3.41: This element is available only in Office 2013 Preview.

<101> Section 2.3.42: This element is available only in Office 2013 Preview.

<102> Section 2.3.43: This element is available only in Office 2013 Preview.

<103> Section 2.3.44: This element is available only in Office 2013 Preview.

<104> Section 2.3.45: This element is available only in Office 2013 Preview.

<105> Section 2.3.46: This element is available only in Office 2013 Preview.

<106> Section 2.3.47: This element is available only in Office 2013 Preview.

<107> Section 2.3.48: This element is available only in Office 2013 Preview.

<108> Section 2.3.49: This element is available only in Office 2013 Preview.

<109> Section 2.3.50: This element is available only in Office 2013 Preview.

<110> Section 2.3.51: This element is available only in Office 2013 Preview.

<111> Section 2.3.52: This element is available only in Office 2013 Preview.

<112> Section 2.3.53: This element is available only in Office 2013 Preview.

<113> Section 2.3.54: The child elements of **CT_ManualLayout** ([ISO/IEC-29500-1] section A.5.1) other than w (Width) and h (Height) are ignored for a **Datalabel** object (section 2.2.1.3). The child elements of **CT_ManualLayout** ([ISO/IEC-29500-1] section A.5.1) other than x (Left), y (Top), w (Width) and h (Height) are ignored for a parent **Datalabels** object (section 2.2.1.2).

<114> Section 2.3.54: This element is available only in Office 2013 Preview.

<115> Section 2.3.55: This element is available only in Office 2013 Preview.

<116> Section 2.3.56: This element is available only in Office 2013 Preview.

<117> Section 2.3.57: This element is available only in Office 2013 Preview.

<118> Section 2.3.58: This element is available only in Office 2013 Preview.

<119> Section 2.3.59: This element is available only in Office 2013 Preview.

<120> Section 2.3.60: This element is available only in Office 2013 Preview.

<121> Section 2.3.61: This element is available only in Office 2013 Preview.

<122> Section 2.3.62: This element is available only in Office 2013 Preview.

<123> Section 2.3.63: This element is available only in Office 2013 Preview.

<124> Section 2.3.64: This element is available only in Office 2013 Preview.

<125> Section 2.5.51: Microsoft Office 2010 requires that the **macro** attribute follow the same grammar as name references ([ISO/IEC-29500-1] section M.2.16.6), with a minimum length of zero characters and a maximum length of 256 characters.

<126> Section 2.5.58: Office Excel 2007 does not ignore the **CT_Style** element([ISO/IEC-29500-4] section A.5.1).

<127> Section 2.5.59: Word 2010 supports only positive values for this element.

<128> Section 2.5.60: Word 2010 supports only positive values for this element.

<129> Section 2.5.61: This complex type is available only in Office 2013 Preview.

<130> Section 2.5.62: This complex type is available only in Office 2013 Preview.

<131> Section 2.5.63: This type is available only in Office 2013 Preview.

<132> Section 2.5.64: This type is available only in Office 2013 Preview.

<133> Section 2.5.65: This type is available only in Office 2013 Preview.

<134> Section 2.5.66: This type is available only in Office 2013 Preview.

<135> Section 2.5.67: This type is available only in Office 2013 Preview.

<136> Section 2.5.68: This type is available only in Office 2013 Preview.

<137> Section 2.5.69: This type is available only in Office 2013 Preview.

<138> Section 2.5.70: This type is available only in Office 2013 Preview.

<139> Section 2.5.76: In Word 2010 a **CT_WordprocessingShape** that is directly contained by a **wpc** element and does not have a **cNvPr** child element.

<140> Section 2.5.76: In Word 2010, the **spPr** element is required to have either a **custGeom** element ([ISO/IEC-29500-1] section 20.1.9.8) or a **prstGeom** element ([ISO/IEC-29500-1] section 20.1.9.18) as a child element.

<141> Section 2.5.78: In Word 2010, an instantiation of the **scene3D** element ([ISO/IEC-29500-1] section 20.1.4.1.26) in an outer group takes precedence over **scene3D** instantiated in any inner shapes or groups.

<142> Section 2.5.78: Word 2010 does not support this child element on a **CT_WordprocessingGroup** if the group contains a **CT_WordprocessingCanvas** as an ancestor.

<143> Section 2.5.79: Word 2010 does not support this child element on a **CT_WordprocessingCanvas**.

<144> Section 2.5.81: Microsoft Office 2010 requires that the **macro** attribute follow the same grammar as name references ([ISO/IEC-29500-1] section M.2.16.6), with a minimum length of zero characters and a maximum length of 256 characters.

<145> Section 2.5.84: This type is available only in Office 2013 Preview.

<146> Section 2.5.85: This type is available only in Office 2013 Preview.

<147> Section 2.5.86: This type is available only in Office 2013 Preview.

<148> Section 2.5.87: This type is available only in Office 2013 Preview.

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<153> Section 2.5.92: This type is available only in Office 2013 Preview.

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<158> Section 2.5.97: This complex type is available only in Office 2013 Preview.

<159> Section 2.5.98: This complex type is available only in Office 2013 Preview.

<160> Section 2.5.99: This complex type is available only in Office 2013 Preview.

<161> Section 2.5.100: This complex type is available only in Office 2013 Preview.

<162> Section 2.5.101: This type is available only in Office 2013 Preview.

<163> Section 2.5.102: This type is available only in Office 2013 Preview.

<164> Section 2.5.104: This complex type is available only in Office 2013 Preview.

<165> Section 2.6.21: This type is available only in Office 2013 Preview.

<166> Section 2.6.22: This type is available only in Office 2013 Preview.

<167> Section 2.6.23: This type is available only in Office 2013 Preview.

<168> Section 2.6.24: This type is available only in Office 2013 Preview.

<169> Section 2.6.25: This type is available only in Office 2013 Preview.

<170> Section 2.6.26: This type is available only in Office 2013 Preview.

<171> Section 2.6.27: This type is available only in Office 2013 Preview.

<172> Section 2.6.28: This type is available only in Office 2013 Preview.

<173> Section 2.6.29: This type is available only in Office 2013 Preview.

<174> Section 2.6.30: This type is available only in Office 2013 Preview.

<175> Section 2.6.31: This type is available only in Office 2013 Preview.

<176> Section 2.6.32: This type is available only in Office 2013 Preview.

<177> Section 2.6.33: This type is available only in Office 2013 Preview.

7 Change Tracking

This section identifies changes that were made to the [MS-ODRAWXML] protocol document between the April 2012 and July 2012 releases. Changes are classified as New, Major, Minor, Editorial, or No change.

The revision class **New** means that a new document is being released.

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 or functionality.
- An extensive rewrite, addition, or deletion of major portions of content.
- The removal of a document from the documentation set.
- Changes made for template compliance.

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 **Editorial** means that the language and formatting in the technical content was changed. Editorial changes apply to grammatical, formatting, and style issues.

The revision class **No change** means that no new technical or language changes were introduced. The technical content of the document is identical to the last released version, but minor editorial and formatting changes, as well as updates to the header and footer information, and to the revision summary, may have been made.

Major and minor changes can be described further using the following change types:

- New content added.
- Content updated.
- Content removed.
- New product behavior note added.
- Product behavior note updated.
- Product behavior note removed.
- New protocol syntax added.
- Protocol syntax updated.
- Protocol syntax removed.
- New content added due to protocol revision.
- Content updated due to protocol revision.
- Content removed due to protocol revision.
- New protocol syntax added due to protocol revision.

- Protocol syntax updated due to protocol revision.
- Protocol syntax removed due to protocol revision.
- New content added for template compliance.
- Content updated for template compliance.
- Content removed for template compliance.
- Obsolete document removed.

Editorial changes are always classified with the change type **Editorially updated.**

Some important terms used in the change type descriptions are defined as follows:

- **Protocol syntax** refers to data elements (such as packets, structures, enumerations, and methods) as well as interfaces.
- **Protocol revision** refers to changes made to a protocol that affect the bits that are sent over the wire.

The changes made to this document are listed in the following table. For more information, please contact protocol@microsoft.com.

Section	Tracking number (if applicable) and description	Major change (Y or N)	Change type
1.1 Glossary	Added new terms: cell reference, worksheet.	N	New content added.
1.2.1 Normative References	Removed self-reference, [MS-ODRAWXML].	N	Content removed.
1.3.1 Charts	Modified description for the "levelRef" extension, and added description for the "formulaRef" extension.	N	Content updated.
2.2.1.1 Filtering	Added extension URIs for the numRef, strRef, multiLvlStrRef elements of the extLst child element.	N	Content updated.
2.2.8 Themes	Added new extension.	Y	New content added.
2.3.62	Added criteria for	N	Content

Section	Tracking number (if applicable) and description	Major change (Y or N)	Change type
autoCat	presence of element.		updated.
2.3.64 colorStyle	Added new global element.	Y	New content added.
2.3.65 themeFamily	Added new global element.	Y	New content added.
2.3.66 formulaRef	Added new global element.	Y	New content added.
2.3.67 webVideoPr	Added new global element.	Y	New content added.
2.4.4 name	Added new global attribute.	Y	New content added.
2.5.61 CT_FullRef	Updated description for the "sqref" element.	N	Content updated.
2.5.62 CT_LevelRef	Updated description for the "sqref" element.	N	Content updated.
2.5.97 CT_SeriesDataLabelsRange	Added ABNF reference and restrictions.	N	Content updated.
2.5.98 CT_DataLabelFieldTableEntry	Added new element to the complex type: dlblFieldTableCache.	Y	Protocol syntax updated.
2.5.100 CT_CategoryFilterException	Updated the description of the "sqref" element.	N	Content updated.
2.5.102 CT_ChartStyle	Added new element to complex type: dataLabelCallout.	Y	Protocol syntax updated.
2.5.103 CT_ThemeFamily	Added new global complex type.	Y	New content added.
2.5.104	Added new global	Y	New

Section	Tracking number (if applicable) and description	Major change (Y or N)	Change type
CT_FormulaRef	complex type.		content added.
2.5.105 CT_WebVideoPr	Added new global complex type.	Y	New content added.
2.6.22 ST_ColorStyleMethodEnum	Added two new enumerations: withinLinearReversed, acrossLinearReversed.	N	Content updated.
5.13 http://schemas.microsoft.com/office/drawing/2012/chart	Updated schema to reflect revisions made throughout specification.	Y	Protocol syntax updated.
5.15 http://schemas.microsoft.com/office/drawing/2012/chartStyle	Updated schema to reflect revisions made throughout specification.	Y	Protocol syntax updated.
5.17 http://schemas.microsoft.com/office/thememl/2012/main	Added new schema.	Y	New protocol syntax added.
5.18 http://schemas.microsoft.com/office/word/2012/wordprocessingDrawing	Updated schema to reflect revisions made throughout specification.	Y	Protocol syntax updated.
	Removed the global element "WordVideoPr".	Y	Content removed.
	Removed the global complex type "WordVidoPr".	Y	Content removed.

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