[MS-PPTX]:

PowerPoint (.pptx) Extensions to the Office Open XML File Format

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Revision Summary

Date	Revision History	Revision Class	Comments
7/13/2009	0.1	Major	Initial Availability
8/28/2009	0.2	Major	Updated and revised the technical content
11/6/2009	0.3	Editorial	Revised and edited the technical content
2/19/2010	1.0	Major	Updated and revised the technical content
3/31/2010	1.01	Editorial	Revised and edited the technical content
4/30/2010	1.02	Editorial	Revised and edited the technical content
6/7/2010	1.03	Editorial	Revised and edited the technical content
6/29/2010	1.04	Editorial	Changed language and formatting in the technical content.
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11/15/2010	1.05	Major	Significantly changed the technical content.
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9/29/2016	9.0	None	No changes to the meaning, language, or formatting of the technical content.

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1 Introduction

The PowerPoint (.pptx) Extensions to the Office Open XML File Format specifies elements and attributes that extend the XML vocabulary for representing PresentationML documents described in the [ISO/IEC29500:2012] specification. The new elements and attributes are presented using the extensibility mechanisms provided by the [ISO/IEC29500:2012] specification.

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

1.1 Glossary

This document uses the following terms:

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

Coordinated Universal Time (UTC): A high-precision atomic time standard that approximately tracks Universal Time (UT). It is the basis for legal, civil time all over the Earth. Time zones around the world are expressed as positive and negative offsets from UTC. In this role, it is also referred to as Zulu time (Z) and Greenwich Mean Time (GMT). In these specifications, all references to UTC refer to the time at UTC-0 (or GMT).

globally unique identifier (GUID): A term used interchangeably with universally unique identifier (UUID) in Microsoft protocol technical documents (TDs). Interchanging the usage of these terms does not imply or require a specific algorithm or mechanism to generate the value. Specifically, the use of this term does not imply or require that the algorithms described in [RFC4122] or [C706] must be used for generating the **GUID**. See also universally unique identifier (UUID).

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

presentation: A collection of slides that are intended to be viewed by an audience.

presentation slide: A slide that contains the content that can be displayed during a slide show. A presentation slide can derive formatting and content from a main master slide or a title master slide.

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

shape identifier: An integer that corresponds to a shape object or an instantiation of a shape object.

slide show: A delivery of a sequence of presentation slides, typically to an audience.

time node: A record or parent node that stores the information that is necessary to cause a time- or action-based effect to occur. Each time node has a corresponding object to which an effect is applied. It can be used randomly, simultaneously, or sequentially, and it can be used to specify certain time-based effects between objects that are being animated. Effects include visual and media behaviors.

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

Zoom: An object that links to a slide or section that shows a transition when navigating to the slide or section.

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

1.2 References

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

1.2.1 Normative References

We conduct frequent surveys of the normative references to assure their continued availability. If you have any issue with finding a normative reference, please contact dochelp@microsoft.com. We will assist you in finding the relevant information.

[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

[ISO/IEC29500-1:2012] ISO/IEC, "Information Technology -- Document description and processing languages -- Office Open XML File Formats -- Part 1: Fundamentals and Markup Language Reference", ISO/IEC 29500-1:2012, http://www.iso.org/iso/home/store/catalogue_ics/catalogue_detail_ics.htm?csnumber=61750

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

[ISO/IEC29500-3:2012] ISO/IEC, "Information technology -- Document description and processing languages -- Office Open XML File Formats -- Part 3: Markup Compatibility and Extensibility", ISO/IEC 29500-3:2012, http://www.iso.org/iso/home/store/catalogue_ics/catalogue_detail_ics.htm?csnumber=61797

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

[ISO/IEC29500:2012] ISO/IEC, "Information Technology -- Document description and processing languages -- Office Open XML File Formats -- Parts 1-4", ISO/IEC 29500-1:2012, http://www.iso.org/iso/home/store/catalogue_ics/catalogue_detail_ics.htm?csnumber=61750

[MS-DTYP] Microsoft Corporation, "Windows Data Types".

[MS-ODRAWXML] Microsoft Corporation, "Office Drawing Extensions to Office Open XML Structure".

[MS-OWEXML] Microsoft Corporation, "Office Web Extensibility Extensions to Office Open XML Structure 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

[RFC5234] Crocker, D., Ed., and Overell, P., "Augmented BNF for Syntax Specifications: ABNF", STD 68, RFC 5234, January 2008, http://www.rfc-editor.org/rfc/rfc5234.txt

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[XMLSCHEMA1] Thompson, H., Beech, D., Maloney, M., and Mendelsohn, N., Eds., "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

None.

1.3 Overview

This structure provides an extended **XML** vocabulary for a PresentationML document. The extended elements and attributes allow the format to indicate further information about a document, or content and formatting of parts of the document beyond the elements and attributes described in [ISO/IEC29500:2012]. Because these elements and attributes are meant as extensions, their intent and usage varies.

The extensions support new functionality involving slide transitions (section 2.2.1), slide animations (section 2.2.2), content parts (section 2.2.3), media (section 2.2.4), sections (section 2.2.5), **slide show** (section 2.2.6), images (section 2.2.7), math (section 2.2.8), change tracking (section 2.2.9), comments (section 2.2.10), guides (section 2.2.11), and charts (section 2.2.12).

The extensions in this format are integrated into [ISO/IEC29500:2012] by means of the Markup Compatibility and Extensibility features as described in [ISO/IEC29500-3:2012]. Specifically, the **Ignorable** attribute ([ISO/IEC29500-3:2012] section 10.1.1), the **AlternateContent** element ([ISO/IEC29500-3:2012] section 10.2.1), and application-defined extension elements are used to maintain compatibility with [ISO/IEC29500:2012] implementations when integrating the extensions from this format. Using these extensions as described in this document will result in a PresentationML document that is conformant to [ISO/IEC29500:2012].

1.4 Relationship to Protocols and Other Structures

The structures described in this document are incorporated into PresentationML documents as described in [ISO/IEC29500-1:2012] using the Markup Compatibility and Extensibility features as described in [ISO/IEC29500-3:2012]. The global elements described in this format appear as optional child elements of certain elements described in [ISO/IEC29500-1:2012] as described in section 2.3. The global attributes described in this format appear as optional attributes on certain elements described in [ISO/IEC29500-1:2012] as described in section 2.4. Some of the elements, attributes, simple types and complex types here also refer to complex or simple types described in [ISO/IEC29500-4:2012].

1.5 Applicability Statement

This document specifies a set of structures to extend the XML vocabulary of [ISO/IEC29500:2012] PresentationML documents. The extensions specified in this document allow for expressing additional document content and properties, and are not applicable as a stand-alone file format. Each structure specified in this document is integrated with [ISO/IEC29500:2012] PresentationML documents in a particular way, as specified in the description of that structure. All structures are integrated into PresentationML documents in such a way that maintains compatibility with [ISO/IEC29500:2012] implementations.

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 PresentationML document.

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1.6 Versioning and Localization

None.

1.7 Vendor-Extensible Fields

None.

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2 Structures

2.1 Part Enumerations

2.1.1 Media Part

The following table specifies a new Media part that can be stored in a PresentationML document.

Part components	Value
Content types	Any supported audio or video type. See [ISO/IEC29500-1:2012] sections 15.2.2 and 15.2.17 for a list of possible content types.
Source relationship	http://schemas.microsoft.com/office/2007/relationships/media

An instance of a Media part specifies the binary data of a media file containing audio information, video information, or both audio and video information.

A Media part MUST be the target of an explicit relationship from a Slide part ([ISO/IEC29500-1:2012] section 13.3.8), a Slide Layout part ([ISO/IEC29500-1:2012] section 13.3.9), or a Slide Master part ([ISO/IEC29500-1:2012] section 13.3.10).

A Media part is not stored as XML; instead, it involves a relationship target that is a media clip.

A Media part can be located within or external to the package containing the relationships part; as such, the value of the **TargetMode** attribute of the **Relationship** element ([ISO/IEC29500-2:2012] section 9.3.2) can be either "Internal" or "External".

A Media part MUST NOT have implicit or explicit relationships to other parts specified in [ISO/IEC29500:2012] or this document.

2.1.2 Revision Information Part

The following table specifies a new Revision Information part that can be stored in a PresentationML document.

Part Components	Value
Content type	application/vnd.ms-powerpoint.revisioninfo+xml
Root namespace	http://schemas.microsoft.com/office/powerpoint/2015/10/main
Source relationship	http://schemas.microsoft.com/office/2015/10/relationships/revisionInfo

An instance of a Revision Information part specifies a set of revisions included by a PresentationML document.

A package MUST contain zero or one Revision Information part. If it exists, that part MUST be the target of an implicit relationship from the Presentation part ([ISO/IEC29500-1:2012] section 13.3.6).

The root element for a part of this content type MUST be **revInfo** (section 2.7.1.1).

A Revision Information part MUST be located within the package containing the relationships part (expressed syntactically, the **TargetMode** attribute of the **Relationship** element ([ISO/IEC29500-2:2012] section 9.3.2) shall be Internal).

A Revision Information part MUST not have implicit or explicit relationships to other parts specified in [ISO/IEC29500:2012] or this document.

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2.2 Extensions

This section specifies the elements from [ISO/IEC29500-1:2012] that are extended by this format. Either the **Ignorable** attribute ([ISO/IEC29500-3:2012] section 10.1.1), **AlternateContent** element ([ISO/IEC29500-3:2012] section 10.2.1), or the **extLst** element ([ISO/IEC29500-1:2012] section 19.2.1.12) MUST be used to maintain compatibility with [ISO/IEC29500:2012] implementations.

2.2.1 Slide Transition Extensions

The **sld** element ([ISO/IEC29500-1:2012] section 19.3.1.38), the **sldLayout** element ([ISO/IEC29500-1:2012] section 19.3.1.39), and the **sldMaster** element ([ISO/IEC29500-1:2012] section 19.3.1.42) are extended by the addition of an **AlternateContent** child element ([ISO/IEC29500-3:2012] section 10.2.1), whose structure is specified in the following table.

AlternateContent components	Child element
Choice: http://schemas.microsoft.com/office/powerpoint/2010/main	**transition** ([ISO/IEC29500-1:2012] section 19.3.1.50)
Choice: http://schemas.microsoft.com/office/powerpoint/2012/main	**transition** ([ISO/IEC29500-1:2012] section 19.3.1.50)
Choice: http://schemas.microsoft.com/office/powerpoint/2015/09/main	**transition** ([ISO/IEC29500-1:2012] section 19.3.1.50)
Fallback	**transition** ([ISO/IEC29500-1:2012] section 19.3.1.50)

The **transition** element ([ISO/IEC29500-1:2012] section 19.3.1.50) is extended by the addition of the following child elements to the **xsd:choice** content model of the **CT_SlideTransition** complex type ([ISO/IEC29500-1:2012] section A.3):

- **vortex** (section 2.3.1.30)
- **switch** (section 2.3.1.29)
- **flip** (section 2.3.1.11)
- **ripple** (section 2.3.1.24)
- **honeycomb** (section 2.3.1.15)
- **prism** (section 2.3.1.22)
- **doors** (section 2.3.1.7)
- **window** (section 2.3.1.33)
- **ferris** (section 2.3.1.9)
- **gallery** (section 2.3.1.13)
- **conveyor** (section 2.3.1.3)
- **pan** (section 2.3.1.21)
- **glitter** (section 2.3.1.14)
- **warp** (section 2.3.1.31)

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- **flythrough** (section 2.3.1.12)
- **flash** (section 2.3.1.10)
- **shred** (section 2.3.1.28)
- **reveal** (section 2.3.1.23)
- **wheelReverse** (section 2.3.1.32)
- **morph** (section 2.6.1.1)
- **prstTrans** (section 2.4.1.5)

The **transition** element ([ISO/IEC29500-1:2012] section 19.3.1.50) is further extended by the addition of the following attribute to the **CT_SlideTransition** complex type ([ISO/IEC29500-1:2012] section A.3): **dur** (section 2.3.2.3).

2.2.2 Animation Info Extensions

The **sld** element ([ISO/IEC29500-1:2012] section 19.3.1.38), the **sldLayout** element ([ISO/IEC29500-1:2012] section 19.3.1.39), and the **sldMaster** element ([ISO/IEC29500-1:2012] section 19.3.1.42) are extended by the addition of an **AlternateContent** child element ([ISO/IEC29500-3:2012] section 10.2.1), whose structure is specified in the following table.

AlternateContent components	Child element
Choice: http://schemas.microsoft.com/office/powerpoint/2010/main	**timing** ([ISO/IEC29500-1:2012] section 19.3.1.48)
Fallback	**timing** ([ISO/IEC29500-1:2012] section 19.3.1.48)

The **tgtEl** descendant element ([ISO/IEC29500-1:2012] section 19.5.81) of the **timing** element is extended by the addition of the following child elements to the **xsd:choice** content model of the **CT_TLTimeTargetElement** complex type ([ISO/IEC29500-1:2012] section A.3): **bmkTgt** (section 2.3.1.1).

The **cTn** descendant element ([ISO/IEC29500-1:2012] section 19.5.33) of the **timing** element is extended by the addition of the following attribute to the **CT_TLCommonTimeNodeData** complex type ([ISO/IEC29500-1:2012] section A.3): **presetBounceEnd** (section 2.3.2.4).

The **anim** descendant element ([ISO/IEC29500-1:2012] section 19.5.1) of the **timing** element is extended by the addition of the following attribute to the **CT_TLAnimateBehavior** complex type ([ISO/IEC29500-1:2012] section A.3): **bounceEnd** (section 2.3.2.1).

The **animMotion** descendant element ([ISO/IEC29500-1:2012] section 19.5.4) of the **timing** element is extended by the addition of the following attribute to the **CT_TLAnimateMotionBehavior** complex type ([ISO/IEC29500-1:2012] section A.3): **bounceEnd** (section 2.3.2.1).

The **animRot** descendant element ([ISO/IEC29500-1:2012] section 19.5.5) of the **timing** element is extended by the addition of the following attribute to the **CT_TLAnimateRotationBehavior** complex type ([ISO/IEC29500-1:2012] section A.3): **bounceEnd** (section 2.3.2.1).

The **animScale** descendant element ([ISO/IEC29500-1:2012] section 19.5.6) of the **timing** element is extended by the addition of the following attribute to the **CT_TLAnimateScaleBehavior** complex type ([ISO/IEC29500-1:2012] section A.3): **bounceEnd** (section 2.3.2.1).

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2.2.3 Content Part Extensions

The **grpSp** element ([ISO/IEC29500-1:2012] section 19.3.1.22) is extended by the addition of an **AlternateContent** child element ([ISO/IEC29500-3:2012] section 10.2.1), whose structure is specified in the following table.

AlternateContent components	Child element
Choice: http://schemas.microsoft.com/office/powerpoint/2010/main	**contentPart** ([ISO/IEC29500-1:2012] section 19.3.1.14)
Fallback	**sp** ([ISO/IEC29500-1:2012] section 19.3.1.43)

The **contentPart** element ([ISO/IEC29500-1:2012] section 19.3.1.14) is extended by the addition of the following child elements to a new **xsd:sequence** content model of the **CT_Rel** complex type ([ISO/IEC29500-1:2012] section A.3):

- **nvContentPartPr** (section 2.3.1.20)
- **xfrm** (section 2.3.1.34)
- **extLst** (section 2.3.1.8).

The **contentPart** element ([ISO/IEC29500-1:2012] section 19.3.1.14) is further extended by the addition of the following attribute to the **CT_Rel** complex type ([ISO/IEC29500-1:2012] section A.3): **bwMode** (section 2.3.2.2).

2.2.3.1 Ink Extensions

The spTree element ([ISO/IEC29500-1:2012] section 19.3.1.45) and the grpSp element ([ISO/IEC29500-1:2012] section 19.3.1.22) are extended by the addition of an AlternateContent child element<1> whose structure is specified in the following table.

AlternateContent components	Child element
Choice: http://schemas.microsoft.com/office/powerpoint/2010/main http://schemas.microsoft.com/office/powerpoint/2014/inkAction ([MS-ODRAWXML] section 2.21)	contentPart ([ISO/IEC29500-1:2012] section 19.3.1.14)
Fallback	pic ([ISO/IEC29500-1:2012] section 19.3.1.37)

2.2.4 Media Extensions

The **extLst** child element of the **nvPr** element ([ISO/IEC29500-1:2012] section 19.3.1.33) is extended by the addition of a new **ext** child element ([ISO/IEC29500-1:2012] section 19.2.1.11), whose structure is specified in the following table.

Ext uri	Child element
{DAA4B4D4-6D71-4841-9C94-3DE7FCFB9230}	**media** (section 2.3.1.18)

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The **extLst** child element of the **showPr** element ([ISO/IEC29500-1:2012] section 19.2.1.30) is extended by the addition of a new **ext** child element ([ISO/IEC29500-1:2012] section 19.2.1.11), whose structure is specified in the following table.

Ext uri	Child element
{2FDB2607-1784-4EEB-B798-7EB5836EED8A}	**showMediaCtrls** (section 2.3.1.27)

For more information about how extension lists are used, see [ISO/IEC29500-3:2012] section 10.1.2.

2.2.5 Section Extensions

The **extLst** child element of the **presentation** element ([ISO/IEC29500-1:2012] section 19.2.1.26) is extended by the addition of a new **ext** child element ([ISO/IEC29500-1:2012] section 19.2.1.11), whose structure is specified in the following table:

Ext uri	Child element
{521415D9-36F7-43E2-AB2F-B90AF26B5E84}	**sectionLst** (section 2.3.1.25)

For more information about how extension lists are used, see [ISO/IEC29500-3:2012] section 10.1.2.

2.2.6 Slide Show Extensions

The **extLst** child element of the **showPr** element ([ISO/IEC29500-1:2012] section 19.2.1.30) is extended by the addition of new **ext** child elements ([ISO/IEC29500-1:2012] section 19.2.1.11), whose structures are specified in the following table.

Ext uri	Child element
{F99C55AA-B7CB-42B0-86F8-08522FDF87E8}	**browseMode** (section 2.3.1.2)
{EC167BDD-8182-4AB7-AECC-EB403E3ABB37}	**laserClr** (section 2.3.1.16)

The **extLst** child element of the **sld** element ([ISO/IEC29500-1:2012] section 19.3.1.38) is extended by the addition of new **ext** child elements ([ISO/IEC29500-1:2012] section 19.2.1.11), whose structures are specified in the following table.

Ext uri	Child element
{3A86A75C-4F4B-4683-9AE1-C65F6400EC91}	**laserTraceLst** (section 2.3.1.17)
{E180D4A7-C9FB-4DFB-919C-405C955672EB}	**showEvtLst** (section 2.3.1.26)

For more information about how extension lists are used, see [ISO/IEC29500-3:2012] section 10.1.2.

2.2.7 Image Extensions

The **extLst** child element of the **presentationPr** element ([ISO/IEC29500-1:2012] section 19.2.1.27) is extended by the addition of new **ext** child elements ([ISO/IEC29500-1:2012] section 19.2.1.11), whose structures are specified in the following table.

Ext uri	Child element
{E76CE94A-603C-4142-B9EB-6D1370010A27}	**discardImageEditData** (section 2.3.1.6)

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Ext uri	Child element
{D31A062A-798A-4329-ABDD-BBA856620510}	**defaultImageDpi** (section 2.3.1.5)

For more information about how extension lists are used, see [ISO/IEC29500-3:2012] section 10.1.2.

2.2.8 Math Extensions

The **extLst** child element of the **presentationPr** element ([ISO/IEC29500-1:2012] section 19.2.1.27) is extended by the addition of new **ext** child elements ([ISO/IEC29500-1:2012] section 19.2.1.11), whose structures are specified in the following table.

Ext uri	Child element
{4599F94E-CEE6-441E-89CC-EB005ECD8F06}	**a14:m** ([MS-ODRAWXML] section 2.3.1.11)

For more information about how extension lists are used, see [ISO/IEC29500-3:2012] section 10.1.2.

2.2.9 Change Tracking Extensions

The **extLst** child element of the **nvPr** element ([ISO/IEC29500-1:2012] section 19.3.1.33) is extended by the addition of a new **ext** child element ([ISO/IEC29500-1:2012] section 19.2.1.11), whose structure is specified in the following table.

Ext uri	Child element
{D42A27DB-BD31-4B8C-83A1-F6EECF244321}	**modId** (section 2.3.1.19)

The **extLst** child element of the **cSld** element ([ISO/IEC29500-1:2012] section 19.3.1.16) is extended by the addition of a new **ext** child element ([ISO/IEC29500-1:2012] section 19.2.1.11), whose structure is specified in the following table.

Ext uri	Child element
{BB962C8B-B14F-4D97-AF65-F5344CB8AC3E}	**creationId** (section 2.3.1.4)

For more information about how extension lists are used, see [ISO/IEC29500-3:2012] section 10.1.2.

2.2.10 Comment Extensions

The **extLst** child element of the **cmAuthor** element ([ISO/IEC29500-1:2012] section 19.4.2) is extended by the addition of a new **ext** child element ([ISO/IEC29500-1:2012] section 19.2.1.11), whose structure is specified in the following table.<2>

Ext uri	Child element
{19B8F6BF-5375-455C-9EA6-DF929625EA0E}	**presenceInfo** (section 2.4.1.4)

The **extLst** child element of the **cm** element ([ISO/IEC29500-1:2012] section 19.4.1) is extended by the addition of a new **ext** child element ([ISO/IEC29500-1:2012] section 19.2.1.11), whose structure is specified in the following table.<3>

Ext uri	Child element
{C676402C-5697-4E1C-873F-D02D1690AC5C}	**threadingInfo** (section 2.4.1.7)

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For more information about how extension lists are used, see [ISO/IEC29500-3:2012] section 10.1.2.

2.2.11 Guide Extensions

The **extLst** child element of the **presentation** element ([ISO/IEC29500-1:2012] section 19.2.1.26) is extended by the addition of new **ext** child elements ([ISO/IEC29500-1:2012] section 19.2.1.11), whose structures are specified in the following table.<4>

Ext uri	Child element
{EFAFB233-063F-42B5-8137-9DF3F51BA10A}	**sldGuideLst** (section 2.4.1.6)
{2D200454-40CA-4A62-9FC3-DE9A4176ACB9}	**notesGuideLst** (section 2.4.1.3)

The **extLst** child element of the **sldLayout** element ([ISO/IEC29500-1:2012] section 19.3.1.39) is extended by the addition of a new **ext** child element ([ISO/IEC29500-1:2012] section 19.2.1.11), whose structure is specified in the following table.<5>

Ext uri	Child element
{DCECCB84-F9BA-43D5-87BE-67443E8EF086}	**sldGuideLst** (section 2.4.1.6)

The **extLst** child element of the **sldMaster** element ([ISO/IEC29500-1:2012] section 19.3.1.42) is extended by the addition of a new **ext** child element ([ISO/IEC29500-1:2012] section 19.2.1.11), whose structure is specified in the following table.<6>

Ext uri	Child element
{27BBF7A9-308A-43DC-89C8-2F10F3537804}	**sldGuideLst** (section 2.4.1.6)

The **extLst** child element of the **handoutMaster** element ([ISO/IEC29500-1:2012] section 19.3.1.24) is extended by the addition of a new **ext** child element ([ISO/IEC29500-1:2012] section 19.2.1.11), whose structure is specified in the following table.<7>

Ext uri	Child element
{56416CCD-93CA-4268-BC5B-53C4BB910035}	**sldGuideLst** (section 2.4.1.6)

The **extLst** child element of the **notesMaster** element ([ISO/IEC29500-1:2012] section 19.3.1.27) is extended by the addition of a new **ext** child element ([ISO/IEC29500-1:2012] section 19.2.1.11), whose structure is specified in the following table.<8>

Ext uri	Child element
{620B2872-D7B9-4A21-9093-7833F8D536E1}	**sldGuideLst** (section 2.4.1.6)

For more information about how extension lists are used, see [ISO/IEC29500-3:2012] section 10.1.2.

2.2.12 Charting Extensions

The **extLst** child element of the **presentationPr** element ([ISO/IEC29500-1:2012] section 19.2.1.27) is extended by the addition of a new **ext** child element ([ISO/IEC29500-1:2012] section 19.2.1.11), whose structure is specified in the following table.<9>

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Ext uri	Child element
{FD5EFAAD-0ECE-453E-9831-46B23BE46B34}	**chartTrackingRefBased** (section 2.4.1.1)

For more information about how extension lists are used, see [ISO/IEC29500-3:2012] section 10.1.2

2.2.13 Office App Extensions

The **spTree** element ([ISO/IEC29500-1:2012] section 19.3.1.45) and the **grpSp** element ([ISO/IEC29500-1:2012] section 19.3.1.22) are extended by the addition of an **AlternateContent** child element whose structure is specified in the following table.

AlternateContent components	Child element
Choice: http://schemas.microsoft.com/office/webextensions/webextension/2010/11 http://schemas.microsoft.com/office/powerpoint/2013/contentapp	**webextensionref (**[MS-OWEXML] section 2.1.3)
Fallback	**pic** ([ISO/IEC29500-1:2012] section 19.3.1.37)

2.2.14 Narration Extensions

The **extLst** child element of the **nvPr** element ([ISO/IEC29500-1:2012] section 19.3.1.33) is extended by the addition of a new **ext** child element<10> ([ISO/IEC29500-1:2012] section 19.2.1.11), whose structure is specified in the following table.

Ext uri	Child element
{42D2F446-02D8-4167-A562-619A0277C38B}	**isNarration** (section 2.4.1.2)

2.2.15 Zoom Extensions

The **spTree** element ([ISO/IEC29500-1:2012] section 19.3.1.45) and the **grpSp** element ([ISO/IEC29500-1:2012] section 19.3.1.22) are extended by the addition of an **AlternateContent** child element whose structure is specified in the following tables.

AlternateContent components	Child element
Choice: http://schemas.microsoft.com/office/powerpoint/2016/sectionzoom	**sectionZm** (section 2.9.1.1)
Fallback	**pic** ([ISO/IEC29500-1:2012] section 19.3.1.37)

AlternateContent components	Child element
Choice: http://schemas.microsoft.com/office/powerpoint/2016/slidezoom	**sldZm** (section 2.10.1.1)
Fallback	**pic** ([ISO/IEC29500-1:2012] section 19.3.1.37)

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AlternateContent components	Child element
Choice: http://schemas.microsoft.com/office/powerpoint/2016/summaryzoom	**summaryZm** (section 2.11.1.1)
Fallback	**grpSp** ([ISO/IEC29500-1:2012] section 19.3.1.22)

2.3 http://schemas.microsoft.com/office/powerpoint/2010/main

2.3.1 Elements

2.3.1.1 bmkTgt

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

A **CT_MediaBookmarkTarget** element (section 2.3.3.13) that specifies a media bookmark that triggers an animation. See section 2.2.2 for how this element integrates with [ISO/IEC29500:2012].

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

```
<xsd:element name="bmkTgt" type="CT_MediaBookmarkTarget"/>
```

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

2.3.1.2 browseMode

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

A **CT_BrowseMode** element (section 2.3.3.1) that specifies the status bar visibility when slide show is in browse mode. See section 2.2.6 for how this element integrates with [ISO/IEC29500:2012].

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

```
<xsd:element name="browseMode" type="CT_BrowseMode"/>
```

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

2.3.1.3 conveyor

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

A **CT_LeftRightDirectionTransition** element (section 2.3.3.10) that specifies a conveyor transition. See section 2.2.1 for how this element integrates with [ISO/IEC29500:2012].

The following is a sample with **dir** equal to "l" (left):

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Figure 1: Sample conveyor transition

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

```
<xsd:element name="conveyor" type="CT_LeftRightDirectionTransition"/>
```

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

2.3.1.4 creationId

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

A **CT_RandomId** element (section 2.3.3.21) that specifies an identifier that is generated when a slide is created. See section 2.2.9 for how this element integrates with [ISO/IEC29500:2012].

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

```
<xsd:element name="creationId" type="CT_RandomId"/>
```

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

2.3.1.5 defaultImageDpi

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

A **CT_DefaultImageDpi** element (section 2.3.3.3) that specifies the resolution, in dots per inch (dpi), to use when saving images in the document. This element value is used only when the **autoCompressPictures** attribute ([ISO/IEC29500-1:2012] section 19.2.1.26) is set to **true**, and the **useLocalDpi** element ([MS-ODRAWXML] section 2.3.1.13) is set to **false**. See section 2.2.7 for how this element integrates with [ISO/IEC29500:2012].

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

```
<xsd:element name="defaultImageDpi" type="CT_DefaultImageDpi"/>
```

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

2.3.1.6 discardImageEditData

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

A **CT_DiscardImageEditData** element (section 2.3.3.4) that specifies that all **imgProps** elements ([MS-ODRAWXML] section 2.3.1.9) and cropped out areas of images are not to be saved. See section 2.2.7 for how this element integrates with [ISO/IEC29500:2012].

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

```
<xsd:element name="discardImageEditData" type="CT_DiscardImageEditData"/>
```

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

2.3.1.7 doors

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

A **p:CT_OrientationTransition** element ([ISO/IEC29500-4:2012] section A.3) that specifies a doors transition. See section 2.2.1 for how this element integrates with [ISO/IEC29500:2012].

The following is a sample with **dir** equal to "vert" (vertical):

Figure 2: Sample doors transition

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

```
<xsd:element name="doors" type="p:CT_OrientationTransition"/>
```

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

2.3.1.8 extLst

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

A **p:CT_ExtensionListModify** element ([ISO/IEC29500-4:2012] section A.3) that specifies the extension list with modification ability. All future extensions to the **contentPart** element ([ISO/IEC29500-1:2012] section 19.3.1.14) will be stored within this extension list. See section 2.2.3 for how this element integrates with [ISO/IEC29500:2012].

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

```
<xsd:element name="extLst" type="p:CT_ExtensionListModify"/>
```

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

2.3.1.9 ferris

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

A **CT_LeftRightDirectionTransition** element (section 2.3.3.10) that specifies a ferris transition. See section 2.2.1 for how this element integrates with [ISO/IEC29500:2012].

The following is a sample with **dir** equal to "l" (left):

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Figure 3: Sample ferris transition

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

```
<xsd:element name="ferris" type="CT_LeftRightDirectionTransition"/>
```

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

2.3.1.10 flash

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

A **p:CT_Empty** element ([ISO/IEC29500-4:2012] section A.3) that specifies a flash transition. See section 2.2.1 for how this element integrates with [ISO/IEC29500:2012].

The following figure is a sample:

Figure 4: Sample flash transition

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

```
<xsd:element name="flash" type="p:CT_Empty"/>
```

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

2.3.1.11 flip

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

A **CT_LeftRightDirectionTransition** element (section 2.3.3.10) that specifies a flip transition. See section 2.2.1 for how this element integrates with [ISO/IEC29500:2012].

The following figure is a sample with **dir** equal to "r" (right).

Figure 5: Sample flip transition

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

```
<xsd:element name="flip" type="CT_LeftRightDirectionTransition"/>
```

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

2.3.1.12 flythrough

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

A **CT_FlyThroughTransition** element (section 2.3.3.5) that specifies a fly through transition. See section 2.2.1 for how this element integrates with [ISO/IEC29500:2012].

The following figure is a sample with **dir** equal to "in", **hasBounce** equal to **false**:

Figure 6: Sample flythrough transition

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

```
<xsd:element name="flythrough" type="CT_FlyThroughTransition"/>
```

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

2.3.1.13 gallery

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

A **CT_LeftRightDirectionTransition** element (section 2.3.3.10) that specifies a gallery transition. See section 2.2.1 for how this element integrates with [ISO/IEC29500:2012].

The following figure is a sample with **dir** equal to "l" (left).

Figure 7: Sample gallery transition

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

```
<xsd:element name="gallery" type="CT_LeftRightDirectionTransition"/>
```

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

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2.3.1.14 glitter

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

A **CT_GlitterTransition** element (section 2.3.3.6) that specifies a glitter transition. See section 2.2.1 for how this element integrates with [ISO/IEC29500:2012].

The following is a sample with **dir** equal to "l" (left), **pattern** equal to "diamond":

Figure 8: Sample glitter transition

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

```
<xsd:element name="glitter" type="CT_GlitterTransition"/>
```

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

2.3.1.15 honeycomb

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

A **p:CT_Empty** element ([ISO/IEC29500-4:2012] section A.3) that specifies a honeycomb transition. See section 2.2.1 for how this element integrates with [ISO/IEC29500:2012].

The following figure is a sample:

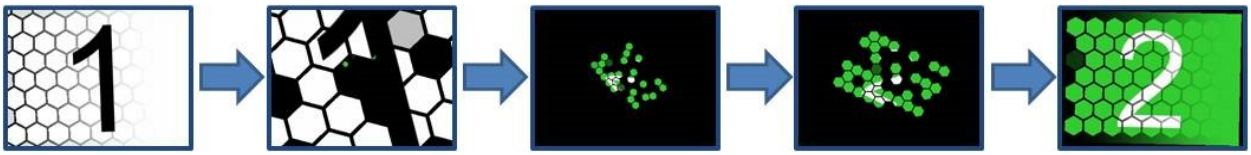

Figure 9: Sample honeycomb transition

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

```
<xsd:element name="honeycomb" type="p:CT_Empty"/>
```

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

2.3.1.16 laserClr

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

An **a:CT_Color** element ([ISO/IEC29500-4:2012] section A.4.1) that specifies the color to be used to render the laser dot. See section 2.2.6 for how this element integrates with [ISO/IEC29500:2012].

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

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```
<xsd:element name="laserClr" type="a:CT_Color"/>
```

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

2.3.1.17 laserTraceLst

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

A **CT_LaserTraceList** element (section 2.3.3.8) that specifies a list of laser traces on the **presentation slide**. See section 2.2.6 for how this element integrates with [ISO/IEC29500:2012].

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

```
<xsd:element name="laserTraceLst" type="CT_LaserTraceList"/>
```

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

2.3.1.18 media

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

A **CT_Media** element (section 2.3.3.14) that specifies a media object. See section 2.2.4 for how this element integrates with [ISO/IEC29500:2012].

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

```
<xsd:element name="media" type="CT_Media"/>
```

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

2.3.1.19 modId

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

A **CT_RandomId** element (section 2.3.3.21) that specifies an identifier that is updated each time a **shape** is modified. Each identifier specified MUST be unique to the presentation slide that contains it. See section 2.2.9 for how this element integrates with [ISO/IEC29500:2012].

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

```
<xsd:element name="modId" type="CT_RandomId"/>
```

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

2.3.1.20 nvContentPartPr

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

A **CT_ContentPartNonVisual** element (section 2.3.3.2) that specifies the non-visual drawing properties for a **contentPart** element ([ISO/IEC29500-1:2012] section 19.3.1.14). These non-visual

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properties are properties that the generating application uses when rendering and editing the content part. See section 2.2.3 for how this element integrates with [ISO/IEC29500:2012].

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

```
<xsd:element name="nvContentPartPr" type="CT_ContentPartNonVisual"/>
```

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

2.3.1.21 pan

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

A **p:CT_SideDirectionTransition** element ([ISO/IEC29500-4:2012] section A.3) that specifies a pan transition. See section 2.2.1 for how this element integrates with [ISO/IEC29500:2012].

The following figure is a sample with **dir** equal to "u" (up).

Figure 10: Sample pan transition

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

```
<xsd:element name="pan" type="p:CT_SideDirectionTransition"/>
```

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

2.3.1.22 prism

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

A **CT_PrismTransition** element (section 2.3.3.20) that specifies a prism transition. See section 2.2.1 for how this element integrates with [ISO/IEC29500:2012].

The following figure is a sample with **dir** equal to "l" (left), **isContent** equal to **false**, **isInverted** equal to **false**:

Figure 11: Sample prism transition 1

The following figure is a sample with **dir** equal to "r" (right), **isContent** equal to **false**, **isInverted** equal to **true**:

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Figure 12: Sample prism transition 2

The following figure is a sample with **dir** equal to "u" (up), **isContent** equal to **true**, **isInverted** equal to **false**:

Figure 13: Sample prism transition 3

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

```
<xsd:element name="prism" type="CT_PrismTransition"/>
```

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

2.3.1.23 reveal

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

A **CT_RevealTransition** element (section 2.3.3.22) that specifies a reveal transition. See section 2.2.1 for how this element integrates with [ISO/IEC29500:2012].

The following is a sample with **thruBlk** equal to **true**, **dir** equal to "l" (left):

Figure 14: Sample reveal transition

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

```
<xsd:element name="reveal" type="CT_RevealTransition"/>
```

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

2.3.1.24 ripple

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

A **CT_RippleTransition** element (section 2.3.3.23) that specifies a ripple transition. See section 2.2.1 for how this element integrates with [ISO/IEC29500:2012].

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The following figure is a sample with **dir** equal to "center".

Figure 15: Sample ripple transition

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

```
<xsd:element name="ripple" type="CT_RippleTransition"/>
```

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

2.3.1.25 sectionLst

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

A **CT_SectionList** element (section 2.3.3.25) that specifies section properties for the document. See section 2.2.5 for how this element integrates with [ISO/IEC29500:2012].

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

```
<xsd:element name="sectionLst" type="CT_SectionList"/>
```

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

2.3.1.26 showEvtLst

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

A **CT_ShowEventRecordList** element (section 2.3.3.28) that specifies a list of slide show events that occur during slide show. See section 2.2.6 for how this element integrates with [ISO/IEC29500:2012].

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

```
<xsd:element name="showEvtLst" type="CT_ShowEventRecordList"/>
```

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

2.3.1.27 showMediaCtrls

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

A **CT_ShowMediaControls** element (section 2.3.3.29) that specifies the visibility of media user interface controls during slide show. See section 2.2.4 for how this element integrates with [ISO/IEC29500:2012].

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

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```
<xsd:element name="showMediaCtrls" type="CT_ShowMediaControls"/>
```

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

2.3.1.28 shred

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

A **CT_ShredTransition** element (section 2.3.3.30) that specifies a shred transition. See section 2.2.1 for how this element integrates with [ISO/IEC29500:2012].

The following figure is a sample with **pattern** equal to "strip", **dir** equal to "in":

Figure 16: Sample shred transition

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

```
<xsd:element name="shred" type="CT_ShredTransition"/>
```

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

2.3.1.29 switch

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

A **CT_LeftRightDirectionTransition** element (section 2.3.3.10) that specifies a switch transition. See section 2.2.1 for how this element integrates with [ISO/IEC29500:2012].

The following figure is a sample with **dir** equal to "r" (right):

Figure 17: Sample switch transition

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

```
<xsd:element name="switch" type="CT_LeftRightDirectionTransition"/>
```

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

2.3.1.30 vortex

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

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A **p:CT_SideDirectionTransition** element ([ISO/IEC29500-4:2012] section A.3) that specifies a vortex transition. See section 2.2.1 for how this element integrates with [ISO/IEC29500:2012].

The following figure is a sample with **dir** equal to "r" (right):

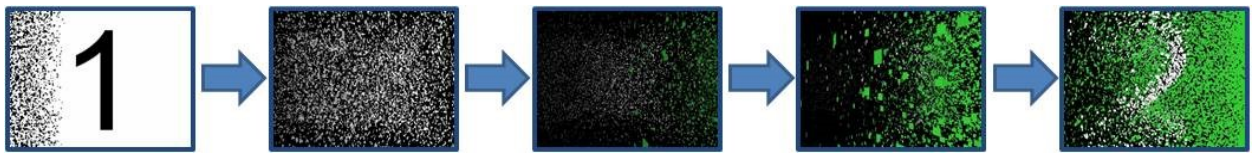

Figure 18: Sample vortex transition

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

```
<xsd:element name="vortex" type="p:CT_SideDirectionTransition"/>
```

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

2.3.1.31 warp

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

A **p:CT_InOutTransition** element ([ISO/IEC29500-4:2012] section A.3) that specifies a warp transition. See section 2.2.1 for how this element integrates with [ISO/IEC29500:2012].

The following is a sample with **dir** equal to "in":

Figure 19: Sample warp transition

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

```
<xsd:element name="warp" type="p:CT_InOutTransition"/>
```

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

2.3.1.32 wheelReverse

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

A **p:CT_WheelTransition** element ([ISO/IEC29500-4:2012] section A.3) that specifies a reverse wheel transition. See section 2.2.1 for how this element integrates with [ISO/IEC29500:2012].

The following figure is a sample with **spokes** equal to 1.

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Figure 20: Sample wheelReverse transition

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

```
<xsd:element name="wheelReverse" type="p:CT_WheelTransition"/>
```

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

2.3.1.33 window

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

A **p:CT_OrientationTransition** element ([ISO/IEC29500-4:2012] section A.3) that specifies a window transition. See section 2.2.1 for how this element integrates with [ISO/IEC29500:2012].

The following is a sample with **dir** equal to "vert" (vertical):

Figure 21: Sample window transition

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

```
<xsd:element name="window" type="p:CT_OrientationTransition"/>
```

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

2.3.1.34 xfrm

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

An **a:CT_Transform2D** element ([ISO/IEC29500-4:2012] section A.4.1) that specifies the 2-D transform for a content part. See section 2.2.3 for how this element integrates with [ISO/IEC29500:2012].

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

```
<xsd:element name="xfrm" type="a:CT_Transform2D"/>
```

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

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2.3.2 Attributes

2.3.2.1 bounceEnd

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

An **s:ST_PositiveFixedPercentage** attribute ([ISO/IEC29500-4:2012] section A.7.9) that specifies the percentage of the **time node**'s duration to do a bounce at the end of the animation. The bounce emulates a mass-spring-damper system. See section 2.2.2 for how this element integrates with [ISO/IEC29500:2012].

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

```
<xsd:attribute name="bounceEnd" type="s:ST_PositiveFixedPercentage"/>
```

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

2.3.2.2 bwMode

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

An **a:ST_BlackWhiteMode** attribute ([ISO/IEC29500-4:2012] section A.4.1) 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. See section 2.2.3 for how this element integrates with [ISO/IEC29500:2012].

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

```
<xsd:attribute name="bwMode" type="a:ST_BlackWhiteMode"/>
```

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

2.3.2.3 dur

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

An **ST_UniversalTimeOffset** attribute (section 2.3.4.6) that specifies the time a transition takes to display from start to finish. See section 2.2.1 for how this element integrates with [ISO/IEC29500:2012].

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

```
<xsd:attribute name="dur" type="p14:ST_UniversalTimeOffset"/>
```

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

2.3.2.4 presetBounceEnd

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

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An **s:ST_PositiveFixedPercentage** attribute ([ISO/IEC29500-4:2012] section A.7.9) that specifies a preset percentage of a time node's duration to do a bounce at the end of the animation. This value is used only by the user interface. The actual bounce animations are specified by the **bounceEnd** (section 2.3.2.1) attributes. See section 2.2.2 for how this element integrates with [ISO/IEC29500:2012].

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

```
<xsd:attribute name="presetBounceEnd" type="s:ST_PositiveFixedPercentage"/>
```

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

2.3.3 Complex Types

2.3.3.1 CT_BrowseMode

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

Referenced by: browseMode

A complex type that specifies the visibility of the status bar in slide show browse mode.

Attributes:

showStatus: An **xsd:boolean** attribute ([XMLSCHEMA2] section 3.2.2) that specifies the visibility of status bar when slide show is in browse mode.

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

```
<xsd:complexType name="CT_BrowseMode">
  <xsd:attribute name="showStatus" type="xsd:boolean" use="optional" default="true"/>
</xsd:complexType>
```

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

2.3.3.2 CT_ContentPartNonVisual

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

Referenced by: nvContentPartPr

A complex type which specifies non-visual properties for a **contentPart** element ([ISO/IEC29500-1:2012] section 19.3.1.14).

Child Elements:

cNvPr: An **a:CT_NonVisualDrawingProps** element ([ISO/IEC29500-4:2012] section A.4.1) that specifies the non-visual drawing properties for the content part. This element allows for additional information that does not affect the appearance of the content part to be stored.

cNvContentPartPr: An **a14:CT_NonVisualInkContentPartProperties** element ([MS-ODRAWXML] section 2.3.3.7) that specifies non-visual **ink** properties for the content part. This element allows for additional information that does not affect the appearance of ink in the content part to be stored.

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nvPr: A **p:CT_ApplicationNonVisualDrawingProps** element ([ISO/IEC29500-4:2012] section A.3) that specifies PresentationML Drawing specific non-visual properties for the content part.

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:element name="nvPr" type="p:CT ApplicationNonVisualDrawingProps" minOccurs="1"
maxOccurs="1"/>
  </xsd:sequence>
</xsd:complexType>
```

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

2.3.3.3 CT_DefaultImageDpi

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

Referenced by: defaultImageDpi

A complex type that specifies the default dpi to use when saving each image in the document.

Attributes:

val: An **xsd:unsignedInt** attribute ([XMLSCHEMA2] section 3.3.22) that specifies the dpi.

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

```
<xsd:complexType name="CT_DefaultImageDpi">
  <xsd:attribute name="val" type="xsd:unsignedInt" use="required"/>
</xsd:complexType>
```

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

2.3.3.4 CT_DiscardImageEditData

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

Referenced by: discardImageEditData

A complex type that specifies whether to discard editing data for images when saving.

Attributes:

val: An **xsd:boolean** attribute ([XMLSCHEMA2] section 3.2.2) that specifies whether to discard image editing data when saving.

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

```
<xsd:complexType name="CT DiscardImageEditData">
  <xsd:attribute name="val" type="xsd:boolean" use="required"/>
</xsd:complexType>
```


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

2.3.3.5 CT_FlyThroughTransition

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

Referenced by: flythrough

A complex type that specifies the parameters for a fly-through transition.

Attributes:

dir: A **p:ST_TransitionInOutDirectionType** attribute ([ISO/IEC29500-4:2012] section A.3) that specifies the direction presentation slides move during the transition.

hasBounce: An **xsd:boolean** attribute ([XMLSCHEMA2] section 3.2.2) that specifies that the movement of the presentation slides during the transition includes a bounce.

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

```
<xsd:complexType name="CT_FlyThroughTransition">
  <xsd:attribute name="dir" type="p:ST_TransitionInOutDirectionType" use="optional"
default="in"/>
  <xsd:attribute name="hasBounce" type="xsd:boolean" use="optional" default="false"/>
</xsd:complexType>
```

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

2.3.3.6 CT_GlitterTransition

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

Referenced by: glitter

A complex type that specifies the parameters for a glitter transition.

Attributes:

dir: A **p:ST_TransitionSideDirectionType** attribute ([ISO/IEC29500-4:2012] section A.3) that specifies the direction presentation slides move during the transition.

pattern: An **ST_TransitionPattern** (section 2.3.4.4) attribute that specifies the shape of the visuals used during the transition.

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

```
<xsd:complexType name="CT_GlitterTransition">
  <xsd:attribute name="dir" type="p:ST_TransitionSideDirectionType" use="optional"
default="l"/>
  <xsd:attribute name="pattern" type="ST_TransitionPattern" use="optional"
default="diamond"/>
</xsd:complexType>
```

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

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2.3.3.7 CT_LaserTrace

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

Referenced by: CT_LaserTraceList

A complex type that specifies a list of laser trace points. The first point in the list of points specifies when and where the laser point appears. The last point in the list of points specifies when and where the laser point disappears. Other trace points in the list of points specify laser point appearance time and locations.

Child Elements:

tracePt: A **CT_LaserTracePoint** element (section 2.3.3.9) that specifies a location of the laser point.

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

```
<xsd:complexType name="CT_LaserTrace">
  <xsd:sequence>
    <xsd:element name="tracePt" type="CT_LaserTracePoint" minOccurs="0"
maxOccurs="unbounded"/>
  </xsd:sequence>
</xsd:complexType>
```

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

2.3.3.8 CT_LaserTraceList

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

Referenced by: laserTraceLst

A complex type that specifies a list of laser traces.

Child Elements:

tracePtLst: A **CT_LaserTrace** element (section 2.3.3.7) that specifies a laser trace.

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

```
<xsd:complexType name="CT_LaserTraceList">
  <xsd:sequence>
    <xsd:element name="tracePtLst" type="CT_LaserTrace" minOccurs="0" maxOccurs="unbounded"/>
  </xsd:sequence>
</xsd:complexType>
```

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

2.3.3.9 CT_LaserTracePoint

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

Referenced by: CT_LaserTrace

A complex type that specifies the time and location of the laser pointer on a presentation slide.

Attributes:

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t: An **ST_UniversalTimeOffset** attribute (section 2.3.4.6) that specifies the time relative to the beginning of the slide timeline and not including transition time.

x: An **a:ST_Coordinate** attribute ([ISO/IEC29500-4:2012] section A.4.1) that specifies the horizontal location relative to the top-left corner of the presentation slide.

y: An **a:ST_Coordinate** attribute ([ISO/IEC29500-4:2012] section A.4.1) that specifies the vertical location relative to the top-left corner of the presentation slide.

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

```
<xsd:complexType name="CT_LaserTracePoint">
  <xsd:attribute name="t" type="p14:ST_UniversalTimeOffset" use="required"/>
  <xsd:attribute name="x" type="a:ST Coordinate" use="required"/>
  <xsd:attribute name="y" type="a:ST_Coordinate" use="required"/>
</xsd:complexType>
```

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

2.3.3.10 CT_LeftRightDirectionTransition

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

Referenced by: switch, flip, ferris, gallery, conveyor

A complex type that specifies a transition restricted to left and right directions.

Attributes:

dir: An **ST_TransitionLeftRightDirectionType** attribute (section 2.3.4.3) that specifies the direction presentation slides move during the transition.

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

```
<xsd:complexType name="CT_LeftRightDirectionTransition">
  <xsd:attribute name="dir" type="ST_TransitionLeftRightDirectionType"/>
</xsd:complexType>
```

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

2.3.3.11 CT_MediaBookmark

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

Referenced by: CT_MediaBookmarkList

A complex type that specifies a media bookmark on the media.

Attributes:

name: An xsd:string ([XMLSCHEMA2] section 3.2.1) attribute that specifies the name for the bookmark. The bookmark name MUST be unique among all bookmarks in its parent **CT_MediaBookmarkList** (section 2.3.3.12).

time: An **ST_UniversalTimeOffset** attribute (section 2.3.4.6) that specifies the time of the bookmark relative to the beginning of the media. It MUST be unique among all bookmarks in its

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parent **CT_MediaBookmarkList** (section 2.3.3.12). It MUST be less than or equal to the length of the media.

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

```
<xsd:complexType name="CT_MediaBookmark">
  <xsd:attribute name="name" type="xsd:string"/>
  <xsd:attribute name="time" type="p14:ST_UniversalTimeOffset"/>
</xsd:complexType>
```

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

2.3.3.12 CT_MediaBookmarkList

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

Referenced by: CT_Media

A complex type that specifies a list of media bookmarks on the media.

Child Elements:

bmk: A **CT_MediaBookmark** element (section 2.3.3.11) that specifies a bookmark name and time.

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

```
<xsd:complexType name="CT_MediaBookmarkList">
  <xsd:sequence>
    <xsd:element name="bmk" type="CT_MediaBookmark" minOccurs="0" maxOccurs="unbounded"/>
  </xsd:sequence>
</xsd:complexType>
```

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

2.3.3.13 CT_MediaBookmarkTarget

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

Referenced by: bmkTgt

A complex type that specifies a media bookmark that triggers an animation.

Attributes:

spid: An **a:ST_DrawingElementId** attribute ([ISO/IEC29500-4:2012] section A.4.1) that specifies the **shape identifier** of the shape that contains video or audio data.

bmkName: An **xsd:string** attribute ([XMLSCHEMA2] section 3.2.1) that specifies the name of the bookmark for the media that is contained in the shape specified by **spid**. The name MUST exist in the **CT_MediaBookmarkList** (section 2.3.3.12) contained by the media.

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

```
<xsd:complexType name="CT_MediaBookmarkTarget">
  <xsd:attribute name="spid" type="a:ST_DrawingElementId" use="required"/>
```


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```
  <xsd:attribute name="bmkName" type="xsd:string" use="required"/>
</xsd:complexType>
```

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

2.3.3.14 CT_Media

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

Referenced by: media

A complex type that specifies the media.

Child Elements:

trim: A **CT_MediaTrim** element (section 2.3.3.18) that specifies the amount of time to be trimmed from the start and end of the media during playback.

fade: A **CT_MediaFade** element (section 2.3.3.15) that specifies the starting and ending fade durations for the media.

bmkLst: A **CT_MediaBookmarkList** element (section 2.3.3.12) that specifies a list of bookmarks on the media.

extLst: A **p:CT_ExtensionList** ([ISO/IEC-29500-4] section A.3) element that specifies the extension list. All future extensions to the media will be stored in the extension list.

Attributes:

r:embed: A **r:ST_RelationshipId** ([ISO/IEC-29500-4] section A.7.8) attribute that specifies the relationship identifier that is used to determine the location of the media if it is embedded in the document. The **r:embed** attribute MUST be present if the attribute is not present. If both the **r:embed** and **r:link** attributes are present, the **r:link** attribute takes precedence.

r:link: A **r:ST_RelationshipId** ([ISO/IEC-29500-4] section A.7.8) attribute that specifies the relationship identifier that is used to determine the location of the media if it is linked from the document. The **r:link** attribute MUST be present if the **r:embed** attribute is not present. If both the **r:link** and **r:embed** attributes are present, the **r:link** attribute takes precedence.

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

```
<xsd:complexType name="CT_Media">
  <xsd:sequence>
    <xsd:element name="trim" type="CT_MediaTrim" minOccurs="0" maxOccurs="1"/>
    <xsd:element name="fade" type="CT_MediaFade" minOccurs="0" maxOccurs="1"/>
    <xsd:element name="bmkLst" type="CT_MediaBookmarkList" minOccurs="0" maxOccurs="1"/>
    <xsd:element name="extLst" type="p:CT_ExtensionList" minOccurs="0" maxOccurs="1"/>
  </xsd:sequence>
  <xsd:attributeGroup ref="a:AG_Blob"/>
</xsd:complexType>
```

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

2.3.3.15 CT_MediaFade

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

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Referenced by: CT_Media

A complex type that specifies the media fade.

Attributes:

in: An **ST_UniversalTimeOffset** (section 2.3.4.6) attribute that specifies the duration of the starting fade. It MUST be less than or equal to the total length of the media minus the **out**.

out: An **ST_UniversalTimeOffset** attribute that specifies the duration of the ending fade. It MUST be less than or equal to the total length of the media minus the **in**.

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

```
<xsd:complexType name="CT_MediaFade">
  <xsd:attribute name="in" type="p14:ST_UniversalTimeOffset" use="optional" default="0"/>
  <xsd:attribute name="out" type="p14:ST_UniversalTimeOffset" use="optional" default="0"/>
</xsd:complexType>
```

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

2.3.3.16 CT_MediaPlaybackEventRecord

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

Referenced by: CT_ShowEventRecordList

A complex type that specifies a media playback event that occurs during slide show.

Attributes:

time: An **ST_UniversalTimeOffset** (section 2.3.4.6) attribute that specifies the time that the event occurs. The value is relative to the beginning of the slide timeline, which does not include side transition time.

objId: An **a:ST_DrawingElementId** attribute ([ISO/IEC29500-4:2012] section A.4.1) that specifies the identifier of the media object on the slide that is the target of the event.

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

```
<xsd:complexType name="CT_MediaPlaybackEventRecord">
  <xsd:attribute name="time" type="p14:ST_UniversalTimeOffset" use="required"/>
  <xsd:attribute name="objId" type="a:ST_DrawingElementId" use="required"/>
</xsd:complexType>
```

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

2.3.3.17 CT_MediaSeekEventRecord

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

Referenced by: CT_ShowEventRecordList

A complex type that specifies a media seek event that occurs during slide show.

Attributes:

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time: An **ST_UniversalTimeOffset** attribute (section 2.3.4.6) that specifies the time that the event occurs. The value is relative to the beginning of the slide timeline, which does not include slide transition time.

objId: An **a:ST_DrawingElementId** attribute ([ISO/IEC29500-4:2012] section A.4.1) that specifies the identifier of the media object on the slide that is the target of this event.

seek: An **ST_UniversalTimeOffset** attribute (section 2.3.4.6) that specifies the time of the position to seek to in the media stream.

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

```
<xsd:complexType name="CT_MediaSeekEventRecord">
  <xsd:attribute name="time" type="p14:ST_UniversalTimeOffset" use="required"/>
  <xsd:attribute name="objId" type="a:ST_DrawingElementId" use="required"/>
  <xsd:attribute name="seek" type="p14:ST_UniversalTimeOffset" use="required"/>
</xsd:complexType>
```

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

2.3.3.18 CT_MediaTrim

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

Referenced by: CT_Media

A complex type that specifies the amount of time to be trimmed from the start and end of the media during playback.

Attributes:

st: An **ST_UniversalTimeOffset** attribute (section 2.3.4.6) that specifies a duration of time to be removed from the start of the media during playback. It MUST be less than the total length of the media minus the **end**.

end: An **ST_UniversalTimeOffset** attribute (section 2.3.4.6) that specifies a duration of time to be removed from the end of the media during playback. It MUST be less than the total length of the media minus the **st**.

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

```
<xsd:complexType name="CT_MediaTrim">
  <xsd:attribute name="st" type="p14:ST_UniversalTimeOffset" use="optional" default="0"/>
  <xsd:attribute name="end" type="p14:ST_UniversalTimeOffset" use="optional" default="0"/>
</xsd:complexType>
```

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

2.3.3.19 CT_NullEventRecord

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

Referenced by: CT_ShowEventRecordList

A complex type that specifies an unknown event in slide show. This is for future extension.

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Attributes:

time: An **ST_UniversalTimeOffset** attribute (section 2.3.4.6) that specifies the time that the event occurs. The value is relative to the beginning of the slide timeline, which does not include slide transition time.

objId: An **a:ST_DrawingElementId** attribute ([ISO/IEC29500-4:2012] section A.4.1) that specifies the identifier of the shape object on the slide that is the target of this event.

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

```
<xsd:complexType name="CT_NullEventRecord">
  <xsd:attribute name="time" type="p14:ST_UniversalTimeOffset" use="required"/>
  <xsd:attribute name="objId" type="a:ST DrawingElementId" use="required"/>
</xsd:complexType>
```

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

2.3.3.20 CT_PrismTransition

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

Referenced by: prism

A complex type that specifies the parameters for a prism transition.

Attributes:

dir: A **p:ST_TransitionSideDirectionType** attribute ([ISO/IEC29500-4:2012] section A.3) that specifies the direction presentation slides move during the transition.

isContent: An **xsd:boolean** attribute ([XMLSCHEMA2] section 3.2.2) that specifies whether the visual representation draws presentation slide content and presentation slide background separately.

isInverted: An **xsd:boolean** attribute ([XMLSCHEMA2] section 3.2.2) that specifies whether the layout of the presentation slides during the transition is concave instead of convex.

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

```
<xsd:complexType name="CT_PrismTransition">
  <xsd:attribute name="dir" type="p:ST TransitionSideDirectionType" use="optional"
default="l"/>
  <xsd:attribute name="isContent" type="xsd:boolean" use="optional" default="false"/>
  <xsd:attribute name="isInverted" type="xsd:boolean" use="optional" default="false"/>
</xsd:complexType>
```

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

2.3.3.21 CT_RandomId

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

Referenced by: creationId, modId

A complex type that specifies a cryptographically strong random number.

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Attributes:

val: An **xsd:unsignedInt** attribute ([XMLSCHEMA2] section 3.3.22) that specifies the random number.

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

```
<xsd:complexType name="CT_RandomId">
  <xsd:attribute name="val" type="xsd:unsignedInt" use="required"/>
</xsd:complexType>
```

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

2.3.3.22 CT_RevealTransition

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

Referenced by: reveal

A complex type that specifies the parameters for a reveal transition.

Attributes:

thruBlk: An **xsd:boolean** attribute ([XMLSCHEMA2] section 3.2.2) that specifies whether the transition fades through black.

dir: An **ST_TransitionLeftRightDirectionType** attribute (section 2.3.4.3) that specifies the direction presentation slides move during the transition.

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

```
<xsd:complexType name="CT_RevealTransition">
  <xsd:attribute name="thruBlk" type="xsd:boolean" use="optional" default="false"/>
  <xsd:attribute name="dir" type="ST_TransitionLeftRightDirectionType" use="optional"
default="l"/>
</xsd:complexType>
```

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

2.3.3.23 CT_RippleTransition

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

Referenced by: ripple

A complex type that specifies the parameters for a ripple transition.

Attributes:

dir: An **ST_TransitionCornerAndCenterDirectionType** attribute (section 2.3.4.2) that specifies the direction presentation slides move during the transition.

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

```
<xsd:complexType name="CT_RippleTransition">
```


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```
  <xsd:attribute name="dir" type="ST_TransitionCornerAndCenterDirectionType" use="optional"
default="center"/>
</xsd:complexType>
```

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

2.3.3.24 CT_Section

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

Referenced by: CT_SectionList

A complex type that specifies a section and its properties.

Child Elements:

sldIdLst: A **CT_SectionSlideIdList** element (section 2.3.3.26) that specifies a list of presentation slides in a section.

extLst: A **p:CT_ExtensionList** element ([ISO/IEC29500-4:2012] section A.3) that specifies the extension list. All future extensions to the section will be stored in the extension list.

Attributes:

name: An **xsd:string** attribute ([XMLSCHEMA2] section 3.2.1) that specifies the name of the section.

id: A **s:ST_Guid** attribute ([ISO/IEC29500-4:2012] section A.7.9) that specifies a **GUID** used to uniquely identify a section in the **CT_SectionList** (section 2.3.3.25).

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

```
<xsd:complexType name="CT_Section">
  <xsd:sequence>
    <xsd:element name="sldIdLst" type="CT_SectionSlideIdList" minOccurs="1" maxOccurs="1"/>
    <xsd:element name="extLst" type="p:CT_ExtensionList" minOccurs="0" maxOccurs="1"/>
  </xsd:sequence>
  <xsd:attribute name="name" type="xsd:string"/>
  <xsd:attribute name="id" type="s:ST_Guid"/>
</xsd:complexType>
```

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

2.3.3.25 CT_SectionList

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

Referenced by: sectionLst

A complex type that specifies section properties for the document.

Child Elements:

section: A **CT_Section** element (section 2.3.3.24) that specifies a section in the document.

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

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```
<xsd:complexType name="CT_SectionList">
  <xsd:sequence>
    <xsd:element name="section" type="CT_Section" minOccurs="1" maxOccurs="unbounded"/>
  </xsd:sequence>
</xsd:complexType>
```

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

2.3.3.26 CT_SectionSlideIdList

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

Referenced by: CT_Section

A complex type that specifies the list of presentation slides that belong to a section.

Child Elements:

sldId: A **CT_SectionSlideIdListEntry** element (section 2.3.3.27) that specifies an identifier of a presentation slide.

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

```
<xsd:complexType name="CT_SectionSlideIdList">
  <xsd:sequence>
    <xsd:element name="sldId" type="CT SectionSlideIdListEntry" minOccurs="0"
maxOccurs="unbounded"/>
  </xsd:sequence>
</xsd:complexType>
```

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

2.3.3.27 CT_SectionSlideIdListEntry

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

Referenced by: CT_SectionSlideIdList

A complex type that specifies the presentation slide identifier.

Attributes:

id: A **p:ST_SlideId** attribute ([ISO/IEC29500-4:2012] section A.3) that specifies the slide identifier.

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

```
<xsd:complexType name="CT SectionSlideIdListEntry">
  <xsd:attribute name="id" type="p:ST_SlideId" use="required"/>
</xsd:complexType>
```

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

2.3.3.28 CT_ShowEventRecordList

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

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Referenced by: showEvtLst

A complex type that specifies a list of slide show events that occurs during slide show.

Child Elements:

triggerEvt: A **CT_TriggerEventRecord** element (section 2.3.3.31) that specifies a triggered animation event.

playEvt: A **CT_MediaPlaybackEventRecord** element (section 2.3.3.16) that specifies an event targeting a media object that starts playback.

stopEvt: A **CT_MediaPlaybackEventRecord** element (section 2.3.3.16) that specifies an event targeting a media object that stops playback.

pauseEvt: A **CT_MediaPlaybackEventRecord** element (section 2.3.3.16) that specifies an event targeting a media object that pauses playback.

resumeEvt: A **CT_MediaPlaybackEventRecord** element (section 2.3.3.16) that specifies an event targeting a media object that assumes playback.

seekEvt: A **CT_MediaSeekEventRecord** element (section 2.3.3.17) that specifies an event targeting a media object that seeks to a specified time in the media stream.

nullEvt: A **CT_NullEventRecord** element (section 2.3.3.19) that specifies an unknown event.

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

```
<xsd:complexType name="CT_ShowEventRecordList">
  <xsd:sequence>
    <xsd:choice minOccurs="0" maxOccurs="unbounded">
      <xsd:element name="triggerEvt" type="CT_TriggerEventRecord"/>
      <xsd:element name="playEvt" type="CT_MediaPlaybackEventRecord"/>
      <xsd:element name="stopEvt" type="CT_MediaPlaybackEventRecord"/>
      <xsd:element name="pauseEvt" type="CT_MediaPlaybackEventRecord"/>
      <xsd:element name="resumeEvt" type="CT_MediaPlaybackEventRecord"/>
      <xsd:element name="seekEvt" type="CT_MediaSeekEventRecord"/>
      <xsd:element name="nullEvt" type="CT_NullEventRecord"/>
    </xsd:choice>
  </xsd:sequence>
</xsd:complexType>
```

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

2.3.3.29 CT_ShowMediaControls

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

Referenced by: showMediaCtrls

A complex type that specifies the visibility of media user interface controls during slide show.

Attributes:

val: An **xsd:boolean** attribute ([XMLSCHEMA2] section 3.2.2) that specifies the visibility of media user interface controls.

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

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```
<xsd:complexType name="CT_ShowMediaControls">
  <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).

2.3.3.30 CT_ShredTransition

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

Referenced by: shred

A complex type that specifies the parameters for a shred transition.

Attributes:

pattern: An **ST_TransitionShredPattern** attribute (section 2.3.4.5) that specifies the shape of the visuals used during the transition.

dir: A **p:ST_TransitionInOutDirectionType** attribute ([ISO/IEC29500-4:2012] section A.3) that specifies the direction presentation slides move during the transition.

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

```
<xsd:complexType name="CT_ShredTransition">
  <xsd:attribute name="pattern" type="ST_TransitionShredPattern" use="optional"
default="strip"/>
  <xsd:attribute name="dir" type="p:ST_TransitionInOutDirectionType" use="optional"
default="in"/>
</xsd:complexType>
```

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

2.3.3.31 CT_TriggerEventRecord

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

Referenced by: CT_ShowEventRecordList

A complex type that specifies a triggered event that occurs during slide show.

Attributes:

type: A **p:ST_TLTriggerEvent** attribute ([ISO/IEC29500-4:2012] section A.3) that specifies the type of the triggered event.

time: An **ST_UniversalTimeOffset** attribute (section 2.3.4.6) that specifies the time that the event occurs. The value is relative to the beginning of the slide timeline, which does not include slide transition time.

objId: An **a:ST_DrawingElementId** attribute ([ISO/IEC29500-4:2012] section A.4.1) that specifies the identifier of the shape object on the slide that is the target of this event.

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

```
<xsd:complexType name="CT_TriggerEventRecord">
```


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```
  <xsd:attribute name="type" type="p:ST_TLTriggerEvent" use="required"/>
  <xsd:attribute name="time" type="p14:ST_UniversalTimeOffset" use="required"/>
  <xsd:attribute name="objId" type="a:ST_DrawingElementId" use="required"/>
</xsd:complexType>
```

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

2.3.4 Simple Types

2.3.4.1 ST_TransitionCenterDirectionType

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

Referenced by: ST_TransitionCornerAndCenterDirectionType

A simple type that specifies a direction restricted to the center.

Value	Meaning
center	Direction of movement is to or from the center.

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

```
<xsd:simpleType name="ST_TransitionCenterDirectionType">
  <xsd:restriction base="xsd:token">
    <xsd:enumeration value="center"/>
  </xsd:restriction>
</xsd:simpleType>
```

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

2.3.4.2 ST_TransitionCornerAndCenterDirectionType

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

Referenced by: CT_RippleTransition

A simple type that specifies a direction restricted to the corners and center.

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

```
<xsd:simpleType name="ST_TransitionCornerAndCenterDirectionType">
  <xsd:union memberTypes="p:ST_TransitionCornerDirectionType
ST TransitionCenterDirectionType"/>
</xsd:simpleType>
```

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

2.3.4.3 ST_TransitionLeftRightDirectionType

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

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Referenced by: CT_LeftRightDirectionTransition, CT_RevealTransition

A simple type that specifies a direction restricted to the values of left and right.

Value	Meaning
l	Left
r	Right

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

```
<xsd:simpleType name="ST_TransitionLeftRightDirectionType">
  <xsd:restriction base="xsd:token">
    <xsd:enumeration value="l"/>
    <xsd:enumeration value="r"/>
  </xsd:restriction>
</xsd:simpleType>
```

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

2.3.4.4 ST_TransitionPattern

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

Referenced by: CT_GlitterTransition

A simple type that specifies a geometric pattern that tiles together to fill a larger area.

Value	Meaning
diamond	Diamond tile pattern
hexagon	Hexagon tile pattern

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

```
<xsd:simpleType name="ST_TransitionPattern">
  <xsd:restriction base="xsd:token">
    <xsd:enumeration value="diamond"/>
    <xsd:enumeration value="hexagon"/>
  </xsd:restriction>
</xsd:simpleType>
```

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

2.3.4.5 ST_TransitionShredPattern

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

Referenced by: CT_ShredTransition

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A simple type that specifies a geometric shape that tiles together to fill a larger area.

Value	Meaning
strip	Vertical strips
rectangle	Small rectangles

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

```
<xsd:simpleType name="ST_TransitionShredPattern">
  <xsd:restriction base="xsd:token">
    <xsd:enumeration value="strip"/>
    <xsd:enumeration value="rectangle"/>
  </xsd:restriction>
</xsd:simpleType>
```

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

2.3.4.6 ST_UniversalTimeOffset

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

Referenced by: dur, CT_MediaTrim, CT_MediaFade, CT_MediaBookmark, CT_LaserTracePoint, CT_TriggerEventRecord, CT_NullEventRecord, CT_MediaPlaybackEventRecord, CT_MediaSeekEventRecord, CT_ZoomObjectProperties

A simple type that specifies an amount of time. It MUST be a valid TIMEOFFSET as specified in the following ABNF [RFC5234] grammar:

TIMEOFFSET = TIME [UNITS]

TIME = 1*DIGIT ["." 1*DIGIT]

UNITS = "h" / "min" / "s" / "ms" / "µs" / "ns"

UNITS specifies one of the following units of time:

Abbreviation	Unit of Time
h	Hour
min	Minute
s	Second
ms	Millisecond
µs	Microsecond
ns	Nanosecond

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If no unit is specified, the default is millisecond.

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

```
<xsd:simpleType name="ST_UniversalTimeOffset">
  <xsd:restriction base="xsd:string"/>
</xsd:simpleType>
```

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

2.4 http://schemas.microsoft.com/office/powerpoint/2012/main

2.4.1 Elements

2.4.1.1 chartTrackingRefBased

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

A **CT_ChartTrackingRefBased** element (section 2.4.3.1) that specifies how data point properties and datalabels ([MS-ODRAWXML] section 2.2.1.2) in all charts ([ISO/IEC29500-1:2012] section 21.2) in this **presentation** behave.<11> See section 2.2.12 for how this element integrates with [ISO/IEC29500:2012].

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

```
<xsd:element name="chartTrackingRefBased" type="CT_ChartTrackingRefBased"/>
```

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

2.4.1.2 isNarration

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

A **CT_IsNarration** element<12> section 2.4.3.5 that specifies whether the shape is narration related.

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

```
<xsd:element name="isNarration" type="CT_IsNarration"/>
```

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

2.4.1.3 notesGuideLst

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

A **CT_ExtendedGuideList** element (section 2.4.3.4) that specifies a list of extended guides for a notes page view.<13> See section 2.2.11 for how this element integrates with [ISO/IEC29500:2012].

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

```
<xsd:element name="notesGuideLst" type="CT_ExtendedGuideList"/>
```

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

2.4.1.4 presenceInfo

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

A **CT_PresenceInfo** element (section 2.4.3.7) that specifies presence information for a **comment** author.<14> See section 2.2.10 for how this element integrates with [ISO/IEC29500:2012].

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

```
<xsd:element name="presenceInfo" type="CT_PresenceInfo"/>
```

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

2.4.1.5 prstTrans

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

A **CT_PresetTransition** element (section 2.4.3.8) that specifies a preset transition.

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

```
<xsd:element name="prstTrans" type="CT_PresetTransition"/>
```

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

2.4.1.6 sldGuideLst

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

A **CT_ExtendedGuideList** element (section 2.4.3.4) that specifies a list of extended guides for a master slide, a slide layout or a slide view of the presentation.<15> See section 2.2.11 for how this element integrates with [ISO/IEC29500:2012].

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

```
<xsd:element name="sldGuideLst" type="CT_ExtendedGuideList"/>
```

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

2.4.1.7 threadingInfo

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

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A **CT_CommentThreading** element (section 2.4.3.2) that specifies comment threading.<16> See section 2.2.10 for how this element integrates with [ISO/IEC29500:2012].

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

```
<xsd:element name="threadingInfo" type="CT_CommentThreading"/>
```

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

2.4.2 Attributes

None.

2.4.3 Complex Types

2.4.3.1 CT_ChartTrackingRefBased

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

Referenced by: chartTrackingRefBased

A complex type that specifies how data point properties and datalabels ([MS-ODRAWXML] section 2.2.1.2) in all charts ([ISO/IEC29500-1:2012] section 21.2) in this presentation behave.<17>

Attributes:

val: An **xsd:boolean** ([XMLSCHEMA2] section 3.2.2) attribute that specifies the behavior of data point properties and datalabels ([MS-ODRAWXML] section 2.2.1.2) in all charts ([ISO/IEC29500-1:2012] section 21.2) in this presentation as defined by the following table.

Value	Meaning
True	Datapoint properties and datalabels in all charts ([ISO/IEC29500-1:2012] section 21.2) in this presentation follow their reference.
False	Datapoint properties and datalabels in all charts ([ISO/IEC29500-1:2012] section 21.2) in this presentation follow their position in the chart.

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

```
<xsd:complexType name="CT_ChartTrackingRefBased">
  <xsd:attribute name="val" type="xsd:boolean" use="required"/>
</xsd:complexType>
```

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

2.4.3.2 CT_CommentThreading

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

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Referenced by: threadingInfo

A complex type that specifies threading extensions to the **CT_Comment** complex type ([ISO/IEC29500-4:2012] section A.3).<18>

Child Elements:

parentCm: A **CT_ParentCommentIdentifier** element (section 2.4.3.6) that specifies the parent comment.

Attributes:

timeZoneBias: An **xsd:int** attribute ([XMLSCHEMA2] section 3.3.17) that specifies the time zone bias, in minutes. The bias is the difference between **Coordinated Universal Time (UTC)** and time stored in the **dt** attribute of the **CT_Comment** complex type ([ISO/IEC29500-4:2012] section A.3). All translations between UTC and local time are based on the following formula: UTC = local time + bias

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

```
<xsd:complexType name="CT_CommentThreading">
  <xsd:sequence>
    <xsd:element name="parentCm" type="CT ParentCommentIdentifier" minOccurs="0"
maxOccurs="1"/>
  </xsd:sequence>
  <xsd:attribute name="timeZoneBias" type="xsd:int"/>
</xsd:complexType>
```

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

2.4.3.3 CT_ExtendedGuide

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

Referenced by: CT_ExtendedGuideList

A complex type that specifies a guide within a presentation.<19> Guides are lines used for arranging shapes and other content.

Child Elements:

clr: A **CT_Color** element ([ISO/IEC29500-4:2012] section A.4.1) that specifies the color of the guide.

extLst: A **CT_ExtensionList** element ([ISO/IEC29500-4:2012] section A.3) that specifies the extension list. All future extensions to the guide will be stored in the extension list.

Attributes:

id: An **xsd:unsignedInt** attribute ([XMLSCHEMA2] section 3.3.22) that specifies a unique identifier for the guide. The identifier MUST be unique within its parent **CT_ExtendedGuideList** (section 2.4.3.4).

name: An **xsd:string** attribute ([XMLSCHEMA2] section 3.2.1) that specifies the name of the guide.

orient: An **ST_Direction** attribute ([ISO/IEC29500-4:2012] section A.3) that specifies the orientation of the guide.

pos: An **ST_Coordinate32** attribute ([ISO/IEC29500-4:2012] section A.4.1) that specifies the position of the guide relative to the top or left side of the slide.

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userDrawn: An **xsd:boolean** ([XMLSCHEMA2] section 3.2.2) attribute that specifies whether the guide was inserted by the user.

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

```
<xsd:complexType name="CT ExtendedGuide">
  <xsd:sequence>
    <xsd:element name="clr" type="a:CT Color" minOccurs="1" maxOccurs="1"/>
    <xsd:element name="extLst" type="p:CT_ExtensionList" minOccurs="0" maxOccurs="1"/>
  </xsd:sequence>
  <xsd:attribute name="id" type="xsd:unsignedInt" use="required"/>
  <xsd:attribute name="name" type="xsd:string" use="optional" default=""/>
  <xsd:attribute name="orient" type="p:ST Direction" use="optional" default="vert"/>
  <xsd:attribute name="pos" type="a:ST_Coordinate32" use="optional" default="0"/>
  <xsd:attribute name="userDrawn" type="xsd:boolean" use="optional" default="false"/>
</xsd:complexType>
```

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

2.4.3.4 CT_ExtendedGuideList

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

Referenced by: sldGuideLst, notesGuideLst

A complex type that specifies a list of extended guides for a master slide, a slide layout, or a particular view of the presentation.<20>

Child Elements:

guide: A **CT_ExtendedGuide** element (section 2.4.3.3) that specifies a guide in a presentation.

extLst: A **CT_ExtensionList** element ([ISO/IEC29500-4:2012] section A.3) that specifies the extension list. All future extensions to the guide list will be stored in the extension list.

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

```
<xsd:complexType name="CT ExtendedGuideList">
  <xsd:sequence>
    <xsd:element name="guide" type="CT ExtendedGuide" minOccurs="0" maxOccurs="unbounded"/>
    <xsd:element name="extLst" type="p:CT_ExtensionList" minOccurs="0" maxOccurs="1"/>
  </xsd:sequence>
</xsd:complexType>
```

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

2.4.3.5 CT_IsNarration

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

Referenced by: isNarration

A complex type<21> that specifies the narration flag for shapes.

Attributes:

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val: An **xsd:boolean** ([XMLSCHEMA2] section 3.2.2) attribute that specifies whether the shape is narration related.

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

```
 <xsd:complexType name="CT_IsNarration">
   <xsd:attribute name="val" type="xsd:boolean" use="optional" default="false"/>
</xsd:complexType>
```

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

2.4.3.6 CT_ParentCommentIdentifier

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

Referenced by: CT_CommentThreading

A complex type that specifies the comment author ID and comment index of the parent comment.<22> Together, they identify the parent comment within a presentation.

Attributes:

authorId: An **xsd:unsignedInt** attribute ([XMLSCHEMA2] section 3.3.22) that specifies the author of the parent comment by reference to the **authorId** attribute contained within the **CT_Comment** complex type ([ISO/IEC29500-4:2012] section A.3).

idx: An **xsd:unsignedInt** attribute ([XMLSCHEMA2] section 3.3.22) that specifies the index of the parent comment by reference to the **idx** attribute contained within the **CT_Comment** complex type ([ISO/IEC29500-4:2012] section A.3).

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

```
<xsd:complexType name="CT_ParentCommentIdentifier">
  <xsd:attribute name="authorId" type="xsd:unsignedInt"/>
  <xsd:attribute name="idx" type="xsd:unsignedInt"/>
</xsd:complexType>
```

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

2.4.3.7 CT_PresenceInfo

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

Referenced by: presenceInfo

A complex type that specifies presence information extensions to the **CT_CommentAuthor** complex type ([ISO/IEC29500-4:2012] section A.3).<23>

Attributes:

userId: An **xsd:string** ([XMLSCHEMA2] section 3.2.1) attribute that specifies a unique user id for a person.

providerId: An **xsd:string** ([XMLSCHEMA2] section 3.2.1) attribute that specifies the identity provider that produced the subsequent userId attribute.

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This table lists example data for these attributes.

Identity Provider	providerId value	userId value	Description of userId value
No Provider	"None"	"Name"	Author's name
Active Directory	"AD"	SID	Active Directory Security Identifier (as specified in [MS-DTYP] section 2.4.2)
Windows Live ID	"Windows Live"	CID	A 64-bit signed decimal that uniquely identifies a user on Windows Live.

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

```
<xsd:complexType name="CT_PresenceInfo">
  <xsd:attribute name="userId" type="xsd:string" use="required"/>
  <xsd:attribute name="providerId" type="xsd:string" use="required"/>
</xsd:complexType>
```

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

2.4.3.8 CT_PresetTransition

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

Referenced by: prstTrans

A complex type that specifies the parameters of a preset transition.

Attributes:

prst: An **xsd:string** ([XMLSCHEMA2] section 3.2.1) attribute that specifies the name of the preset transition. This name specifies the internal resource to use for the transition.

prst Value	Meaning
fallOver	A fall over transition as shown in the following figure.
Figure 22: Sample with prst equal to "fallOver"	
drape	A drape transition as shown in the following figure.

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Figure 23: Sample with prst equal to "drape"

curtains	A curtains transition as shown in the following figure.

Figure 24: Sample with prst equal to "curtains"

wind	A wind transition as shown in the following figure.

Figure 25: Sample with prst equal to "wind"

prestige	A prestige transition as shown in the following figure.

Figure 26: Sample with prst equal to "prestige"

fracture	A fracture transition as shown in the following figure.

Figure 27: Sample with prst equal to "fracture"

crush	A crush transition as shown in the following figure.

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Figure 28: Sample with prst equal to "crush"

peelOff	A peel off transition as shown in the following figure.

Figure 29: Sample with prst equal to "peelOff"

pageCurlDouble	A double page curl transition as shown in the following figure.

Figure 30: Sample with prst equal to "pageCurlDouble"

pageCurlSingle	A single page curl transition as shown in the following figure.

Figure 31: Sample with prst equal to "pageCurlSingle"

airplane	An airplane transition as shown in the following figure.

Figure 32: Sample with prst equal to "airplane"

origami	An origami transition as shown in the following figure.

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Figure 33: Sample with prst equal to "origami"

invX: An **xsd:boolean** ([XMLSCHEMA2] section 3.2.2) attribute that specifies whether to invert the X coordinates of the transition. This can be used to make a left direction-based transition preset into a right direction-based transition.

invY: An **xsd:boolean** ([XMLSCHEMA2] section 3.2.2) attribute that specifies whether to invert the Y coordinates of the transition. This can be used to make an up direction-based transition preset into a down direction-based transition preset.

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

```
<xsd:complexType name="CT_PresetTransition">
  <xsd:attribute name="prst" type="xsd:string"/>
  <xsd:attribute name="invX" type="xsd:boolean" use="optional" default="false"/>
  <xsd:attribute name="invY" type="xsd:boolean" use="optional" default="false"/>
</xsd:complexType>
```

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

2.4.4 Simple Types

None.

2.5 http://schemas.microsoft.com/office/powerpoint/2015/main

2.5.1 Elements

2.5.1.1 designElem

Target namespace: http://schemas.microsoft.com/office/powerpoint/2015/main

A CT_DesignElement element (section 2.5.3.1) that specifies whether an item is a design element. See section 2.5.3.1 for how this element integrates with [ISO/IEC29500:2012].

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

```
<xsd:element name="designElem" type="CT_DesignElement"/>
```

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

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2.5.2 Attributes

None.

2.5.3 Complex Types

2.5.3.1 CT_DesignElement

Target namespace: http://schemas.microsoft.com/office/powerpoint/2015/main

Referenced by: designElem

A complex type that specifies design element extensions to the **CT_ApplicationNonVisualDrawingProps** complex type ([ISO/IEC29500-4:2012] section A.3)<24>

Attributes:

val: An xsd:boolean ([XMLSCHEMA2] section 3.2.2) attribute that specifies whether an element is a design element.

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

```
<xsd:complexType name="CT_DesignElement">
  <xsd:attribute name="val" type="xsd:boolean"/>
</xsd:complexType>
```

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

2.5.4 Simple Types

None.

2.6 http://schemas.microsoft.com/office/powerpoint/2015/09/main

2.6.1 Elements

2.6.1.1 morph

Target namespace: http://schemas.microsoft.com/office/powerpoint/2015/09/main

A CT_MorphTransition element that specifies a morph transition. See section 2.2.1 for how this element integrates with [ISO/IEC29500:2012].

The following figure is a sample with the **option** attribute set to **byObject**.

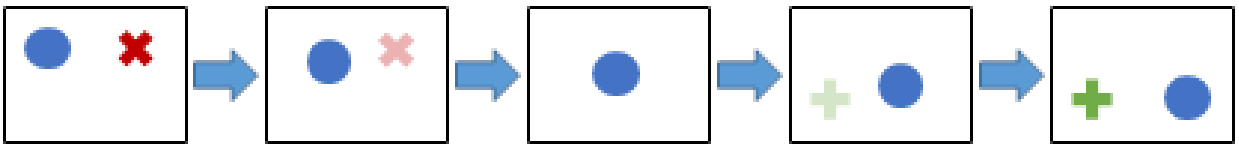

Figure 6: Sample morph transition

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

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```
<xsd:element name="morph" type="CT_MorphTransition"/>
```

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

2.6.2 Attributes

None.

2.6.3 Complex Types

2.6.3.1 CT_MorphTransition

Target namespace: http://schemas.microsoft.com/office/powerpoint/2015/09/main

Referenced by: morph

A complex type that specifies the parameters of a morph transition.

Attributes:

option: An ST_TransitionMorphOption attribute that specifies the level of detail for matching objects on the slide.

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

```
<xsd:complexType name="CT_MorphTransition">
  <xsd:attribute name="option" type="ST_TransitionMorphOption" use="required"/>
</xsd:complexType>
```

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

2.6.4 Simple Types

2.6.4.1 ST_TransitionMorphOption

Target namespace: http://schemas.microsoft.com/office/powerpoint/2015/09/main

Referenced by: CT_MorphTransition

A simple type that specifies the level of detail for matching objects on the slide.

Value	Meaning
byObject	Sets the Objects effect option, where objects are matched and moved.
byWord	Sets the Words effect option, where objects as well as individual words are matched and moved.
byChar	Sets the Characters effect option, where objects as well as individual characters are matched and moved.

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

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```
<xsd:simpleType name="ST_TransitionMorphOption">
  <xsd:restriction base="xsd:token">
    <xsd:enumeration value="byObject"/>
    <xsd:enumeration value="byWord"/>
    <xsd:enumeration value="byChar"/>
  </xsd:restriction>
</xsd:simpleType>
```

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

2.7 http://schemas.microsoft.com/office/powerpoint/2015/10/main

2.7.1 Elements

2.7.1.1 revInfo

Target namespace: http://schemas.microsoft.com/office/powerpoint/2015/10/main

A CT_RevisionInfo element that specifies the revisions contained in this document. A revision contains information about a set of modifications made to the document by one of the application instances participating in a collaborative session.

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

```
<xsd:element name="revInfo" type="CT_RevisionInfo"/>
```

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

2.7.2 Attributes

None.

2.7.3 Complex Types

2.7.3.1 CT_ClientRevision

Target namespace: http://schemas.microsoft.com/office/powerpoint/2015/10/main

Referenced by: CT_ClientRevisionList

A complex type that specifies information about a set of modifications made to the document by a collaborating application instance.

Attributes:

id: An ST_ClientID attribute that specifies a unique identifier for an application instance in a collaborative session.

v: An ST_ClientRevisionNumber attribute that specifies a unique identifier for the latest revision made by this application instance that has been saved by this application instance.

vWet: An ST_ClientRevisionNumber attribute that specifies an identifier for the latest revision made by this application instance that was saved by an application instance other than this application instance. A scenario when this attribute applies is when a modification made by this application

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instance is sent to another application instance via a communication channel, and the other application instance saves the modification before this application instance does.

dt: An xsd:dateTime ([XMLSCHEMA2] section 3.2.7) attribute that specifies the date and time of the latest revision specified by **v** or **vWet**, whichever is the later.

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

```
<xsd:complexType name="CT_ClientRevision">
  <xsd:attribute name="id" type="ST_ClientID" use="required"/>
  <xsd:attribute name="v" type="ST_ClientRevisionNumber" use="optional" default="0"/>
  <xsd:attribute name="vWet" type="ST ClientRevisionNumber" use="optional" default="0"/>
  <xsd:attribute name="dt" type="xsd:dateTime" use="required"/>
</xsd:complexType>
```

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

2.7.3.2 CT_ClientRevisionList

Target namespace: http://schemas.microsoft.com/office/powerpoint/2015/10/main

Referenced by: CT_RevisionInfo

A complex type that specifies a list of revisions to the document.

Child Elements:

client: A CT_ClientRevision element that specifies a revision made by an application instance in a collaborative session.

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

```
<xsd:complexType name="CT_ClientRevisionList">
  <xsd:sequence>
    <xsd:element name="client" type="CT_ClientRevision" minOccurs="0" maxOccurs="unbounded"/>
  </xsd:sequence>
</xsd:complexType>
```

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

2.7.3.3 CT_RevisionInfo

Target namespace: http://schemas.microsoft.com/office/powerpoint/2015/10/main

Referenced by: revInfo

A complex type that specifies information about the revisions made to a document.

Child Elements:

revLst: A CT_ClientRevisionList element that specifies a list of revisions made to the document.

extLst: A p:CT_ExtensionList ([ISO/IEC-29500-4] section A.3) element that specifies the extension list. All future extensions to the revision information will be stored in the extension list.

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

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```
<xsd:complexType name="CT_RevisionInfo">
  <xsd:sequence>
    <xsd:element name="revLst" type="CT_ClientRevisionList" minOccurs="0" maxOccurs="1"/>
    <xsd:element name="extLst" type="p:CT_ExtensionList" minOccurs="0" maxOccurs="1"/>
  </xsd:sequence>
</xsd:complexType>
```

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

2.7.4 Simple Types

2.7.4.1 ST_ClientID

Target namespace: http://schemas.microsoft.com/office/powerpoint/2015/10/main

Referenced by: CT_ClientRevision

A simple type that specifies a unique identifier for an application instance participating in a collaborative session.

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

```
<xsd:simpleType name="ST_ClientID">
  <xsd:restriction base="xsd:string"/>
</xsd:simpleType>
```

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

2.7.4.2 ST_ClientRevisionNumber

Target namespace: http://schemas.microsoft.com/office/powerpoint/2015/10/main

Referenced by: CT_ClientRevision

A simple type that specifies an unsigned integer for uniquely identifying a revision made by a particular application instance. A client revision number MUST be a strictly increasing value, with a later revision having a greater client revision number than an earlier one. A client revision number does not have to be unique across different application instances. A pair consisting of a client ID and a client revision number uniquely identifies a revision within a collaborative session.

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

```
<xsd:simpleType name="ST_ClientRevisionNumber">
  <xsd:restriction base="xsd:unsignedInt"/>
</xsd:simpleType>
```

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

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2.8 http://schemas.microsoft.com/office/powerpoint/2016/6/main

2.8.1 Elements

None.

2.8.2 Attributes

None.

2.8.3 Complex Types

2.8.3.1 CT_ZoomObjectProperties

Target namespace: http://schemas.microsoft.com/office/powerpoint/2016/6/main

Referenced by: CT_SectionZoomObject, CT_SlideZoomObject, CT_SummaryZoomObject

A complex type that specifies properties of a **Zoom** object.

Child Elements:

blipFill: An a:CT_BlipFillProperties ([ISO/IEC29500-1:2012] section 19.3.1.4) element that specifies the type of picture fill that the object uses.

spPr: An a:CT_ShapeProperties ([ISO/IEC29500-1:2012] section A.4.1) element that specifies the visual shape properties that can be applied to the object.

Attributes:

id: A s:ST_Guid ([ISO/IEC29500-4:2012] section A.7.9) attribute that specifies the unique ID of the Zoom object.

returnToParent: An xsd:boolean ([XMLSCHEMA2] section 3.2.2) attribute that specifies return to parent navigation behavior in slideshow.

imageType: An ST_ZoomObjectImageType attribute that specifies whether a custom cover image is used, or the slide preview.

transitionDur: An ST_UniversalTimeOffset attribute that specifies the duration of the transition between Zoom and slide. If not specified, it will use the destination slide transition and the timings associated with that transition.

showBg: An xsd:boolean ([XMLSCHEMA2] section 3.2.2) attribute that specifies whether the Zoom will use the background of the destination slide.

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

```
<xsd:complexType name="CT_ZoomObjectProperties">
  <xsd:sequence>
    <xsd:element name="blipFill" type="a:CT_BlipFillProperties" minOccurs="1" maxOccurs="1"/>
    <xsd:element name="spPr" type="a:CT_ShapeProperties" minOccurs="1" maxOccurs="1"/>
  </xsd:sequence>
  <xsd:attribute name="id" type="s:ST_Guid" use="required"/>
  <xsd:attribute name="returnToParent" type="xsd:boolean" use="optional" default="true"/>
  <xsd:attribute name="imageType" type="ST_ZoomObjectImageType" use="optional"
default="preview"/>
  <xsd:attribute name="transitionDur" type="p14:ST_UniversalTimeOffset" use="optional"/>
```


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```
  <xsd:attribute name="showBg" type="xsd:boolean" use="optional" default="true"/>
</xsd:complexType>
```

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

2.8.4 Simple Types

2.8.4.1 ST_ZoomObjectImageType

Target namespace: http://schemas.microsoft.com/office/powerpoint/2016/6/main

Referenced by: CT_ZoomObjectProperties

A simple type that specifies whether the Zoom object is using the slide preview or a cover image.

Value	Meaning
preview	Use the image of the slide or section
cover	Use a custom image

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

```
<xsd:simpleType name="ST_ZoomObjectImageType">
  <xsd:restriction base="xsd:token">
    <xsd:enumeration value="preview"/>
    <xsd:enumeration value="cover"/>
  </xsd:restriction>
</xsd:simpleType>
```

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

2.9 http://schemas.microsoft.com/office/powerpoint/2016/sectionzoom

2.9.1 Elements

2.9.1.1 sectionZm

Target namespace: http://schemas.microsoft.com/office/powerpoint/2016/sectionzoom

A CT_SectionZoom element that specifies the Zoom type as a Section Zoom container.

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

```
<xsd:element name="sectionZm" type="CT_SectionZoom"/>
```

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

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2.9.2 Attributes

None.

2.9.3 Complex Types

2.9.3.1 CT_SectionZoom

Target namespace: http://schemas.microsoft.com/office/powerpoint/2016/sectionzoom

Referenced by: sectionZm

A complex type that specifies the Zoom type as a Section Zoom container.

Child Elements:

sectionZmObj: A CT_SectionZoomObject element that specifies the object type as a Section Zoom object.

extLst: A p:CT_ExtensionList ([ISO/IEC29500-4:2012] section A.3) element that specifies the extension list. All future extensions to the Zoom will be stored in the extension list.

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

```
<xsd:complexType name="CT_SectionZoom">
  <xsd:sequence>
    <xsd:element name="sectionZmObj" type="CT_SectionZoomObject" minOccurs="1"
maxOccurs="1"/>
    <xsd:element name="extLst" type="p:CT_ExtensionList" minOccurs="0" maxOccurs="1"/>
  </xsd:sequence>
</xsd:complexType>
```

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

2.9.3.2 CT_SectionZoomObject

Target namespace: http://schemas.microsoft.com/office/powerpoint/2016/sectionzoom

Referenced by: CT_SectionZoom

A complex type that specifies the object type as a Section Zoom object.

Child Elements:

zmPr: A CT_ZoomObjectProperties element that specifies Section Zoom object properties.

extLst: A p:CT_ExtensionList ([ISO/IEC29500-4:2012] section A.3) element that specifies the extension list. All future extensions to the Zoom will be stored in the extension list.

Attributes:

sectionId: A s:ST_Guid ([ISO/IEC29500-4:2012] section A.7.9) attribute that specifies the section ID the Section Zoom object links to.

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

```
<xsd:complexType name="CT_SectionZoomObject">
```


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```
  <xsd:sequence>
    <xsd:element name="zmPr" type="p166:CT_ZoomObjectProperties" minOccurs="1"
maxOccurs="1"/>
    <xsd:element name="extLst" type="p:CT_ExtensionList" minOccurs="0" maxOccurs="1"/>
  </xsd:sequence>
  <xsd:attribute name="sectionId" type="s:ST Guid" use="required"/>
</xsd:complexType>
```

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

2.9.4 Simple Types

None.

2.10 http://schemas.microsoft.com/office/powerpoint/2016/slidezoom

2.10.1 Elements

2.10.1.1 sldZm

Target namespace: http://schemas.microsoft.com/office/powerpoint/2016/slidezoom

A CT_SlideZoom element that specifies the Zoom type as a Slide Zoom container.

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

```
<xsd:element name="sldZm" type="CT_SlideZoom"/>
```

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

2.10.2 Attributes

None.

2.10.3 Complex Types

2.10.3.1 CT_SlideZoom

Target namespace: http://schemas.microsoft.com/office/powerpoint/2016/slidezoom

Referenced by: sldZm

A complex type that specifies the Zoom type as a Slide Zoom container.

Child Elements:

sldZmObj: A CT_SlideZoomObject element that specifies the object type as a Slide Zoom object.

extLst: A p:CT_ExtensionList ([ISO/IEC29500-4:2012] section A.3) element that specifies the extension list. All future extensions to the Zoom will be stored in the extension list.

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

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```
<xsd:complexType name="CT_SlideZoom">
  <xsd:sequence>
    <xsd:element name="sldZmObj" type="CT_SlideZoomObject" minOccurs="1" maxOccurs="1"/>
    <xsd:element name="extLst" type="p:CT_ExtensionList" minOccurs="0" maxOccurs="1"/>
  </xsd:sequence>
</xsd:complexType>
```

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

2.10.3.2 CT_SlideZoomObject

Target namespace: http://schemas.microsoft.com/office/powerpoint/2016/slidezoom

Referenced by: CT_SlideZoom

A complex type that specifies the object type as a Slide Zoom object.

Child Elements:

zmPr: A CT_ZoomObjectProperties element that specifies the Slide Zoom object properties.

extLst: A p:CT_ExtensionList ([ISO/IEC29500-4:2012] section A.3) element that specifies the extension list. All future extensions to the Zoom will be stored in the extension list.

Attributes:

sldId: A p:ST_SlideId ([ISO/IEC29500-4:2012] section A.3) attribute that specifies the slide ID the Slide Zoom object links to.

cId: An xsd:unsignedInt ([XMLSCHEMA2] section 3.3.22) attribute that specifies the creation ID the Slide Zoom object links to.

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

```
<xsd:complexType name="CT_SlideZoomObject">
  <xsd:sequence>
    <xsd:element name="zmPr" type="p166:CT_ZoomObjectProperties" minOccurs="1"
maxOccurs="1"/>
    <xsd:element name="extLst" type="p:CT_ExtensionList" minOccurs="0" maxOccurs="1"/>
  </xsd:sequence>
  <xsd:attribute name="sldId" type="p:ST_SlideId" use="required"/>
  <xsd:attribute name="cId" type="xsd:unsignedInt" use="optional"/>
</xsd:complexType>
```

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

2.10.4 Simple Types

None.

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2.11 http://schemas.microsoft.com/office/powerpoint/2016/summaryzoom

2.11.1 Elements

2.11.1.1 summaryZm

Target namespace: http://schemas.microsoft.com/office/powerpoint/2016/summaryzoom

A CT_SummaryZoom element that specifies the Zoom type as a Summary Zoom container.

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

```
<xsd:element name="summaryZm" type="CT_SummaryZoom"/>
```

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

2.11.2 Attributes

None.

2.11.3 Complex Types

2.11.3.1 CT_FixedLayout

Target namespace: http://schemas.microsoft.com/office/powerpoint/2016/summaryzoom

Referenced by: CT_SummaryZoom

A complex type that specifies the layout with user-defined Zoom positioning.

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

```
<xsd:complexType name="CT_FixedLayout"/>
```

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

2.11.3.2 CT_GridLayout

Target namespace: http://schemas.microsoft.com/office/powerpoint/2016/summaryzoom

Referenced by: CT_SummaryZoom

A complex type that specifies the layout as a grid layout for a list of objects.

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

```
<xsd:complexType name="CT_GridLayout"/>
```

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

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2.11.3.3 CT_SummaryZoom

Target namespace: http://schemas.microsoft.com/office/powerpoint/2016/summaryzoom

Referenced by: summaryZm

A complex type that specifies the Zoom type as a Summary Zoom.

Child Elements:

summaryZmObj: A CT_SummaryZoomObject element that specifies the object type as a Summary Zoom object.

gridLayout: A CT_GridLayout element that specifies the layout as a grid layout for a list of objects.

fixedLayout: A CT_FixedLayout element that specifies the layout with user-defined Zoom positioning.

extLst: A p:CT_ExtensionList ([ISO/IEC29500-4:2012] section A.3) element that specifies the extension list. All future extensions to the Zoom will be stored in the extension list.

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

```
<xsd:complexType name="CT_SummaryZoom">
  <xsd:sequence>
    <xsd:element name="summaryZmObj" type="CT_SummaryZoomObject" minOccurs="0"
maxOccurs="unbounded"/>
    <xsd:choice minOccurs="1" maxOccurs="1">
      <xsd:element name="gridLayout" type="CT_GridLayout"/>
      <xsd:element name="fixedLayout" type="CT_FixedLayout"/>
    </xsd:choice>
    <xsd:element name="extLst" type="p:CT_ExtensionList" minOccurs="0" maxOccurs="1"/>
  </xsd:sequence>
</xsd:complexType>
```

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

2.11.3.4 CT_SummaryZoomObject

Target namespace: http://schemas.microsoft.com/office/powerpoint/2016/summaryzoom

Referenced by: CT_SummaryZoom

A complex type that specifies the object type as a Summary Zoom object.

Child Elements:

zmPr: A CT_ZoomObjectProperties element that specifies Summary Zoom object properties.

extLst: A p:CT_ExtensionList ([ISO/IEC29500-4:2012] section A.3) element that specifies the extension list. All future extensions to the Zoom will be stored in the extension list.

Attributes:

sectionId: A s:ST_Guid ([ISO/IEC29500-4:2012] section A.7.9) attribute that specifies the section ID the Summary Zoom object links to.

title: An xsd:string ([XMLSCHEMA2] section 3.2.1) attribute that specifies the Alt text title of the Summary Zoom object.

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descr: An xsd:string ([XMLSCHEMA2] section 3.2.1) attribute that specifies the Alt text description of the Summary Zoom object.

offsetFactorX: An a:ST_Percentage ([ISO/IEC29500-4:2012] section 12.1.2.2) attribute that specifies the percentage the object is offset on the x axis from the default layout.

offsetFactorY: An a:ST_Percentage ([ISO/IEC29500-4:2012] section 12.1.2.2) attribute that specifies the percentage the object is offset on the y axis from the default layout.

scaleFactorX: An a:ST_Percentage ([ISO/IEC29500-4:2012] section 12.1.2.2) attribute that specifies the percentage the object is scaled on the x axis from the default layout.

scaleFactorY: An a:ST_Percentage ([ISO/IEC29500-4:2012] section 12.1.2.2) attribute that specifies the percentage the object is scaled on the y axis from the default layout.

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

```
<xsd:complexType name="CT_SummaryZoomObject">
  <xsd:sequence>
    <xsd:element name="zmPr" type="p166:CT_ZoomObjectProperties" minOccurs="1"
maxOccurs="1"/>
    <xsd:element name="extLst" type="p:CT_ExtensionList" minOccurs="0" maxOccurs="1"/>
  </xsd:sequence>
  <xsd:attribute name="sectionId" type="s:ST_Guid" use="required"/>
  <xsd:attribute name="title" type="xsd:string" use="optional" default=""/>
  <xsd:attribute name="descr" type="xsd:string" use="optional" default=""/>
  <xsd:attribute name="offsetFactorX" type="a:ST Percentage" use="optional" default="0"/>
  <xsd:attribute name="offsetFactorY" type="a:ST_Percentage" use="optional" default="0"/>
  <xsd:attribute name="scaleFactorX" type="a:ST Percentage" use="optional" default="100000"/>
  <xsd:attribute name="scaleFactorY" type="a:ST_Percentage" use="optional" default="100000"/>
</xsd:complexType>
```

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

2.11.4 Simple Types

None.

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3 Structure Examples

The following sections provide examples of some of the extensions specified in this document. Some otherwise required markup has been elided and marked with "..." to focus the example on the particular elements being described.

3.1 Slide Transitions

The following shows an example of a **ripple** transition (section 2.3.1.24):

```
<p:sld xmlns:a="http://schemas.openxmlformats.org/drawingml/2006/main"
xmlns:r="http://schemas.openxmlformats.org/officeDocument/2006/relationships"
xmlns:p="http://schemas.openxmlformats.org/presentationml/2006/main"
xmlns:p14="http://schemas.microsoft.com/office/powerpoint/2010/main"
xmlns:mc="http://schemas.openxmlformats.org/markup-compatibility/2006">

...

   <mc:AlternateContent>
      <mc:Choice Requires="p14">
         <p:transition spd="slow" p14:dur="1500">
            <p14:ripple dir="ld"/>
         </p:transition>
      </mc:Choice>
      <mc:Fallback>
         <p:transition spd="slow">
            <p:fade/>
         </p:transition>
      </mc:Fallback>
   </mc:AlternateContent>

...

</p:sld>
```

This example shows a **ripple** slide transition (section 2.3.1.24). The **p14:dur** (section 2.3.2.3) attribute on the **p:transition** element ([ISO/IEC29500-1:2012] section 19.3.1.50) has a value of 1500 and indicates the transition runs for 1.5 seconds. The **dir** attribute on the **p14:ripple** element (section 2.3.1.24) has a value of "ld" and indicates the ripple will be to the left and down.

3.2 Media

The following shows an example of a **media** (section 2.3.1.18) extension:

```
            <p:pic>
                <p:nvPicPr>
                    <p:cNvPr id="4" name="video1.wmv" />
                    <p:cNvPicPr>
                        <a:picLocks noChangeAspect="1"/>
                    </p:cNvPicPr>
                    <p:nvPr>
                        <a:videoFile r:link="rId1"/>
                        <p:extLst>
                            <p:ext uri="{DAA4B4D4-6D71-4841-9C94-3DE7FCFB9230}">
                                <p14:media
xmlns:p14="http://schemas.microsoft.com/office/powerpoint/2010/main" r:embed="rId2">
                                    <p14:trim st="18374.0515" end="29596.7072"/>
                                    <p14:fade in="1000"/>
                                    <p14:bmkLst>
                                        <p14:bmk name="Bookmark 1" time="53703.3597"/>
                                    </p14:bmkLst>
                                </p14:media>
```


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```
                        </p:ext>
                    </p:extLst>
                </p:nvPr>
            </p:nvPicPr>
        </p:pic>
```

This example shows an embedded media that represents a video. The **r:embed** attribute of the **p14:media** element has a value of "rId2" and indicates the relationship identifier to use to find the **Media** (section 2.3.1.18) part. The **st** attribute of the **p14:trim** element has value of 18374.0515 and the **end** attribute has a value of 29596.7072. Together they indicate that the video has been trimmed, such that the first frame played is 18.3740515 seconds from the start of the video and the last frame played is 29.5967072 seconds from the end of the video. The **in** attribute of the **p14:fade** element has a value of 1000 and indicates the video will fade in for 1 second of playback. Finally, the **p14:bmk** element indicates a media bookmark. The **time** attribute has a value of 53703.3597 and indicates the bookmark location is 53.7033597 seconds from the start of the video. The bookmark can be used to easily jump to a particular point in the video or to trigger a separate animation.

3.3 Sections

The following shows an example of a **sectionLst** (section 2.3.1.25) extension:

```
<p:presentation xmlns:a="http://schemas.openxmlformats.org/drawingml/2006/main"
xmlns:r="http://schemas.openxmlformats.org/officeDocument/2006/relationships"
xmlns:p="http://schemas.openxmlformats.org/presentationml/2006/main"
xmlns:p14="http://schemas.microsoft.com/office/powerpoint/2010/main" saveSubsetFonts="1">

...

   <p:sldIdLst>
      <p:sldId id="256" r:id="rId2"/>
      <p:sldId id="257" r:id="rId3"/>
      <p:sldId id="259" r:id="rId4"/>
      <p:sldId id="258" r:id="rId5"/>
   </p:sldIdLst>

...

  <p:extLst>
     <p:ext uri="{521415D9-36F7-43E2-AB2F-B90AF26B5E84}">
         <p14:sectionLst>
             <p14:section name="Introduction" id="{01F07B81-39E6-4BBB-9B89-66EA253FBD29}">
                 <p14:sldIdLst>
                     <p14:sldId id="256"/>
                 </p14:sldIdLst>
             </p14:section>
             <p14:section name="Content" id="{1FEF2C88-0CF2-4176-BA81-0DE6FD9D1274}">
                 <p14:sldIdLst>
                     <p14:sldId id="257"/>
                     <p14:sldId id="259"/>
                 </p14:sldIdLst>
             </p14:section>
             <p14:section name="Conclusion" id="{CA1E145A-94F4-4C2D-9BC0-76C4A01D48ED}">
                 <p14:sldIdLst>
                     <p14:sldId id="258"/>
                 </p14:sldIdLst>
             </p14:section>
         </p14:sectionLst>
     </p:ext>
   </p:extLst>
</p:presentation>
```


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This example shows a presentation with three sections. The first **p14:section** element represents the first section. Its **name** attribute has a value of "Introduction" and indicates the name of the first section; its child element **p14:sldIdLst** has a child **p14:sldId** with the value of 256 that indicates that the first section encompasses the first presentation slide. The second **p14:section** element represents the second section. Its **name** attribute has a value of "Content" and indicates the name of the second section; it has a child element **p14:sldIdLst** that has two **p14:sldId** child elements with the values of 257 and 259 and that indicates that the second section encompasses the second and third presentation slides. The third **p14:section** element represents the third section. Its **name** attribute has a value of "Conclusion" and indicates the name of the third section; its child element **p14**:**sldIdLst** has only one child element **p14:sldId** with the value of 258 and that indicates that the third section encompasses the fourth presentation slide.

3.4 Slide Show

The following shows an example of the **laserTraceLst** (section 2.3.1.17) and **showEvtLst** (section 2.3.1.26) extensions:

```
<p:sld xmlns:a="http://schemas.openxmlformats.org/drawingml/2006/main"
xmlns:r="http://schemas.openxmlformats.org/officeDocument/2006/relationships"
xmlns:p="http://schemas.openxmlformats.org/presentationml/2006/main"
xmlns:p14="http://schemas.microsoft.com/office/powerpoint/2010/main">
   <p:cSld>
      <p:spTree>

...

         <p:pic>
            <p:nvPicPr>
               <p:cNvPr id="4" name="video1.wmv">
                  <a:hlinkClick r:id="" action="ppaction://media"/>
               </p:cNvPr>
               <p:cNvPicP>
                  <a:picLocks noChangeAspect="1"/>
               </p:cNvPicPr>
               <p:nvPr>
                  <a:videoFile r:link="rId2"/>
                  <p:extLst>
                     <p:ext uri="{DAA4B4D4-6D71-4841-9C94-3DE7FCFB9230}">
                        <p14:media r:embed="rId1"/>
                           <p14:bmkLst/>
                        </p14:media>
                     </p:ext>
                  </p:extLst>
               </p:nvPr>
            </p:nvPicPr>

...

         </p:pic>
         <p:sp>
            <p:nvSpPr>
               <p:cNvPr id="6" name="Rectangle 5"/>
               <p:cNvSpPr/>
               <p:nvPr/>
            </p:nvSpPr>

...

         </p:sp>
      </p:spTree>
   </p:cSld>

...

   <p:extLst>
```


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```
      <p:ext uri="{3A86A75C-4F4B-4683-9AE1-C65F6400EC91}">
         <p14:laserTraceLst>
            <p14:tracePtLst>
               <p14:tracePt t="48796" x="6062662" y="3259137"/>
               <p14:tracePt t="49796" x="6438900" y="3179762"/>
               <p14:tracePt t="50296" x="0" y="0"/>
            </p14:tracePtLst>
            <p14:tracePtLst>
               <p14:tracePt t="52000" x="1196975" y="2982912"/>
               <p14:tracePt t="55000" x="0" y="0"/>
            </p14:tracePtLst>
         </p14:laserTraceLst>
      </p:ext>
      <p:ext uri="{E180D4A7-C9FB-4DFB-919C-405C955672EB}">
         <p14:showEvtLst>
            <p14:triggerEvt type="onClick" time="6950" objId="6"/>
            <p14:playEvt time="12722" objId="4"/>
            <p14:pauseEvt time="38839" objId="4"/>
            <p14:seekEvt time="38839" objId="4" seek="10379"/>
            <p14:resumeEvt time="38859" objId="4"/>
            <p14:stopEvt time="49628" objId="4"/>
         </p14:showEvtLst>
      </p:ext>
   </p:extLst>
</p:sld>
```

First, the example shows a **p14:laserTraceLst** (section 2.3.1.17) element with two laser traces. The first **p14:tracePtLst** element indicates the first laser trace which includes three trace points. The first **p14:tracePt** element's **t** attribute has a value of 48796; its **x** attribute has a value of 6062662; and its **y** attribute has a value of 3259137. Together they indicate that the laser pointer first appears after 48.796 seconds at the location (6062662, 3259137). The second **p14:tracePt** element's **t** attribute has a value of 49796; its **x** attribute has a value of "6438900"; and its **y** attribute has a value of 3179762. Together they indicate that the laser pointer moves to the location (6438900, 3179762) after one additional second. The third **p14:tracePt** element's **t** attribute has a value of 50296; its **x** attribute has a value of zero; and its **y** value has a value of zero. Together, they indicate that the laser pointer moves to location (0, 0) after an additional 500 milliseconds. At this point, the laser trace ends and the laser pointer disappears. The second **p14:tracePtLst** element indicates the second laser trace, which includes two trace points. The first **p14:tracePt** element's **t** attribute has a value of 52000; its **x** attribute has a value of 1196975; and its **y** attribute has a value of 2982912. Together they indicate that the laser pointer reappears 1.704 seconds later at position (1196975, 2982912). The second **p14:tracePt** element's **t** attribute has a value of 55000; its **x** attribute has a value of zero; and its **y** attribute has a value of zero. Together they indicate that the laser pointer moves to location (0, 0) after an additional 3 seconds. At this point, the laser trace ends and the laser pointer again disappears.

Next, the example shows a **p14:showEvtLst** (section 2.3.1.26) with six events. The **p14:triggerEvt** element indicates the first event. Its **type** attribute has a value of "onClick"; its **time** attribute has a value of 6950; and its **objId** attribute has a value of 6. Together they indicate that the shape with the name "Rectangle 5" was clicked at 6.95 seconds. The **p14:playEvt** element indicates the second event. Its **time** attribute has a value of 12722 and its **objId** attribute has a value of 4. Together they indicate that the video with name "video1.wmv" began playing at 12.722 seconds. The **p14:pauseEvt** element indicates the third event. Its **time** attribute has a value of 38839 and its **objId** attribute has a value of 4. Together they indicate that the video with name "video1.wmv" was paused at 38.839 seconds. The **p14:seekEvt** element indicates the fourth event. Its **time** attribute has a value of 38839; its **objId** attribute has a value of 4; and its **seek** attribute has a value of 10379. Together they indicate that the video with name "video1.wmv" was seeked to 10.379 seconds from the start of the video at 38.839 seconds. The **p14:resumeEvt** element indicates the fifth event. Its **time** attribute has a value of 38859 and its **objId** attribute has a value of 4. Together they indicate that the video with name "video1.wmv" resumed playing at 38.859 seconds. The **p14:stopEvt** element indicates the sixth event. Its **time** attribute has a value of 49628 and its **objId** attribute has a value of 4. Together they indicate that the video with name "video1.wmv" stopped playing at 49.628 seconds.

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4 Security

4.1 Security Considerations for Implementers

None.

4.2 Index of Security Parameters

None.

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5 Appendix A: Full XML Schemas

For ease of implementation, this section provides the full W3C XML schemas for the new elements, attributes, complex types, and simple types specified in this document. Any schema references to namespaces included in [ISO/IEC29500:2012] refer specifically to the transitional schemas, as specified in [ISO/IEC29500-4:2012].

Schema name	Prefix	Section
http://schemas.microsoft.com/office/powerpoint/2010/main Schema	p14	5.1
http://schemas.microsoft.com/office/powerpoint/2012/main Schema	None.	5.2
	p159	5.3
	p1510	5.4
	p16	5.5
	p166	5.6
	psez	5.7
	pslz	5.8
	psuz	5.9

5.1 http://schemas.microsoft.com/office/powerpoint/2010/main Schema

```
<xsd:schema elementFormDefault="qualified"
targetNamespace="http://schemas.microsoft.com/office/powerpoint/2010/main"
xmlns="http://schemas.microsoft.com/office/powerpoint/2010/main"
xmlns:p14="http://schemas.microsoft.com/office/powerpoint/2010/main"
xmlns:p="http://schemas.openxmlformats.org/presentationml/2006/main"
xmlns:a="http://schemas.openxmlformats.org/drawingml/2006/main"
xmlns:s="http://schemas.openxmlformats.org/officeDocument/2006/sharedTypes"
xmlns:xsd="http://www.w3.org/2001/XMLSchema"
xmlns:a14="http://schemas.microsoft.com/office/drawing/2010/main"
xmlns:r="http://schemas.openxmlformats.org/officeDocument/2006/relationships">
  <xsd:simpleType name="ST_UniversalTimeOffset">
    <xsd:restriction base="xsd:string"/>
  </xsd:simpleType>
  <xsd:simpleType name="ST_TransitionPattern">
    <xsd:restriction base="xsd:token">
      <xsd:enumeration value="diamond"/>
      <xsd:enumeration value="hexagon"/>
    </xsd:restriction>
  </xsd:simpleType>
  <xsd:simpleType name="ST_TransitionCenterDirectionType">
    <xsd:restriction base="xsd:token">
      <xsd:enumeration value="center"/>
    </xsd:restriction>
  </xsd:simpleType>
  <xsd:simpleType name="ST TransitionShredPattern">
    <xsd:restriction base="xsd:token">
      <xsd:enumeration value="strip"/>
      <xsd:enumeration value="rectangle"/>
    </xsd:restriction>
  </xsd:simpleType>
  <xsd:simpleType name="ST TransitionCornerAndCenterDirectionType">
    <xsd:union memberTypes="p:ST_TransitionCornerDirectionType
ST_TransitionCenterDirectionType"/>
  </xsd:simpleType>
```


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```
  <xsd:simpleType name="ST_TransitionLeftRightDirectionType">
    <xsd:restriction base="xsd:token">
      <xsd:enumeration value="l"/>
      <xsd:enumeration value="r"/>
    </xsd:restriction>
  </xsd:simpleType>
  <xsd:complexType name="CT_LeftRightDirectionTransition">
    <xsd:attribute name="dir" type="ST_TransitionLeftRightDirectionType"/>
  </xsd:complexType>
  <xsd:element name="vortex" type="p:CT_SideDirectionTransition"/>
  <xsd:element name="switch" type="CT LeftRightDirectionTransition"/>
  <xsd:element name="flip" type="CT_LeftRightDirectionTransition"/>
  <xsd:complexType name="CT_RippleTransition">
    <xsd:attribute name="dir" type="ST_TransitionCornerAndCenterDirectionType" use="optional"
default="center"/>
  </xsd:complexType>
  <xsd:element name="ripple" type="CT RippleTransition"/>
  <xsd:element name="honeycomb" type="p:CT_Empty"/>
  <xsd:complexType name="CT PrismTransition">
    <xsd:attribute name="dir" type="p:ST_TransitionSideDirectionType" use="optional"
default="l"/>
    <xsd:attribute name="isContent" type="xsd:boolean" use="optional" default="false"/>
    <xsd:attribute name="isInverted" type="xsd:boolean" use="optional" default="false"/>
  </xsd:complexType>
  <xsd:element name="prism" type="CT_PrismTransition"/>
  <xsd:element name="doors" type="p:CT_OrientationTransition"/>
  <xsd:element name="window" type="p:CT_OrientationTransition"/>
  <xsd:element name="ferris" type="CT_LeftRightDirectionTransition"/>
  <xsd:element name="gallery" type="CT LeftRightDirectionTransition"/>
  <xsd:element name="conveyor" type="CT_LeftRightDirectionTransition"/>
  <xsd:element name="pan" type="p:CT SideDirectionTransition"/>
  <xsd:complexType name="CT_GlitterTransition">
    <xsd:attribute name="dir" type="p:ST_TransitionSideDirectionType" use="optional"
default="l"/>
    <xsd:attribute name="pattern" type="ST_TransitionPattern" use="optional"
default="diamond"/>
  </xsd:complexType>
  <xsd:element name="glitter" type="CT_GlitterTransition"/>
  <xsd:complexType name="CT_FlyThroughTransition">
    <xsd:attribute name="dir" type="p:ST TransitionInOutDirectionType" use="optional"
default="in"/>
    <xsd:attribute name="hasBounce" type="xsd:boolean" use="optional" default="false"/>
  </xsd:complexType>
  <xsd:element name="warp" type="p:CT_InOutTransition"/>
  <xsd:element name="flythrough" type="CT_FlyThroughTransition"/>
  <xsd:element name="flash" type="p:CT Empty"/>
  <xsd:complexType name="CT_ShredTransition">
    <xsd:attribute name="pattern" type="ST TransitionShredPattern" use="optional"
default="strip"/>
    <xsd:attribute name="dir" type="p:ST_TransitionInOutDirectionType" use="optional"
default="in"/>
  </xsd:complexType>
  <xsd:element name="shred" type="CT_ShredTransition"/>
  <xsd:complexType name="CT RevealTransition">
    <xsd:attribute name="thruBlk" type="xsd:boolean" use="optional" default="false"/>
    <xsd:attribute name="dir" type="ST_TransitionLeftRightDirectionType" use="optional"
default="l"/>
  </xsd:complexType>
  <xsd:element name="reveal" type="CT RevealTransition"/>
  <xsd:complexType name="CT_MediaBookmarkTarget">
    <xsd:attribute name="spid" type="a:ST_DrawingElementId" use="required"/>
    <xsd:attribute name="bmkName" type="xsd:string" use="required"/>
  </xsd:complexType>
  <xsd:element name="wheelReverse" type="p:CT_WheelTransition"/>
  <xsd:attribute name="dur" type="p14:ST UniversalTimeOffset"/>
  <xsd:element name="bmkTgt" type="CT_MediaBookmarkTarget"/>
  <xsd:attribute name="presetBounceEnd" type="s:ST_PositiveFixedPercentage"/>
  <xsd:attribute name="bounceEnd" type="s:ST_PositiveFixedPercentage"/>
  <xsd:complexType name="CT_ContentPartNonVisual">
```


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```
    <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:element name="nvPr" type="p:CT ApplicationNonVisualDrawingProps" minOccurs="1"
maxOccurs="1"/>
    </xsd:sequence>
  </xsd:complexType>
  <xsd:element name="nvContentPartPr" type="CT_ContentPartNonVisual"/>
  <xsd:attribute name="bwMode" type="a:ST BlackWhiteMode"/>
  <xsd:element name="xfrm" type="a:CT_Transform2D"/>
  <xsd:element name="extLst" type="p:CT_ExtensionListModify"/>
  <xsd:complexType name="CT_MediaTrim">
    <xsd:attribute name="st" type="p14:ST_UniversalTimeOffset" use="optional" default="0"/>
    <xsd:attribute name="end" type="p14:ST_UniversalTimeOffset" use="optional" default="0"/>
  </xsd:complexType>
  <xsd:complexType name="CT_MediaFade">
    <xsd:attribute name="in" type="p14:ST UniversalTimeOffset" use="optional" default="0"/>
    <xsd:attribute name="out" type="p14:ST_UniversalTimeOffset" use="optional" default="0"/>
  </xsd:complexType>
  <xsd:complexType name="CT_MediaBookmark">
    <xsd:attribute name="name" type="xsd:string"/>
    <xsd:attribute name="time" type="p14:ST_UniversalTimeOffset"/>
  </xsd:complexType>
  <xsd:complexType name="CT_MediaBookmarkList">
    <xsd:sequence>
      <xsd:element name="bmk" type="CT_MediaBookmark" minOccurs="0" maxOccurs="unbounded"/>
    </xsd:sequence>
  </xsd:complexType>
  <xsd:complexType name="CT Media">
    <xsd:sequence>
      <xsd:element name="trim" type="CT_MediaTrim" minOccurs="0" maxOccurs="1"/>
      <xsd:element name="fade" type="CT MediaFade" minOccurs="0" maxOccurs="1"/>
      <xsd:element name="bmkLst" type="CT_MediaBookmarkList" minOccurs="0" maxOccurs="1"/>
      <xsd:element name="extLst" type="p:CT ExtensionList" minOccurs="0" maxOccurs="1"/>
    </xsd:sequence>
    <xsd:attributeGroup ref="a:AG_Blob"/>
  </xsd:complexType>
  <xsd:element name="media" type="CT Media"/>
  <xsd:complexType name="CT_SectionSlideIdListEntry">
    <xsd:attribute name="id" type="p:ST SlideId" use="required"/>
  </xsd:complexType>
  <xsd:complexType name="CT_SectionSlideIdList">
    <xsd:sequence>
      <xsd:element name="sldId" type="CT SectionSlideIdListEntry" minOccurs="0"
maxOccurs="unbounded"/>
    </xsd:sequence>
  </xsd:complexType>
  <xsd:complexType name="CT_Section">
    <xsd:sequence>
      <xsd:element name="sldIdLst" type="CT SectionSlideIdList" minOccurs="1" maxOccurs="1"/>
      <xsd:element name="extLst" type="p:CT_ExtensionList" minOccurs="0" maxOccurs="1"/>
    </xsd:sequence>
    <xsd:attribute name="name" type="xsd:string"/>
    <xsd:attribute name="id" type="s:ST_Guid"/>
  </xsd:complexType>
  <xsd:complexType name="CT SectionList">
    <xsd:sequence>
      <xsd:element name="section" type="CT_Section" minOccurs="1" maxOccurs="unbounded"/>
    </xsd:sequence>
  </xsd:complexType>
  <xsd:element name="sectionLst" type="CT SectionList"/>
  <xsd:complexType name="CT_BrowseMode">
    <xsd:attribute name="showStatus" type="xsd:boolean" use="optional" default="true"/>
  </xsd:complexType>
  <xsd:element name="browseMode" type="CT_BrowseMode"/>
  <xsd:element name="laserClr" type="a:CT_Color"/>
  <xsd:complexType name="CT_DefaultImageDpi">
```


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```
    <xsd:attribute name="val" type="xsd:unsignedInt" use="required"/>
  </xsd:complexType>
  <xsd:element name="defaultImageDpi" type="CT_DefaultImageDpi"/>
  <xsd:complexType name="CT_DiscardImageEditData">
    <xsd:attribute name="val" type="xsd:boolean" use="required"/>
  </xsd:complexType>
  <xsd:element name="discardImageEditData" type="CT_DiscardImageEditData"/>
  <xsd:complexType name="CT_ShowMediaControls">
    <xsd:attribute name="val" type="xsd:boolean" use="required"/>
  </xsd:complexType>
  <xsd:element name="showMediaCtrls" type="CT ShowMediaControls"/>
  <xsd:complexType name="CT_LaserTracePoint">
    <xsd:attribute name="t" type="p14:ST_UniversalTimeOffset" use="required"/>
    <xsd:attribute name="x" type="a:ST_Coordinate" use="required"/>
    <xsd:attribute name="y" type="a:ST_Coordinate" use="required"/>
  </xsd:complexType>
  <xsd:complexType name="CT LaserTrace">
    <xsd:sequence>
      <xsd:element name="tracePt" type="CT LaserTracePoint" minOccurs="0"
maxOccurs="unbounded"/>
    </xsd:sequence>
  </xsd:complexType>
  <xsd:complexType name="CT LaserTraceList">
    <xsd:sequence>
      <xsd:element name="tracePtLst" type="CT_LaserTrace" minOccurs="0"
maxOccurs="unbounded"/>
    </xsd:sequence>
  </xsd:complexType>
  <xsd:element name="laserTraceLst" type="CT LaserTraceList"/>
  <xsd:complexType name="CT_RandomId">
    <xsd:attribute name="val" type="xsd:unsignedInt" use="required"/>
  </xsd:complexType>
  <xsd:element name="creationId" type="CT_RandomId"/>
  <xsd:element name="modId" type="CT RandomId"/>
  <xsd:complexType name="CT_TriggerEventRecord">
    <xsd:attribute name="type" type="p:ST TLTriggerEvent" use="required"/>
    <xsd:attribute name="time" type="p14:ST_UniversalTimeOffset" use="required"/>
    <xsd:attribute name="objId" type="a:ST_DrawingElementId" use="required"/>
  </xsd:complexType>
  <xsd:complexType name="CT NullEventRecord">
    <xsd:attribute name="time" type="p14:ST_UniversalTimeOffset" use="required"/>
    <xsd:attribute name="objId" type="a:ST DrawingElementId" use="required"/>
  </xsd:complexType>
  <xsd:complexType name="CT_MediaPlaybackEventRecord">
    <xsd:attribute name="time" type="p14:ST_UniversalTimeOffset" use="required"/>
    <xsd:attribute name="objId" type="a:ST DrawingElementId" use="required"/>
  </xsd:complexType>
  <xsd:complexType name="CT MediaSeekEventRecord">
    <xsd:attribute name="time" type="p14:ST_UniversalTimeOffset" use="required"/>
    <xsd:attribute name="objId" type="a:ST_DrawingElementId" use="required"/>
    <xsd:attribute name="seek" type="p14:ST_UniversalTimeOffset" use="required"/>
  </xsd:complexType>
  <xsd:complexType name="CT_ShowEventRecordList">
    <xsd:sequence>
      <xsd:choice minOccurs="0" maxOccurs="unbounded">
        <xsd:element name="triggerEvt" type="CT_TriggerEventRecord"/>
        <xsd:element name="playEvt" type="CT MediaPlaybackEventRecord"/>
        <xsd:element name="stopEvt" type="CT MediaPlaybackEventRecord"/>
        <xsd:element name="pauseEvt" type="CT MediaPlaybackEventRecord"/>
        <xsd:element name="resumeEvt" type="CT_MediaPlaybackEventRecord"/>
        <xsd:element name="seekEvt" type="CT_MediaSeekEventRecord"/>
        <xsd:element name="nullEvt" type="CT_NullEventRecord"/>
      </xsd:choice>
    </xsd:sequence>
  </xsd:complexType>
  <xsd:element name="showEvtLst" type="CT_ShowEventRecordList"/>
  <xsd:import namespace="http://schemas.microsoft.com/office/drawing/2010/main"
schemaLocation="dml-mainExt.xsd"/>
```


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```
  <xsd:import namespace="http://schemas.openxmlformats.org/drawingml/2006/main"
schemaLocation="dml-main.xsd"/>
  <xsd:import namespace="http://schemas.openxmlformats.org/officeDocument/2006/relationships"
schemaLocation="shared-relationshipReference.xsd"/>
  <xsd:import namespace="http://schemas.openxmlformats.org/officeDocument/2006/sharedTypes"
schemaLocation="shared-commonSimpleTypes.xsd"/>
  <xsd:import namespace="http://schemas.openxmlformats.org/presentationml/2006/main"
schemaLocation="pml.xsd"/>
</xsd:schema>
```

5.2 http://schemas.microsoft.com/office/powerpoint/2012/main Schema

```
<xsd:schema elementFormDefault="qualified"
targetNamespace="http://schemas.microsoft.com/office/powerpoint/2012/main"
xmlns="http://schemas.microsoft.com/office/powerpoint/2012/main"
xmlns:p14="http://schemas.microsoft.com/office/powerpoint/2010/main"
xmlns:p="http://schemas.openxmlformats.org/presentationml/2006/main"
xmlns:a="http://schemas.openxmlformats.org/drawingml/2006/main"
xmlns:s="http://schemas.openxmlformats.org/officeDocument/2006/sharedTypes"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
  <xsd:complexType name="CT PresetTransition"
xmlns:p15="http://schemas.microsoft.com/office/powerpoint/2012/main">
    <xsd:attribute name="prst" type="xsd:string"/>
    <xsd:attribute name="invX" type="xsd:boolean" use="optional" default="false"/>
    <xsd:attribute name="invY" type="xsd:boolean" use="optional" default="false"/>
  </xsd:complexType>
  <xsd:element name="prstTrans" type="CT PresetTransition"
xmlns:p15="http://schemas.microsoft.com/office/powerpoint/2012/main"/>
  <xsd:complexType name="CT_PresenceInfo">
    <xsd:attribute name="userId" type="xsd:string" use="required"/>
    <xsd:attribute name="providerId" type="xsd:string" use="required"/>
  </xsd:complexType>
  <xsd:complexType name="CT_ParentCommentIdentifier">
    <xsd:attribute name="authorId" type="xsd:unsignedInt"/>
    <xsd:attribute name="idx" type="xsd:unsignedInt"/>
  </xsd:complexType>
  <xsd:complexType name="CT CommentThreading">
    <xsd:sequence>
      <xsd:element name="parentCm" type="CT_ParentCommentIdentifier" minOccurs="0"
maxOccurs="1"/>
    </xsd:sequence>
    <xsd:attribute name="timeZoneBias" type="xsd:int"/>
  </xsd:complexType>
  <xsd:element name="presenceInfo" type="CT PresenceInfo"/>
  <xsd:element name="threadingInfo" type="CT_CommentThreading"/>
  <xsd:complexType name="CT_ExtendedGuide">
    <xsd:sequence>
      <xsd:element name="clr" type="a:CT Color" minOccurs="1" maxOccurs="1"/>
      <xsd:element name="extLst" type="p:CT_ExtensionList" minOccurs="0" maxOccurs="1"/>
    </xsd:sequence>
    <xsd:attribute name="id" type="xsd:unsignedInt" use="required"/>
    <xsd:attribute name="name" type="xsd:string" use="optional" default=""/>
    <xsd:attribute name="orient" type="p:ST_Direction" use="optional" default="vert"/>
    <xsd:attribute name="pos" type="a:ST_Coordinate32" use="optional" default="0"/>
    <xsd:attribute name="userDrawn" type="xsd:boolean" use="optional" default="false"/>
  </xsd:complexType>
  <xsd:complexType name="CT_ExtendedGuideList">
    <xsd:sequence>
      <xsd:element name="guide" type="CT ExtendedGuide" minOccurs="0" maxOccurs="unbounded"/>
      <xsd:element name="extLst" type="p:CT_ExtensionList" minOccurs="0" maxOccurs="1"/>
    </xsd:sequence>
  </xsd:complexType>
  <xsd:element name="sldGuideLst" type="CT_ExtendedGuideList"/>
  <xsd:element name="notesGuideLst" type="CT_ExtendedGuideList"/>
  <xsd:complexType name="CT ChartTrackingRefBased">
    <xsd:attribute name="val" type="xsd:boolean" use="required"/>
  </xsd:complexType>
```


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```
  <xsd:element name="chartTrackingRefBased" type="CT_ChartTrackingRefBased"/>
  <xsd:import namespace="http://schemas.openxmlformats.org/drawingml/2006/main"
schemaLocation="dml-main.xsd"/>
  <xsd:import namespace="http://schemas.openxmlformats.org/officeDocument/2006/sharedTypes"
schemaLocation="shared-commonSimpleTypes.xsd"/>
  <xsd:import namespace="http://schemas.openxmlformats.org/presentationml/2006/main"
schemaLocation="pml.xsd"/>
</xsd:schema>
```

5.3 http://schemas.microsoft.com/office/powerpoint/2015/09/main Schema

```
<xsd:schema elementFormDefault="qualified"
targetNamespace="http://schemas.microsoft.com/office/powerpoint/2015/09/main"
xmlns="http://schemas.microsoft.com/office/powerpoint/2015/09/main"
xmlns:p159="http://schemas.microsoft.com/office/powerpoint/2015/09/main"
xmlns:p="http://schemas.openxmlformats.org/presentationml/2006/main"
xmlns:a="http://schemas.openxmlformats.org/drawingml/2006/main"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
  <xsd:import namespace="http://schemas.openxmlformats.org/presentationml/2006/main"
schemaLocation="pml.xsd"/>
  <xsd:simpleType name="ST TransitionMorphOption">
    <xsd:restriction base="xsd:token">
      <xsd:enumeration value="byObject"/>
      <xsd:enumeration value="byWord"/>
      <xsd:enumeration value="byChar"/>
    </xsd:restriction>
  </xsd:simpleType>
  <xsd:complexType name="CT_MorphTransition">
    <xsd:attribute name="option" type="ST_TransitionMorphOption" use="required"/>
  </xsd:complexType>
  <xsd:element name="morph" type="CT MorphTransition"/>
</xsd:schema>
```

5.4 http://schemas.microsoft.com/office/powerpoint/2015/10/main Schema

```
<xsd:schema elementFormDefault="qualified"
targetNamespace="http://schemas.microsoft.com/office/powerpoint/2015/10/main"
xmlns="http://schemas.microsoft.com/office/powerpoint/2015/10/main"
xmlns:p1510="http://schemas.microsoft.com/office/powerpoint/2015/10/main"
xmlns:p="http://schemas.openxmlformats.org/presentationml/2006/main"
xmlns:a="http://schemas.openxmlformats.org/drawingml/2006/main"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
  <xsd:import namespace="http://schemas.openxmlformats.org/presentationml/2006/main"
schemaLocation="pml.xsd"/>
  <xsd:simpleType name="ST_ClientID"
xmlns:r="http://schemas.openxmlformats.org/officeDocument/2006/relationships">
    <xsd:restriction base="xsd:string"/>
  </xsd:simpleType>
  <xsd:simpleType name="ST_ClientRevisionNumber"
xmlns:r="http://schemas.openxmlformats.org/officeDocument/2006/relationships">
    <xsd:restriction base="xsd:unsignedInt"/>
  </xsd:simpleType>
  <xsd:complexType name="CT_ClientRevision"
xmlns:r="http://schemas.openxmlformats.org/officeDocument/2006/relationships">
    <xsd:attribute name="id" type="ST_ClientID" use="required"/>
    <xsd:attribute name="v" type="ST_ClientRevisionNumber" use="optional" default="0"/>
    <xsd:attribute name="vWet" type="ST ClientRevisionNumber" use="optional" default="0"/>
    <xsd:attribute name="dt" type="xsd:dateTime" use="required"/>
  </xsd:complexType>
  <xsd:complexType name="CT_ClientRevisionList"
xmlns:r="http://schemas.openxmlformats.org/officeDocument/2006/relationships">
    <xsd:sequence>
      <xsd:element name="client" type="CT ClientRevision" minOccurs="0"
maxOccurs="unbounded"/>
    </xsd:sequence>
```


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```
  </xsd:complexType>
  <xsd:complexType name="CT_RevisionInfo"
xmlns:r="http://schemas.openxmlformats.org/officeDocument/2006/relationships">
    <xsd:sequence>
      <xsd:element name="revLst" type="CT_ClientRevisionList" minOccurs="0" maxOccurs="1"/>
      <xsd:element name="extLst" type="p:CT ExtensionList" minOccurs="0" maxOccurs="1"/>
    </xsd:sequence>
  </xsd:complexType>
  <xsd:element name="revInfo" type="CT_RevisionInfo"
xmlns:r="http://schemas.openxmlformats.org/officeDocument/2006/relationships"/>
</xsd:schema>
```

5.5 http://schemas.microsoft.com/office/powerpoint/2015/main Schema

```
<xsd:schema elementFormDefault="qualified"
targetNamespace="http://schemas.microsoft.com/office/powerpoint/2015/main"
xmlns="http://schemas.microsoft.com/office/powerpoint/2015/main"
xmlns:p16="http://schemas.microsoft.com/office/powerpoint/2015/main"
xmlns:xsd="http://www.w3.org/2001/XMLSchema"
xmlns:s="http://schemas.openxmlformats.org/officeDocument/2006/sharedTypes">
  <xsd:complexType name="CT DesignElement">
    <xsd:attribute name="val" type="xsd:boolean"/>
  </xsd:complexType>
  <xsd:element name="designElem" type="CT_DesignElement"/>
  <xsd:import namespace="http://schemas.openxmlformats.org/drawingml/2006/main"
schemaLocation="dml-main.xsd"/>
  <xsd:import namespace="http://schemas.openxmlformats.org/officeDocument/2006/sharedTypes"
schemaLocation="shared-commonSimpleTypes.xsd"/>
  <xsd:import namespace="http://schemas.openxmlformats.org/presentationml/2006/main"
schemaLocation="pml.xsd"/>
</xsd:schema>
```

5.6 http://schemas.microsoft.com/office/powerpoint/2016/6/main Schema

```
<xsd:schema elementFormDefault="qualified"
targetNamespace="http://schemas.microsoft.com/office/powerpoint/2016/6/main"
xmlns="http://schemas.microsoft.com/office/powerpoint/2016/6/main"
xmlns:p166="http://schemas.microsoft.com/office/powerpoint/2016/6/main"
xmlns:p="http://schemas.openxmlformats.org/presentationml/2006/main"
xmlns:p14="http://schemas.microsoft.com/office/powerpoint/2010/main"
xmlns:a="http://schemas.openxmlformats.org/drawingml/2006/main"
xmlns:s="http://schemas.openxmlformats.org/officeDocument/2006/sharedTypes"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
  <xsd:simpleType name="ST_ZoomObjectImageType">
    <xsd:restriction base="xsd:token">
      <xsd:enumeration value="preview"/>
      <xsd:enumeration value="cover"/>
    </xsd:restriction>
  </xsd:simpleType>
  <xsd:complexType name="CT_ZoomObjectProperties">
    <xsd:sequence>
      <xsd:element name="blipFill" type="a:CT_BlipFillProperties" minOccurs="1"
maxOccurs="1"/>
      <xsd:element name="spPr" type="a:CT_ShapeProperties" minOccurs="1" maxOccurs="1"/>
    </xsd:sequence>
    <xsd:attribute name="id" type="s:ST_Guid" use="required"/>
    <xsd:attribute name="returnToParent" type="xsd:boolean" use="optional" default="true"/>
    <xsd:attribute name="imageType" type="ST_ZoomObjectImageType" use="optional"
default="preview"/>
    <xsd:attribute name="transitionDur" type="p14:ST_UniversalTimeOffset" use="optional"/>
    <xsd:attribute name="showBg" type="xsd:boolean" use="optional" default="true"/>
  </xsd:complexType>
  <xsd:import namespace="http://schemas.microsoft.com/office/powerpoint/2010/main"
schemaLocation="ms-pptx14.xsd"/>
```


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```
  <xsd:import namespace="http://schemas.openxmlformats.org/drawingml/2006/main"
schemaLocation="dml-main.xsd"/>
  <xsd:import namespace="http://schemas.openxmlformats.org/officeDocument/2006/sharedTypes"
schemaLocation="shared-commonSimpleTypes.xsd"/>
  <xsd:import namespace="http://schemas.openxmlformats.org/presentationml/2006/main"
schemaLocation="pml.xsd"/>
</xsd:schema>
```

5.7 http://schemas.microsoft.com/office/powerpoint/2016/sectionzoom Schema

```
<xsd:schema elementFormDefault="qualified"
targetNamespace="http://schemas.microsoft.com/office/powerpoint/2016/sectionzoom"
xmlns="http://schemas.microsoft.com/office/powerpoint/2016/sectionzoom"
xmlns:psez="http://schemas.microsoft.com/office/powerpoint/2016/sectionzoom"
xmlns:p166="http://schemas.microsoft.com/office/powerpoint/2016/6/main"
xmlns:p="http://schemas.openxmlformats.org/presentationml/2006/main"
xmlns:a="http://schemas.openxmlformats.org/drawingml/2006/main"
xmlns:s="http://schemas.openxmlformats.org/officeDocument/2006/sharedTypes"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
  <xsd:complexType name="CT_SectionZoomObject">
    <xsd:sequence>
      <xsd:element name="zmPr" type="p166:CT_ZoomObjectProperties" minOccurs="1"
maxOccurs="1"/>
      <xsd:element name="extLst" type="p:CT_ExtensionList" minOccurs="0" maxOccurs="1"/>
    </xsd:sequence>
    <xsd:attribute name="sectionId" type="s:ST_Guid" use="required"/>
  </xsd:complexType>
  <xsd:complexType name="CT_SectionZoom">
    <xsd:sequence>
      <xsd:element name="sectionZmObj" type="CT_SectionZoomObject" minOccurs="1"
maxOccurs="1"/>
      <xsd:element name="extLst" type="p:CT ExtensionList" minOccurs="0" maxOccurs="1"/>
    </xsd:sequence>
  </xsd:complexType>
  <xsd:element name="sectionZm" type="CT_SectionZoom"/>
  <xsd:import namespace="http://schemas.microsoft.com/office/powerpoint/2016/6/main"
schemaLocation="ms-pptx166.xsd"/>
  <xsd:import namespace="http://schemas.openxmlformats.org/officeDocument/2006/sharedTypes"
schemaLocation="shared-commonSimpleTypes.xsd"/>
  <xsd:import namespace="http://schemas.openxmlformats.org/presentationml/2006/main"
schemaLocation="pml.xsd"/>
</xsd:schema>
```

5.8 http://schemas.microsoft.com/office/powerpoint/2016/slidezoom Schema

```
<xsd:schema elementFormDefault="qualified"
targetNamespace="http://schemas.microsoft.com/office/powerpoint/2016/slidezoom"
xmlns="http://schemas.microsoft.com/office/powerpoint/2016/slidezoom"
xmlns:pslz="http://schemas.microsoft.com/office/powerpoint/2016/slidezoom"
xmlns:p166="http://schemas.microsoft.com/office/powerpoint/2016/6/main"
xmlns:p="http://schemas.openxmlformats.org/presentationml/2006/main"
xmlns:s="http://schemas.openxmlformats.org/officeDocument/2006/sharedTypes"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
  <xsd:complexType name="CT_SlideZoomObject">
    <xsd:sequence>
      <xsd:element name="zmPr" type="p166:CT_ZoomObjectProperties" minOccurs="1"
maxOccurs="1"/>
      <xsd:element name="extLst" type="p:CT_ExtensionList" minOccurs="0" maxOccurs="1"/>
    </xsd:sequence>
    <xsd:attribute name="sldId" type="p:ST_SlideId" use="required"/>
    <xsd:attribute name="cId" type="xsd:unsignedInt" use="optional"/>
  </xsd:complexType>
  <xsd:complexType name="CT SlideZoom">
    <xsd:sequence>
      <xsd:element name="sldZmObj" type="CT_SlideZoomObject" minOccurs="1" maxOccurs="1"/>
```


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```
      <xsd:element name="extLst" type="p:CT_ExtensionList" minOccurs="0" maxOccurs="1"/>
    </xsd:sequence>
  </xsd:complexType>
  <xsd:element name="sldZm" type="CT_SlideZoom"/>
  <xsd:import namespace="http://schemas.microsoft.com/office/powerpoint/2016/6/main"
schemaLocation="ms-pptx166.xsd"/>
  <xsd:import namespace="http://schemas.openxmlformats.org/officeDocument/2006/sharedTypes"
schemaLocation="shared-commonSimpleTypes.xsd"/>
  <xsd:import namespace="http://schemas.openxmlformats.org/presentationml/2006/main"
schemaLocation="pml.xsd"/>
</xsd:schema>
```

5.9 http://schemas.microsoft.com/office/powerpoint/2016/summaryzoom Schema

```
<xsd:schema elementFormDefault="qualified"
targetNamespace="http://schemas.microsoft.com/office/powerpoint/2016/summaryzoom"
xmlns="http://schemas.microsoft.com/office/powerpoint/2016/summaryzoom"
xmlns:psuz="http://schemas.microsoft.com/office/powerpoint/2016/summaryzoom"
xmlns:p166="http://schemas.microsoft.com/office/powerpoint/2016/6/main"
xmlns:p="http://schemas.openxmlformats.org/presentationml/2006/main"
xmlns:a="http://schemas.openxmlformats.org/drawingml/2006/main"
xmlns:s="http://schemas.openxmlformats.org/officeDocument/2006/sharedTypes"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
  <xsd:complexType name="CT_SummaryZoomObject">
    <xsd:sequence>
      <xsd:element name="zmPr" type="p166:CT_ZoomObjectProperties" minOccurs="1"
maxOccurs="1"/>
      <xsd:element name="extLst" type="p:CT_ExtensionList" minOccurs="0" maxOccurs="1"/>
    </xsd:sequence>
    <xsd:attribute name="sectionId" type="s:ST_Guid" use="required"/>
    <xsd:attribute name="title" type="xsd:string" use="optional" default=""/>
    <xsd:attribute name="descr" type="xsd:string" use="optional" default=""/>
    <xsd:attribute name="offsetFactorX" type="a:ST_Percentage" use="optional" default="0"/>
    <xsd:attribute name="offsetFactorY" type="a:ST_Percentage" use="optional" default="0"/>
    <xsd:attribute name="scaleFactorX" type="a:ST_Percentage" use="optional"
default="100000"/>
    <xsd:attribute name="scaleFactorY" type="a:ST Percentage" use="optional"
default="100000"/>
  </xsd:complexType>
  <xsd:complexType name="CT_GridLayout"/>
  <xsd:complexType name="CT_FixedLayout"/>
  <xsd:complexType name="CT SummaryZoom">
    <xsd:sequence>
      <xsd:element name="summaryZmObj" type="CT SummaryZoomObject" minOccurs="0"
maxOccurs="unbounded"/>
      <xsd:choice minOccurs="1" maxOccurs="1">
        <xsd:element name="gridLayout" type="CT_GridLayout"/>
        <xsd:element name="fixedLayout" type="CT FixedLayout"/>
      </xsd:choice>
      <xsd:element name="extLst" type="p:CT ExtensionList" minOccurs="0" maxOccurs="1"/>
    </xsd:sequence>
  </xsd:complexType>
  <xsd:element name="summaryZm" type="CT_SummaryZoom"/>
  <xsd:import namespace="http://schemas.microsoft.com/office/powerpoint/2016/6/main"
schemaLocation="ms-pptx166.xsd"/>
  <xsd:import namespace="http://schemas.openxmlformats.org/drawingml/2006/main"
schemaLocation="dml-main.xsd"/>
  <xsd:import namespace="http://schemas.openxmlformats.org/officeDocument/2006/sharedTypes"
schemaLocation="shared-commonSimpleTypes.xsd"/>
  <xsd:import namespace="http://schemas.openxmlformats.org/presentationml/2006/main"
schemaLocation="pml.xsd"/>
</xsd:schema>
```


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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.

- Microsoft PowerPoint 2010
- Microsoft PowerPoint 2013
- Microsoft PowerPoint Online
- Microsoft PowerPoint 2016

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 2.2.3.1: This child element is only available in PowerPoint 2016.

<2> Section 2.2.10: This extension is available only in PowerPoint 2013.

<3> Section 2.2.10: This extension is available only in PowerPoint 2013.

<4> Section 2.2.11: This extension is available only in PowerPoint 2013.

<5> Section 2.2.11: This extension is available only in PowerPoint 2013.

<6> Section 2.2.11: This extension is available only in PowerPoint 2013.

<7> Section 2.2.11: This extension is available only in PowerPoint 2013.

<8> Section 2.2.11: This extension is available only in PowerPoint 2013.

<9> Section 2.2.12: This extension is available only in PowerPoint 2013.

<10> Section 2.2.14: This extension is only available in PowerPoint 2016.

<11> Section 2.4.1.1: This element is available only in PowerPoint 2013.

<12> Section 2.4.1.2: This element is available as of February 10, 2015 update for PowerPoint 2013.

<13> Section 2.4.1.3: This element is available only in PowerPoint 2013.

<14> Section 2.4.1.4: This element is available only in PowerPoint 2013.

<15> Section 2.4.1.6: This element is available only in PowerPoint 2013.

<16> Section 2.4.1.7: This element is available only in PowerPoint 2013.

<17> Section 2.4.3.1: This type is available only in PowerPoint 2013.

<18> Section 2.4.3.2: This type is available only in PowerPoint 2013.

<19> Section 2.4.3.3: This type is available only in PowerPoint 2013.

<20> Section 2.4.3.4: This type is available only in PowerPoint 2013.

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<21> Section 2.4.3.5: This type is available as of the February 10, 2015 update for PowerPoint 2013.

<22> Section 2.4.3.6: This type is available only in PowerPoint 2013.

<23> Section 2.4.3.7: This type is available only in PowerPoint 2013.

<24> Section 2.5.3.1: This type is available only in PowerPoint 2016.

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7 Change Tracking

No table of changes is available. The document is either new or has had no changes since its last release.

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