[MS-PPTX]:

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

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1 Introduction


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, runtime 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.
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.


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

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


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.
1.6 Versioning and Localization
None.

1.7 Vendor-Extensible Fields
None.
2 Structures

2.1 PartEnumerations

2.1.1 MediaPart

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

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<tr>
<td>Content types</td>
<td>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.</td>
</tr>
</tbody>
</table>

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 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.

<table>
<thead>
<tr>
<th>Part Components</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Content type</td>
<td>application/vnd.ms-powerpoint.revisioninfo+xml</td>
</tr>
<tr>
<td>Root namespace</td>
<td><a href="http://schemas.microsoft.com/office/powerpoint/2015/10/main">http://schemas.microsoft.com/office/powerpoint/2015/10/main</a></td>
</tr>
<tr>
<td>Source relationship</td>
<td><a href="http://schemas.microsoft.com/office/2015/10/relationships/revisionInfo">http://schemas.microsoft.com/office/2015/10/relationships/revisionInfo</a></td>
</tr>
</tbody>
</table>

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.
2.2 Extensions


2.2.1 Slide Transition Extensions


<table>
<thead>
<tr>
<th>AlternateContent components</th>
<th>Child element</th>
</tr>
</thead>
<tbody>
<tr>
<td>Choice:</td>
<td>transition</td>
</tr>
<tr>
<td>Choice:</td>
<td>transition</td>
</tr>
<tr>
<td>Choice:</td>
<td>transition</td>
</tr>
<tr>
<td>Fallback</td>
<td>transition</td>
</tr>
<tr>
<td></td>
<td>([ISO/IEC29500-1:2012] section 19.3.1.50)</td>
</tr>
</tbody>
</table>

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)
• 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


<table>
<thead>
<tr>
<th>AlternateContent components</th>
<th>Child element</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fallback</td>
<td>timing ([ISO/IEC29500-1:2012] section 19.3.1.48)</td>
</tr>
</tbody>
</table>

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).
### 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.

<table>
<thead>
<tr>
<th>AlternateContent components</th>
<th>Child element</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fallback</td>
<td>sp ([ISO/IEC29500-1:2012] section 19.3.1.43)</td>
</tr>
</tbody>
</table>

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.

<table>
<thead>
<tr>
<th>AlternateContent components</th>
<th>Child element</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fallback</td>
<td>pic ([ISO/IEC29500-1:2012] section 19.3.1.37)</td>
</tr>
</tbody>
</table>

#### 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.

<table>
<thead>
<tr>
<th>Ext uri</th>
<th>Child element</th>
</tr>
</thead>
<tbody>
<tr>
<td>{DAA4B4D4-6D71-4841-9C94-3DE7FCFB9230}</td>
<td>media (section 2.3.1.18)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Ext uri</th>
<th>Child element</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>{2FDB2607-1784-4EEB-B798-7EB5836EED8A}</code></td>
<td><code>showMediaCtrls</code> (section 2.3.1.27)</td>
</tr>
</tbody>
</table>

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:

<table>
<thead>
<tr>
<th>Ext uri</th>
<th>Child element</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>{521415D9-36F7-43E2-AB2F-B90AF26B5E84}</code></td>
<td><code>sectionLst</code> (section 2.3.1.25)</td>
</tr>
</tbody>
</table>

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

### 2.2.6 Slide Show Extensions


<table>
<thead>
<tr>
<th>Ext uri</th>
<th>Child element</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>{F99C55AA-B7CB-42B0-86F8-08522FDF87E8}</code></td>
<td><code>browseMode</code> (section 2.3.1.2)</td>
</tr>
<tr>
<td><code>{EC167BDD-8182-4AB7-AECC-B403E3ABB37}</code></td>
<td><code>laserClr</code> (section 2.3.1.16)</td>
</tr>
</tbody>
</table>


<table>
<thead>
<tr>
<th>Ext uri</th>
<th>Child element</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>{3A86A75C-4F4B-4683-9AE1-C65F6400EC91}</code></td>
<td><code>laserTraceLst</code> (section 2.3.1.17)</td>
</tr>
<tr>
<td><code>{E180D4A7-C9FB-4DFB-919C-405C955672EB}</code></td>
<td><code>showEvtLst</code> (section 2.3.1.26)</td>
</tr>
</tbody>
</table>

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

### 2.2.7 Image Extensions


<table>
<thead>
<tr>
<th>Ext uri</th>
<th>Child element</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>{E76CE94A-603C-4142-B9EB-6D1370010A27}</code></td>
<td><code>discardImageEditData</code> (section 2.3.1.6)</td>
</tr>
</tbody>
</table>
For more information about how extension lists are used, see [ISO/IEC29500-3:2012] section 10.1.2.

### 2.2.8 Math Extensions


<table>
<thead>
<tr>
<th>Ext uri</th>
<th>Child element</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>{4599F94E-CEE6-441E-89CC-EB005ECD8F06}</code></td>
<td><code>a14:m</code> ([MS-ODRAWXML] section 2.3.1.11)</td>
</tr>
</tbody>
</table>

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

### 2.2.9 Change Tracking Extensions


<table>
<thead>
<tr>
<th>Ext uri</th>
<th>Child element</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>{D42A27DB-BD31-4B8C-83A1-F6EECF244321}</code></td>
<td><code>modId</code> (section 2.3.1.19)</td>
</tr>
</tbody>
</table>


<table>
<thead>
<tr>
<th>Ext uri</th>
<th>Child element</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>{BB962C8B-B14F-4D97-AF65-F5344CB8AC3E}</code></td>
<td><code>creationId</code> (section 2.3.1.4)</td>
</tr>
</tbody>
</table>

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>

<table>
<thead>
<tr>
<th>Ext uri</th>
<th>Child element</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>{19B8F6BF-5375-455C-9EA6-DF929625EA0E}</code></td>
<td><code>presenceInfo</code> (section 2.4.1.4)</td>
</tr>
</tbody>
</table>

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>

<table>
<thead>
<tr>
<th>Ext uri</th>
<th>Child element</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>{C676402C-5697-4E1C-873F-D02D1690AC5C}</code></td>
<td><code>threadingInfo</code> (section 2.4.1.7)</td>
</tr>
</tbody>
</table>
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>

<table>
<thead>
<tr>
<th>Ext uri</th>
<th>Child element</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>{EFAFB233-063F-42B5-8137-9DF3F51BA10A}</code></td>
<td>sldGuideLst (section 2.4.1.6)</td>
</tr>
<tr>
<td><code>{2D200454-40CA-4A62-9FC3-DE9A4176ACB9}</code></td>
<td>notesGuideLst (section 2.4.1.3)</td>
</tr>
</tbody>
</table>

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>

<table>
<thead>
<tr>
<th>Ext uri</th>
<th>Child element</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>{DCECCBB4-F9BA-43D5-87BE-67443E8EF086}</code></td>
<td>sldGuideLst (section 2.4.1.6)</td>
</tr>
</tbody>
</table>

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>

<table>
<thead>
<tr>
<th>Ext uri</th>
<th>Child element</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>{27BBF7A9-308A-43DC-89C8-2F10F357804}</code></td>
<td>sldGuideLst (section 2.4.1.6)</td>
</tr>
</tbody>
</table>

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>

<table>
<thead>
<tr>
<th>Ext uri</th>
<th>Child element</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>{56416CCD-93CA-4268-BC5B-53C4BB910035}</code></td>
<td>sldGuideLst (section 2.4.1.6)</td>
</tr>
</tbody>
</table>

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>

<table>
<thead>
<tr>
<th>Ext uri</th>
<th>Child element</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>{620B2872-D7B9-4A21-9093-7833F8D536E1}</code></td>
<td>sldGuideLst (section 2.4.1.6)</td>
</tr>
</tbody>
</table>

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>
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.

<table>
<thead>
<tr>
<th>AlternateContent components</th>
<th>Child element</th>
</tr>
</thead>
<tbody>
<tr>
<td>Choice:</td>
<td></td>
</tr>
<tr>
<td><a href="http://schemas.microsoft.com/office/powerpoint/2013/contentapp">http://schemas.microsoft.com/office/powerpoint/2013/contentapp</a></td>
<td></td>
</tr>
<tr>
<td>Fallback</td>
<td></td>
</tr>
<tr>
<td></td>
<td>pic ([ISO/IEC29500-1:2012] section 19.3.1.37)</td>
</tr>
</tbody>
</table>
2.3  http://schemas.microsoft.com/office/powerpoint/2010/main

2.3.1  Elements

2.3.1.1  bmkTgt


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.

```xml
<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


A **CT_BrowseMode** element (section 2.3.1) 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.

```xml
<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


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):
Figure 1: Sample conveyor transition

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

```xml
<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.

```xml
<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.

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

```xml
<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


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

![Sample doors transition](image)

**Figure 2: Sample doors transition**

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

```xml
<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


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

```xml
<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):

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

```xml
<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


The following figure is a sample:

![Sample flash transition](image)

**Figure 4: Sample flash transition**

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

```xml
<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).

![Sample flip transition](image)

**Figure 5: Sample flip transition**
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**:

![Sample flythrough transition](image)

**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).

![Sample gallery transition](image)

**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).
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 "1" (left), `pattern` equal to "diamond":

![Sample glitter transition](image)

Figure 8: Sample glitter transition

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

```xml
<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


The following figure is a sample:

![Sample honeycomb transition](image)

Figure 9: Sample honeycomb transition

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

```xml
<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.
<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.

```xml
<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.

```xml
<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.

```xml
<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
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.

```xml
<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


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

![Sample pan transition](image)

**Figure 10: Sample pan transition**

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

```xml
<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:

![Sample prism transition 1](image)

**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:
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.

```xml
<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.

```xml
<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].
The following figure is a sample with dir equal to "center".

![Sample ripple transition](image)

**Figure 15: Sample ripple transition**

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

```xml
<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.

```xml
<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.

```xml
<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.
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":

![Sample shred transition](image)

**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):

![Sample switch transition](image)

**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

[MS-PPTX] - v20160929
PowerPoint (.pptx) Extensions to the Office Open XML File Format
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Release: September 29, 2016

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

![Sample vortex transition](image)

**Figure 18: Sample vortex transition**

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

```xml
<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*


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

![Sample warp transition](image)

**Figure 19: Sample warp transition**

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

```xml
<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*


The following figure is a sample with `spokes` equal to 1.
Figure 20: Sample wheelReverse transition

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

```xml
<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


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.

```xml
<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.

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

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

```xml
<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.

```xml
<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.

```xml
<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
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.

```xml
<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.

```xml
<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


**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.

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

```xml
<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.

```xml
<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.

```xml
<xsd:complexType name="CT_DiscardImageEditData">
  <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).

2.3.3.5 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:


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.

```xml
<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:


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.

```xml
<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).
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.

```xml
<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: laserTraceList

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.

```xml
<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:
**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.

```xml
<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.

```xml
<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
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"/>  
</xsd:complexType>
```
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
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.

```xml
<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.

```xml
<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:
**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.

```xml
<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.

```xml
<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.
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.

```xml
<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:


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.

```xml
<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.
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.

```xml
<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.

```xml
<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.

```xml
<xsd:complexType name="CT_RippleTransition">
  <xsd:attribute name="dir" type="ST_TransitionCornerAndCenterDirectionType" use="optional" default="l"/>
</xsd:complexType>
```
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.

2.3.3.25 CT_SectionList

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

Referenced by: sectionList

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.
<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:


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
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.

```xml
<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.
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.


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

```xml
<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:


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.

```xml
<xsd:complexType name="CT_TriggerEventRecord">
</xsd:complexType>
```
<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.

<table>
<thead>
<tr>
<th>Value</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>center</td>
<td>Direction of movement is to or from the center.</td>
</tr>
</tbody>
</table>

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

```xml
<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.

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

<table>
<thead>
<tr>
<th>Value</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>l</td>
<td>Left</td>
</tr>
<tr>
<td>r</td>
<td>Right</td>
</tr>
</tbody>
</table>

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

```xml
<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.

<table>
<thead>
<tr>
<th>Value</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>diamond</td>
<td>Diamond tile pattern</td>
</tr>
<tr>
<td>hexagon</td>
<td>Hexagon tile pattern</td>
</tr>
</tbody>
</table>

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

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

<table>
<thead>
<tr>
<th>Value</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>strip</td>
<td>Vertical strips</td>
</tr>
<tr>
<td>rectangle</td>
<td>Small rectangles</td>
</tr>
</tbody>
</table>

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

```xml
<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:

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Unit of Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>h</td>
<td>Hour</td>
</tr>
<tr>
<td>min</td>
<td>Minute</td>
</tr>
<tr>
<td>s</td>
<td>Second</td>
</tr>
<tr>
<td>ms</td>
<td>Millisecond</td>
</tr>
<tr>
<td>µs</td>
<td>Microsecond</td>
</tr>
<tr>
<td>ns</td>
<td>Nanosecond</td>
</tr>
</tbody>
</table>


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.

```xml
<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. 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.

```xml
<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 (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.

```xml
<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. 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.

```xml
<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.

```xml
<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.

```xml
<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.

```xml
<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

[MS-PPTX] - v20160929
PowerPoint (.pptx) Extensions to the Office Open XML File Format
Copyright © 2016 Microsoft Corporation
Release: September 29, 2016
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.

```xml
<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.

<table>
<thead>
<tr>
<th>Value</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>False</td>
<td>Datapoint properties and datalabels in all charts ([ISO/IEC29500-1:2012] section 21.2) in this presentation follow their position in the chart.</td>
</tr>
</tbody>
</table>

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

```xml
<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
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.

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


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.


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.
**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.

```xml
<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.

**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.

```xml
<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 that specifies the narration flag for shapes.

**Attributes:**
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.

```xml
<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. 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.

```xml
<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).

**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.
This table lists example data for these attributes.

<table>
<thead>
<tr>
<th>Identity Provider</th>
<th>providerId value</th>
<th>userId value</th>
<th>Description of userId value</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Provider</td>
<td>&quot;None&quot;</td>
<td>&quot;Name&quot;</td>
<td>Author’s name</td>
</tr>
<tr>
<td>Active Directory</td>
<td>&quot;AD&quot;</td>
<td>SID</td>
<td>Active Directory Security Identifier (as specified in [MS-DTYP] section 2.4.2)</td>
</tr>
<tr>
<td>Windows Live ID</td>
<td>&quot;Windows Live&quot;</td>
<td>CID</td>
<td>A 64-bit signed decimal that uniquely identifies a user on Windows Live.</td>
</tr>
</tbody>
</table>

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

```xml
<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.

<table>
<thead>
<tr>
<th>prst Value</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>fallOver</td>
<td>A fall over transition as shown in the following figure.</td>
</tr>
</tbody>
</table>

![Figure 22: Sample with prst equal to "fallOver"](image)

<table>
<thead>
<tr>
<th>drape</th>
<th>A drape transition as shown in the following figure.</th>
</tr>
</thead>
</table>

[MS-PPTX] - v20160929

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

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Release: September 29, 2016
curtains

A curtains transition as shown in the following figure.

wind

A wind transition as shown in the following figure.

prestige

A prestige transition as shown in the following figure.

fracture

A fracture transition as shown in the following figure.

crush

A crush transition as shown in the following figure.
<table>
<thead>
<tr>
<th>Transition</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>peelOff</td>
<td>A peel off transition as shown in the following figure.</td>
</tr>
<tr>
<td>pageCurlDouble</td>
<td>A double page curl transition as shown in the following figure.</td>
</tr>
<tr>
<td>pageCurlSingle</td>
<td>A single page curl transition as shown in the following figure.</td>
</tr>
<tr>
<td>airplane</td>
<td>An airplane transition as shown in the following figure.</td>
</tr>
<tr>
<td>origami</td>
<td>An origami transition as shown in the following figure.</td>
</tr>
</tbody>
</table>
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.

```xml
<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.

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

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

```xml
<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.

![Sample morph transition](image)

**Figure 6: Sample morph transition**

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

<table>
<thead>
<tr>
<th>Value</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>byObject</td>
<td>Sets the Objects effect option, where objects are matched and moved.</td>
</tr>
<tr>
<td>byWord</td>
<td>Sets the Words effect option, where objects as well as individual words are matched and moved.</td>
</tr>
<tr>
<td>byChar</td>
<td>Sets the Characters effect option, where objects as well as individual characters are matched and moved.</td>
</tr>
</tbody>
</table>

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

```xml
<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.

```xml
<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.
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.

```xml
<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.

```xml
<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).
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.

```xml
<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: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.

<table>
<thead>
<tr>
<th>Value</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>preview</td>
<td>Use the image of the slide or section</td>
</tr>
<tr>
<td>cover</td>
<td>Use a custom image</td>
</tr>
</tbody>
</table>

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

```xml
<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.

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

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

```xml
<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.

```xml
<xsd:complexType name="CT_SectionZoomObject">
  <xsd:sequence>
    <!-- Child Elements and Attributes go here -->
  </xsd:sequence>
</xsd:complexType>
```
<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.
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.

```xml
<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.
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.

```xml
<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.

```xml
<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.

```xml
<xsd:complexType name="CT_GridLayout"/>
```

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

```xml
<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.
**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.

```xml
<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.
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):

```xml
    xmlns:p="http://schemas.openxmlformats.org/presentationml/2006/main"
...

    <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:slide>
```

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:

```xml
<p:pic>
    <p:nvPicPr>
        <p:cNvPr id="4" name="video1.wmv" />
        <p:cNvPicPr>
            <a:picLocks noChangeAspect="1"/>
        </p:cNvPicPr>
    </p:nvPicPr>
    <a:videoFile r:link="rId1"/>
    <p:extLst>
        <p:ext uri="{DAA4B4D4-6D71-4841-9C94-3DE7FCFB9230}"
            <p14:media
                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>
        </p:ext>
    </p:extLst>
</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:

```xml
xmlns:p="http://schemas.openxmlformats.org/presentationml/2006/main"
...
<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: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>
</p:extLst>
</p:presentation>
```
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:

```xml
xmlns:p="http://schemas.openxmlformats.org/presentationml/2006/main"
  <p:cSld>
    <p:spTree>
      ...
      <p:pic>
        <p:nvPicPr>
          <p:cNvPicPr id="4" name="video1.wmv">
            <a:hlinkClick r:id="" action="ppaction://media"/>
          </p:cNvPicPr>
          <p:cNvPicPr>
            <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"/>
              <p:media/>
              <p:media/>
              <p:extLst>
            </p:extLst>
          </p:nvPr>
        </p:nvPicPr>
      ...
      </p:pic>
      ...
      <p:sp>
        <p:nvSpPr>
          <p:cNvPr id="6" name="Rectangle 5"/>
          <p:nvPr/>
        </p:nvSpPr>
      ...
    </p:spTree>
  </p:cSld>
  ...
  <p:extLst>
```

[MS-PPTX] - v20160929
PowerPoint (.pptx) Extensions to the Office Open XML File Format
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Release: September 29, 2016
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 first `<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 second `<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 third `<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 fourth `<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 fifth `<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 sixth `<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.
4 Security

4.1 Security Considerations for Implementers

None.

4.2 Index of Security Parameters

None.
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].

<table>
<thead>
<tr>
<th>Schema name</th>
<th>Prefix</th>
<th>Section</th>
</tr>
</thead>
<tbody>
<tr>
<td><a href="http://schemas.microsoft.com/office/powerpoint/2012/main">http://schemas.microsoft.com/office/powerpoint/2012/main</a> Schema</td>
<td>None.</td>
<td>5.2</td>
</tr>
<tr>
<td></td>
<td>p159</td>
<td>5.3</td>
</tr>
<tr>
<td></td>
<td>p1510</td>
<td>5.4</td>
</tr>
<tr>
<td></td>
<td>p16</td>
<td>5.5</td>
</tr>
<tr>
<td></td>
<td>p166</td>
<td>5.6</td>
</tr>
<tr>
<td></td>
<td>psez</td>
<td>5.7</td>
</tr>
<tr>
<td></td>
<td>pslz</td>
<td>5.8</td>
</tr>
<tr>
<td></td>
<td>psuz</td>
<td>5.9</td>
</tr>
</tbody>
</table>


```xml
<xsd:schema elementFormDefault="qualified"
    xmlns:p="http://schemas.openxmlformats.org/presentationml/2006/main"
    xmlns:"http://schemas.openxmlformats.org/drawingml/2006/main"
    xmlns:s="http://schemas.openxmlformats.org/officeDocument/2006/sharedTypes"
    xmlns:xmlns:xsd="http://www.w3.org/2001/XMLSchema"
    <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_TransitionCornerAndCenterDirectionType">
        <xsd:restriction base="xsd:token">
            <xsd:enumeration value="strip"/>
            <xsd:enumeration value="rectangle"/>
        </xsd:restriction>
    </xsd:simpleType>
</xsd:schema>
```
<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="1"/>
</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"/>
<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:element name="laserTraceLst" type="CT_LaserTrace" minOccurs="0" maxOccurs="unbounded"/>
</xsd:complexType>
<xsd:element name="laserTraceLst" type="CT_LaserTraceList"/>
<xsd:complexType name="CT_LaserTraceList">
<xsd:sequence>
<xsd:element name="laserTraceLst" type="CT_LaserTrace" minOccurs="0" maxOccurs="unbounded"/>
</xsd:sequence>
</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: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"/>
5.2 http://schemas.microsoft.com/office/powerpoint/2012/main Schema

```xml
<xsd:schema elementFormDefault="qualified"

targetNamespace="http://schemas.microsoft.com/office/powerpoint/2012/main"

xmlns="http://schemas.microsoft.com/office/powerpoint/2012/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"/>

<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="p: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: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>
```
5.3 http://schemas.microsoft.com/office/powerpoint/2015/09/main Schema

5.4 http://schemas.microsoft.com/office/powerpoint/2015/10/main Schema
5.5 http://schemas.microsoft.com/office/powerpoint/2015/main Schema

5.6 http://schemas.microsoft.com/office/powerpoint/2016/6/main Schema
<xsd:import namespace="http://schemas.openxmlformats.org/drawingml/2006/main"
schemaLocation="dml-main.xsd然"
schemaLocation="shared-commonSimpleTypes.xsd然"
><xsd:import namespace="http://schemas.openxmlformats.org/presentationml/2006/main"
schemaLocation="pml.xsd然"
</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: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_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: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: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"/>
    </xsd:sequence>
  </xsd:complexType>
  <xsd:element name="slideZm" type="CT_SlideZoom"/>}
</xsd:schema>
5.9 http://schemas.microsoft.com.office/powerpoint/2016/summaryzoom Schema

```xml
<xsd:schema elementFormDefault="qualified"
targetNamespace="http://schemas.microsoft.comoffice/powerpoint/2016/summaryzoom"
xm xmlns="http://schemas.microsoft.comoffice/powerpoint/2016/summaryzoom"
 xmlns:psuz="http://schemas.microsoft.comoffice/powerpoint/2016/summaryzoom"
 xmlns:p166="http://schemas.microsoft.comoffice/powerpoint/2016/6/main"
 xmlns:x="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" />
        <xsd:attribute name="descr" type="xsd:string" use="optional" />
        <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:sequence>
    </xsd:complexType>
    <xsd:element name="summaryZm" type="CT_SummaryZoom" minOccurs="0" maxOccurs="1" />
</xsd:schema>
```
6 Appendix B: Product Behavior

The information in this specification is applicable to the following Microsoft products or supplemental software. References to product versions include released service packs.

- 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.
<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.
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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