#### Changes to section 19.2.1.39 sldSz (Presentation Slide Size)

|  |  |
| --- | --- |
| type (Type of Size) | Specifies the kind of slide size that should be used. This identifies in particular the expected delivery platform for this presentation. If this attribute is not present, the presentation has no preferred delivery platform.  The possible values for this attribute are defined by the ST\_SlideSizeType simple type (§19.7.18). |

### Changes to section 19.5.1 anim (Animate)

This element is a generic animation element that requires little or no semantic understanding of the attribute being animated.  It can animate text within a shape or even the shape itself.

The attributes by, from and to ~~must~~shall be used in one of the following combinations:

* ~~From-to: when the~~ from and to attributes are both present and the by attribute is not present
* ~~From-by: when the~~ from and by attributes are both present and the to attribute is not present
* ~~To-only: when the~~ to attribute is present and the from and by attributes ~~is~~ are not present
* ~~By-only: when the~~ by attribute is present and the from and to attributes are not present

…

|  |  |
| --- | --- |
| Attributes | Description |
| by (By) | This attribute specifies a relative offset value for the animation with respect to its position before the start of the animation.  See element description for valid combinations of the by, from and to attributes.  The possible values for this attribute are defined by the W3C XML Schema string datatype. |
| from (From) | This attribute specifies the starting value of the animation.  See element description for valid combinations of the by, from and to attributes.  The possible values for this attribute are defined by the W3C XML Schema string datatype. |
| to (To) | This attribute specifies the ending value for the animation as a percentage.  See element description for valid combinations of the by, from and to attributes.  The possible values for this attribute are defined by the W3C XML Schema string datatype. |

### Changes to section 19.5.2 animClr (Animate Color Behavior)

|  |  |
| --- | --- |
| Attributes | Description |
| clrSpc (Color Space) | This attribute specifies the color space in which to interpolate the animation. ~~Values for example can be HSL & RGB.~~    [Note: The color space for the transition need not match the color spaces for either of the endpoints~~The values for from/to/by/etc. can still be specified in any supported color format without affecting the color space within which the animation happens~~. end note]    ~~The RGB color space is best used for doing animations between two different colors since it doesn't require going through any other hues between the two colors specified. The HSL space is useful for animating through a rainbow of colors or for modifying just the saturation by 30% for example.~~  The possible values for this attribute are defined by the ST\_TLAnimateColorSpace simple type (§19.7.23). |

### Changes to section 19.5.3 animEffect (Animate Effect)

|  |  |
| --- | --- |
| Attributes | Description |
| filter (Filter) | …  [Note: The renderings shown above are for example purposes only. Exact rendering of any animation is determined by the rendering application. As such, the same animation can have many variations, depending on the implementation. More detail for each rendering above can be found in transition (§19.3.1.50). end note]  If this attribute is omitted, no effect is applied to the animation. |

### Changes to section 19.5.4 animMotion (Animate Motion)

|  |  |
| --- | --- |
| Attributes | Description |
| ptsTypes (Points Types) | This attribute describes the point type of the points in the path attribute. The allowed values that are understood for the ptsTypes attribute are as follows:  A = Auto, F = Corner, T = Straight, S = Smooth  UPPERCASE = Straight Line follows point, lowercase = curve follows point.  Thus, the total allowed set = {A,F,T,S,a,f,t,s}  If the attribute is missing or ~~a is present~~its value is outside the above set, "Auto" behavior is assumed.  The possible values for this attribute are defined by the W3C XML Schema string datatype. |

### Changes to section 19.5.5 animRot (Animate Rotation)

The sign of the rotation angle specifies the direction for rotation. A negative rotation specifies that the rotation should appear in the host to go counter-clockwise".

The attributes by, from and to shall be used in one of the following combinations:

* from and to attributes are both present and the by attribute is not present
* from and by attributes are both present and the to attribute is not present
* to attribute is present and the from and by attributes are not present
* by attribute is present and the from and to attributes are not present

|  |  |
| --- | --- |
| Attributes | Description |
| by (By) | This attribute describes the relative offset value for the animation.  See element description for valid combinations of the by, from and to attributes.  The possible values for this attribute are defined by the ST\_Angle simple type (§20.1.10.3). |
| from (From) | This attribute describes the starting value for the animation.  See element description for valid combinations of the by, from and to attributes.  The possible values for this attribute are defined by the ST\_Angle simple type (§20.1.10.3). |
| to (To) | This attribute describes the ending value for the animation.  See element description for valid combinations of the by, from and to attributes.  The possible values for this attribute are defined by the ST\_Angle simple type (§20.1.10.3). |

### Changes to section 19.5.22 cBhvr (Common Behavior)

This element describes the common behaviors of animations.

The attributes by, from and to shall be used in one of the following combinations:

* from and to attributes are both present and the by attribute is not present
* from and by attributes are both present and the to attribute is not present
* to attribute is present and the from and by attributes are not present
* by attribute is present and the from and to attributes are not present

|  |  |
| --- | --- |
| Attributes | Description |
| by (By) | This attribute specifies a relative offset value for the animation..  See element description for valid combinations of the by, from and to attributes.  The possible values for this attribute are defined by the W3C XML Schema string datatype. |
| from (From) | This attribute specifies the starting value of the animation.  See element description for valid combinations of the by, from and to attributes.  The possible values for this attribute are defined by the W3C XML Schema string datatype. |
| override (Override) | This attribute specifies how a behavior should override animation on the target element. ~~The "childStyle" clears the attributes on the children contained inside the target element.~~  The possible values for this attribute are defined by the ST\_TLBehaviorOverrideType simple type (§19.7.29). |
| rctx (Runtime Context) | This attribute describes the runtime context of the animation. The currently-understood values are “PPT” and “IE.” This is used to specify the behavior used when animating in the PPT slideshow vs. IE HTML runtime. An example can be seen with the transparency effect. In IE, the transparency is animated as a bitmap, where in PPT, the style.opacity property of a shape is used to animate the transparency.  If this attribute is not present, there is no runtime context associated with the animation.  The possible values for this attribute are defined by the W3C XML Schema string datatype. |
| to (To) | This attribute specifies the ending value of the animation.  See element description for valid combinations of the by, from and to attributes.  The possible values for this attribute are defined by the W3C XML Schema string datatype. |

### Changes to section 19.5.28 cmd (Command)

|  |  |
| --- | --- |
| Attributes | Description |
| cmd (Command) | The value of the cmd attribute shall be the string representation of an integer that represents the embedded object verb number. This verb number determines the action that the rendering application should take corresponding to this object when this point in the animation is reached.  This attribute must be present if the type attribute is present. |

### Changes to section 19.5.33 cTn (Common Time Node Properties)

This element describes the properties that are common for time nodes.

|  |  |
| --- | --- |
| Attributes | Description |
| bldLvl (Build level) | This attribute describes the build level of the animation. If this attribute is not present, the corresponding time node is not associated with a build level.  The possible values for this attribute are defined by the W3C XML Schema int datatype. |
| evtFilter (Event Filter) | This attribute describes the event filter for this time node. If this attribute is not present, the corresponding time node is not associated with an event filter.  The possible values for this attribute are defined by the W3C XML Schema string datatype. |
| fill (Fill) | This attribute describes the fill type for the time node. If this attribute is not present, the corresponding time node is not associated with a fill type.  The possible values for this attribute are defined by the ST\_TLTimeNodeFillType simple type (§19.7.41). |
| masterRel (Master Relation) | This attribute specifies how the time node plays back relative to its master time node. If this attribute is not present, the corresponding time node plays independently of its master time node.  The possible values for this attribute are defined by the ST\_TLTimeNodeMasterRelation simple type (§19.7.43). |
| nodeType (Node Type) | This attribute specifies the type of time node. If this attribute is not present, the corresponding time node has no type.  The possible values for this attribute are defined by the ST\_TLTimeNodeType simple type (§19.7.47). |
| presetClass (Preset Types) | This attribute descries the class of effect in which it belongs. If this attribute is not present, the corresponding time node has no class.  The possible values for this attribute are defined by the ST\_TLTimeNodePresetClassType simple type (§19.7.44). |
| syncBehavior (Synchronization Behavior) | This attribute specifies how the time node synchronizes to its group. If this attribute is not present, the corresponding time node has no synchronization behaviour.  The possible values for this attribute are defined by the ST\_TLTimeNodeSyncType simple type (§19.7.46). |
| tmFilter (Time Filter) | This attribute specifies the time filter for the time node. If this attribute is not present, the corresponding time node has no time filter.  The possible values for this attribute are defined by the W3C XML Schema string datatype. |

### Changes to section 19.5.39 endSync (EndSync)

|  |  |
| --- | --- |
| Attributes | Description |
| evt (Trigger Event) | This attribute describes the event that triggers an animation. If this attribute is missing, the animation is not triggered by an event.  The possible values for this attribute are defined by the ST\_TLTriggerEvent simple type (§19.7.48). |

Changes to section A.3 PresentationML

This schema is available in the file pml.xsd.

<xsd:complexType name="CT\_TLTimeCondition">

<xsd:choice minOccurs="0" maxOccurs="1">

<xsd:element name="tgtEl" type="[CT\_TLTimeTargetElement](#XSD_S_ppt_CT_TLTimeTargetElement)"/>

<xsd:element name="tn" type="[CT\_TLTriggerTimeNodeID](#XSD_S_ppt_CT_TLTriggerTimeNodeID)"/>

<xsd:element name="rtn" type="[CT\_TLTriggerRuntimeNode](#XSD_S_ppt_CT_TLTriggerRuntimeNode)"/>

</xsd:choice>

<xsd:attribute name="evt" use="optional" type="[ST\_TLTriggerEvent](#XSD_S_ppt_ST_TLTriggerEvent)"/>

<xsd:attribute name="delay" type="[ST\_TLTime](#XSD_S_ppt_ST_TLTime)" use="optional" default="0"/>

</xsd:complexType>

<xsd:complexType name="CT\_TLCommonTimeNodeData">

<xsd:sequence>

<xsd:element name="stCondLst" type="[CT\_TLTimeConditionList](#XSD_S_ppt_CT_TLTimeConditionList)" minOccurs="0" maxOccurs="1"/>

<xsd:element name="endCondLst" type="[CT\_TLTimeConditionList](#XSD_S_ppt_CT_TLTimeConditionList)" minOccurs="0" maxOccurs="1"/>

<xsd:element name="endSync" type="[CT\_TLTimeCondition](#XSD_S_ppt_CT_TLTimeCondition)" minOccurs="0" maxOccurs="1"/>

<xsd:element name="iterate" type="[CT\_TLIterateData](#XSD_S_ppt_CT_TLIterateData)" minOccurs="0" maxOccurs="1"/>

<xsd:element name="childTnLst" type="[CT\_TimeNodeList](#XSD_S_ppt_CT_TimeNodeList)" minOccurs="0" maxOccurs="1"/>

<xsd:element name="subTnLst" type="[CT\_TimeNodeList](#XSD_S_ppt_CT_TimeNodeList)" minOccurs="0" maxOccurs="1"/>

</xsd:sequence>

<xsd:attribute name="id" type="[ST\_TLTimeNodeID](#XSD_S_ppt_ST_TLTimeNodeID)" use="optional"/>

<xsd:attribute name="presetID" type="xsd:int" use="optional"/>

<xsd:attribute name="presetClass" type="[ST\_TLTimeNodePresetClassType](#XSD_S_ppt_ST_TLTimeNodePresetClassType)" use="optional"/>

<xsd:attribute name="presetSubtype" type="xsd:int" use="optional" default="0"/>

<xsd:attribute name="dur" type="[ST\_TLTime](#XSD_S_ppt_ST_TLTime)" use="optional" default="0"/>

<xsd:attribute name="repeatCount" type="[ST\_TLTime](#XSD_S_ppt_ST_TLTime)" use="optional" default="1000"/>

<xsd:attribute name="repeatDur" type="[ST\_TLTime](#XSD_S_ppt_ST_TLTime)" use="optional"/>

<xsd:attribute name="spd" type="[a:ST\_Percentage](#XSD_S_a_ST_Percentage)" use="optional" default="100%"/>

<xsd:attribute name="accel" type="[a:ST\_PositiveFixedPercentage](#XSD_S_a_ST_PositiveFixedPercentage)" use="optional" default="0%"/>

<xsd:attribute name="decel" type="[a:ST\_PositiveFixedPercentage](#XSD_S_a_ST_PositiveFixedPercentage)" use="optional" default="0%"/>

<xsd:attribute name="autoRev" type="xsd:boolean" use="optional" default="false"/>

<xsd:attribute name="restart" type="[ST\_TLTimeNodeRestartType](#XSD_S_ppt_ST_TLTimeNodeRestartType)" use="optional" default="always"/>

<xsd:attribute name="fill" type="[ST\_TLTimeNodeFillType](#XSD_S_ppt_ST_TLTimeNodeFillType)" use="optional"/>

<xsd:attribute name="syncBehavior" type="[ST\_TLTimeNodeSyncType](#XSD_S_ppt_ST_TLTimeNodeSyncType)" use="optional"/>

<xsd:attribute name="tmFilter" type="xsd:string" use="optional"/>

<xsd:attribute name="evtFilter" type="xsd:string" use="optional"/>

<xsd:attribute name="display" type="xsd:boolean" use="optional" default="true"/>

<xsd:attribute name="masterRel" type="[ST\_TLTimeNodeMasterRelation](#XSD_S_ppt_ST_TLTimeNodeMasterRelation)" use="optional"/>

<xsd:attribute name="bldLvl" type="xsd:int" use="optional"/>

<xsd:attribute name="grpId" type="xsd:unsignedInt" use="optional"/>

<xsd:attribute name="afterEffect" type="xsd:boolean" use="optional" default="false"/>

<xsd:attribute name="nodeType" type="[ST\_TLTimeNodeType](#XSD_S_ppt_ST_TLTimeNodeType)" use="optional"/>

<xsd:attribute name="nodePh" type="xsd:boolean" use="optional" default="false"/>

</xsd:complexType>

<xsd:complexType name="CT\_TLCommonBehaviorData">

<xsd:sequence>

<xsd:element name="cTn" type="[CT\_TLCommonTimeNodeData](#XSD_S_ppt_CT_TLCommonTimeNodeData)" minOccurs="1" maxOccurs="1"/>

<xsd:element name="tgtEl" type="[CT\_TLTimeTargetElement](#XSD_S_ppt_CT_TLTimeTargetElement)" minOccurs="1" maxOccurs="1"/>

<xsd:element name="attrNameLst" type="[CT\_TLBehaviorAttributeNameList](#XSD_S_ppt_CT_TLBehaviorAttributeNameList)" minOccurs="0" maxOccurs="1"/>

</xsd:sequence>

<xsd:attribute name="additive" type="[ST\_TLBehaviorAdditiveType](#XSD_S_ppt_ST_TLBehaviorAdditiveType)" use="optional" default="base"/>

<xsd:attribute name="accumulate" type="[ST\_TLBehaviorAccumulateType](#XSD_S_ppt_ST_TLBehaviorAccumulateType)" use="optional" default="none"/>

<xsd:attribute name="xfrmType" type="[ST\_TLBehaviorTransformType](#XSD_S_ppt_ST_TLBehaviorTransformType)" use="optional" default="pt"/>

<xsd:attribute name="from" type="xsd:string" use="optional"/>

<xsd:attribute name="to" type="xsd:string" use="optional"/>

<xsd:attribute name="by" type="xsd:string" use="optional"/>

<xsd:attribute name="rctx" type="xsd:string" use="optional"/>

<xsd:attribute name="override" type="[ST\_TLBehaviorOverrideType](#XSD_S_ppt_ST_TLBehaviorOverrideType)" use="optional" default="normal"/>

</xsd:complexType>

<xsd:complexType name="CT\_TLAnimateBehavior">

<xsd:sequence>

<xsd:element name="cBhvr" type="[CT\_TLCommonBehaviorData](#XSD_S_ppt_CT_TLCommonBehaviorData)" minOccurs="1" maxOccurs="1"/>

<xsd:element name="tavLst" type="[CT\_TLTimeAnimateValueList](#XSD_S_ppt_CT_TLTimeAnimateValueList)" minOccurs="0" maxOccurs="1"/>

</xsd:sequence>

<xsd:attribute name="by" type="xsd:string" use="optional"/>

<xsd:attribute name="from" type="xsd:string" use="optional"/>

<xsd:attribute name="to" type="xsd:string" use="optional"/>

<xsd:attribute name="calcmode" type="[ST\_TLAnimateBehaviorCalcMode](#XSD_S_ppt_ST_TLAnimateBehaviorCalcMode)" use="optional" default="lin"/>

<xsd:attribute name="valueType" type="[ST\_TLAnimateBehaviorValueType](#XSD_S_ppt_ST_TLAnimateBehaviorValueType)" use="optional" default="num"/>

</xsd:complexType>

<xsd:complexType name="CT\_TLAnimateColorBehavior">

<xsd:sequence>

<xsd:element name="cBhvr" type="[CT\_TLCommonBehaviorData](#XSD_S_ppt_CT_TLCommonBehaviorData)" minOccurs="1" maxOccurs="1"/>

<xsd:element name="by" type="[CT\_TLByAnimateColorTransform](#XSD_S_ppt_CT_TLByAnimateColorTransform)" minOccurs="0" maxOccurs="1"/>

<xsd:element name="from" type="[a:CT\_Color](#XSD_S_a_CT_Color)" minOccurs="0" maxOccurs="1"/>

<xsd:element name="to" type="[a:CT\_Color](#XSD_S_a_CT_Color)" minOccurs="0" maxOccurs="1"/>

</xsd:sequence>

<xsd:attribute name="clrSpc" type="[ST\_TLAnimateColorSpace](#XSD_S_ppt_ST_TLAnimateColorSpace)" use="optional" default="rgb"/>

<xsd:attribute name="dir" type="[ST\_TLAnimateColorDirection](#XSD_S_ppt_ST_TLAnimateColorDirection)" use="optional"/>

</xsd:complexType>

<xsd:complexType name="CT\_TLAnimateMotionBehavior">

<xsd:sequence>

<xsd:element name="cBhvr" type="[CT\_TLCommonBehaviorData](#XSD_S_ppt_CT_TLCommonBehaviorData)" minOccurs="1" maxOccurs="1"/>

<xsd:element name="by" type="[CT\_TLPoint](#XSD_S_ppt_CT_TLPoint)" minOccurs="0" maxOccurs="1"/>

<xsd:element name="from" type="[CT\_TLPoint](#XSD_S_ppt_CT_TLPoint)" minOccurs="0" maxOccurs="1"/>

<xsd:element name="to" type="[CT\_TLPoint](#XSD_S_ppt_CT_TLPoint)" minOccurs="0" maxOccurs="1"/>

<xsd:element name="rCtr" type="[CT\_TLPoint](#XSD_S_ppt_CT_TLPoint)" minOccurs="0" maxOccurs="1"/>

</xsd:sequence>

<xsd:attribute name="origin" type="[ST\_TLAnimateMotionBehaviorOrigin](#XSD_S_ppt_ST_TLAnimateMotionBehaviorOrig)" use="optional" default="parent"/>

<xsd:attribute name="path" type="xsd:string" use="optional" default=""/>

<xsd:attribute name="pathEditMode" type="[ST\_TLAnimateMotionPathEditMode](#XSD_S_ppt_ST_TLAnimateMotionPathEditMode)" use="optional" default="relative"/>

<xsd:attribute name="rAng" type="[a:ST\_Angle](#XSD_S_a_ST_Angle)" use="optional" default="0"/>

<xsd:attribute name="ptsTypes" type="xsd:string" use="optional"/>

</xsd:complexType>

<xsd:complexType name="CT\_TLAnimateScaleBehavior">

<xsd:sequence>

<xsd:element name="cBhvr" type="[CT\_TLCommonBehaviorData](#XSD_S_ppt_CT_TLCommonBehaviorData)" minOccurs="1" maxOccurs="1"/>

<xsd:element name="by" type="[CT\_TLPoint](#XSD_S_ppt_CT_TLPoint)" minOccurs="0" maxOccurs="1"/>

<xsd:element name="from" type="[CT\_TLPoint](#XSD_S_ppt_CT_TLPoint)" minOccurs="0" maxOccurs="1"/>

<xsd:element name="to" type="[CT\_TLPoint](#XSD_S_ppt_CT_TLPoint)" minOccurs="0" maxOccurs="1"/>

</xsd:sequence>

<xsd:attribute name="zoomContents" type="xsd:boolean" use="optional" default="false"/>

</xsd:complexType>

<xsd:complexType name="CT\_TLCommandBehavior">

<xsd:sequence>

<xsd:element name="cBhvr" type="[CT\_TLCommonBehaviorData](#XSD_S_ppt_CT_TLCommonBehaviorData)" minOccurs="1" maxOccurs="1"/>

</xsd:sequence>

<xsd:attribute type="[ST\_TLCommandType](#XSD_S_ppt_ST_TLCommandType)" name="type" use="optional" default="call"/>

<xsd:attribute name="cmd" type="xsd:string" use="optional"/>

</xsd:complexType>

<xsd:complexType name="CT\_Kinsoku">

<xsd:attribute name="lang" type="xsd:string" use="~~optional~~required"/>

<xsd:attribute name="invalStChars" type="xsd:string" use="required"/>

<xsd:attribute name="invalEndChars" type="xsd:string" use="required"/>

</xsd:complexType>

<xsd:complexType name="CT\_GraphicalObjectFrame">

<xsd:sequence>

<xsd:element name="nvGraphicFramePr" type="[CT\_GraphicalObjectFrameNonVisual](#XSD_S_ppt_CT_GraphicalObjectFrameNonVisu)" minOccurs="1" maxOccurs="1"/>

<xsd:element name="xfrm" type="[a:CT\_Transform2D](#XSD_S_a_CT_Transform2D)" minOccurs="1" maxOccurs="1"/>

<xsd:element ref="a:graphic" minOccurs="1" maxOccurs="1"/>

<xsd:element name="extLst" type="[CT\_ExtensionListModify](#XSD_S_ppt_CT_ExtensionListModify)" minOccurs="0" maxOccurs="1"/>

</xsd:sequence>

<xsd:attribute name="bwMode" type="a:ST\_BlackWhiteMode" use="optional" default="auto"/>

</xsd:complexType>