

## Office Binary (doc, xls, ppt) Translator to Open XML

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*(ppt to pptx Mapping Phase III; DiaLOGIKa/clam/wk 27 February 2009)*

This is a very initial mapping table from the binary PowerPoint format (ppt) to PresentationML -- the Open XML markup language for PowerPoint documents (pptx). We will use this mapping table in the future to implement the converter from binary to Open XML PowerPoint documents.

The following mapping information is currently available:

- Document Parts
- Presentation Part
- Master Slide Part
- Slide Part
- Slide Layout Part
- Theme Part
- Shape Mapping
- Animation Mapping

The following columns describe the mapping:

<b>Stream:</b>	<i>The binary stream</i>
<b>XML File:</b>	<i>The corresponding XML file</i>
<b>XML Element:</b>	<i>The corresponding XML element</i>
<b>XML Attribute:</b>	<i>The corresponding XML attribute</i>
<b>Status:</b>	<i>Required or optional</i>
<b>Record:</b>	<i>The binary record</i>
<b>Field:</b>	<i>The mapped field of the binary structure</i>
<b>Comment:</b>	<i>Further details</i>

Document Parts					
Stream	XML File	Status	Comment	Mapping	Implemented
PowerPoint Document	ppt\presentation.xml	Required	Core presentation information. Has lists for slides and slide masters.	See 'Presentation Part'.	✓
PowerPoint Document	ppt\theme\themeX.xml	Required	Color descriptions, font descriptions and generic style information. A presentation needs to have a theme.	Use MainMaster/Theme, if present, or default theme.	✓
PowerPoint Document	ppt\slideMasters\slideMasterX.xml ppt\handoutMasters\handoutMasterX.xml ppt\notesMasters\notesMasterX.xml	Required Optional Optional	These include a reference spTree with shapes appearing on every slide, a list of slide layouts which are based on this master and text styles. References a theme and all slide layouts using this master slide.	See 'Master Slide Part'.	✓
PowerPoint Document	ppt\slideLayouts\slideLayoutX.xml	Required	Layout reference slides. These include a reference spTree with shapes appearing on every slide using this layout and placeholder shapes. References a master.	See <slidLayoutIdLst> in 'Master Slide Part'.	✓
PowerPoint Document	ppt\slides\slideX.xml	Optional	Each slide references a slide layout.	See 'Slide Part'.	✓
PowerPoint Document	ppt\presProps.xml	Optional	Additional presentation-wide properties like printing properties, presentation show properties etc.		
PowerPoint Document	ppt\tableStyles.xml	Optional	Table formatting information.		
PowerPoint Document	ppt\viewProps.xml	Optional	View properties like view mode, last viewed slide etc.		
PowerPoint Document	docProps\app.xml	Optional	Application-specific properties.		
PowerPoint Document	docProps\core.xml	Optional	Core document meta data. Document title, creator etc.		
Pictures	ppt\media	Optional	Binary stream containing images.	See 'Shape Mapping'.	✓
PowerPoint Document	ppt\Environment\FontCollection		Fonts	See 'Shape Mapping'.	✓
PowerPoint Document		Optional	Footer	See 'Header-Footer Mapping'.	

presentation.xml						
Record	Field	XML Element	XML attribute	Status	Comment	Implemented
DocumentAtom	slideSize.x	sldSz	cx	Required	Convert Master Coordinates to EMUs.	✓
DocumentAtom	slideSize.y	sldSz	cy	Required	Convert Master Coordinates to EMUs.	✓
DocumentAtom	slideSizeType	sldSz	type	Required	Use mapping table.	✓
DocumentAtom	notesSize.x	notesSz	cx	Required	Convert Master Coordinates to EMUs.	✓
DocumentAtom	notesSize.y	notesSz	cy	Required	Convert Master Coordinates to EMUs.	✓
SlideListWithText/SlidePersistAtom	slideId	sldIdLst/sldId	id	Required	Match Slide to SlidePersistAtom via sldPst.psrReference = slide.siblingIndex.	✓
		sldIdLst/sldId	r:id	Required	Automatically generated relationship id.	✓
		sldMasterIdLst/sldMasterId	r:id	Required	Automatically generated relationship id.	✓
		notesMasterIdLst/notesMasterId	r:id		Automatically generated relationship id.	
		handoutMasterIdLst/handoutMasterId	r:id		Automatically generated relationship id.	

slideMasterX.xml

Record	Field	XML Element	XML Attribute	Status	Comment	Implemented
		spTree		Required	See 'Shape Mapping'.	✓
ColorMapping		clrMap		Required	Write default clrMap in case of absence.	✓
RoundTripContentMasterInfo12		sldLayoutIdLst/sldLayoutId	r:id	Required	In case of absence add fitting default slide layout part and write that part's id.	✓
TxMasterStyleAtom & RoundTripOArtTextStyles12		txStyles		Required	Use RoundTripOArtTextStyles12 if present. Else convert TxMasterStyleAtom styles.	✓
TextMasterStyle9Atom		txStyles		Optional	PPT9 bullet blips.	✓

slideX.xml

Record	Field	XML element	XML Attribute	Status	Comment	Implemented
		/sldMaster/spTree		Required	See 'Shape Mapping'.	✓

spTree Mapping

Record	Field	XML Element	XML attribute	Status	Comment	Implemented
		nvGrpSpPr/cNvPr	id	Required	Use per-spTree shape id counter from 1.	✓
		nvSpPr/cNvPr	id	Required	Use per-spTree shape id counter from 1.	✓
ClientData/OEPlaceholderAtom	placeholderId	nvSpPr/nvPr/ph	type		Use mapping table.	✓
ClientData/OEPlaceholderAtom	placementId	nvSpPr/nvPr/ph	idx			✓
ClientAnchor	Top	spPr/xfrm/off	x		Convert Master Coordinates to EMUs.	✓
ClientAnchor	Left	spPr/xfrm/off	y		Convert Master Coordinates to EMUs.	✓
ClientAnchor		spPr/xfrm/ext	cx		Value = Bottom - Top. Convert Master Coordinates to EMUs.	✓
ClientAnchor		spPr/xfrm/ext	cy		Value = Right - Left. Convert Master Coordinates to EMUs.	✓
ClientTextbox		sp/txBdy			Split text from TextBytes/CharsAtom into runs utilizing paragraph / character formatting run information from Master/StyleTextPropAtom. Renest elements for XML. (can't overlap pf / cf runs)	✓
BlipBitmap		pic			Images	✓
StyleTextPropAtom/TextCFRun	fontSize	rPr	sz		size	✓
StyleTextPropAtom/TextCFRun	bold	rPr	b		bold	✓
StyleTextPropAtom/TextCFRun	italic	rPr	i		italic	✓
StyleTextPropAtom/TextCFRun	underline	rPr	u		underlined	✓
StyleTextPropAtom/TextCFRun	color	rPr/solidFill			color	✓
StyleTextPropAtom/TextCFRun		rPr/solidFill/srgbClr	val			✓
StyleTextPropAtom/TextPFRun	indentLevel	pPr	lvl		Indent level.	✓
StyleTextPropAtom/TextPFRun	leftMargin	pPr	marL		Left margin.	✓
StyleTextPropAtom/TextPFRun	indent	pPr	indent		Indentation.	✓
Shape	Instance	custGeom			Custom shape	✓
ShapeOptions	pVertices	custGeom/cxnLst/cxn			Points of the shape.	✓
ShapeOptions	pSegmentInfo	custGeom/pathLst/path			Segments (moveTo, lnTo, curveTo, close)	✓
Shape	Instance	prstGeom	prst		Predefined shape	✓
ShapeOptions	fillColor	ln	solidFill		Fill color of the shape.	✓
ShapeOptions	lineStartArrowhead	ln/headEnd	type		Start type of a line.	✓
ShapeOptions	lineEndArrowhead	ln/tailEnd	type		End type of a line.	✓
ShapeOptions	fillType				Type of fill.	✓
ShapeOptions	fillBlipName	pattFill	prst		Predefined patterns of Powerpoint. These are not defined in the binary specification.	✓
ShapeOptions	fillBlipName	blipFill/blip			Texture and picture fills.	✓
ShapeOptions	fillShadeColors	gradFill/gsLst/gs			Gradient fills with more than two colors.	✓
ShapeOptions	lineDashing	ln/prstDash			Dashing of lines.	✓
SolverContainer/FConnectorRule	spidA	cxnSp/nvCxnSpPr/cNvCxnSpPr/stCxn	id		ID of shape where connector starts.	✓
SolverContainer/FConnectorRule	spidB	cxnSp/nvCxnSpPr/cNvCxnSpPr/endCxn	id		ID of shape where connector ends.	✓
SolverContainer/FConnectorRule	spidC				ID of connector shape.	✓
SolverContainer/FConnectorRule	cptiA	cxnSp/nvCxnSpPr/cNvCxnSpPr/stCxn	idx		Index of shape where connector starts.	✓
SolverContainer/FConnectorRule	cptiB	cxnSp/nvCxnSpPr/cNvCxnSpPr/endCxn	idx		Index of shape where connector ends.	✓

Animation Mapping						
Record	Field	XML element	XML Attribute	Status	Comment	Implemented
AnimationInfoAtom		timing				
AnimationInfoAtom	animEffect	p:animEffect	filter			
	animEffectDirection				meaning depends on animEffect	

## Header-Header Mapping

Record	Field	XML element	XML Attribute	Status	Comment	Implemented
Document\HeadersFootersContainer\HeadersFootersAtom	fHasFooter				Defines whether the slides have a footer.	✓
TitleMaster\ShapeContainer\ (OEPlaceholderAtom = MasterFooter)		p:sp (p:ph type="ftr")			The Footer content that has to be added to all slides.	✓