

# [MS-AXL]: Access Application Transfer Protocol Structure

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## Revision Summary

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# Table of Contents

<b>1 Introduction</b>	<b>14</b>
1.1 Glossary	14
1.2 References	15
1.2.1 Normative References	15
1.2.2 Informative References	16
1.3 Structure Overview (Synopsis)	16
1.3.1 Application Element	16
1.3.2 Forms	16
1.3.2.1 Form Sections	16
1.3.2.2 Form Controls	17
1.3.2.3 Form Styles	17
1.3.3 UI Macros	17
1.3.4 Data Macros	18
1.3.5 Queries	18
1.3.6 Reports	19
1.3.7 Application Reference	19
1.4 Relationship to Protocols and Other Structures	19
1.5 Applicability Statement	19
1.6 Versioning and Localization	19
1.7 Vendor-Extensible Fields	20
<b>2 Structures</b>	<b>21</b>
2.1 Conceptual Overview	21
2.1.1 Application	21
2.1.2 Forms	21
2.1.3 Macros	21
2.1.3.1 User Interface Macros	22
2.1.3.2 Data Macros	22
2.1.3.3 Variables	22
2.1.3.3.1 Temporary Variables	22
2.1.3.3.2 Local Variables	22
2.1.3.3.3 Return Variables	22
2.1.4 Queries	22
2.1.5 Reports	23
2.1.6 Shared Images	23
2.1.7 Ignored Value	23
2.2 AXL	23
2.2.1 Elements	23
2.2.1.1 Application	24
2.2.1.2 Query	24
2.2.1.3 Ordering	24
2.2.1.4 UserInterfaceMacros	24
2.2.1.5 DataMacros	25
2.2.1.6 UserInterfaceMacro	25
2.2.1.7 View	25
2.2.1.8 ApplicationReference	25
2.2.2 Attributes	26
2.2.3 Complex Types	26
2.2.3.1 CT_Expression	26
2.2.3.2 CT_Property	27

2.2.3.3	CT_PropertyBag .....	27
2.2.3.4	CT_Order.....	28
2.2.3.5	CT_Ordering .....	28
2.2.3.6	CT_AdHocOrder.....	29
2.2.3.7	CT_AdHocOrdering .....	29
2.2.3.8	CT_Reference.....	30
2.2.3.9	CT_References .....	30
2.2.3.10	CT_Result .....	31
2.2.3.11	CT_Results.....	32
2.2.3.12	CT_Join .....	32
2.2.3.13	CT_Joins .....	33
2.2.3.14	CT_Parameter .....	33
2.2.3.15	CT_Parameters .....	34
2.2.3.16	CT_ParameterDefinition .....	34
2.2.3.17	CT_ParameterDefinitions .....	35
2.2.3.18	CT_ParameterValue.....	35
2.2.3.19	CT_ParameterValues .....	36
2.2.3.20	CT_Query .....	36
2.2.3.21	CT_Argument .....	37
2.2.3.22	CT_Action .....	38
2.2.3.23	CT_ForEachRecordData .....	38
2.2.3.24	CT_ForEachRecord .....	39
2.2.3.25	CT_LookupRecordData.....	40
2.2.3.26	CT_LookupRecord .....	41
2.2.3.27	CT_CreateRecordData .....	41
2.2.3.28	CT_CreateRecord .....	42
2.2.3.29	CT_EditRecordData .....	43
2.2.3.30	CT_EditRecord.....	43
2.2.3.31	CT_UserInterfaceIf.....	44
2.2.3.32	CT_UserInterfaceElseIf .....	44
2.2.3.33	CT_UserInterfaceElse .....	45
2.2.3.34	CT_DataIf .....	45
2.2.3.35	CT_DataElseIf .....	46
2.2.3.36	CT_DataElse.....	47
2.2.3.37	CT_UserInterfaceConditionalBlock.....	47
2.2.3.38	CT_DataConditionalBlock .....	48
2.2.3.39	CT_Sub .....	49
2.2.3.40	CT_UserInterfaceMacroStatements .....	49
2.2.3.41	CT_DataMacroStatements.....	50
2.2.3.42	CT_UserInterfaceMacroStatementGroup .....	51
2.2.3.43	CT_DataMacroStatementGroup.....	51
2.2.3.44	CT_Application .....	52
2.2.3.45	CT_MacroReference.....	52
2.2.3.46	CT_UserInterfaceMacros .....	53
2.2.3.47	CT_DataMacros .....	53
2.2.3.48	CT_UserInterfaceMacro .....	54
2.2.3.49	CT_DataMacro .....	55
2.2.3.50	CT_RecordSource .....	55
2.2.3.51	CT_ViewData.....	56
2.2.3.52	CT_View .....	57
2.2.3.53	CT_Object.....	57
2.2.3.54	CT_ApplicationReference.....	58
2.2.4	Simple Types.....	59

2.2.4.1	ST_ObjectName .....	59
2.2.4.2	ST_UserInterfaceObjectEvent.....	60
2.2.4.3	ST_DataObjectEvent .....	61
2.2.4.4	ST_ShortString.....	61
2.2.4.5	ST_LongString .....	62
2.2.4.6	ST_JoinDirection.....	62
2.2.4.7	ST_FieldType .....	63
2.2.4.8	ST_SortDirection .....	63
2.2.5	Macros.....	64
2.2.5.1	Actions.....	64
2.2.5.1.1	BrowseTo .....	64
2.2.5.1.2	CancelRecordChange .....	65
2.2.5.1.3	ClearMacroError .....	65
2.2.5.1.4	CloseWindow .....	65
2.2.5.1.5	DeleteRecord .....	65
2.2.5.1.6	ExitForEachRecord.....	65
2.2.5.1.7	GoToControl .....	65
2.2.5.1.8	GoToRecord.....	66
2.2.5.1.9	LogEvent.....	66
2.2.5.1.10	MessageBox.....	66
2.2.5.1.11	OnError .....	66
2.2.5.1.12	OpenForm .....	67
2.2.5.1.13	OpenReport .....	67
2.2.5.1.14	RaiseError .....	67
2.2.5.1.15	RefreshRecord .....	67
2.2.5.1.16	RemoveAllTempVars .....	68
2.2.5.1.17	RemoveTempVar .....	68
2.2.5.1.18	Requery .....	68
2.2.5.1.19	RunDataMacro .....	68
2.2.5.1.20	RunMacro .....	68
2.2.5.1.21	SaveRecord .....	69
2.2.5.1.22	SendEmail .....	69
2.2.5.1.23	SetField.....	69
2.2.5.1.24	SetFilter .....	69
2.2.5.1.25	SetLocalVar .....	70
2.2.5.1.26	SetOrderBy.....	70
2.2.5.1.27	SetProperty .....	70
2.2.5.1.28	SetReturnVar .....	71
2.2.5.1.29	SetTempVar.....	71
2.2.5.1.30	StopAllMacros .....	71
2.2.5.1.31	StopMacro .....	71
2.2.5.2	Arguments.....	71
2.2.5.2.1	Alias .....	71
2.2.5.2.2	Bcc.....	72
2.2.5.2.3	Body.....	72
2.2.5.2.4	Cc .....	72
2.2.5.2.5	ControlName .....	72
2.2.5.2.6	DataMode.....	72
2.2.5.2.7	Description .....	72
2.2.5.2.8	Expression .....	73
2.2.5.2.9	Field .....	73
2.2.5.2.10	FormName .....	73
2.2.5.2.11	Goto .....	73

2.2.5.2.12	MacroName .....	73
2.2.5.2.13	Message.....	73
2.2.5.2.14	Name.....	74
2.2.5.2.15	Number.....	74
2.2.5.2.16	ObjectName.....	74
2.2.5.2.17	ObjectType .....	74
2.2.5.2.18	OrderBy .....	74
2.2.5.2.19	Page .....	74
2.2.5.2.20	PathToSubformControl .....	74
2.2.5.2.21	Property.....	75
2.2.5.2.22	Record .....	75
2.2.5.2.23	ReportName .....	75
2.2.5.2.24	Subject .....	76
2.2.5.2.25	To .....	76
2.2.5.2.26	Value .....	76
2.2.5.2.27	WhereCondition.....	76
2.2.5.2.28	WindowMode .....	76
2.3	XAML .....	77
2.3.1	XAML 2006.....	77
2.3.1.1	Elements .....	77
2.3.1.2	Attributes .....	77
2.3.1.2.1	Key .....	77
2.3.1.2.2	Name .....	77
2.3.1.3	Complex Types.....	78
2.3.1.4	Simple Types .....	78
2.3.2	WPF.....	78
2.3.2.1	Elements .....	78
2.3.2.1.1	Grid.....	78
2.3.2.1.2	Border .....	78
2.3.2.2	Attributes .....	78
2.3.2.3	Complex Types.....	78
2.3.2.3.1	CT_StackPanelResource .....	78
2.3.2.3.2	CT_Style .....	79
2.3.2.3.3	CT_Setter .....	80
2.3.2.3.4	CT_StackPanelSection.....	80
2.3.2.3.5	CT_Grid .....	80
2.3.2.3.6	CT_GridColumnDefinitions.....	81
2.3.2.3.7	CT_ColumnDefinition .....	82
2.3.2.3.8	CT_GridRowDefinitions.....	82
2.3.2.3.9	CT_RowDefinition .....	82
2.3.2.3.10	CT_DataTemplateProperty.....	83
2.3.2.3.11	CT_DataTemplate.....	83
2.3.2.3.12	CT_Border .....	84
2.3.2.4	Simple Types .....	85
2.3.2.4.1	ST_SetterProperty.....	85
2.3.2.4.2	ST_Color .....	88
2.3.2.4.3	ST_ReferenceType .....	89
2.3.2.4.4	ST_FlowDirection .....	89
2.3.2.4.5	ST_Visibility .....	90
2.3.2.4.6	ST_ScrollBarVisibility .....	90
2.3.2.4.7	ST_Cursor .....	91
2.3.3	Form XAML.....	91
2.3.3.1	Elements .....	91

2.3.3.1.1	Form .....	91
2.3.3.1.2	Section .....	92
2.3.3.1.3	TextBox .....	92
2.3.3.1.4	Button .....	92
2.3.3.1.5	Image.....	93
2.3.3.1.6	Label .....	93
2.3.3.1.7	Attachment .....	93
2.3.3.1.8	ListBox .....	93
2.3.3.1.9	ComboBox.....	94
2.3.3.1.10	CheckBox .....	94
2.3.3.1.11	NavigationControl.....	94
2.3.3.1.12	TabControl.....	95
2.3.3.1.13	SubForm .....	95
2.3.3.1.14	WebBrowser .....	95
2.3.3.1.15	NavigationButton.....	96
2.3.3.2	Attributes .....	96
2.3.3.2.1	LayoutGroup.....	96
2.3.3.3	Complex Types.....	96
2.3.3.3.1	CT_Form .....	96
2.3.3.3.2	CT_FormHeaderFooter .....	98
2.3.3.3.3	CT_FormDatashheet.....	99
2.3.3.3.4	CT_Section .....	99
2.3.3.3.5	CT_AccTabControl .....	100
2.3.3.3.6	CT_TabItem .....	101
2.3.3.3.7	CT_AccDataSheet.....	102
2.3.3.3.8	CT_AccTextBox .....	103
2.3.3.3.9	CT_AccDSTextBox .....	104
2.3.3.3.10	CT_AccSubForm .....	105
2.3.3.3.11	CT_AccButton .....	106
2.3.3.3.12	CT_AccImage.....	107
2.3.3.3.13	CT_AccLabel .....	108
2.3.3.3.14	CT_AccDSLabel .....	109
2.3.3.3.15	CT_AccAttachment .....	110
2.3.3.3.16	CT_AccDSAttachment .....	111
2.3.3.3.17	CT_AccListComboBoxRowSource .....	112
2.3.3.3.18	CT_AccListBox .....	112
2.3.3.3.19	CT_AccComboBox.....	114
2.3.3.3.20	CT_AccDSComboBox .....	115
2.3.3.3.21	CT_AccCheckBox .....	117
2.3.3.3.22	CT_AccDSCheckBox.....	118
2.3.3.3.23	CT_AccNavigationControl.....	119
2.3.3.3.24	CT_AccNavigationButton .....	120
2.3.3.3.25	CT_AccWebBrowser .....	121
2.3.3.4	Simple Types .....	122
2.3.3.4.1	ST_AccPictureAlignment.....	122
2.3.3.4.2	ST_AccPictureSizeMode.....	123
2.3.3.4.3	ST_AccAggregateType .....	123
2.3.3.4.4	ST_AccAggregateTypeAll .....	124
2.3.3.4.5	ST_AccPictureTiling .....	124
2.3.3.4.6	ST_AccRowSourceType .....	125
2.3.3.4.7	ST_AccDecimalPlaces.....	125
2.3.3.4.8	ST_AccString2048.....	126
2.3.3.4.9	ST_AccDatashheetCaption .....	126



2.3.3.4.10	ST_AccString255	127
2.3.3.4.11	ST_AccFormat	127
2.3.3.4.12	ST_AccAcceptsReturn	128
2.3.3.4.13	ST_AccPictureCaptionArrangement	128
2.3.3.4.14	ST_AccScrollBars	129
2.3.3.4.15	ST_AccDisplayAsHyperlink	129
2.3.3.4.16	ST_AccBorderStyle	130
2.3.3.4.17	ST_WebToolbar	131
2.3.4	Control Attributes	131
2.3.4.1	AcceptsReturn	131
2.3.4.2	AllowValueListEdits	131
2.3.4.3	AlternateBackground	132
2.3.4.4	Association	132
2.3.4.5	Background	132
2.3.4.6	BorderThickness	132
2.3.4.7	Caption	132
2.3.4.8	ColumnCount	133
2.3.4.9	ColumnWidths	133
2.3.4.10	ControlHeight	133
2.3.4.11	ControlSource	134
2.3.4.12	ControlWidth	134
2.3.4.13	CurrencySymbol	134
2.3.4.14	Cursor	134
2.3.4.15	DatasheetCaption	134
2.3.4.16	DecimalPlaces	135
2.3.4.17	DefaultInsertButton	135
2.3.4.18	DefaultPicture	135
2.3.4.19	DefaultValue	135
2.3.4.20	DisplayAs	135
2.3.4.21	DisplayAsHyperlink	135
2.3.4.22	EffectSize	136
2.3.4.23	FlowDirection	136
2.3.4.24	FontFamily	136
2.3.4.25	FontSize	136
2.3.4.26	FontStyle	136
2.3.4.27	FontWeight	137
2.3.4.28	Foreground	137
2.3.4.29	FormatDataAs	137
2.3.4.30	Height	137
2.3.4.31	HorizontalScrollBarVisibility	137
2.3.4.32	HyperlinkAddress	138
2.3.4.33	InheritValueList	138
2.3.4.34	IsEnabled	138
2.3.4.35	IsHyperlink	138
2.3.4.36	GridlineBorderBrush	138
2.3.4.37	LimitToList	139
2.3.4.38	LineHeight	139
2.3.4.39	LinkChildFields	139
2.3.4.40	LinkMasterFields	139
2.3.4.41	ListItemsEditForm	139
2.3.4.42	ListWidth	139
2.3.4.43	Locked	140
2.3.4.44	MinHeight	140

2.3.4.45	MinWidth	140
2.3.4.46	Name	140
2.3.4.47	NavigationButtons	140
2.3.4.48	NavigationParent	141
2.3.4.49	NavigationParentButton	141
2.3.4.50	NavigationTargetName	141
2.3.4.51	NavigationTargetSubform	141
2.3.4.52	NavigationWhereClause	141
2.3.4.53	Padding	141
2.3.4.54	PageSize	142
2.3.4.55	Picture	142
2.3.4.56	PictureAlignment	142
2.3.4.57	PictureCaptionArrangement	142
2.3.4.58	PictureSizeMode	142
2.3.4.59	PictureTiling	142
2.3.4.60	RowSourceType	142
2.3.4.61	ScrollBars	143
2.3.4.62	SeparatorCharacters	143
2.3.4.63	ShowColumnHeader	143
2.3.4.64	SizeMode	143
2.3.4.65	SourceObject	143
2.3.4.66	Span	144
2.3.4.67	Style	144
2.3.4.68	StyleHover	144
2.3.4.69	StyleSelected	144
2.3.4.70	TabularBorderStyle	144
2.3.4.71	TextAlignment	144
2.3.4.72	TextDecorations	145
2.3.4.73	TextFormat	145
2.3.4.74	ToolTip	145
2.3.4.75	VerticalScrollBarVisibility	145
2.3.4.76	Visibility	146
2.3.4.77	WebImageCluster	146
2.3.4.78	WebImageLeft	146
2.3.4.79	WebImageTop	146
2.3.4.80	WebToolBar	146
2.3.4.81	Width	146
2.4	RDL	147
2.4.1	Elements	147
2.4.1.1	Report	147
2.4.2	Attributes	147
2.4.3	Complex Types	147
2.4.3.1	Report	147
2.4.3.2	ReportSectionsType	148
2.4.3.3	ReportSectionType	148
2.4.3.4	ReportParametersType	149
2.4.3.5	ReportParameterType	149
2.4.3.6	DataSetsType	150
2.4.3.7	DataSetType	150
2.4.3.8	FieldsType	151
2.4.3.9	FieldType	151
2.4.3.10	QueryType	152
2.4.3.11	DataSourcesType	152

2.4.3.12	DataSourceType	153
2.4.3.13	ConnectionPropertiesType	153
2.4.3.14	QueryParametersType	154
2.4.3.15	QueryParameterType	154
2.4.3.16	BodyType	155
2.4.3.17	PageType	155
2.4.3.18	PageHeaderSectionType	156
2.4.3.19	PageFooterSectionType	157
2.4.3.20	TextboxRectangleReportItemsType	158
2.4.3.21	ControlsReportItemsType	158
2.4.3.22	BodyTypeReportItemsType	159
2.4.3.23	ActionInfoType	159
2.4.3.24	ActionsType	160
2.4.3.25	ActionType	160
2.4.3.26	VisibilityType	160
2.4.3.27	TextboxRectangleType	161
2.4.3.28	CellContentsRectangleType	161
2.4.3.29	ReportHeaderRectangleType	162
2.4.3.30	TextboxType	163
2.4.3.31	CellContentsTextboxType	164
2.4.3.32	ParagraphsType	165
2.4.3.33	ParagraphType	166
2.4.3.34	TextRunsType	166
2.4.3.35	TextRunType	166
2.4.3.36	ImageType	167
2.4.3.37	CellContentsImageType	168
2.4.3.38	GroupType	170
2.4.3.39	GroupExpressionsType	170
2.4.3.40	SortExpressionsType	171
2.4.3.41	SortExpressionType	171
2.4.3.42	RectangleStyleType	171
2.4.3.43	ImageStyleType	172
2.4.3.44	TextRunStyleType	173
2.4.3.45	TextBoxStyleType	174
2.4.3.46	ParagraphStyleType	175
2.4.3.47	SubBorderType	175
2.4.3.48	BorderType	176
2.4.3.49	StringLocIDType	176
2.4.3.50	LocIDStringWithDataTypeAttribute	177
2.4.3.51	CustomPropertiesType	177
2.4.3.52	CustomPropertyType	178
2.4.3.53	TablixType	178
2.4.3.54	TablixBodyType	179
2.4.3.55	TablixRowHierarchyType	179
2.4.3.56	TablixRowMembersType	180
2.4.3.57	TablixColumnHierarchyType	180
2.4.3.58	TablixColumnMembersType	181
2.4.3.59	TablixColumnMemberType	181
2.4.3.60	TablixRowMemberType	181
2.4.3.61	CellContentsType	182
2.4.3.62	TablixColumnsType	183
2.4.3.63	TablixColumnType	183
2.4.3.64	TablixRowsType	184

2.4.3.65	TablixRowType .....	184
2.4.3.66	TablixCellsType.....	185
2.4.3.67	TablixCellType .....	185
2.4.3.68	PageBreakType.....	186
2.4.4	Simple Types .....	186
2.4.4.1	DataTypeReportParameterType .....	186
2.4.4.2	ImageTypeSizing .....	187
2.4.4.3	SortExpressionDirection.....	187
2.4.4.4	SizeType .....	188
2.4.4.5	EvaluationModeType .....	188
2.4.4.6	PageBreakLocation.....	189
2.5	Expressions.....	189
2.5.1	Data Macros .....	189
2.5.1.1	Syntax .....	189
2.5.1.2	Function Names.....	192
2.5.2	Filters .....	194
2.5.2.1	Syntax .....	194
2.5.2.2	Function Names.....	196
2.5.3	Forms .....	196
2.5.3.1	Syntax .....	197
2.5.3.2	Function Names.....	198
2.5.4	Query Columns .....	199
2.5.4.1	Syntax .....	199
2.5.4.2	Function Names.....	201
2.5.5	Query Restrictions .....	203
2.5.5.1	Syntax .....	203
2.5.5.2	Function Names.....	204
2.5.6	Reports.....	205
2.5.6.1	Syntax .....	205
2.5.6.2	Functions.....	205
2.5.6.2.1	Evaluate Function Syntax .....	206
2.5.6.2.2	SanitizeUrlProtocol Function Syntax.....	206
2.5.7	User Interface Macros .....	206
2.5.7.1	Syntax .....	206
2.5.7.2	Function Names.....	210
2.6	ACCDW .....	210
2.6.1	Elements.....	210
2.6.1.1	ApplicationReference.....	210
2.6.2	Attributes.....	211
2.6.3	Complex Types .....	211
2.6.3.1	CT_Object .....	211
2.6.3.2	CT_ApplicationReference .....	211
2.6.4	Simple Types.....	212
2.6.4.1	ST_ShortString.....	212
2.6.4.2	ST_ObjectName .....	212
<b>3</b>	<b>Structure Examples .....</b>	<b>213</b>
3.1	Application Element .....	213
3.2	Forms .....	213
3.2.1	Detail Form .....	213
3.2.2	Navigation Form.....	217
3.2.3	Datasheet Form .....	218
3.3	UI Macros .....	220

3.3.1	Validation and Exceptions.....	220
3.3.2	Standalone.....	222
3.3.3	Filtering.....	222
3.4	Data Macros.....	223
3.4.1	Validate Delete.....	223
3.4.2	After Insert.....	224
3.4.3	Named Macro.....	225
3.5	Queries.....	226
3.5.1	Single Reference Query.....	226
3.5.2	Multiple Reference Query with Join.....	227
3.6	Reports.....	228
3.6.1	Grouped Report with Aggregate Expressions.....	228
<b>4</b>	<b>Security.....</b>	<b>234</b>
4.1	Security Considerations for Implementers.....	234
4.2	Index of Security Fields.....	234
<b>5</b>	<b>Appendix A: Full XML Schemas.....</b>	<b>235</b>
5.1	http://schemas.microsoft.com/winfx/2009/04/xaml.....	235
5.2	http://schemas.microsoft.com/client/2009/11.....	235
5.3	http://schemas.microsoft.com/office/accessservices/2009/11/forms.....	239
5.4	http://schemas.microsoft.com/office/accessservices/2009/11/application.....	253
5.5	http://schemas.microsoft.com/office/accessservices/2009/11/reports.....	262
5.6	http://schemas.microsoft.com/office/accessservices/2009/04/accdw.....	273
<b>6</b>	<b>Appendix B: Product Behavior.....</b>	<b>274</b>
<b>7</b>	<b>Change Tracking.....</b>	<b>275</b>
<b>8</b>	<b>Index.....</b>	<b>277</b>

# 1 Introduction

The Access Application Transfer Protocol Structure specifies the file format for the representation of a database application. This file format can include structures for layout descriptions of views of data, actions to control workflow, the combining, filtering and ordering of data, and metadata to describe the database application as a whole.

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

## 1.1 Glossary

The following terms are defined in [\[MS-GLOS\]](#):

**XML**

The following terms are defined in [\[MS-OFCGLOS\]](#):

**alias**  
**bind**  
**caption**  
**cell**  
**color level**  
**column**  
**control**  
**data macro**  
**data source**  
**database application**  
**database object**  
**dictionary**  
**expression**  
**Extensible Application Markup Language (XAML)**  
**field**  
**filter**  
**floating-point number**  
**form**  
**gridline**  
**input source**  
**list**  
**list item**  
**placeholder**  
**primary key**  
**query**  
**record**  
**rich text**  
**row**  
**section**  
**session**  
**site**  
**sRGB**  
**style**  
**toolbar**  
**Uniform Resource Locator (URL)**  
**whitespace**

The following terms are specific to this document:

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

## 1.2 References

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

### 1.2.1 Normative References

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

[ISO/IEC29500-1:2011] ISO/IEC, "Information Technology -- Document description and processing languages -- Office Open XML File Formats -- Part 1: Fundamentals and Markup Language Reference", ISO/IEC 29500-1:2011, 2011, [http://www.iso.org/iso/iso\\_catalogue/catalogue\\_tc/catalogue\\_detail.htm?csnumber=59575](http://www.iso.org/iso/iso_catalogue/catalogue_tc/catalogue_detail.htm?csnumber=59575)

[MSDN-TSQL-Ref] Microsoft Corporation, "Transact-SQL Reference", [http://msdn.microsoft.com/en-us/library/ms189826\(SQL.90\).aspx](http://msdn.microsoft.com/en-us/library/ms189826(SQL.90).aspx)

[MS-OSHARED] Microsoft Corporation, "[Office Common Data Types and Objects Structures](#)".

[MS-RDL] Microsoft Corporation, "[Report Definition Language \(RDL\) File Format Structure Specification](#)".

[MS-WPFXV] Microsoft Corporation, "[WPF XAML Vocabulary Specification 2006](#)".

[RFC1738] Berners-Lee, T., Masinter, L., and McCahill, M., "Uniform Resource Locators (URL)", RFC 1738, December 1994, <http://www.ietf.org/rfc/rfc1738.txt>

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

[RFC4234] Crocker, D., Ed., and Overell, P., "Augmented BNF for Syntax Specifications: ABNF", RFC 4234, October 2005, <http://www.ietf.org/rfc/rfc4234.txt>

[W3C-XML] Bray, T., Paoli, J., Sperberg-McQueen, C.M., Maler, E., Yergeau, F., Eds., "Extensible Markup Language (XML) 1.1 (Second Edition)", W3C Recommendation, August 2006, <http://www.w3.org/TR/2006/REC-xml11-20060816/>

[XML] World Wide Web Consortium, "Extensible Markup Language (XML) 1.0 (Fourth Edition)", W3C Recommendation, August 2006, <http://www.w3.org/TR/2006/REC-xml-20060816/>

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

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

## 1.2.2 Informative References

[MS-ACCDT] Microsoft Corporation, "[Access Template File Format Specification](#)".

[MS-ASWS] Microsoft Corporation, "[Access Services Protocol](#)".

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

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

## 1.3 Structure Overview (Synopsis)

This document is a specification of the Access Application Transfer Protocol Structure, also known as Application XML (AXL). It specifies structures that can be used to describe data application components. Data applications are computer programs that allow users to create, retrieve, update and delete relational data.

AXL follows **XML** formatting. AXL provides storage of application variables, forms, user interface command routines, data manipulation routines, queries and reports.

AXL does not specify how to contain data or data schemas.

### 1.3.1 Application Element

The **Application** element (section [2.2.1.1](#)) contains application metadata data relating to the opening and versioning of applications, as well as other application-level properties.

### 1.3.2 Forms

AXL Forms allow users of an application to display and manipulate data in underlying data structures. The **Form** element (section [2.3.3.1.1](#)) provides constructs for single record forms, containers, tabular views (sometimes referred to as datasheet views or spreadsheet forms), navigation forms and controls, binding and events.

The top-level element of a form is the **View** element (section [2.2.1.7](#)) of the AXL schema. View elements can have up to three child elements. The optional **Data** child element, of type **CT\_ViewData** (section [2.2.3.51](#)), specifies the **data source (1)** for the form, as well as attributes that specify which **records** from the data source (1) the user will see and whether the records can be edited. The optional **UserInterfaceMacros** child element, of type **CT\_UserInterfaceMacros** (section [2.2.3.46](#)), specifies the macros used by the form or controls on the form (for more information about macros, see section [1.3.3](#)). Finally, the required **Form** child element, of type **CT\_Form** (section [2.3.3.3.1](#)), specifies the layout and appearance of the form and its controls.

#### 1.3.2.1 Form Sections

A form consists of multiple **sections (1)**, which are specified by child elements of **CT\_Form** (section [2.3.3.3.1](#)).

A form header or footer is typically used to keep an area of the form surface visible while scrolling through the records displayed by the form. The form header and footer will not move when scrolling the form vertically, but the detail section can. The child elements **Form.Header** and **Form.Footer** specify the header and footer.

The detail section of a form is generally used to display data that changes as the record being viewed changes. In a single-item form, the detail section displays one record at a time. If the detail section is larger than the available viewing area, it can be scrolled horizontally or vertically, but



scrolling does not change the record being displayed. In contrast, a multiple-items form repeats the detail section for each record, so in addition to scrolling more of the detail section into view, scrolling can change the record being displayed to the next or previous record. Regardless of whether the form displays one or multiple records at a time, the **CT\_Form** element (section [2.3.3.3.1](#)) specifies at most one detail section with the **Form.Detail** element, because the layout of the section doesn't change between records.

In a datasheet form, the detail section is replaced by a tabular view that displays multiple records, which is specified by the **Form.Datasheet** element. The **controls** in that section correspond to **columns (2)** in the view and displayed records correspond to **rows (2)** in the view. The element of type **CT\_FormDatasheet** (section [2.3.3.3.3](#)) also has a child element named **Datasheet**. Its child elements specify the controls that appear in the datasheet part of the form. The column headers in the view are the names of the controls, except for controls that specify the **DatasheetCaption** attribute (section [2.3.4.15](#)).

### 1.3.2.2 Form Controls

Controls in a non-datasheet section are laid out in a grid, which is specified by each section's **Grid** child element, of type **CT\_Grid** (section [2.3.2.3.5](#)). The grid begins at the top left corner of the form and ends at the bottom right corner of the form. The layout of the grid—the number of columns and rows and the width and height of each column and row—is specified by the **ColumnDefinitions** and **RowDefinitions** child elements of the **Grid** element. Rows and columns are numbered starting with 0.

The parts of the form that are actually displayed are specified by the section's **Border** child elements, which are of type **CT\_Border** (section [2.3.2.3.12](#)). The **Grid.Row** and **Grid.Column** attributes specify the beginning of each control, and the **Grid.RowSpan** and **Grid.ColumnSpan** attributes specify the number of rows and columns that the control takes up. Within each cell, which takes up one or more rows and one or more columns, a child element can be specified. Cells that are not used by a control can be used to specify blank space on a form.

### 1.3.2.3 Form Styles

The **Form.Resources** child element of a **CT\_Form** element (section [2.3.3.3.1](#)) specifies the **styles** used by the form, by sections of the form, or by controls on the form. Each **Style** element under the **Resources** element is of type **CT\_Style** (section [2.3.2.3.2](#)) and is identified by a string **key** (section [2.3.1.2.1](#)). Its child **Setter** elements, of type **CT\_Setter** (section [2.3.2.3.3](#)), are properties that can apply to more than one control on the form or the form itself. Each **Setter** contains a property name and value. The form or controls on the form can then specify the **Key** of the **Setter** as the **Key** value in the **ST\_ReferenceType** (section [2.3.2.4.3](#)) that specifies their **Style** attribute (section [2.3.4.67](#)).

### 1.3.3 UI Macros

AXL User Interface (UI) Macros are command routines that respond to user interaction and change the state of UI. They can be used to perform a variety of actions, including navigating among forms, validating and verifying user input, and filtering records that are shown in the forms. Important features of UI Macros include **expressions**, **filters**, error handling and the ability to implement conditional logic. A UI Macro can exist as a standalone object with a name or as an embedded macro that is part of a form. Macros that are part of a form are triggered by events that occur on the form or on a control on the form.

An example of application logic is the use of UI Macros to respond to user input in a search field. After the user modifies the contents of a search box and navigates to a different control, a UI Macro

can be triggered that applies a filter to a list of items, such as a list box or a subform, which limits the records displayed in the list to those containing the search term.

Another example is the use of UI Macros to implement navigation functionality, such as drill-through behavior on a form. After an item in a list box is double-clicked, a UI Macro can be triggered that launches a new form, which displays details of the selected item, such as information from a related data source (1).

UI Macros are specified by the **CT\_UserInterfaceMacro** type (section [2.2.3.48](#)). Both embedded and standalone UI Macros can specify any number of **Sub** child elements and an optional **Statements** element, both of which specify commands that will be performed when the Macro is run. Embedded Macros also specify the **Event** attribute, which specifies when the Macro will be triggered, and the optional **For** attribute if the Macro will be triggered by the event of a control on the form, as opposed to an event of the form itself.

### 1.3.4 Data Macros

AXL Data Macros represent data validation logic, product logic and business logic in a data application. Data Macros allow a data application to perform a series of actions based on a given set of conditions. They can exist in a **list (1)** as a standalone named object, or be associated with an event in a list (1).

An example of validation logic is the use of a Data Macro to ensure that a value entered into a **field (3)** makes sense given other values in the list (1). After a value is entered into the **EndDate** field of a record, a Data Macro can be triggered to ensure that the value of that field is later than the value of the **StartDate** field in the same record, or else the record will not be updated.

Another example is the use of a Data Macro to keep the value of a field in one list (1) updated based on entries in another list (1). When a new item is created in a Projects table, a Data Macro can be triggered to increment the **TotalProjectCount** field in the separate Managers table, so that each record in the Managers table always has an up-to-date count of the total number of projects assigned to that manager.

Data Macros are specified by the **CT\_DataMacro** type (section [2.2.3.49](#)). All Data Macros can specify a **Statements** child element which specifies the commands that will be performed when the Macro is called. Data Macros associated with a list (1) event specify the **Event** attribute, which specifies when the Macro will be triggered, whereas named Data Macros specify the **Name** attribute. Named data macros can also specify a **Parameters** child element which specifies the names and values of passed-in parameters.

### 1.3.5 Queries

Query AXL is a language for specifying queries for data applications. AXL queries are similar to SQL SELECT queries.

Queries are used in a data application for combining, filtering and sorting of data. Queries can reduce the load on a system by returning only the subset of information that is relevant to a process or an end user.

AXL queries support:

- Projection: Limiting the results to a subset of the fields (3) in the underlying data source (1).
- Ordering: Sorting the results on one or more fields (3).
- Restriction: Limiting the results to certain records, based on data in the record.

- Joins: Creating a new result set from the combination of multiple data sources (1).

### 1.3.6 Reports

AXL Reports are representations of data that support grouping, sorting, aggregating and visually formatting a static set of data. Reports can be displayed on a computer screen but are often designed to be printed on paper.

Reports can be used to display simple structures, such as a page of address labels, or more complex structures, such as a list of all sales this month, grouped by salesperson and sorted within that group from highest to lowest sale amount. Reports also specify constructs for conditional formatting and expressions. For example, a report element can display the title of a task in red when it is past due, based on the current date, and in black otherwise.

AXL Reports are written with a strict subset of RDL. For more information about the structure of RDL, see [\[MS-RDL\]](#) section 1.3.

### 1.3.7 Application Reference

The **ApplicationReference** element (section [2.6.1.1](#)) contains information that can be used to locate a **database application**, specify a **database object** to open, and indicate the data mode in which that object will be opened.

These elements can exist in standalone files with a file extension of .ACCDW. The content of such a file is standard XML (for more information, see [\[XML\]](#)) that uses an **ApplicationReference** element (section [2.6.1.1](#)) as the root node of the XML document.

## 1.4 Relationship to Protocols and Other Structures

AXL is designed to be used as part of a communication protocol with a server. It is dependent on the following structures and protocols:

- [\[MS-RDL\]](#) for the specification of Report Definition Language (RDL).
- [\[MS-WPFXV\]](#) for the definition of Windows Presentation Foundation (WPF) Xaml Vocabulary.

The [\[MS-ASWS\]](#) protocol and the [\[MS-ACCDT\]](#) file format both depend on this document for parts of their structure content.

## 1.5 Applicability Statement

The Access Application Transfer Protocol Structure is applicable for use as a standalone representation and for publishing to a server a database application, which can include structures for layout descriptions of views of the data, actions to control workflow, the combining, filtering and ordering of data, and metadata to describe the database application as a whole.

This format provides interoperability with applications that create or read documents conforming to this structure.

## 1.6 Versioning and Localization

This document covers versioning issues in the following areas:

- **Structure versions:** There is only one version of the Access Application Transfer Protocol structure.

- **Localization:** This structure defines no locale-specific processes or data.

## 1.7 Vendor-Extensible Fields

Access Application Transfer Protocol Structure is an open schema. Authors of a database application can extend and comment the Access Application Transfer Protocol Structure with their own attributes and sub elements as long as they are in their own namespace. Note, however, that implementations that use the Access Application Transfer Protocol Structure are not required to preserve unrecognized elements when loading and persisting.

## 2 Structures

### 2.1 Conceptual Overview

This section specifies the concepts used by structures that conform to the AXL, **XAML**, or Report Definition Language (RDL) schemas.

#### 2.1.1 Application

An AXL application is a set of database objects, which together specify a database application. Each object specifies its own properties and relationships to other objects. One of the objects specifies application-level properties, which aren't specified by other objects.

#### 2.1.2 Forms

An AXL form is a container of controls that can be used to collect information from the user or to display information to the user. It can **bind** to a data source (1) so that its controls display data from or collect data into that data source (1).

A form consists of three kinds of sections. The header and footer sections appear at the top and bottom of the form, respectively. They are each optional. The detail section acts as the body of the form.

There are three types of forms, as follows:

- A single-record form displays one record at a time.
- A multiple-record form displays multiple records by repeating the detail section of the form for each record.
- A tabular view or datasheet form displays multiple records in a tabular format, where each record is displayed in one row (2).

Forms maintain the concept of a current record, which is the record that would be changed if the user were to enter data into a control or **cell** on the form. A form that is not bound to a data source (1) behaves as if it had one record, which is the current record and consists of the values of the controls on the form when it is active.

#### 2.1.3 Macros

An AXL Macro is a set of commands that are performed when the Macro is called and logical constructs that control the flow of the Macro. Each command in the Macro is specified by an [action](#) and zero or more [arguments](#) that modify the meaning of the action. A Macro is called by an object in the application.

A named Macro, that is, a Macro that specifies a name, exists as a database object in the Application. Objects that reference a Macro can specify either the name of a named Macro or a list of inline commands. Macro commands that are specified inline in an object specify an embedded Macro.

Macros are run in one of two contexts, as specified in the next two sections. Errors that occur during the performance of a Macro are stored so that the Macro can handle it with the [OnError](#) action. If the Macro clears the error with the [ClearMacroError](#) action, the Macro continues as if no error had occurred. If the Macro does not specify an OnError action, the Application can interrupt the flow of the Macro as part of handling the error.

### 2.1.3.1 User Interface Macros

The commands of a User Interface Macro are performed at the level of the graphical user interface of the application.

### 2.1.3.2 Data Macros

The commands of a Data Macro are performed at the level of the data of the application. That is, a Data Macro is run by the list (1) that references it, rather than by a View that displays the data.

### 2.1.3.3 Variables

AXL Macros can reference the following types of variables.

#### 2.1.3.3.1 Temporary Variables

Temporary variables are identified by name. They can be referenced by any User Interface Macro in the Application whenever it runs. A temporary variable is created when the first [SetTempVar](#) action that references its name is performed and exists until it is explicitly removed or until the end of the Application **session (2)**, whichever comes first. A temporary variable is explicitly removed with a [RemoveAllTempVars](#) action or a [RemoveTempVar](#) action that references it by name.

#### 2.1.3.3.2 Local Variables

Local variables are identified by name. They can be referenced only by the Macro that created them. A local variable is created when the first [SetLocalVar](#) action that references its name is performed and exists until the Macro that created it has finished running.

#### 2.1.3.3.3 Return Variables

Return variables are identified by name. A return variable is created when the first [SetReturnVar](#) action that references its name is performed, and it is available only in the Macro that called the Macro that created the return variable. It exists until the calling Macro has finished running.

### 2.1.4 Queries

An AXL Query defines a way to build a view on list (1) data to be used as the data source for a [Form](#), [Report](#), [ComboBox](#), or [ListBox](#). Queries in AXL are a subset of the functionality defined by the SELECT statement in Transact-SQL [\[MSDN-TSQL-Ref\]](#).

An AXL Query can be used to filter or order data. It can also be used to bring together data from more than one input source, including another AXL Query, to form a joint data source. Queries can take input from non-List sources in the form of parameters, which can be included in the output columns (1) as part of an expression or used to filter the query results. Queries can use expressions in output columns or restrictions to perform calculations or formatting on data.

AXL Queries include components that map to the following clauses of a SELECT statement as expressed by Transact-SQL [\[MSDN-TSQL-Ref\]](#). Restrictions on what is permitted for each AXL Query component are described in the linked sections in this document.

Transact-SQL clause	Query AXL
SELECT	<a href="#">Results</a> and <a href="#">Parameters</a>
FROM	<a href="#">References</a> and <a href="#">Joins</a>

Transact-SQL clause	Query AXL
WHERE	<b>Restriction</b> child element of <a href="#">CT_Query</a>
ORDER BY	<a href="#">Ordering</a>

### 2.1.5 Reports

Reports are defined using the Report Definition Language (RDL) as specified by [\[MS-RDL\]](#). However, the structures specified in this document use only a portion of the **2009/01** RDL schema specified by [\[MS-RDL\]](#) section [5.4](#). The [RDL](#) section specifies the subset of that schema that is used by the structures specified in this document.

### 2.1.6 Shared Images

A shared image represents an image that is identified by its name. The name of the shared image MUST be unique within the [application](#) and it MUST conform to the restrictions as specified by [ST\\_ObjectName](#).

### 2.1.7 Ignored Value

An attribute that can have any value such that the document remains well-formed ([\[XML\]](#) section 2).[<1>](#)

## 2.2 AXL

### 2.2.1 Elements

The following table summarizes the set of common XML schema element definitions defined by this specification. XML schema element definitions that are specific to a particular operation are described with the operation.

Element	Description
<b>Application</b>	A <b>CT_Application</b> element that specifies a single <b>Application</b> .
<b>Query</b>	A <b>CT_Query</b> element that specifies one <b>Query</b> to be used as a data source in an <b>Application</b> .
<b>Ordering</b>	A <b>CT_AdHocOrdering</b> element that specifies the format of the <b>OrderBy</b> argument for the <b>SetOrderBy</b> macro action.
<b>UserInterfaceMacros</b>	A <b>CT_UserInterfaceMacros</b> element that specifies all <b>User Interface Macros</b> used by an <b>Application</b> .
<b>DataMacros</b>	A <b>CT_DataMacros</b> element that specifies all <b>Data Macros</b> used by a list (1).
<b>UserInterfaceMacro</b>	A <b>CT_UserInterfaceMacro</b> element that specifies a single <b>User Interface Macro</b> .
<b>View</b>	A <b>CT_View</b> element that specifies a single <b>Form</b> , its data source (1), and all <b>User Interface Macros</b> used in the <b>Form</b> .
<b>ApplicationReference</b>	A <b>CT_ApplicationReference</b> element that contains XML that specifies the <b>Uniform Resource Locator (URL)</b> of an <b>Application</b> and at most one <b>CT_Object</b> in that application.

### 2.2.1.1 Application

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/application>

A [CT\\_Application](#) element that specifies a single [Application](#).

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

```
<xsd:element name="Application" wbl:d:cname="Application" wbl:d:codeName="Application" type="CT_Application"/>
```

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

### 2.2.1.2 Query

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/application>

*Referenced by:* [CT\\_AccListComboBoxRowSource](#)

A [CT\\_Query](#) element that specifies one [Query](#) to be used as a data source in an [Application](#).

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

```
<xsd:element name="Query" type="CT_Query" wbl:d:cname="Query" wbl:d:codeName="Query"/>
```

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

### 2.2.1.3 Ordering

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/application>

A [CT\\_AdHocOrdering](#) element that specifies the format of the [OrderBy](#) argument for the [SetOrderBy](#) macro action.

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

```
<xsd:element name="Ordering" type="CT_AdHocOrdering" wbl:d:cname="Ordering" wbl:d:codeName="Ordering"/>
```

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

### 2.2.1.4 UserInterfaceMacros

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/application>

*Referenced by:* [CT\\_View](#)

A [CT\\_UserInterfaceMacros](#) element that specifies all [User Interface Macros](#) used by an [Application](#).

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



```
<xsd:element name="UserInterfaceMacros" wblld:cname="UserInterfaceMacros"
wblld:codeName="UserInterfaceMacros" type="CT_UserInterfaceMacros"/>
```

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

### 2.2.1.5 DataMacros

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/application>

A [CT\\_DataMacros](#) element that specifies all [Data Macros](#) used by a list (1).

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

```
<xsd:element name="DataMacros" wblld:cname="DataMacros" wblld:codeName="DataMacros"
type="CT_DataMacros"/>
```

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

### 2.2.1.6 UserInterfaceMacro

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/application>

A [CT\\_UserInterfaceMacro](#) element that specifies a single [User Interface Macro](#).

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

```
<xsd:element name="UserInterfaceMacro" wblld:cname="UserInterfaceMacro"
wblld:codeName="UserInterfaceMacro" type="CT_UserInterfaceMacro"/>
```

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

### 2.2.1.7 View

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/application>

A [CT\\_View](#) element that specifies a single [Form](#), its data source (1), and all [User Interface Macros](#) used in the Form.

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

```
<xsd:element name="View" wblld:cname="View" wblld:codeName="View" type="CT_View"/>
```

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

### 2.2.1.8 ApplicationReference

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/application>

A [CT\\_ApplicationReference](#) element that contains XML that specifies the Uniform Resource Locator (URL) of an [Application](#) and at most one [CT\\_Object](#) in that application. [<2>](#)

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

```
<xsd:element name="ApplicationReference" wblld:cname="ApplicationReference"
wblld:codeName="ApplicationReference" type="CT_ApplicationReference"/>
```

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

## 2.2.2 Attributes

None.

## 2.2.3 Complex Types

### 2.2.3.1 CT\_Expression

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/application>

*Referenced by:* [CT\\_Result](#), [CT\\_Query](#), [CT\\_Property](#), [CT\\_Argument](#), [CT\\_ForEachRecordData](#), [CT\\_LookupRecordData](#), [CT\\_DataIf](#), [CT\\_DataElseIf](#), [CT\\_UserInterfaceIf](#), [CT\\_UserInterfaceElseIf](#)

A string ([\[XMLSCHEMA2\]](#) section 3.2.1) that represents a single expression. The length of this string MUST be less than or equal to 8192 characters. When this type is used as a child element or base type for any Complex Type other than CT\_Property and CT\_Argument, then the first non-**whitespace** character MUST be an equal sign. In CT\_Property, contents of this element are never treated as an expression, so the first character can be any character allowed in a string. For CT\_Argument, the behavior of this string depends on the type of the [argument](#).

The syntax of the expression depends on the type of the parent element as specified by the following table.

Parent element type	Syntax type
<a href="#">CT_Result</a>	<a href="#">Query Columns</a> .
<a href="#">CT_Query</a>	<a href="#">Query Restrictions</a> .
<a href="#">CT_Property</a>	MUST be treated as plain text with no syntax requirements.
<a href="#">CT_Argument</a>	Depends on the type of the argument.
<a href="#">CT_ForEachRecordData</a> , <a href="#">CT_LookupRecordData</a> , <a href="#">CT_DataIf</a> , <a href="#">CT_DataElseIf</a>	<a href="#">Data Macros</a> .
<a href="#">CT_UserInterfaceIf</a> , <a href="#">CT_UserInterfaceElseIf</a>	<a href="#">User Interface Macros</a> .

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

```
<xsd:complexType name="CT_Expression" mixed="true"/>
```

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

### 2.2.3.2 CT\_Property

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/application>

*Referenced by:* [CT\\_PropertyBag](#)

Specifies a single property in an [Application](#). If the **Name** of a property is the same as a name in the following table, then the **Type** and value of the property MUST be set to the corresponding type and value.

Property name	Property type	Property value	Property meaning
<b>WebStartupView</b>	MUST be 10.	MUST be the name of a <a href="#">Form</a> defined in the Application.	Specifies the initial Form to show when the database application is opened or viewed.
<b>WebDesignMode</b>	MUST be 2.	MUST be 1.	Specifies that the database application can be used to create a <b>site (2)</b> .

*Attributes:*

**Name :** A string ([\[XMLSCHEMA2\]](#) section 3.2.1) attribute that specifies the name of the property. MUST be unique within the same Application.

**Type :** A string ([\[XMLSCHEMA2\]](#) section 3.2.1) attribute that specifies the type of the property.

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

```
<xsd:complexType name="CT_Property">
  <xsd:complexContent>
    <xsd:extension base="CT_Expression">
      <xsd:attribute name="Name" type="xsd:string" use="required" wld:cname="Name"/>
      <xsd:attribute name="Type" type="xsd:string" use="required" wld:cname="Type"/>
    </xsd:extension>
  </xsd:complexContent>
</xsd:complexType>
```

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

### 2.2.3.3 CT\_PropertyBag

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/application>

*Referenced by:* [CT\\_Application](#)

Container type for the properties in an Application. MUST contain one or more **Property** elements.

*Child Elements:*

**Property :** A [CT\\_Property](#) element that specifies a single property in an Application.

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

```

<xsd:complexType name="CT_PropertyBag">
  <xsd:sequence>
    <xsd:element name="Property" maxOccurs="unbounded" wblld:cname="Property"
type="CT_Property"/>
  </xsd:sequence>
</xsd:complexType>

```

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

#### 2.2.3.4 CT\_Order

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/application>

*Referenced by:* [CT\\_Ordering](#)

Specifies a single order to apply to a [Query](#).

*Attributes:*

**Direction :** An [ST\\_SortDirection](#) attribute that specifies the direction of the order.

**Name :** An [ST\\_LongString](#) attribute that specifies one column (1) from the **input source** specified by the **Source** attribute. If the column (1) is included in the query [Results](#), then the data from that column (1) is ordered in the query Results. If the column (1) is not included in the query Results, then the ordering is applied as if the column (1) were included.

**Source :** An [ST\\_ObjectName](#) attribute that specifies the name or **alias** of one of the input sources to the query. The input source MUST be listed in the [References](#) collection of the query. If the [Reference](#) element specifying the input source specifies an **Alias**, then this attribute MUST use that value.

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

```

<xsd:complexType name="CT_Order">
  <xsd:attribute name="Name" type="ST_LongString" use="required" wblld:cname="Name"/>
  <xsd:attribute name="Source" type="ST_ObjectName" use="required" wblld:cname="Source"/>
  <xsd:attribute name="Direction" type="ST_SortDirection" default="Ascending"
wblld:cname="Direction" use="optional"/>
</xsd:complexType>

```

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

#### 2.2.3.5 CT\_Ordering

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/application>

*Referenced by:* [CT\\_Query](#)

Container type for all of the ordering specified in a Query. MUST contain at least one and no more than 255 **Order** elements.

*Child Elements:*

**Order :** A [CT\\_Order](#) element that specifies a single order to apply to the Query. When more than one order is specified, the final query [Results](#) are ordered such that the first listed order takes

precedence across the entire result set, with the second listed order affecting the arrangement of rows within the limits imposed by the first order, and so on.

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

```
<xsd:complexType name="CT_Ordering">
  <xsd:sequence>
    <xsd:element name="Order" maxOccurs="255" wblid:cname="Order" type="CT_Order"/>
  </xsd:sequence>
</xsd:complexType>
```

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

### 2.2.3.6 CT\_AdHocOrder

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/application>

*Referenced by:* [CT\\_AdHocOrdering](#)

Specifies one column (1) to order.

*Attributes:*

**Direction :** An [ST\\_SortDirection](#) attribute that specifies the direction of the order.

**Name :** An [ST\\_LongString](#) attribute that specifies the column (1) to which the order is applied.

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

```
<xsd:complexType name="CT_AdHocOrder">
  <xsd:attribute name="Name" type="ST_LongString" use="required" wblid:cname="Name"/>
  <xsd:attribute name="Direction" type="ST_SortDirection" default="Ascending"
wblid:cname="Direction" use="optional"/>
</xsd:complexType>
```

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

### 2.2.3.7 CT\_AdHocOrdering

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/application>

*Referenced by:* [Ordering](#)

Container type that MUST contain one or more **Order** elements.

*Child Elements:*

**Order :** A [CT\\_AdHocOrder](#) element that specifies one column (1) to order.

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

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

```

<xsd:sequence>
  <xsd:element name="Order" maxOccurs="255" wblid:cname="Order" type="CT_AdHocOrder"/>
</xsd:sequence>
</xsd:complexType>

```

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

### 2.2.3.8 CT\_Reference

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/application>

*Referenced by:* [CT References](#)

Specifies one input source to the parent [Query](#).

*Attributes:*

**Alias :** An [ST\\_ObjectName](#) attribute that specifies an alias for the input source. This alias **MUST** be used throughout the Query object to refer to the input source as if it had been named this alias. The value **MUST** be unique among all **Alias** attribute values under the References collection.

**Source :** An [ST\\_ObjectName](#) attribute that specifies a table or a named Query that contains data included in the query [Results](#).

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

```

<xsd:complexType name="CT_Reference">
  <xsd:attribute name="Source" type="ST_ObjectName" use="required" wblid:cname="Source"/>
  <xsd:attribute name="Alias" type="ST_ObjectName" wblid:cname="Alias" use="optional"/>
</xsd:complexType>

```

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

### 2.2.3.9 CT\_References

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/application>

*Referenced by:* [CT Query](#)

Container type for the input sources to a Query. **MUST** contain one or more **Reference** elements. When more than one input source is included in a Query, every input source **MUST** be included in a [Join](#).

*Child Elements:*

**Reference :** A [CT\\_Reference](#) element that specifies a list (1) or Query that is an input source to the Query.

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

```

<xsd:complexType name="CT_References">
  <xsd:sequence>

```

```

    <xsd:element name="Reference" maxOccurs="unbounded" wld:cname="Reference"
type="CT_Reference"/>
  </xsd:sequence>
</xsd:complexType>

```

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

### 2.2.3.10 CT\_Result

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/application>

*Referenced by:* [CT\\_Results](#)

Specifies one or more columns (1) of data to be included in the Results of a [Query](#).

The specification is for one column (1) of data from a single input source (that is, the **All** attribute is false and the **Name** and **Source** attributes are present), all columns (1) from a single input source (that is, **All** is true and **Source** is present), all columns (1) from all input sources (that is, **All** is true and **Source** is not present), or a single [expression](#) (that is, an **Expression** child element is present).

*Child Elements:*

**Expression** : A [CT\\_Expression](#) element that specifies a single expression to be included in the query results. The expression **MUST** be evaluated per row in the results. This element **MUST NOT** be present if the **Source** or **Name** attribute is present or if the **All** attribute is true. When this attribute is present, the **Alias** attribute **MUST** also be present.

*Attributes:*

**Alias** : An [ST\\_ObjectName](#) attribute that specifies an alias for a column (1) in the query results. This attribute **MUST NOT** be present if the **All** attribute is set to true. This attribute **MUST** be present if an **Expression** child element is present. The value **MUST** be unique among all **Alias** attribute values under the Results collection.

If the same single column (1) of data is specified by more than one **Result** element in a Results collection, not including **Result** elements where the **All** attribute is true, then either all or all but one **Result** element that specifies the column by including both a **Source** attribute and a **Name** attribute **MUST** have an **Alias** attribute present.

**All** : A boolean ([\[XMLSCHEMA2\]](#) section 3.2.2) attribute. If this attribute is true and the **Source** attribute is present, then the query results **MUST** contain all columns (1) from the input source indicated by the **Source** attribute. If this attribute is true and the **Source** attribute is not present, then the query results **MUST** contain all columns (1) from all input sources listed in the [References](#) collection. When this attribute is true, the **Expression** child element, the **Name** attribute, and the **Alias** attribute **MUST NOT** be present.

**Name** : An [ST\\_LongString](#) attribute that specifies one column (1) from the input source specified by the **Source** attribute. The data from that column (1) **MUST** be included in the query results. This attribute **MUST NOT** be present if the **All** attribute is set to true or if an **Expression** child element is present.

**Source** : An [ST\\_ObjectName](#) attribute that specifies the name or alias of one of the input sources to the query. This attribute **MUST NOT** be present if an **Expression** child element is present. The input source **MUST** be listed in the References collection of the query. If the [Reference](#) element specifying the input source contains an **Alias** value, then this attribute **MUST** be that value.

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

```
<xsd:complexType name="CT_Result">
  <xsd:all>
    <xsd:element name="Expression" type="CT_Expression" minOccurs="0"
wblid:cname="Expression"/>
  </xsd:all>
  <xsd:attribute name="Source" type="ST_ObjectName" wblid:cname="Source" use="optional"/>
  <xsd:attribute name="Name" type="ST_LongString" wblid:cname="Name" use="optional"/>
  <xsd:attribute name="Alias" type="ST_ObjectName" wblid:cname="Alias" use="optional"/>
  <xsd:attribute name="All" type="xsd:boolean" default="false" wblid:cname="All"
use="optional"/>
</xsd:complexType>
```

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

### 2.2.3.11 CT\_Results

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/application>

*Referenced by:* [CT\\_Query](#)

Container element for the results in a Query. MUST include one or more **Property** elements.

*Child Elements:*

**Property** : A [CT\\_Result](#) element that specifies one or more columns (1) of data to include in the Query results.

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

```
<xsd:complexType name="CT_Results">
  <xsd:sequence>
    <xsd:element name="Property" maxOccurs="255" wblid:cname="Property" type="CT_Result"/>
  </xsd:sequence>
</xsd:complexType>
```

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

### 2.2.3.12 CT\_Join

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/application>

*Referenced by:* [CT Joins](#)

Description of a single join in a [Query](#). A join MUST NOT have the same pair of **Left** and **Right** attribute values as another join in the same Query.

*Attributes:*

**Left** : An [ST\\_ObjectName](#) attribute that specifies the left input source. The input source MUST be listed in the [References](#) collection of the Query. If the [Reference](#) includes an **Alias** attribute, then this attribute MUST be that value.



**LeftProperty** : An [ST\\_LongString](#) attribute that specifies the column (1) in the left input source on which to join.

**Right** : An `ST_ObjectName` attribute that specifies the right input source. The input source MUST be listed in the References collection of the Query. If the Reference includes an **Alias** attribute, then this attribute MUST be that value.

**RightProperty** : An `ST_LongString` attribute that specifies the column (1) in the right input source on which to join.

**Type** : An [ST\\_JoinDirection](#) attribute that specifies the direction of the join.

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

```
<xsd:complexType name="CT_Join">
  <xsd:attribute name="Left" type="ST_ObjectName" use="required" wblld:cname="Left"/>
  <xsd:attribute name="Right" type="ST_ObjectName" use="required" wblld:cname="Right"/>
  <xsd:attribute name="LeftProperty" type="ST_LongString" use="required"
wblld:cname="LeftProperty"/>
  <xsd:attribute name="RightProperty" type="ST_LongString" use="required"
wblld:cname="RightProperty"/>
  <xsd:attribute name="Type" type="ST_JoinDirection" default="Inner" wblld:cname="Type"
use="optional"/>
</xsd:complexType>
```

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

### 2.2.3.13 CT\_Joins

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/application>

*Referenced by:* [CT\\_Query](#)

Container type for the joins in a Query. MUST contain one or more **Join** elements.

*Child Elements:*

**Join** : A [CT\\_Join](#) element that specifies a single join in the Query.

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

```
<xsd:complexType name="CT_Joins">
  <xsd:sequence>
    <xsd:element name="Join" wblld:cname="Join" minOccurs="0" maxOccurs="unbounded"
type="CT_Join"/>
  </xsd:sequence>
</xsd:complexType>
```

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

### 2.2.3.14 CT\_Parameter

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/application>

Referenced by: [CT\\_Parameters](#)

Specifies one parameter to the parent [Query](#).

Attributes:

**Name** : An [ST\\_ObjectName](#) attribute that specifies the name of the parameter.

**Type** : An [ST\\_FieldType](#) attribute that specifies the type of the parameter.

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

```
<xsd:complexType name="CT_Parameter">
  <xsd:attribute name="Name" type="ST_ObjectName" use="required" wblid:cname="Name"/>
  <xsd:attribute name="Type" type="ST_FieldType" use="required" wblid:cname="Type"/>
</xsd:complexType>
```

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

### 2.2.3.15 CT\_Parameters

Target namespace: <http://schemas.microsoft.com/office/accessservices/2009/11/application>

Referenced by: [CT\\_Query](#)

Container type for the parameters in a Query. MUST contain one or more Parameter elements.

Child Elements:

**Parameter** : A [CT\\_Parameter](#) element that specifies one parameter to the Query.

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

```
<xsd:complexType name="CT_Parameters">
  <xsd:sequence>
    <xsd:element name="Parameter" maxOccurs="unbounded" wblid:cname="Parameter"
type="CT_Parameter"/>
  </xsd:sequence>
</xsd:complexType>
```

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

### 2.2.3.16 CT\_ParameterDefinition

Target namespace: <http://schemas.microsoft.com/office/accessservices/2009/11/application>

Referenced by: [CT\\_ParameterDefinitions](#)

Specifies one parameter that is accepted by a [Data Macro](#).

Attributes:

**Description** : An [Ignored Value](#).

**Name** : An [ST\\_ObjectName](#) attribute that specifies the name of the parameter. The value of this attribute MUST be unique among all other elements of type CT\_ParameterDefinition in the same Data Macro.

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

```
<xsd:complexType name="CT_ParameterDefinition">
  <xsd:attribute name="Name" type="ST_ObjectName" use="required" wld:cname="Name"/>
  <xsd:attribute name="Description" type="ST_LongString" wld:cname="Description"
use="optional"/>
</xsd:complexType>
```

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

### 2.2.3.17 CT\_ParameterDefinitions

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/application>

*Referenced by:* [CT\\_DataMacro](#)

Container type for the parameter definitions in a [Data Macro](#). MUST contain one or more **ParameterDefintion** elements.

*Child Elements:*

**Parameter** : A [CT\\_ParameterDefinition](#) element that specifies a parameter supported by the Data Macro.

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

```
<xsd:complexType name="CT_ParameterDefinitions">
  <xsd:sequence>
    <xsd:element name="Parameter" maxOccurs="unbounded" wld:cname="Parameter"
type="CT_ParameterDefinition"/>
  </xsd:sequence>
</xsd:complexType>
```

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

### 2.2.3.18 CT\_ParameterValue

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/application>

*Referenced by:* [CT\\_ParameterValues](#)

Specifies one parameter to be passed into a [Data Macro](#), [Form](#), or [Report](#).

*Attributes:*

**Name** : An [ST\\_ObjectName](#) attribute that specifies the name of the parameter.

**Value** : An [ST\\_LongString](#) attribute that specifies the value of the parameter. If the containing macro is a [User Interface Macro](#) then the syntax of **Value** is specified by section [2.5.7](#). If the containing macro is a Data Macro then the syntax of **Value** is specified by section [2.5.1](#)

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

```
<xsd:complexType name="CT_ParameterValue">
  <xsd:attribute name="Name" type="ST_ObjectName" use="required" wblid:cname="Name"/>
  <xsd:attribute name="Value" type="ST_LongString" use="required" wblid:cname="Value"/>
</xsd:complexType>
```

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

### 2.2.3.19 CT\_ParameterValues

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/application>

*Referenced by:* [CT\\_Action](#), [CT\\_ForEachRecordData](#), [CT\\_LookupRecordData](#)

Container type for the parameter values to be passed into a [Data Macro](#), [Form](#), or [Report](#). MUST contain one or more **Parameter** elements.

*Child Elements:*

**Parameter** : A [CT\\_ParameterValue](#) element that specifies a single value to be passed into a Data Macro, Form or Report. The value of the **Name** attribute of each **Parameter** element MUST be unique within the same **CT\_ParameterValues**.

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

```
<xsd:complexType name="CT_ParameterValues">
  <xsd:sequence>
    <xsd:element name="Parameter" maxOccurs="unbounded" wblid:cname="Parameter"
      type="CT_ParameterValue"/>
  </xsd:sequence>
</xsd:complexType>
```

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

### 2.2.3.20 CT\_Query

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/application>

*Referenced by:* [CT\\_AccListComboBoxRowSource](#), [CT\\_ForEachRecordData](#), [CT\\_LookupRecordData](#), [CT\\_RecordSource](#), [Query](#)

Specifies a [Query](#).

*Child Elements:*

**Joins** : A [CT\\_Joins](#) element that specifies all joins in the query.

**Ordering** : A [CT\\_Ordering](#) element that specifies the order of the query results.

**Parameters** : A [CT\\_Parameters](#) element that specifies all parameters in the query.

**References** : A [CT\\_References](#) element that specifies all input sources for the query.

**Restriction** : A [CT\\_Expression](#) element that specifies a filter for the query. All rows included in the query results MUST meet the criteria defined by the restriction expression.

**Results** : A [CT\\_Results](#) element that specifies the columns (1) included in the result of running the query.

*Attributes:*

**Caption** : An [ST\\_LongString](#) attribute that specifies a **caption** for the query.

**MinimumClientDesignVersion** : An [Ignored Value](#).

**Name** : An [ST\\_ObjectName](#) attribute that specifies the name of the query. MUST be present when this query is not embedded in another object, such as a [Macro](#) or [Form](#). MUST NOT be present when this query is embedded in another object.

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

```
<xsd:complexType name="CT_Query">
  <xsd:sequence>
    <xsd:element name="Parameters" minOccurs="0" type="CT_Parameters"
      wblid:cname="Parameters"/>
    <xsd:element name="References" type="CT_References" wblid:cname="References"/>
    <xsd:element name="Results" type="CT_Results" wblid:cname="Results"/>
    <xsd:element name="Joins" minOccurs="0" type="CT_Joins" wblid:cname="Joins"/>
    <xsd:element name="Restriction" type="CT_Expression" minOccurs="0"
      wblid:cname="Restriction"/>
    <xsd:element name="Ordering" minOccurs="0" type="CT_Ordering" wblid:cname="Ordering"/>
  </xsd:sequence>
  <xsd:attribute name="Name" type="ST_ObjectName" wblid:cname="Name" use="optional"/>
  <xsd:attribute name="Caption" type="ST_LongString" wblid:cname="Caption" use="optional"/>
  <xsd:attribute name="MinimumClientDesignVersion" type="ST_ShortString"
    wblid:cname="MinimumClientDesignVersion" use="optional"/>
</xsd:complexType>
```

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

### 2.2.3.21 CT\_Argument

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/application>

*Referenced by:* [CT\\_Action](#)

Specifies an argument of a [macro](#) action.

*Attributes:*

**Name** : An [ST\\_ObjectName](#) attribute that specifies the name of the argument. MUST be one of the arguments specified by section [2.2.5.2](#).

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

```
<xsd:complexType name="CT_Argument">
  <xsd:complexContent>
    <xsd:extension base="CT_Expression">
```

```

    <xsd:attribute name="Name" type="ST_ObjectName" use="required" wblld:cname="Name"/>
  </xsd:extension>
</xsd:complexContent>
</xsd:complexType>

```

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

### 2.2.3.22 CT\_Action

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/application>

*Referenced by:* [CT\\_DataMacroStatements](#), [CT\\_UserInterfaceMacroStatements](#)

Specifies a [macro](#) action.

*Child Elements:*

**Argument** : A [CT\\_Argument](#) element that specifies an argument for the action.

**Parameters** : A [CT\\_ParameterValues](#) element that specifies the parameters to the action. MUST NOT be present if the **Name** attribute is not "RunDataMacro", "BrowseTo", "OpenForm", or "OpenReport".

*Attributes:*

**Collapsed** : An [Ignored Value](#).

**Name** : An [ST\\_ObjectName](#) attribute that specifies the name of the action. MUST be one of the actions specified by section [2.2.5.1](#).

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

```

<xsd:complexType name="CT_Action">
  <xsd:sequence>
    <xsd:element name="Argument" minOccurs="0" maxOccurs="unbounded" wblld:cname="Argument"
type="CT_Argument"/>
    <xsd:element name="Parameters" minOccurs="0" type="CT_ParameterValues"
wblld:cname="Parameters"/>
  </xsd:sequence>
  <xsd:attribute name="Name" type="ST_ObjectName" use="required" wblld:cname="Name"/>
  <xsd:attribute name="Collapsed" type="xsd:boolean" wblld:cname="Collapsed" use="optional"/>
</xsd:complexType>

```

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

### 2.2.3.23 CT\_ForEachRecordData

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/application>

*Referenced by:* [CT\\_ForEachRecord](#)

Specifies a set of records.

*Child Elements:*

**Parameters** : A [CT\\_ParameterValues](#) element that specifies the parameters to either the **Query** element or the [query](#) specified by the **Reference** element. MUST NOT be present if the **Reference** element is present and specifies a list (1).

**Query** : A [CT\\_Query](#) element that specifies a set of records. MUST NOT be present if the **Reference** element is present.

**Reference** : An [ST\\_ObjectName](#) element that specifies a list (1) or query. MUST NOT be present if the **Query** element is present.

**WhereCondition** : A [CT\\_Expression](#) element that specifies an [expression](#) that selects a set of records from the records in the **Query** element or in the object specified by the **Reference** element.

*Attributes:*

**Alias** : An [ST\\_ObjectName](#) attribute that specifies a name for this set of records.

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

```
<xsd:complexType name="CT_ForEachRecordData">
  <xsd:sequence>
    <xsd:choice>
      <xsd:element name="Query" type="CT_Query" wblid:cname="Query"/>
      <xsd:element name="Reference" type="ST_ObjectName" wblid:cname="Reference"/>
    </xsd:choice>
    <xsd:element name="WhereCondition" minOccurs="0" type="CT_Expression"
wblid:cname="WhereCondition"/>
    <xsd:element name="Parameters" minOccurs="0" type="CT_ParameterValues"
wblid:cname="Parameters"/>
  </xsd:sequence>
  <xsd:attribute name="Alias" type="ST_ObjectName" wblid:cname="Alias" use="optional"/>
</xsd:complexType>
```

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

### 2.2.3.24 CT\_ForEachRecord

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/application>

*Referenced by:* [CT\\_DataMacroStatements](#)

Specifies a set of commands that are performed for each record in a specified set of records.

MUST NOT be present in a [CT\\_DataMacroStatements](#) element that is a child of a [CT\\_CreateRecord](#) or [CT\\_EditRecord](#) element. MUST NOT be present in a [CT\\_DataMacroStatements](#) element that is a child of a [CT\\_DataMacro](#) element whose **Event** attribute is set to "BeforeChange" or "BeforeDelete".

*Child Elements:*

**Data** : A [CT\\_ForEachRecordData](#) element that specifies the set of records on which to perform the commands.

**Statements** : A [CT\\_DataMacroStatements](#) element that specifies a set of commands to perform on each record.

*Attributes:*

**Collapsed** : An [Ignored Value](#).

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

```
<xsd:complexType name="CT_ForEachRecord">
  <xsd:sequence>
    <xsd:element name="Data" wblid:cname="Data" type="CT_ForEachRecordData"/>
    <xsd:element name="Statements" type="CT_DataMacroStatements" wblid:cname="Statements"/>
  </xsd:sequence>
  <xsd:attribute name="Collapsed" type="xsd:boolean" wblid:cname="Collapsed" use="optional"/>
</xsd:complexType>
```

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

### 2.2.3.25 CT\_LookupRecordData

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/application>

*Referenced by:* [CT\\_LookupRecord](#)

Specifies a single record.

*Child Elements:*

**Parameters** : A [CT\\_ParameterValues](#) element that specifies the parameters to either the **Query** element or the [query](#) specified by the **Reference** element. MUST NOT be present if the **Reference** element is present and specifies a list (1).

**Query** : A [CT\\_Query](#) element that specifies a single record. MUST NOT be present if the **Reference** element is present.

**Reference** : An [ST\\_ObjectName](#) element that specifies a list (1) or query. MUST NOT be present if the **Query** element is present.

**WhereCondition** : A [CT\\_Expression](#) element that specifies an expression that selects a single record from the object specified by the **Reference** element or the results of the **Query** element.

*Attributes:*

**Alias** : An [ST\\_ObjectName](#) attribute that specifies a name for this record.

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

```
<xsd:complexType name="CT_LookupRecordData">
  <xsd:sequence>
    <xsd:choice>
      <xsd:element name="Query" type="CT_Query" wblid:cname="Query"/>
      <xsd:element name="Reference" type="ST_ObjectName" wblid:cname="Reference"/>
    </xsd:choice>
    <xsd:element name="WhereCondition" minOccurs="0" type="CT_Expression"
wblid:cname="WhereCondition"/>
    <xsd:element name="Parameters" minOccurs="0" type="CT_ParameterValues"
wblid:cname="Parameters"/>
  </xsd:sequence>
</xsd:complexType>
```



```
</xsd:sequence>
<xsd:attribute name="Alias" type="ST_ObjectName" wblid:cname="Alias" use="optional"/>
</xsd:complexType>
```

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

### 2.2.3.26 CT\_LookupRecord

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/application>

*Referenced by:* [CT\\_DataMacroStatements](#)

Specifies a set of commands that are performed for a single record.

MUST NOT be present in a CT\_DataMacroStatements element that is a child of a [CT\\_CreateRecord](#) or [CT\\_EditRecord](#) element.

*Child Elements:*

**Data :** A [CT\\_LookupRecordData](#) element that specifies a single record.

**Statements :** A CT\_DataMacroStatements element that specifies a set of commands to perform on a single record.

*Attributes:*

**Collapsed :** An [Ignored Value](#).

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

```
<xsd:complexType name="CT_LookupRecord">
  <xsd:sequence>
    <xsd:element name="Data" wblid:cname="Data" type="CT_LookupRecordData"/>
    <xsd:element name="Statements" type="CT_DataMacroStatements" wblid:cname="Statements"/>
  </xsd:sequence>
  <xsd:attribute name="Collapsed" type="xsd:boolean" wblid:cname="Collapsed" use="optional"/>
</xsd:complexType>
```

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

### 2.2.3.27 CT\_CreateRecordData

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/application>

*Referenced by:* [CT\\_CreateRecord](#)

Specifies a list (1) in which to create a new record.

*Child Elements:*

**Reference :** An [ST\\_ObjectName](#) element that specifies the name of the list (1).

*Attributes:*

**Alias** : An ST\_ObjectName attribute that specifies a name for the newly created record in the list (1).

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

```
<xsd:complexType name="CT_CreateRecordData">
  <xsd:choice>
    <xsd:element name="Reference" type="ST_ObjectName" wblid:cname="Reference"/>
  </xsd:choice>
  <xsd:attribute name="Alias" type="ST_ObjectName" wblid:cname="Alias" use="optional"/>
</xsd:complexType>
```

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

### 2.2.3.28 CT\_CreateRecord

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/application>

*Referenced by:* [CT\\_DataMacroStatements](#)

Specifies a set of commands that are performed on a newly created record.

MUST NOT be present in a CT\_DataMacroStatements element that is a child of a [CT\\_ForEachRecord](#) element, a [CT\\_EditRecord](#) element, or another CT\_CreateRecord element. MUST NOT be present in a CT\_DataMacroStatements element that is a child of a [CT\\_DataMacro](#) whose **Event** attribute is set to "BeforeChange" or "BeforeDelete".

*Child Elements:*

**Data** : A [CT\\_CreateRecordData](#) element that specifies the data source (1) in which a record will be created.

**Statements** : A CT\_DataMacroStatements element that specifies a set of commands to perform on the new record.

*Attributes:*

**Collapsed** : An [Ignored Value](#).

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

```
<xsd:complexType name="CT_CreateRecord">
  <xsd:sequence>
    <xsd:element name="Data" wblid:cname="Data" type="CT_CreateRecordData"/>
    <xsd:element name="Statements" type="CT_DataMacroStatements" wblid:cname="Statements"/>
  </xsd:sequence>
  <xsd:attribute name="Collapsed" type="xsd:boolean" wblid:cname="Collapsed" use="optional"/>
</xsd:complexType>
```

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

### 2.2.3.29 CT\_EditRecordData

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/application>

*Referenced by:* [CT\\_EditRecord](#)

Specifies a single record.

*Attributes:*

**Alias :** An [ST\\_ObjectName](#) attribute that specifies the name given to a single record. This attribute MUST be the same as the **Alias** attribute of the outermost [CT\\_ForEachRecordData](#) element, the **Alias** attribute of a [CT\\_LookupRecordData](#) element, or the name of the parent list (1) of the [Data Macro](#).

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

```
<xsd:complexType name="CT_EditRecordData">
  <xsd:attribute name="Alias" type="ST_ObjectName" wblid:cname="Alias" use="optional"/>
</xsd:complexType>
```

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

### 2.2.3.30 CT\_EditRecord

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/application>

*Referenced by:* [CT\\_DataMacroStatements](#)

Specifies a set of commands to run on a single record.

MUST NOT be present in a CT\_DataMacroStatements that is a child of a [CT\\_CreateRecord](#) element or of another CT\_EditRecord element. MUST NOT be present in a CT\_DataMacroStatements element that is a child of a [CT\\_DataMacro](#) element whose **Event** attribute is set to "BeforeChange" or "BeforeDelete".

*Child Elements:*

**Data :** A [CT\\_EditRecordData](#) element that specifies a single record.

**Statements :** A CT\_DataMacroStatements element that specifies a set of commands to perform on a single record.

*Attributes:*

**Collapsed :** An [Ignored Value](#).

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

```
<xsd:complexType name="CT_EditRecord">
  <xsd:sequence>
    <xsd:element name="Data" type="CT_EditRecordData" wblid:cname="Data"/>
    <xsd:element name="Statements" type="CT_DataMacroStatements" wblid:cname="Statements"/>
  </xsd:sequence>
  <xsd:attribute name="Collapsed" type="xsd:boolean" wblid:cname="Collapsed" use="optional"/>
</xsd:complexType>
```

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

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

### 2.2.3.31 CT\_UserInterfaceIf

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/application>

*Referenced by:* [CT\\_UserInterfaceConditionalBlock](#)

Specifies a branch of a conditional block.

*Child Elements:*

**Condition** : A [CT\\_Expression](#) element that specifies a condition.

**Statements** : A [CT\\_UserInterfaceMacroStatements](#) element that specifies the set of commands that are performed if the expression in the **Condition** element evaluates to true.

*Attributes:*

**Collapsed** : An [Ignored Value](#).

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

```
<xsd:complexType name="CT_UserInterfaceIf">
  <xsd:sequence>
    <xsd:element name="Condition" type="CT_Expression" wblid:cname="Condition"/>
    <xsd:element name="Statements" type="CT_UserInterfaceMacroStatements"
      wblid:cname="Statements"/>
  </xsd:sequence>
  <xsd:attribute name="Collapsed" type="xsd:boolean" wblid:cname="Collapsed" use="optional"/>
</xsd:complexType>
```

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

### 2.2.3.32 CT\_UserInterfaceElseIf

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/application>

*Referenced by:* [CT\\_UserInterfaceConditionalBlock](#)

Specifies a branch of a conditional block. This element MUST follow an **If** or another **ElseIf** element in the parent element.

*Child Elements:*

**Condition** : A [CT\\_Expression](#) element that specifies a condition.

**Statements** : A [CT\\_UserInterfaceMacroStatements](#) element that specifies the set of commands that are performed if the expression in the **Condition** element evaluates to true and the **Condition** elements in the preceding **If** and **ElseIf** elements in the parent element evaluate to false.

*Attributes:*

**Collapsed** : An [Ignored Value](#).

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

```
<xsd:complexType name="CT_UserInterfaceElseIf">
  <xsd:sequence>
    <xsd:element name="Condition" type="CT_Expression" wblid:cname="Condition"/>
    <xsd:element name="Statements" type="CT_UserInterfaceMacroStatements"
wblid:cname="Statements"/>
  </xsd:sequence>
  <xsd:attribute name="Collapsed" type="xsd:boolean" wblid:cname="Collapsed" use="optional"/>
</xsd:complexType>
```

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

### 2.2.3.33 CT\_UserInterfaceElse

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/application>

*Referenced by:* [CT\\_UserInterfaceConditionalBlock](#)

Specifies a conditional branch. This element MUST follow an **If** or **ElseIf** element in the parent element.

*Child Elements:*

**Statements** : A [CT\\_UserInterfaceMacroStatements](#) element that specifies the set of commands that are performed if the **Condition** elements of the **If** and **ElseIf** elements in the parent element evaluate to false.

*Attributes:*

**Collapsed** : An [Ignored Value](#).

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

```
<xsd:complexType name="CT_UserInterfaceElse">
  <xsd:sequence>
    <xsd:element name="Statements" type="CT_UserInterfaceMacroStatements"
wblid:cname="Statements"/>
  </xsd:sequence>
  <xsd:attribute name="Collapsed" type="xsd:boolean" wblid:cname="Collapsed" use="optional"/>
</xsd:complexType>
```

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

### 2.2.3.34 CT\_DataIf

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/application>

*Referenced by:* [CT\\_DataConditionalBlock](#)

Specifies a branch of a conditional block.

*Child Elements:*

**Condition** : A [CT\\_Expression](#) element that specifies a condition.

**Statements** : A [CT\\_DataMacroStatements](#) element that specifies the set of commands that are performed if the expression in the **Condition** element evaluates to true.

*Attributes:*

**Collapsed** : An [Ignored Value](#).

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

```
<xsd:complexType name="CT_DataIf">
  <xsd:sequence>
    <xsd:element name="Condition" type="CT_Expression" wblid:cname="Condition"/>
    <xsd:element name="Statements" type="CT_DataMacroStatements" wblid:cname="Statements"/>
  </xsd:sequence>
  <xsd:attribute name="Collapsed" type="xsd:boolean" wblid:cname="Collapsed" use="optional"/>
</xsd:complexType>
```

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

### 2.2.3.35 CT\_DataElseIf

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/application>

*Referenced by:* [CT\\_DataConditionalBlock](#)

Specifies a branch of a conditional block. This element MUST follow an **If** or another **ElseIf** element in the parent element.

*Child Elements:*

**Condition** : A [CT\\_Expression](#) element that specifies a condition.

**Statements** : A [CT\\_DataMacroStatements](#) element that specifies the set of commands that are performed if the expression in the **Condition** element evaluates to true and the **Condition** elements in the preceding **If** and **ElseIf** elements in the parent element evaluate to false.

*Attributes:*

**Collapsed** : An [Ignored Value](#).

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

```
<xsd:complexType name="CT_DataElseIf">
  <xsd:sequence>
    <xsd:element name="Condition" type="CT_Expression" wblid:cname="Condition"/>
    <xsd:element name="Statements" type="CT_DataMacroStatements" wblid:cname="Statements"/>
  </xsd:sequence>
  <xsd:attribute name="Collapsed" type="xsd:boolean" wblid:cname="Collapsed" use="optional"/>
</xsd:complexType>
```

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

### 2.2.3.36 CT\_DataElse

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/application>

*Referenced by:* [CT\\_DataConditionalBlock](#)

Specifies a conditional branch. This element MUST follow an **If** or **ElseIf** element in the parent element.

*Child Elements:*

**Statements** : A [CT\\_DataMacroStatements](#) element that specifies the set of commands that are performed if the **Condition** elements of the **If** and **ElseIf** elements in the parent element evaluate to false.

*Attributes:*

**Collapsed** : An [Ignored Value](#).

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

```
<xsd:complexType name="CT_DataElse">
  <xsd:sequence>
    <xsd:element name="Statements" type="CT_DataMacroStatements" wblid:cname="Statements"/>
  </xsd:sequence>
  <xsd:attribute name="Collapsed" type="xsd:boolean" wblid:cname="Collapsed" use="optional"/>
</xsd:complexType>
```

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

### 2.2.3.37 CT\_UserInterfaceConditionalBlock

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/application>

*Referenced by:* [CT\\_UserInterfaceMacroStatements](#)

Specifies a conditional branch in a [User Interface Macro](#). At runtime, if the expression in the **Condition** element of the **If** element evaluates to true, the macro continues performing the commands within the **Statements** child element of the **If** element and all other branches are skipped. Otherwise the expression in the **Condition** element of each **ElseIf** child, if any are present, is evaluated in order until one is found that evaluates to true. If such a child is found, the macro continues running in the **Statements** child element of that **ElseIf** element and all other branches are skipped. If the conditions of the **If** child element and all **ElseIf** child elements evaluate to false and an **Else** element is present, the macro continues running in the **Statements** child of the **Else** element.

*Child Elements:*

**Else** : A [CT\\_UserInterfaceElse](#) element that specifies a branch to be taken if none of the conditions of the other child elements evaluate to true.

**ElseIf** : A [CT\\_UserInterfaceElseIf](#) element that specifies a subsequent condition and logical branch to be taken if the **If** branch and previous **ElseIf** branches were not taken.

**If** : A [CT\\_UserInterfaceIf](#) element that specifies the first possible condition and logical branch. MUST be present.

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

```
<xsd:complexType name="CT_UserInterfaceConditionalBlock">
  <xsd:sequence>
    <xsd:element name="If" wblld:cname="If" type="CT_UserInterfaceIf"/>
    <xsd:element name="ElseIf" minOccurs="0" maxOccurs="unbounded" wblld:cname="ElseIf"
type="CT_UserInterfaceElseIf"/>
    <xsd:element name="Else" minOccurs="0" wblld:cname="Else" type="CT_UserInterfaceElse"/>
  </xsd:sequence>
</xsd:complexType>
```

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

### 2.2.3.38 CT\_DataConditionalBlock

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/application>

*Referenced by:* [CT\\_DataMacroStatements](#)

Specifies a conditional branch in a [Data Macro](#). At runtime, if the expression in the **Condition** element of the **If** element evaluates to true, the macro continues running in the commands within the **Statements** child element of the **If** element and all other branches are skipped. Otherwise the expression in the **Condition** element of each **ElseIf** child, if any are present, is evaluated in order until one is found that evaluates to true. If such a child is found, the macro continues running in the **Statements** child element of that **ElseIf** element and all other branches are skipped. If the conditions of the **If** child element and all **ElseIf** child elements evaluate to false and an **Else** element is present, the macro continues running in the **Statements** child of the **Else** element.

*Child Elements:*

**Else** : A [CT\\_DataElse](#) element that specifies a branch to be taken if none of the conditions of the other child elements evaluate to true.

**ElseIf** : A [CT\\_DataElseIf](#) element that specifies a subsequent condition and logical branch to be taken if the **If** branch and previous **ElseIf** branches were not taken.

**If** : A [CT\\_DataIf](#) element that specifies the first possible condition and logical branch. MUST be present.

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

```
<xsd:complexType name="CT_DataConditionalBlock">
  <xsd:sequence>
    <xsd:element name="If" wblld:cname="If" type="CT_DataIf"/>
    <xsd:element name="ElseIf" minOccurs="0" maxOccurs="unbounded" wblld:cname="ElseIf"
type="CT_DataElseIf"/>
    <xsd:element name="Else" minOccurs="0" wblld:cname="Else" type="CT_DataElse"/>
  </xsd:sequence>
</xsd:complexType>
```

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



### 2.2.3.39 CT\_Sub

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/application>

*Referenced by:* [CT\\_UserInterfaceMacro](#)

Specifies a subroutine of a named [Macro](#). A subroutine of a named macro can be called in any context in which a named [User Interface Macro](#) can be called, by referring to it as `MacroName.SubroutineName`. MUST NOT be defined for [Data Macros](#).

*Child Elements:*

**Statements :** A [CT\\_UserInterfaceMacroStatements](#) element that specifies the commands to be performed when the macro is called.

*Attributes:*

**Collapsed :** An [Ignored Value](#).

**Name :** An [ST\\_ObjectName](#) attribute that specifies a name for the subroutine. This attribute MUST be unique in relation to all **Sub** child elements in the parent `CT_UserInterfaceMacro`.

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

```
<xsd:complexType name="CT_Sub">
  <xsd:sequence>
    <xsd:element name="Statements" minOccurs="0" maxOccurs="unbounded"
type="CT_UserInterfaceMacroStatements" wblid:cname="Statements"/>
  </xsd:sequence>
  <xsd:attribute name="Name" type="ST_ObjectName" use="required" wblid:cname="Name"/>
  <xsd:attribute name="Collapsed" type="xsd:boolean" wblid:cname="Collapsed" use="optional"/>
</xsd:complexType>
```

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

### 2.2.3.40 CT\_UserInterfaceMacroStatements

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/application>

*Referenced by:* [CT\\_UserInterfaceIf](#), [CT\\_UserInterfaceElseIf](#),  
[CT\\_UserInterfaceMacroStatementGroup](#), [CT\\_UserInterfaceElse](#), [CT\\_Sub](#), [CT\\_UserInterfaceMacro](#)

Container type that contains zero or more elements that specify the commands to be performed when a [User Interface Macro](#) is called.

*Child Elements:*

**Action :** A [CT\\_Action](#) element that specifies a single macro action.

**Comment :** An [ST\\_LongString](#) element that is ignored when the commands are performed.

**ConditionalBlock :** A [CT\\_UserInterfaceConditionalBlock](#) element that specifies a conditional branch.

**StatementGroup :** A `CT_UserInterfaceMacroStatementGroup` element that specifies a user-defined grouping of macro commands.

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

```
<xsd:complexType name="CT_UserInterfaceMacroStatements">
  <xsd:choice minOccurs="0" maxOccurs="unbounded">
    <xsd:element name="Action" type="CT_Action" wblld:cname="Action"/>
    <xsd:element name="Comment" type="ST_LongString" wblld:cname="Comment"/>
    <xsd:element name="ConditionalBlock" type="CT_UserInterfaceConditionalBlock"
wblld:cname="ConditionalBlock"/>
    <xsd:element name="StatementGroup" type="CT_UserInterfaceMacroStatementGroup"
wblld:cname="StatementGroup"/>
  </xsd:choice>
</xsd:complexType>
```

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

### 2.2.3.41 CT\_DataMacroStatements

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/application>

*Referenced by:* [CT\\_ForEachRecord](#), [CT\\_LookupRecord](#), [CT\\_CreateRecord](#), [CT\\_EditRecord](#), [CT\\_DataIf](#), [CT\\_DataMacroStatementGroup](#), [CT\\_DataElseIf](#), [CT\\_DataElse](#), [CT\\_DataMacro](#)

Container type that contains zero or more elements that specify the commands to be performed when a [Data Macro](#) is called.

*Child Elements:*

**Action :** A [CT\\_Action](#) element that specifies a single macro action.

**Comment :** An [ST\\_LongString](#) element that is ignored when the commands are performed.

**ConditionalBlock :** A [CT\\_DataConditionalBlock](#) element that specifies a conditional branch.

**CreateRecord :** A [CT\\_CreateRecord](#) element that specifies a macro block that creates a record.

**EditRecord :** A [CT\\_EditRecord](#) element that specifies a macro block that changes a record.

**ForEachRecord :** A [CT\\_ForEachRecord](#) element that performs actions on multiple records.

**LookUpRecord :** A [CT\\_LookupRecord](#) element that specifies a macro block that performs actions on a single record.

**StatementGroup :** A [CT\\_DataMacroStatementGroup](#) element that specifies a user-defined grouping of macro commands.

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

```
<xsd:complexType name="CT_DataMacroStatements">
  <xsd:choice minOccurs="0" maxOccurs="unbounded">
    <xsd:element name="Action" type="CT_Action" wblld:cname="Action"/>
    <xsd:element name="Comment" type="ST_LongString" wblld:cname="Comment"/>
    <xsd:element name="ForEachRecord" type="CT_ForEachRecord" wblld:cname="ForEachRecord"/>
    <xsd:element name="LookUpRecord" type="CT_LookupRecord" wblld:cname="LookupRecord"/>
    <xsd:element name="CreateRecord" type="CT_CreateRecord" wblld:cname="CreateRecord"/>
    <xsd:element name="EditRecord" type="CT_EditRecord" wblld:cname="EditRecord"/>
  </xsd:choice>
</xsd:complexType>
```

```

    <xsd:element name="ConditionalBlock" type="CT_DataConditionalBlock"
    wblid:cname="ConditionalBlock"/>
    <xsd:element name="StatementGroup" type="CT_DataMacroStatementGroup"
    wblid:cname="StatementGroup"/>
  </xsd:choice>
</xsd:complexType>

```

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

### 2.2.3.42 CT\_UserInterfaceMacroStatementGroup

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/application>

*Referenced by:* [CT\\_UserInterfaceMacroStatements](#)

Container type for macro statements with which a user can organize the actions in a macro. Has no effect on the macro commands that are performed.

*Child Elements:*

**Statements :** A CT\_UserInterfaceMacroStatements element that specifies the logic and actions to be performed in this part of the macro.

*Attributes:*

**Collapsed :** An [Ignored Value](#)

**Description :** An [ST\\_LongString](#) attribute that specifies a description of the enclosed block.

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

```

<xsd:complexType name="CT_UserInterfaceMacroStatementGroup">
  <xsd:sequence>
    <xsd:element name="Statements" type="CT_UserInterfaceMacroStatements"
    wblid:cname="Statements"/>
  </xsd:sequence>
  <xsd:attribute name="Description" type="ST_LongString" wblid:cname="Description"
  use="optional"/>
  <xsd:attribute name="Collapsed" type="xsd:boolean" wblid:cname="Collapsed" use="optional"/>
</xsd:complexType>

```

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

### 2.2.3.43 CT\_DataMacroStatementGroup

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/application>

*Referenced by:* [CT\\_DataMacroStatements](#)

Container type for macro statements with which a user can organize the actions in a macro. Has no effect on the macro commands that are performed.

*Child Elements:*

**Statements** : A CT\_DataMacroStatements element that specifies the logic and actions to be performed in this part of the macro.

*Attributes:*

**Collapsed** : An [Ignored Value](#).

**Description** : An [ST\\_LongString](#) attribute that specifies a description of the enclosed block.

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

```
<xsd:complexType name="CT_DataMacroStatementGroup">
  <xsd:sequence>
    <xsd:element name="Statements" type="CT_DataMacroStatements" wblid:cname="Statements"/>
  </xsd:sequence>
  <xsd:attribute name="Description" type="ST_LongString" wblid:cname="Description"
  use="optional"/>
  <xsd:attribute name="Collapsed" type="xsd:boolean" wblid:cname="Collapsed" use="optional"/>
</xsd:complexType>
```

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

#### 2.2.3.44 CT\_Application

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/application>

*Referenced by:* [Application](#)

Specifies an [Application](#).

*Child Elements:*

**Properties** : A [CT\\_PropertyBag](#) element that specifies any Application level properties.

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

```
<xsd:complexType name="CT_Application">
  <xsd:all>
    <xsd:element name="Properties" type="CT_PropertyBag" wblid:cname="Properties"/>
  </xsd:all>
</xsd:complexType>
```

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

#### 2.2.3.45 CT\_MacroReference

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/application>

*Referenced by:* [CT\\_UserInterfaceMacros](#)

Specifies a reference to a named [User Interface Macro](#). MUST NOT be present except in a CT\_UserInterfaceMacros element that is a child of a [CT\\_View](#) element.

*Attributes:*

**Event** : An [ST\\_UserInterfaceObjectEvent](#) attribute that specifies an event that causes the macro to be called.

**For** : An [ST\\_ObjectName](#) attribute that specifies the name of a control. If this attribute is not present, the macro will be called by the [Form](#) itself. If present, the value MUST be the name of a control on the containing Form whose type supports the event specified by the **Event** attribute.

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

```
<xsd:complexType mixed="true" name="CT_MacroReference">
  <xsd:attribute name="For" type="ST_ObjectName" wblid:cname="For" use="optional"/>
  <xsd:attribute name="Event" type="ST_UserInterfaceObjectEvent" wblid:cname="Event"
use="optional"/>
</xsd:complexType>
```

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

### 2.2.3.46 CT\_UserInterfaceMacros

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/application>

*Referenced by:* [CT\\_View](#), [UserInterfaceMacros](#)

Container type for the [User Interface Macros](#) in a [view](#). MUST contain one or more **UserInterfaceMacro** or **MacroReference** elements.

*Child Elements:*

**MacroReference** : A [CT\\_MacroReference](#) element that specifies a reference to a named User Interface Macro defined elsewhere in the database application.

**UserInterfaceMacro** : A [CT\\_UserInterfaceMacro](#) element that specifies a single User Interface Macro.

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

```
<xsd:complexType name="CT_UserInterfaceMacros">
  <xsd:choice maxOccurs="unbounded">
    <xsd:element name="UserInterfaceMacro" minOccurs="0" maxOccurs="unbounded"
type="CT_UserInterfaceMacro" wblid:cname="UserInterfaceMacro"/>
    <xsd:element name="MacroReference" wblid:cname="MacroReference" type="CT_MacroReference"/>
  </xsd:choice>
</xsd:complexType>
```

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

### 2.2.3.47 CT\_DataMacros

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/application>

*Referenced by:* [DataMacros](#)

Container type for [Data Macros](#). MUST contain one or more **DataMacro** elements.

*Child Elements:*

**DataMacro** : A [CT\\_DataMacro](#) element that specifies a single Data Macro.

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

```
<xsd:complexType name="CT_DataMacros">
  <xsd:choice maxOccurs="unbounded">
    <xsd:element name="DataMacro" minOccurs="0" maxOccurs="unbounded" type="CT_DataMacro"
      wblld:cname="DataMacro"/>
  </xsd:choice>
</xsd:complexType>
```

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

### 2.2.3.48 CT\_UserInterfaceMacro

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/application>

*Referenced by:* [CT\\_UserInterfaceMacros](#), [UserInterfaceMacro](#)

Specifies a [User Interface Macro](#).

*Child Elements:*

**Statements** : A [CT\\_UserInterfaceMacroStatements](#) element that specifies the commands to be performed when the macro is called.

**Sub** : A [CT\\_Sub](#) element that specifies a subroutine.

*Attributes:*

**Event** : An [ST\\_UserInterfaceObjectEvent](#) attribute that specifies the event that will cause the macro to be called. MUST be present if the macro is embedded in a [Form](#); MUST NOT be present otherwise.

**For** : An [ST\\_ObjectName](#) attribute that specifies the name of a control. MUST NOT appear except on a macro that is embedded in a Form. If this attribute is not present, the macro will be called by the Form itself. If present, the value MUST be the name of a control on the containing Form whose type supports the event specified by the **Event** attribute.

**MinimumClientDesignVersion** : An [Ignored Value](#).

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

```
<xsd:complexType name="CT_UserInterfaceMacro">
  <xsd:sequence>
    <xsd:element name="Statements" minOccurs="0" type="CT_UserInterfaceMacroStatements"
      wblld:cname="Statements"/>
    <xsd:element name="Sub" minOccurs="0" maxOccurs="unbounded" type="CT_Sub"
      wblld:cname="Sub"/>
  </xsd:sequence>
  <xsd:attribute name="For" type="ST_ObjectName" wblld:cname="For" use="optional"/>
  <xsd:attribute name="Event" type="ST_UserInterfaceObjectEvent" wblld:cname="Event"
    use="optional"/>
</xsd:complexType>
```

```

    <xsd:attribute name="MinimumClientDesignVersion" type="ST_ShortString"
    wblid:cname="MinimumClientDesignVersion" use="optional"/>
  </xsd:complexType>

```

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

### 2.2.3.49 CT\_DataMacro

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/application>

*Referenced by:* [CT\\_DataMacros](#)

Specifies a [Data Macro](#).

*Child Elements:*

**Parameters** : A [CT\\_ParameterDefinitions](#) element that specifies the list of parameters that the macro accepts when called. MUST NOT be present if the **Event** attribute is present.

**Statements** : A [CT\\_DataMacroStatements](#) element that specifies the commands to be performed when the macro is called.

*Attributes:*

**Event** : An [ST\\_DataObjectEvent](#) attribute that specifies the type of event that will cause the macro to be called. MUST NOT be present if the **Name** attribute is present.

**Name** : An [ST\\_ObjectName](#) attribute that specifies the name of the macro. MUST be present if the **Event** attribute is not present; MUST NOT be present if the **Event** attribute is present. All CT\_DataMacro elements contained within the same CT\_DataMacros element MUST have unique values for the **Name** attribute if the attribute is present.

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

```

<xsd:complexType name="CT_DataMacro">
  <xsd:sequence>
    <xsd:element name="Parameters" minOccurs="0" type="CT_ParameterDefinitions"
    wblid:cname="Parameters"/>
    <xsd:element name="Statements" minOccurs="0" type="CT_DataMacroStatements"
    wblid:cname="Statements"/>
  </xsd:sequence>
  <xsd:attribute name="Event" type="ST_DataObjectEvent" wblid:cname="Event" use="optional"/>
  <xsd:attribute name="Name" type="ST_ObjectName" wblid:cname="Name" use="optional"/>
</xsd:complexType>

```

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

### 2.2.3.50 CT\_RecordSource

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/application>

*Referenced by:* [CT\\_ViewData](#)

Specifies the data source (1) for the [Form](#). If the **Query** child element is not present, the value of this element MUST be the name of a list (1) or [query](#).

*Child Elements:*

**Query** : A [CT\\_Query](#) element that specifies a single query.

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

```
<xsd:complexType mixed="true" name="CT_RecordSource">
  <xsd:sequence>
    <xsd:element name="Query" type="CT_Query" minOccurs="0" wblid:cname="Query"/>
  </xsd:sequence>
</xsd:complexType>
```

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

### 2.2.3.51 CT\_ViewData

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/application>

*Referenced by:* [CT\\_View](#)

Specifies the data properties of the [Form](#) encapsulated by a CT\_View element.

*Child Elements:*

**RecordSource** : A [CT\\_RecordSource](#) element that specifies the data source (1) for the parent's **Form** element.

*Attributes:*

**AllowAdditions** : A boolean ([\[XMLSCHEMA2\]](#) section 3.2.2) attribute that specifies whether the Form allows new records to be added to its data source (1).

**AllowDeletions** : A boolean ([\[XMLSCHEMA2\]](#) section 3.2.2) attribute that specifies whether the Form allows records to be deleted from the data source (1).

**AllowEdits** : A boolean ([\[XMLSCHEMA2\]](#) section 3.2.2) attribute that specifies whether the Form allows existing records in the data source (1) to be modified.

**DataEntry** : A boolean ([\[XMLSCHEMA2\]](#) section 3.2.2) attribute that specifies whether the displayed Form is initially populated with a new blank record by default.

**RecordSetType** : An [Ignored Value](#).

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

```
<xsd:complexType name="CT_ViewData">
  <xsd:all>
    <xsd:element name="RecordSource" minOccurs="0" wblid:cname="RecordSource"
type="CT_RecordSource"/>
  </xsd:all>
  <xsd:attribute name="AllowEdits" type="xsd:boolean" default="true" wblid:cname="AllowEdits"
use="optional"/>
  <xsd:attribute name="AllowDeletions" type="xsd:boolean" default="true"
wblid:cname="AllowDeletions" use="optional"/>
```



```

    <xsd:attribute name="AllowAdditions" type="xsd:boolean" default="true"
    wblid:cname="AllowAdditions" use="optional"/>
    <xsd:attribute name="DataEntry" type="xsd:boolean" default="false" wblid:cname="DataEntry"
    use="optional"/>
    <xsd:attribute name="RecordSetType" type="xsd:string" wblid:cname="RecordSetType"
    use="optional"/>
  </xsd:complexType>

```

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

### 2.2.3.52 CT\_View

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/application>

*Referenced by:* [View](#)

Specifies a View that describes a [Form](#). MUST contain exactly one **Form** element.

*Child Elements:*

**a:Form** : A [CT\\_Form](#) element that specifies the Form.

**Data** : A [CT\\_ViewData](#) element that specifies the data properties of the CT\_Form encapsulated by the View.

**UserInterfaceMacros** : A [CT\\_UserInterfaceMacros](#) element that specifies all [User Interface Macros](#) associated with the View.

*Attributes:*

**MinimumClientDesignVersion** : An [Ignored Value](#).

**Name** : An [ST\\_ObjectName](#) attribute that specifies the name of the View.

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

```

<xsd:complexType name="CT_View">
  <xsd:sequence>
    <xsd:choice>
      <xsd:element ref="UserInterfaceMacros" minOccurs="0" wblid:cname="UserInterfaceMacros"/>
    </xsd:choice>
    <xsd:element name="Data" wblid:cname="Data" minOccurs="0" type="CT_ViewData"/>
    <xsd:element ref="a:Form" wblid:cname="Form"/>
  </xsd:sequence>
  <xsd:attribute name="Name" type="ST_ObjectName" use="required" wblid:cname="Name"/>
  <xsd:attribute name="MinimumClientDesignVersion" type="ST_ShortString" use="optional"
  wblid:cname="MinimumClientDesignVersion"/>
</xsd:complexType>

```

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

### 2.2.3.53 CT\_Object

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/application>

Referenced by: [CT\\_ApplicationReference](#)

Description of a single object in an [Application](#).

Child Elements:

**Mode** : An [ST\\_ShortString](#) element that specifies the mode in which the object is desired to be viewed. MUST be one of the following values.

Value	Meaning
Browse	Opens the object in Browse view.
Design	Opens the object in Design view.
Layout	Opens the object in Layout view.
Normal	Opens the object in Default view.
PrintPreview	Opens the object in Print Preview view.

If this attribute is not present, the object is opened in the default view.

**Name** : An [ST\\_ObjectName](#) element that specifies the name of the object.

**Type** : An [ST\\_ShortString](#) element that specifies the type of the object. MUST be one of the following values.

Value	Meaning
Form	The object is a <a href="#">Form</a> .
Macro	The object is a <a href="#">Macro</a> .
Query	The object is a <a href="#">Query</a> .
Report	The object is a <a href="#">Report</a> .
Table	The object is a List (1).

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

```
<xsd:complexType name="CT_Object">
  <xsd:sequence>
    <xsd:element name="Name" type="ST_ObjectName" wblid:cname="Name"/>
    <xsd:element name="Type" type="ST_ShortString" wblid:cname="Type"/>
    <xsd:element name="Mode" type="ST_ShortString" minOccurs="0" wblid:cname="Mode"/>
  </xsd:sequence>
</xsd:complexType>
```

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

### 2.2.3.54 CT\_ApplicationReference

Target namespace: <http://schemas.microsoft.com/office/accessservices/2009/11/application>

Referenced by: [ApplicationReference](#)

Specifies an Application Reference. MUST contain exactly one **URL** element and at most one **Object** element. If no **Object** element is specified, the application as a whole is specified; otherwise, only that object in the application is specified.

*Child Elements:*

**Object** : A [CT\\_Object](#) element that specifies an object in the [Application](#).

**URL** : An anyURI ([\[XMLSCHEMA2\]](#) section 3.2.17) element that specifies the URL of an [Application](#).

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

```
<xsd:complexType name="CT_ApplicationReference">
  <xsd:sequence>
    <xsd:element name="URL" type="xsd:anyURI" wld:cname="URL"/>
    <xsd:element name="Object" minOccurs="0" wld:cname="Object" type="CT_Object"/>
  </xsd:sequence>
</xsd:complexType>
```

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

## 2.2.4 Simple Types

### 2.2.4.1 ST\_ObjectName

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/application>

Referenced by: [CT\\_Query](#), [CT\\_Parameter](#), [CT\\_Reference](#), [CT\\_Result](#), [CT\\_Join](#), [CT\\_Order](#), [CT\\_ParameterDefinition](#), [CT\\_ParameterValue](#), [CT\\_Argument](#), [CT\\_Action](#), [CT\\_ForEachRecordData](#), [CT\\_LookupRecordData](#), [CT\\_CreateRecordData](#), [CT\\_EditRecordData](#), [CT\\_Sub](#), [CT\\_MacroReference](#), [CT\\_UserInterfaceMacro](#), [CT\\_DataMacro](#), [CT\\_View](#), [CT\\_Object](#)

A string ([\[XMLSCHEMA2\]](#) section 3.2.1) that specifies an attribute of an object in a database application. MUST NOT begin with a space character or the '=' character. MUST NOT contain the tab character or any of the following characters: / \ : \* ? " < > . | # { } % ~ & ; ! ' [ ] , or any character whose hexadecimal value is less than 0x20. The length of the string ([\[XMLSCHEMA2\]](#) section 3.2.1) MUST NOT exceed 64 characters. [<3>](#)

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

```
<xsd:simpleType name="ST_ObjectName">
  <xsd:restriction base="xsd:string">
    <xsd:minLength value="1"/>
    <xsd:maxLength value="72"/>
  </xsd:restriction>
</xsd:simpleType>
```

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

## 2.2.4.2 ST\_UserInterfaceObjectEvent

Target namespace: <http://schemas.microsoft.com/office/accessservices/2009/11/application>

Referenced by: [CT\\_MacroReference](#), [CT\\_UserInterfaceMacro](#)

A string ([\[XMLSCHEMA2\]](#) section 3.2.1) that specifies the type of event that causes a [Macro](#) to be called.

For a [CT\\_MacroReference](#) or a [CT\\_UserInterfaceMacro](#), the value MUST be one of the events that is supported by the form, if no **For** attribute is present, or by the type of control that is specified by the **For** attribute. Any control types not listed in the following table have no valid events.

**OnDbClick** MUST NOT be used in a [CT\\_AccLabel](#) if its **Association** attribute is present.

Control type	Valid events
<a href="#">CT_Form</a> (no <b>For</b> attribute present)	OnLoad, OnCurrent
<a href="#">CT_AccTextBox</a>	OnClick, AfterUpdate, OnDbClick
<a href="#">CT_AccButton</a>	OnClick
<a href="#">CT_AccComboBox</a> or <a href="#">CT_AccListBox</a>	AfterUpdate, OnDbClick
<a href="#">CT_AccLabel</a>	OnClick, OnDbClick
<a href="#">CT_AccImage</a>	OnClick, OnDbClick
<a href="#">CT_AccAttachment</a>	OnClick
<a href="#">CT_AccCheckBox</a>	AfterUpdate
<a href="#">CT_AccTabControl</a>	OnChange

Value	Meaning
OnClick	Call the macro after a control is clicked.
OnDbClick	Call the macro after a control is double-clicked.
AfterUpdate	Call the macro after the content of a control is updated. <a href="#">&lt;4&gt;</a>
OnChange	Call the macro after the content of a control is changed.
OnCurrent	Call the macro after the current record is changed.
OnLoad	Call the macro after a <a href="#">Form</a> is loaded.

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

```
<xsd:simpleType name="ST_UserInterfaceObjectEvent">
  <xsd:restriction base="xsd:string">
    <xsd:minLength value="1"/>
    <xsd:maxLength value="64"/>
  </xsd:restriction>
</xsd:simpleType>
```

```

<xsd:enumeration value="OnClick" wblid:cname="OnClick"/>
<xsd:enumeration value="OnDbClick" wblid:cname="OnDbClick"/>
<xsd:enumeration value="AfterUpdate" wblid:cname="AfterUpdate"/>
<xsd:enumeration value="OnChange" wblid:cname="OnChange"/>
<xsd:enumeration value="OnCurrent" wblid:cname="OnCurrent"/>
<xsd:enumeration value="OnLoad" wblid:cname="OnLoad"/>
</xsd:restriction>
</xsd:simpleType>

```

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

### 2.2.4.3 ST\_DataObjectEvent

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/application>

*Referenced by:* [CT\\_DataMacro](#)

A string ([\[XMLSCHEMA2\]](#) section 3.2.1) that specifies the type of event that causes a [DataMacro](#) to be called.

MUST be one of the following values.

Value	Meaning
AfterInsert	Call the macro after a new record has been added.
AfterUpdate	Call the macro after an existing record has been updated.
AfterDelete	Call the macro after an existing record has been removed.
BeforeChange	Call the macro before a new record is added or an existing record is updated.
BeforeDelete	Call the macro before an existing record is removed.

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

```

<xsd:simpleType name="ST_DataObjectEvent">
  <xsd:restriction base="xsd:string">
    <xsd:minLength value="1"/>
    <xsd:maxLength value="64"/>
    <xsd:enumeration value="AfterInsert" wblid:cname="AfterInsert"/>
    <xsd:enumeration value="AfterUpdate" wblid:cname="AfterUpdate"/>
    <xsd:enumeration value="AfterDelete" wblid:cname="AfterDelete"/>
    <xsd:enumeration value="BeforeChange" wblid:cname="BeforeChange"/>
    <xsd:enumeration value="BeforeDelete" wblid:cname="BeforeDelete"/>
  </xsd:restriction>
</xsd:simpleType>

```

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

### 2.2.4.4 ST\_ShortString

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/application>

*Referenced by:* [CT\\_Query](#), [CT\\_UserInterfaceMacro](#), [CT\\_View](#), [CT\\_Object](#)

A string ([XMLSCHEMA2] section 3.2.1) that MUST be less than or equal to 255 characters in length.

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

```
<xsd:simpleType name="ST_ShortString">
  <xsd:restriction base="xsd:string">
    <xsd:maxLength value="255"/>
  </xsd:restriction>
</xsd:simpleType>
```

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

#### 2.2.4.5 ST\_LongString

*Target namespace:* http://schemas.microsoft.com/office/accessservices/2009/11/application

*Referenced by:* [CT Query](#), [CT Result](#), [CT Join](#), [CT Order](#), [CT AdHocOrder](#), [CT ParameterDefinition](#), [CT ParameterValue](#), [CT DataMacroStatements](#), [CT DataMacroStatementGroup](#), [CT UserInterfaceMacroStatements](#), [CT UserInterfaceMacroStatementGroup](#)

A string ([XMLSCHEMA2] section 3.2.1) that MUST be less than or equal to 1024 characters in length.

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

```
<xsd:simpleType name="ST_LongString">
  <xsd:restriction base="xsd:string">
    <xsd:maxLength value="1024"/>
  </xsd:restriction>
</xsd:simpleType>
```

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

#### 2.2.4.6 ST\_JoinDirection

*Target namespace:* http://schemas.microsoft.com/office/accessservices/2009/11/application

*Referenced by:* [CT Join](#)

A string ([XMLSCHEMA2] section 3.2.1) that specifies the direction of a Join in a [Query](#). MUST be one of the following values.

Value	Meaning
Inner	The join results include data from rows in the left input source and the right input source where the <b>LeftProperty</b> and <b>RightProperty</b> values are equal.
Left Outer	The join results include data from all rows in the left input source along with data from rows in the right input source where the <b>LeftProperty</b> and <b>RightProperty</b> values are equal.
Right Outer	The join results include data from all rows in the right input source along with data from rows in the left input source where the <b>LeftProperty</b> and <b>RightProperty</b> values are equal.

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

```
<xsd:simpleType name="ST_JoinDirection">
  <xsd:restriction base="xsd:string">
    <xsd:enumeration value="Inner" wblid:cname="Inner"/>
    <xsd:enumeration value="Left Outer" wblid:cname="LeftOuter"/>
    <xsd:enumeration value="Right Outer" wblid:cname="RightOuter"/>
  </xsd:restriction>
</xsd:simpleType>
```

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

### 2.2.4.7 ST\_FieldType

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/application>

*Referenced by:* [CT\\_Parameter](#)

A string ([\[XMLSCHEMA2\]](#) section 3.2.1) that specifies a data type. MUST be one of the following values.

Value	Meaning
Text	A string value up to 255 characters in length.
Number	An integer or a <b>floating-point number</b> .
Yes/No	A Boolean value.
Currency	A monetary value.
Date/Time	A date/time value.

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

```
<xsd:simpleType name="ST_FieldType">
  <xsd:restriction base="xsd:string">
    <xsd:enumeration value="Text" wblid:cname="Text"/>
    <xsd:enumeration value="Number" wblid:cname="Number"/>
    <xsd:enumeration value="Yes/No" wblid:cname="YesNo"/>
    <xsd:enumeration value="Currency" wblid:cname="Currency"/>
    <xsd:enumeration value="Date/Time" wblid:cname="DateTime"/>
  </xsd:restriction>
</xsd:simpleType>
```

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

### 2.2.4.8 ST\_SortDirection

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/application>

*Referenced by:* [CT\\_Order](#), [CT\\_AdHocOrder](#)

A string ([\[XMLSCHEMA2\]](#) section 3.2.1) that specifies the direction of an ordering.

Value	Meaning
Ascending	The ordering is smallest to largest.
Descending	The ordering is largest to smallest.

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

```
<xsd:simpleType name="ST_SortDirection">
  <xsd:restriction base="xsd:string">
    <xsd:enumeration value="Ascending" wblid:cname="Ascending"/>
    <xsd:enumeration value="Descending" wblid:cname="Descending"/>
  </xsd:restriction>
</xsd:simpleType>
```

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

## 2.2.5 Macros

This section specifies the valid values for the **Action** and **Argument** child elements of a [Macro](#).

### 2.2.5.1 Actions

Actions are elements of type [CT\\_Action](#). Actions MUST have a **Name** attribute set to the title of one of the following subsections. These actions can be present in either a [Data Macro](#) or a [User Interface Macro](#) unless otherwise specified. Child arguments not specified by an action MUST NOT be present in that action. Child arguments specified by a particular action are optional unless otherwise specified.

#### 2.2.5.1.1 BrowseTo

Changes the focus from the active [Form](#) or [Report](#) object to a different Form or Report object. Parameters to that Form or Report are specified by the **Parameters** element in [CT\\_Action](#).

MUST NOT be present in a [Data Macro](#).

Actions of this type can have the following child arguments.

Argument	Meaning
<a href="#">DataMode</a>	The manner in which records in the data source (1) of the target object are displayed and made available for editing.
<a href="#">ObjectName</a>	The name of the object to which focus will be set. MUST be present.
<a href="#">ObjectType</a>	The type of the object to which focus will be set. MUST be present.
<a href="#">Page</a>	The page number of the target object that will be displayed when focus is set to the object.
<a href="#">PathToSubformControl</a>	The <a href="#">SubForm</a> control in which the target object will be opened.
<a href="#">WhereCondition</a>	An <a href="#">expression</a> used to select the set of records that will be displayed from the



Argument	Meaning
	data source (1) of the target object.

### 2.2.5.1.2 CancelRecordChange

Undoes the last change to a record when present in a [User Interface Macro](#). Exits the [CT\\_CreateRecord](#) or [CT\\_EditRecord](#) block when present in a [Data Macro](#).

MUST NOT be present in a [CT\\_DataMacroStatements](#) element unless that element is contained by a [CT\\_EditRecord](#) or [CT\\_CreateRecord](#) element.

### 2.2.5.1.3 ClearMacroError

Clears the last error that occurred during a macro action.

### 2.2.5.1.4 CloseWindow

Closes the active window.

MUST NOT be present in a [Data Macro](#).

### 2.2.5.1.5 DeleteRecord

If present in a [User Interface Macro](#), deletes the current record from the data source (1) of the active [Form](#). If present in a [Data Macro](#), deletes a record based on the argument.

MUST NOT be present in a [CT\\_DataMacroStatements](#) element that is contained by a [CT\\_EditRecord](#) or [CT\\_CreateRecord](#) element or by a [CT\\_DataMacro](#) whose **Event** attribute is set to "BeforeChange" or "BeforeDelete".

Actions of this type in a Data Macro can have the following child argument.

Argument	Meaning
<a href="#">Alias</a>	The data source (1) from which the record is to be deleted. If this argument is not present, the current record is deleted.

### 2.2.5.1.6 ExitForEachRecord

Exits a running [CT\\_ForEachRecord](#) loop.

MUST NOT be present in a [Data Macro](#) in any element except a [CT\\_DataMacroStatements](#) that is contained by a [CT\\_ForEachRecord](#) element. MUST NOT be present in a [User Interface Macro](#).

### 2.2.5.1.7 GoToControl

Sets the focus to a control on the active [Form](#).

MUST NOT be present in a [Data Macro](#).

Actions of this type can have the following child argument.

Argument	Meaning
<a href="#">ControlName</a>	The name of the control to which the focus will be set.

### 2.2.5.1.8 GoToRecord

Sets the current record in the active list (1), [Form](#), or [Query](#).

MUST NOT be present in a [Data Macro](#).

Actions of this type can have the following child argument.

Argument	Meaning
<a href="#">Record</a>	The record that will become current.

### 2.2.5.1.9 LogEvent

Logs an event entry.

MUST NOT be present in a [CT DataMacroStatements](#) element that is contained by a [CT EditRecord](#) or [CT CreateRecord](#) element or by a [CT DataMacro](#) whose **Event** attribute is "BeforeChange" or "BeforeDelete". MUST NOT be present in a [User Interface Macro](#).

Actions of this type can have the following child argument.

Argument	Meaning
<a href="#">Description</a>	The description of the event entry to be logged. MUST be present.

### 2.2.5.1.10 MessageBox

Launches a modal dialog box that displays a message.

MUST NOT be present in a [Data Macro](#).

Actions of this type can have the following child argument.

Argument	Meaning
<a href="#">Message</a>	The message to be displayed in the dialog box. MUST be present.

### 2.2.5.1.11 OnError

Specifies the action to be performed when an error occurs while a macro is running.

Actions of this type can have the following child arguments.

Argument	Meaning
<a href="#">Goto</a>	The action to be performed when the error occurs. MUST be present.
<a href="#">MacroName</a>	A subroutine to be run. MUST be present if the <b>Goto</b> argument is "Macro Name". MUST NOT be present in a <a href="#">Data Macro</a> .

### 2.2.5.1.12 OpenForm

Opens a [Form](#). Parameters to that Form are specified by the **Parameters** element in [CT Action](#). MUST NOT be present in a [Data Macro](#).

Actions of this type can have the following child arguments.

Argument	Meaning
<a href="#">DataMode</a>	The manner in which target Form will display records from its data source (1) and make them available for editing.
<a href="#">FormName</a>	The name of the Form to open. MUST be present.
<a href="#">WhereCondition</a>	An <a href="#">expression</a> that is used to select a set of records from the data source (1) of the target Form.
<a href="#">WindowMode</a>	The window mode in which the target Form will be opened.

### 2.2.5.1.13 OpenReport

Opens a [Report](#). Parameters to that Report are specified by the **Parameters** element in [CT Action](#). MUST NOT be present in a [Data Macro](#).

Actions of this type can have the following child arguments.

Argument	Meaning
<a href="#">ReportName</a>	The name of the Report to open. MUST be present.
<a href="#">WhereCondition</a>	An <a href="#">expression</a> that is used to select a set of records from the data source (1) of the target Report.
<a href="#">WindowMode</a>	The window mode in which the target Report will be opened.

### 2.2.5.1.14 RaiseError

Generates an error message.

MUST NOT be present in a [User Interface Macro](#). MUST not be present in a [CT DataMacroStatements](#) element that is contained by a [CT EditRecord](#) or [CT CreateRecord](#) element.

Actions of this type can have the following child arguments.

Argument	Meaning
<a href="#">Description</a>	The description of the error.
<a href="#">Number</a>	The error number. MUST be present.

### 2.2.5.1.15 RefreshRecord

Refreshes the current record.

MUST NOT be present in a [Data Macro](#).

#### 2.2.5.1.16 RemoveAllTempVars

Removes all [temporary variables](#) in the active session (2).

MUST NOT be present in a [Data Macro](#).

#### 2.2.5.1.17 RemoveTempVar

Removes a single [temporary variable](#) in the active session (2).

MUST NOT be present in a [Data Macro](#).

Actions of this type can have the following child argument.

Argument	Meaning
<a href="#">Name</a>	The name of the temporary variable to remove. MUST be present.

#### 2.2.5.1.18 Requery

Requeries the data source (1) of the control on the active object or recalculates the value of the control if it is based on an [expression](#).

MUST NOT be present in a [Data Macro](#).

Actions of this type can have the following child argument.

Argument	Meaning
<a href="#">ControlName</a>	The name of the control to refresh. If this argument is not specified, the active object is refreshed.

#### 2.2.5.1.19 RunDataMacro

Calls a named [Data Macro](#). Parameters to the invoked macro are specified by the **Parameters** element in the [CT Action](#) element that specifies the **RunDataMacro** action.

MUST NOT be present in a [CT DataMacroStatements](#) element that is contained by a [CT EditRecord](#) or [CT CreateRecord](#) element or by a [CT DataMacro](#) whose **Event** attribute is "BeforeChange" or "BeforeDelete".

Actions of this type can have the following child arguments.

Argument	Meaning
<a href="#">MacroName</a>	The name of the Data Macro to be run. MUST be present.

#### 2.2.5.1.20 RunMacro

Runs a standalone [User Interface Macro](#).

MUST NOT be present in a [Data Macro](#).

Actions of this type can have the following child argument.

Argument	Meaning
<a href="#">MacroName</a>	The name of the User Interface Macro to be run. MUST be present.

#### 2.2.5.1.21 SaveRecord

Saves the current record.

MUST NOT be present in a [Data Macro](#).

#### 2.2.5.1.22 SendEmail

Composes and sends an e-mail message.

MUST NOT be present in a [User Interface Macro](#). MUST NOT be present in a [CT\\_DataMacroStatements](#) element that is contained by a [CT\\_EditRecord](#) or [CT\\_CreateRecord](#) element or by a [CT\\_DataMacro](#) whose **Event** attribute is set to "BeforeChange" or "BeforeDelete".

Actions of this type can have the following child arguments.

Argument	Usage
<a href="#">Bcc</a>	The e-mail addresses for Bcc recipients.
<a href="#">Body</a>	The body of the e-mail.
<a href="#">Cc</a>	The e-mail addresses for Cc recipients.
<a href="#">Subject</a>	The subject of the e-mail.
<a href="#">To</a>	The e-mail addresses for To recipients. MUST be present.

#### 2.2.5.1.23 SetField

Changes the value of a field (3) in the current record.

MUST NOT be present in a [CT\\_DataMacroStatements](#) element unless that element is contained by a [CT\\_CreateRecord](#) or [CT\\_EditRecord](#) element or by a [CT\\_DataMacro](#) element whose **Event** attribute is set to "BeforeChange". MUST NOT be present in a [User Interface Macro](#).

Actions of this type can have the following child arguments.

Argument	Meaning
<a href="#">Field</a>	The name of the field (3) in the record that will be updated. MUST be present.
<a href="#">Value</a>	The new value for the target field (3) in the record. MUST be present.

#### 2.2.5.1.24 SetFilter

Applies a filter to the data source (1) of a control.

MUST NOT be present in a [Data Macro](#).

Actions of this type can have the following child arguments.

Argument	Meaning
<a href="#">WhereCondition</a>	An <a href="#">Expression</a> that is used to select a set of records from the data source (1) of the target object.
<a href="#">ControlName</a>	The name of the control to which the filter will be applied. If this argument is not specified, the filter is applied to the active object.

#### 2.2.5.1.25 SetLocalVar

Sets the value of a [local variable](#). Creates the local variable if it hasn't been created already.

Actions of this type can have the following child arguments.

Argument	Meaning
<a href="#">Expression</a>	An <a href="#">Expression</a> that evaluates to the new value of the local variable in a <a href="#">User Interface Macro</a> . MUST be present when this action is in a User Interface Macro. MUST NOT be present when this action is in a <a href="#">Data Macro</a> .
<a href="#">Name</a>	The name of the local variable. MUST be present.
<a href="#">Value</a>	The new value of the local variable in a Data Macro. MUST be present when this action is in a Data Macro. MUST NOT be present when this action is in a User Interface Macro.

#### 2.2.5.1.26 SetOrderBy

Sorts the data source (1) of a control in a specific order.

MUST NOT be present in a [Data Macro](#).

Actions of this type can have the following child arguments.

Argument	Meaning
<a href="#">ControlName</a>	The name of the control to which the sort will be applied. If this argument is not specified, the sort is applied to the active object.
<a href="#">OrderBy</a>	The sort order. MUST be present.

#### 2.2.5.1.27 SetProperty

Sets the value of a property for a control.

MUST NOT be present in a [Data Macro](#).

Actions of this type can have the following child arguments.

Argument	Meaning
<a href="#">ControlName</a>	The name of the control on which to set the property. If this argument is not present, the property is set for the active object.
<a href="#">Property</a>	The name of the property to be set. MUST be present.

Argument	Meaning
<a href="#">Value</a>	The value the property is set to.

### 2.2.5.1.28 SetReturnVar

Sets the value of a [return variable](#). Creates the return variable if it hasn't been created yet.

MUST NOT be present in a [User Interface Macro](#).

Actions of this type can have the following child arguments.

Argument	Meaning
<a href="#">Name</a>	The name of the return variable. MUST be present.
<a href="#">Value</a>	The new value of the return variable in a <a href="#">Data Macro</a> . MUST be present.

### 2.2.5.1.29 SetTempVar

Sets the value of a [temporary variable](#). Creates the temporary variable if it hasn't been created yet.

MUST NOT be present in a [Data Macro](#).

Actions of this type can have the following child arguments.

Argument	Meaning
<a href="#">Expression</a>	An <a href="#">Expression</a> that evaluates to the new value of the temporary variable. MUST be present.
<a href="#">Name</a>	The name of the temporary variable. MUST be present.

### 2.2.5.1.30 StopAllMacros

Halts all currently running [Macros](#).

If present in a [Data Macro](#), this action MUST NOT be present in a [CT\\_DataMacroStatements](#) element that is contained by a [CT\\_DataMacro](#) element whose **Event** attribute is set to "BeforeChange" or "BeforeDelete".

### 2.2.5.1.31 StopMacro

Halts the currently running [Macro](#).

## 2.2.5.2 Arguments

Arguments are elements of type [CT\\_Argument](#) that exist as child elements of a [CT\\_Action](#) element. The **Name** attribute of an argument MUST be the title of one of the following subsections.

### 2.2.5.2.1 Alias

A string ([\[XMLSCHEMA2\]](#) section 3.2.1) that specifies the name of a data source (1). The value of this argument corresponds to the **Alias** attribute of [CT\\_ForEachRecordData](#) or [CT\\_LookupRecordData](#).

Applies to: [DeleteRecord](#)

#### 2.2.5.2.2 Bcc

A string ([XMLSCHEMA2] section 3.2.1) that specifies a list of e-mail addresses, delimited by semi-colons, that are entered into the 'Bcc' field of an e-mail message.

Applies to: [SendEmail](#)

#### 2.2.5.2.3 Body

A string ([XMLSCHEMA2] section 3.2.1) that specifies the body of an e-mail message. If the value of this argument begins with an '=' character, it is interpreted as an [Expression](#); otherwise it is interpreted as a string literal.

Applies to: [SendEmail](#)

#### 2.2.5.2.4 Cc

A string ([XMLSCHEMA2] section 3.2.1) that specifies a list of e-mail addresses, delimited by semi-colons, that are entered into the 'Cc' field of an e-mail message.

Applies to: [SendEmail](#)

#### 2.2.5.2.5 ControlName

A string ([XMLSCHEMA2] section 3.2.1) that specifies the name of a control. If the value of this argument begins with an '=' character, it is interpreted as an [Expression](#); otherwise, the value MUST conform to the restrictions specified by [ST\\_ObjectName](#).

Applies to: [GoToControl](#), [Requery](#), [SetFilter](#), [SetOrderBy](#), [SetProperty](#)

#### 2.2.5.2.6 DataMode

A string ([XMLSCHEMA2] section 3.2.1) that specifies the manner in which records from the data source (1) of an object will be displayed and made available for editing. MUST be one of the following values.

Value	Meaning
Add	The object displays no existing records but can be used to create new records.
Edit	The object displays existing records that can be edited.
Read Only	The object displays existing records that cannot be edited.

Applies to: [BrowseTo](#), [OpenForm](#)

#### 2.2.5.2.7 Description

A string ([XMLSCHEMA2] section 3.2.1) that specifies the description of an event or error. If the value of this argument begins with an '=' character, it is interpreted as an [Expression](#); otherwise it is interpreted as a string literal.

Applies to: [LogEvent](#), [RaiseError](#)



### 2.2.5.2.8 Expression

A string ([XMLESCHEMA2] section 3.2.1) that specifies an [Expression](#). MUST begin with an '=' character.

Applies to: [SetLocalVar](#), [SetTempVar](#)

### 2.2.5.2.9 Field

A string ([XMLESCHEMA2] section 3.2.1) that specifies the name of a field (3). If the value of this argument begins with an '=' character, it is interpreted as an [Expression](#); otherwise, it is interpreted as a string literal.

Applies to: [SetField](#)

### 2.2.5.2.10 FormName

A string ([XMLESCHEMA2] section 3.2.1) that specifies the name of a [Form](#). If the value of this argument begins with an '=' character, it is interpreted as an [Expression](#); otherwise, the value MUST conform to the restrictions specified by [ST\\_ObjectName](#).

Applies to: [OpenForm](#)

### 2.2.5.2.11 Goto

A string ([XMLESCHEMA2] section 3.2.1) that specifies the behavior of a [Macro](#) after an error has been trapped. MUST be one of the following values.

Value	Meaning
Fail	Specifies that the running macro will be halted.
Macro Name	Specifies that a subroutine will be run. MUST NOT be used in a <a href="#">Data Macro</a> .
Next	Specifies that the running macro will proceed with the next command.

Applies to: [OnError](#)

### 2.2.5.2.12 MacroName

A string ([XMLESCHEMA2] section 3.2.1) that specifies the name of a Macro or subroutine. If the value of this argument begins with an '=' character, it is interpreted as an [Expression](#); otherwise, the value MUST conform to the restrictions specified by [ST\\_ObjectName](#).

If this attribute specifies a subroutine, then the value of this argument corresponds to the **Name** attribute of a [CT\\_Sub](#) element.

Applies to: [OnError](#), [RunDataMacro](#), [RunMacro](#)

### 2.2.5.2.13 Message

A string ([XMLESCHEMA2] section 3.2.1) that specifies text at most 255 characters in length. If the value of this argument begins with an '=' character, it is interpreted as an [Expression](#); otherwise, it is interpreted as a string literal.

Applies to: [MessageBox](#)

#### 2.2.5.2.14 Name

A string ([\[XMLSCHEMA2\]](#) section 3.2.1) that specifies the name of a variable.

Applies to: [RemoveTempVar](#), [SetLocalVar](#), [SetReturnVar](#), [SetTempVar](#)

#### 2.2.5.2.15 Number

An integer ([\[XMLSCHEMA2\]](#) section 3.3.13) that specifies an error number.

Applies to: [RaiseError](#)

#### 2.2.5.2.16 ObjectName

A string ([\[XMLSCHEMA2\]](#) section 3.2.1) that specifies the name of an object. If the value of this argument begins with an '=' character, it is interpreted as an [Expression](#), otherwise it MUST conform to the restrictions as specified by [ST\\_ObjectName](#).

Applies to: [BrowseTo](#)

#### 2.2.5.2.17 ObjectType

A string ([\[XMLSCHEMA2\]](#) section 3.2.1) that specifies an object type. MUST be set to either "Form" or "Report".

Applies to: [BrowseTo](#)

#### 2.2.5.2.18 OrderBy

A string ([\[XMLSCHEMA2\]](#) section 3.2.1) that specifies a sort order. MUST be XML that specifies a [CT\\_AdHocOrdering](#) element.

Applies to: [SetOrderBy](#)

#### 2.2.5.2.19 Page

A string ([\[XMLSCHEMA2\]](#) section 3.2.1) that specifies the first record to be displayed in a [form](#) that can display multiple records, as a multiple of the [PageSize](#) of the form. If the value of this argument begins with an '=' character, it is interpreted as an [expression](#).

Applies to: [BrowseTo](#)

#### 2.2.5.2.20 PathToSubformControl

A string ([\[XMLSCHEMA2\]](#) section 3.2.1) that specifies a [SubForm](#) control to display an object. The format of the value MUST conform to the following ABNF [\[RFC4234\]](#) grammar:

```
Path = FormName "." SubFormControlName *2NestedSubFormReference
FormName = OBJECT-NAME
SubFormControlName = OBJECT-NAME
NestedSubFormReference = ">" SubFormName "." SubFormControlName
SubFormName = OBJECT-NAME
```

<OBJECT-NAME> is specified by [ST\\_ObjectName](#).

**FormName** specifies the name of the parent [Form](#) of the SubForm control.

**SubFormControlName** specifies the name of the SubForm control.

**SubFormName** specifies the name of the Form displayed by the SubForm control.

Applies to: [BrowseTo](#)

#### 2.2.5.2.21 Property

A string ([\[XMLSCHEMA2\]](#) section 3.2.1) that specifies a property on a control. MUST be one of the following values.

Value	Meaning
BackColor	Specifies the <a href="#">Background</a> attribute of a control.
Caption	Specifies the <a href="#">Caption</a> attribute of a control.
Enabled	Specifies the <a href="#">IsEnabled</a> attribute of a control.
ForeColor	Specifies the <a href="#">Foreground</a> attribute of a control.
Locked	Specifies the <a href="#">Locked</a> attribute of a control.
Value	Specifies the value displayed by a control.
Visible	Specifies the <a href="#">Visibility</a> attribute of a control.

Applies to:  [SetProperty](#)

#### 2.2.5.2.22 Record

A string ([\[XMLSCHEMA2\]](#) section 3.2.1) that specifies a record in the data source (1). MUST be one of the following values.

Value	Meaning
First	The first record in the data source (1).
Last	The last record in the data source (1).
New	A new record in the data source (1).
Next	The record following the current record in the data source (1).
Previous	The record prior to the current record in the data source (1).

Applies to: [GoToRecord](#)

#### 2.2.5.2.23 ReportName

A string ([\[XMLSCHEMA2\]](#) section 3.2.1) that specifies the name of a [Report](#). If the value of this argument begins with an '=' character, it is interpreted as an [Expression](#); otherwise, the value MUST conform to the restrictions specified by [ST\\_ObjectName](#).

Applies to: [OpenReport](#)

#### 2.2.5.2.24 Subject

A string ([XMLSCHEMA2] section 3.2.1) that specifies the subject of an e-mail message. If the value of this argument begins with an '=' character, it is interpreted as an [Expression](#); otherwise it is interpreted as a string literal.

Applies to: [SendEmail](#)

#### 2.2.5.2.25 To

A string ([XMLSCHEMA2] section 3.2.1) that specifies a list of e-mail addresses, delimited by semi-colons, that are entered into the 'To' field of an e-mail message. If the value of this argument begins with an '=' character, it is interpreted as an [Expression](#); otherwise it is interpreted as a string literal.

Applies to: [SendEmail](#)

#### 2.2.5.2.26 Value

A string ([XMLSCHEMA2] section 3.2.1) that specifies the value to be assigned to a field (3), variable or property.

When present in a [SetField](#), [SetLocalVar](#), or [SetReturnVar](#) action, this argument is interpreted as an [Expression](#) and MUST begin with an '=' character. When present in a [SetProperty](#) action, the value of this argument is interpreted as an Expression if it begins with an '=' character; otherwise, it is interpreted as a string literal.

Applies to: [SetField](#), [SetLocalVar](#), [SetProperty](#), [SetReturnVar](#)

#### 2.2.5.2.27 WhereCondition

A string ([XMLSCHEMA2] section 3.2.1) that specifies an [expression](#) that is used to select a set of records from the data source (1) of an object. MUST begin with an '=' character.

Applies to: [BrowseTo](#), [OpenForm](#), [OpenReport](#), [RunDataMacro](#), [SetFilter](#)

#### 2.2.5.2.28 WindowMode

A string ([XMLSCHEMA2] section 3.2.1) that specifies the manner in which the window of a [Form](#) or [Report](#) is opened. MUST be one of the following values.

Value	Meaning
Dialog	The target object is opened in a pop-up modal window.
Normal	The target object is opened in the mode set by the properties of that object. MUST NOT be present in <a href="#">OpenForm</a> .

Applies to: [OpenForm](#), [OpenReport](#)

## 2.3 XAML

### 2.3.1 XAML 2006

#### 2.3.1.1 Elements

This specification does not define any common XML schema element definitions.

#### 2.3.1.2 Attributes

##### 2.3.1.2.1 Key

*Target namespace:* <http://schemas.microsoft.com/winfx/2009/04/xaml>

*Referenced by:* [CT\\_Style](#)

A string ([\[XMLSCHEMA2\]](#) section 3.2.1) attribute that specifies the unique identifier of an instance of CT\_Style.

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

```
<xs:attribute name="Key" type="xs:string" wblld:cname="Key"/>
```

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

##### 2.3.1.2.2 Name

*Target namespace:* <http://schemas.microsoft.com/winfx/2009/04/xaml>

*Referenced by:* [CT\\_Border](#), [CT\\_AccTextBox](#), [CT\\_AccButton](#), [CT\\_AccComboBox](#), [CT\\_AccCheckBox](#), [CT\\_AccListBox](#), [CT\\_AccLabel](#), [CT\\_AccAttachment](#), [CT\\_AccImage](#), [CT\\_AccSubForm](#), [CT\\_AccNavigationControl](#), [CT\\_AccNavigationButton](#), [CT\\_AccTabControl](#), [CT\\_TabItem](#), [CT\\_AccWebBrowser](#), [CT\\_Section](#), [CT\\_AccDataSheet](#), [CT\\_AccDSTextBox](#), [CT\\_AccDSLabel](#), [CT\\_AccDSAttachment](#), [CT\\_AccDSComboBox](#), [CT\\_AccDSCheckBox](#)

A string ([\[XMLSCHEMA2\]](#) section 3.2.1) attribute that specifies the unique identifier of the control. The name MUST conform to the following ABNF [\[RFC4234\]](#) grammar:

```
control-name = control-name-first-character *63control-name-character  
control-name-first-character = ALPHA  
control-name-character = control-name-first-character / DIGIT / "_"
```

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

```
<xs:attribute name="Name" type="xs:string" wblld:cname="Name"/>
```

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

### 2.3.1.3 Complex Types

None.

### 2.3.1.4 Simple Types

This specification does not define any common XML schema simple type definitions.

## 2.3.2 WPF

### 2.3.2.1 Elements

#### 2.3.2.1.1 Grid

*Target namespace:* <http://schemas.microsoft.com/client/2009/11>

*Referenced by:* [CT\\_StackPanelSection](#), [CT\\_TabItem](#), [CT\\_Section](#)

A [CT\\_Grid](#) element.

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

```
<xs:element name="Grid" type="CT_Grid" wld:cname="Grid"/>
```

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

#### 2.3.2.1.2 Border

*Target namespace:* <http://schemas.microsoft.com/client/2009/11>

*Referenced by:* [CT\\_Grid](#), [CT\\_AccNavigationControl](#)

A [CT\\_Border](#) element.

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

```
<xs:element name="Border" wld:cname="Border" type="CT_Border"/>
```

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

### 2.3.2.2 Attributes

This specification does not define any common XML schema attribute definitions.

### 2.3.2.3 Complex Types

#### 2.3.2.3.1 CT\_StackPanelResource

*Target namespace:* <http://schemas.microsoft.com/client/2009/11>

*Referenced by:* [CT\\_Form](#)

A **dictionary** that contains [Styles](#) used by the controls in a [Form](#).

*Child Elements:*

**Style** : A [CT\\_Style](#) element.

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

```
<xs:complexType name="CT_StackPanelResource">
  <xs:sequence>
    <xs:element name="Style" type="CT_Style" minOccurs="0" maxOccurs="unbounded"
      wblid:cname="Style"/>
  </xs:sequence>
</xs:complexType>
```

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

### 2.3.2.3.2 CT\_Style

*Target namespace:* <http://schemas.microsoft.com/client/2009/11>

*Referenced by:* [CT\\_StackPanelResource](#)

A **Style** element as specified by [\[MS-WPFXV\]](#) section 1.191.

*Child Elements:*

**Setter** : A [CT\\_Setter](#) element.

*Attributes:*

**TargetType** : A string ([\[XMLSCHEMA2\]](#) section 3.2.1) attribute that specifies whether this style applies to a [Border](#) or a control. If this attribute is present, then the style applies to a Border and the attribute value MUST be "Border"; otherwise the style applies to a control.

**x:Key** : A string ([\[XMLSCHEMA2\]](#) section 3.2.1) attribute that specifies the unique identifier for this style in **Form.Resources**.

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

```
<xs:complexType name="CT_Style">
  <xs:sequence>
    <xs:element name="Setter" type="CT_Setter" minOccurs="0" maxOccurs="unbounded"
      wblid:cname="Setter"/>
  </xs:sequence>
  <xs:attribute name="TargetType" type="xs:string" fixed="Border" wblid:cname="TargetType"
    use="optional"/>
  <xs:attribute ref="x:Key" use="optional"/>
</xs:complexType>
```

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

### 2.3.2.3.3 CT\_Setter

*Target namespace:* <http://schemas.microsoft.com/client/2009/11>

*Referenced by:* [CT\\_Style](#)

A **Setter** element as specified by [\[MS-WPFXV\]](#) section 1.177.2.

*Attributes:*

**Property** : An [ST\\_SetterProperty](#) attribute that specifies the property to which the **Value** will be assigned.

**Value** : A string ([\[XMLSCHEMA2\]](#) section 3.2.1) attribute that specifies the value to be assigned to the **Property** specified by this **Setter**.

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

```
<xs:complexType name="CT_Setter">
  <xs:attribute name="Property" type="ST_SetterProperty" wblid:cname="Property"
    use="optional"/>
  <xs:attribute name="Value" type="xs:string" wblid:cname="Value" use="optional"/>
</xs:complexType>
```

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

### 2.3.2.3.4 CT\_StackPanelSection

*Target namespace:* <http://schemas.microsoft.com/client/2009/11>

*Referenced by:* [CT\\_Section](#)

A **Section** element as specified by [\[MS-WPFXV\]](#) section 1.48.11.1.6.1.4.

*Child Elements:*

**Grid** : A [CT\\_Grid](#) element.

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

```
<xs:complexType name="CT_StackPanelSection">
  <xs:sequence>
    <xs:choice minOccurs="0" maxOccurs="unbounded">
      <xs:element ref="Grid"/>
    </xs:choice>
  </xs:sequence>
</xs:complexType>
```

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

### 2.3.2.3.5 CT\_Grid

*Target namespace:* <http://schemas.microsoft.com/client/2009/11>



Referenced by: [CT\\_StackPanelSection](#), [CT\\_TabItem](#), [CT\\_Section](#), [Grid](#)

A **Grid** element as specified by [\[MS-WPFV\]](#) section 1.48.95.2.1.17.3.

*Child Elements:*

**Border** : A [CT\\_Border](#) element.

**Grid.ColumnDefinitions** : A [CT\\_GridColumnDefinitions](#) element.

**Grid.RowDefinitions** : A [CT\\_GridRowDefinitions](#) element.

*Attributes:*

**a:LayoutGroup** : An [Ignored Value](#).

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

```
<xs:complexType name="CT_Grid">
  <xs:sequence>
    <xs:element name="Grid.ColumnDefinitions" type="CT_GridColumnDefinitions"
      wblld:cname="Grid_ColumnDefinitions"/>
    <xs:element name="Grid.RowDefinitions" type="CT_GridRowDefinitions"
      wblld:cname="Grid_RowDefinitions"/>
    <xs:element ref="Border" minOccurs="0" maxOccurs="unbounded"/>
  </xs:sequence>
  <xs:attribute ref="a:LayoutGroup" use="required"/>
</xs:complexType>
```

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

### 2.3.2.3.6 CT\_GridColumnDefinitions

*Target namespace:* <http://schemas.microsoft.com/client/2009/11>

Referenced by: [CT\\_Grid](#)

A **Grid.ColumnDefinitions** element as specified by [\[MS-WPFV\]](#) section 1.34, **ColumnDefinitionCollection**.

*Child Elements:*

**ColumnDefinition** : A [CT\\_ColumnDefinition](#) element.

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

```
<xs:complexType name="CT_GridColumnDefinitions">
  <xs:sequence>
    <xs:element name="ColumnDefinition" type="CT_ColumnDefinition" minOccurs="0"
      maxOccurs="unbounded" wblld:cname="ColumnDefinition"/>
  </xs:sequence>
</xs:complexType>
```

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

### 2.3.2.3.7 CT\_ColumnDefinition

*Target namespace:* <http://schemas.microsoft.com/client/2009/11>

*Referenced by:* [CT\\_GridColumnDefinitions](#)

A **ColumnDefinition** element as specified by [\[MS-WPFXV\]](#) section 1.48.11.1.1.1.

*Attributes:*

**Width** : An unsignedInt ([\[XMLSCHEMA2\]](#) section 3.3.22) attribute that specifies the width of a column (2).

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

```
<xs:complexType name="CT_ColumnDefinition">
  <xs:attribute name="Width" type="xs:unsignedInt" use="optional" wld:cname="Width"/>
</xs:complexType>
```

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

### 2.3.2.3.8 CT\_GridRowDefinitions

*Target namespace:* <http://schemas.microsoft.com/client/2009/11>

*Referenced by:* [CT\\_Grid](#)

A **Grid.RowDefinitions** element as specified by [\[MS-WPFXV\]](#) section 1.174, **RowDefinitionCollection**.

*Child Elements:*

**RowDefinition** : A [CT\\_RowDefinition](#) element.

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

```
<xs:complexType name="CT_GridRowDefinitions">
  <xs:sequence>
    <xs:element name="RowDefinition" type="CT_RowDefinition" minOccurs="0"
      maxOccurs="unbounded" wld:cname="RowDefinition"/>
  </xs:sequence>
</xs:complexType>
```

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

### 2.3.2.3.9 CT\_RowDefinition

*Target namespace:* <http://schemas.microsoft.com/client/2009/11>

*Referenced by:* [CT\\_GridRowDefinitions](#)

A **RowDefinition** element as specified by [\[MS-WPFXV\]](#) section 1.48.11.1.1.2.

*Attributes:*

**Height** : An unsignedInt ([\[XMLSCHEMA2\]](#) section 3.3.22) attribute that specifies the height of a row (2).

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

```
<xs:complexType name="CT_RowDefinition">
  <xs:attribute name="Height" type="xs:unsignedInt" use="optional" wblid:cname="Height"/>
</xs:complexType>
```

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

### 2.3.2.3.10 CT\_DataTemplateProperty

*Target namespace:* <http://schemas.microsoft.com/client/2009/11>

*Referenced by:* [CT\\_Form](#)

Container type that MUST contain exactly one **DataTemplate** element.

*Child Elements:*

**DataTemplate** : A [CT\\_DataTemplate](#) element that specifies the detail section of a [Form](#).

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

```
<xs:complexType name="CT_DataTemplateProperty">
  <xs:all>
    <xs:element name="DataTemplate" type="CT_DataTemplate" wblid:cname="DataTemplate"/>
  </xs:all>
</xs:complexType>
```

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

### 2.3.2.3.11 CT\_DataTemplate

*Target namespace:* <http://schemas.microsoft.com/client/2009/11>

*Referenced by:* [CT\\_DataTemplateProperty](#)

A **DataTemplate** element as specified by [\[MS-WPFXV\]](#) section 1.85.2.

*Child Elements:*

**a:Section** : A [CT\\_Section](#) element.

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

```
<xs:complexType name="CT_DataTemplate">
  <xs:sequence>
    <xs:element ref="a:Section"/>
  </xs:sequence>
</xs:complexType>
```

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

### 2.3.2.3.12 CT\_Border

*Target namespace:* <http://schemas.microsoft.com/client/2009/11>

*Referenced by:* [CT\\_Grid](#), [CT\\_AccNavigationControl](#), [Border](#)

A **Border** element as specified by [\[MS-WPFXY\]](#) section 1.48.95.2.1.5.2. This element represents one or more cells that can contain a control. This element MUST contain either zero child elements or exactly one child element, which specifies the control. When this element contains zero child elements, it represents an empty cell.

*Child Elements:*

**a:Attachment** : A [CT\\_AccAttachment](#) that specifies an [Attachment](#) element.

**a:Button** : A [CT\\_AccButton](#) that specifies a [Button](#) element.

**a:CheckBox** : A [CT\\_AccCheckBox](#) that specifies a [CheckBox](#) element.

**a:ComboBox** : A [CT\\_AccComboBox](#) that specifies a [ComboBox](#) element.

**a:Image** : A [CT\\_AccImage](#) that specifies an [Image](#) element.

**a:Label** : A [CT\\_AccLabel](#) that specifies a [Label](#) element.

**a:ListBox** : A [CT\\_AccListBox](#) that specifies a [ListBox](#) element.

**a:NavigationButton** : A [CT\\_AccNavigationButton](#) that specifies a [NavigationButton](#) element.

**a:NavigationControl** : A [CT\\_AccNavigationControl](#) that specifies a [NavigationControl](#) element.

**a:SubForm** : A [CT\\_AccSubForm](#) that specifies a [SubForm](#) element.

**a:TabControl** : A [CT\\_AccTabControl](#) that specifies a [TabControl](#) element.

**a:TextBox** : A [CT\\_AccTextBox](#) that specifies a [TextBox](#) element.

**a:WebBrowser** : A [CT\\_AccWebBrowser](#) that specifies a [WebBrowser](#) element.

*Attributes:*

**ControlHeight** : An unsignedInt ([\[XMLSCHEMA2\]](#) section 3.3.22) that specifies the [ControlHeight](#) attribute.

**ControlWidth** : An unsignedInt ([\[XMLSCHEMA2\]](#) section 3.3.22) that specifies the [ControlWidth](#) attribute.

**Grid.Column** : An unsignedInt ([\[XMLSCHEMA2\]](#) section 3.3.22) attribute that specifies the column in which the child control or empty cell appears within the layout.

**Grid.ColumnSpan** : An unsignedInt ([\[XMLSCHEMA2\]](#) section 3.3.22) attribute that specifies the total number of columns the child control or empty cell spans within the layout.

**Grid.Row** : An unsignedInt ([\[XMLSCHEMA2\]](#) section 3.3.22) attribute that specifies the row in which the child control or empty cell appears within the layout.

**Grid.RowSpan** : An unsignedInt ([XMLSCHEMA2] section 3.3.22) attribute that specifies the total number of rows the child control or empty cell spans within the layout.

**MinHeight** : An unsignedInt ([XMLSCHEMA2] section 3.3.22) that specifies the [MinHeight](#) attribute.

**MinWidth** : An unsignedInt ([XMLSCHEMA2] section 3.3.22) that specifies the [MinWidth](#) attribute.

**Style** : An [ST\\_ReferenceType](#) that specifies the [Style](#) attribute.

**Tag** : An [Ignored Value](#).

**x:Name** : A string ([XMLSCHEMA2] section 3.2.1) that specifies the [Name](#) attribute.

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

```
<xs:complexType name="CT_Border">
  <xs:choice minOccurs="0">
    <xs:element ref="a:TextBox"/>
    <xs:element ref="a:Button"/>
    <xs:element ref="a:ComboBox"/>
    <xs:element ref="a:CheckBox"/>
    <xs:element ref="a:ListBox"/>
    <xs:element ref="a:Label"/>
    <xs:element ref="a:Attachment"/>
    <xs:element ref="a:Image"/>
    <xs:element ref="a:SubForm"/>
    <xs:element ref="a:NavigationControl"/>
    <xs:element ref="a:NavigationButton"/>
    <xs:element ref="a:TabControl"/>
    <xs:element ref="a:WebBrowser"/>
  </xs:choice>
  <xs:attribute name="Style" type="ST_ReferenceType" use="optional" wblid:cname="Style"/>
  <xs:attribute name="Grid.Column" type="xs:unsignedInt" use="optional"
wblid:cname="Grid_Column"/>
  <xs:attribute name="Grid.ColumnSpan" type="xs:unsignedInt" wblid:cname="Grid_ColumnSpan"
use="optional"/>
  <xs:attribute name="Grid.Row" type="xs:unsignedInt" use="optional" wblid:cname="Grid_Row"/>
  <xs:attribute name="Grid.RowSpan" type="xs:unsignedInt" wblid:cname="Grid_RowSpan"
use="optional"/>
  <xs:attribute name="MinWidth" type="xs:unsignedInt" wblid:cname="MinWidth" use="optional"/>
  <xs:attribute name="MinHeight" type="xs:unsignedInt" wblid:cname="MinHeight"
use="optional"/>
  <xs:attribute name="ControlHeight" type="xs:unsignedInt" wblid:cname="ControlHeight"
use="optional"/>
  <xs:attribute name="ControlWidth" type="xs:unsignedInt" wblid:cname="ControlWidth"
use="optional"/>
  <xs:attribute ref="x:Name" use="optional"/>
  <xs:attribute name="Tag" type="xs:string" wblid:cname="Tag" use="optional"/>
</xs:complexType>
```

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

## 2.3.2.4 Simple Types

### 2.3.2.4.1 ST\_SetterProperty

*Target namespace:* <http://schemas.microsoft.com/client/2009/11>

Referenced by: [CT\\_Setter](#)

A string ([\[XMLSCHEMA2\]](#) section 3.2.1) that MUST be one of the following values.

Value	Meaning
Control.FontFamily	Specifies the <a href="#">FontFamily</a> attribute.
Control.FontSize	Specifies the <a href="#">FontSize</a> attribute.
Control.FontStyle	Specifies the <a href="#">FontStyle</a> attribute.
Control.FontWeight	Specifies the <a href="#">FontWeight</a> attribute.
Control.Foreground	Specifies the <a href="#">Foreground</a> attribute.
Control.Background	Specifies the <a href="#">Background</a> attribute.
Control.TextDecorations	Specifies the <a href="#">TextDecorations</a> attribute.
Control.Padding	Specifies the <a href="#">Padding</a> attribute.
AccessControl.TextAlignment	Specifies the <a href="#">TextAlignment</a> attribute.
AccessControl.LineHeight	Specifies the <a href="#">LineHeight</a> attribute.
AccessControl.GridlineBorderBrush	Specifies the <a href="#">GridlineBorderBrush</a> attribute.
Control.BorderThickness	Specifies the <a href="#">BorderThickness</a> attribute.
AccessControl.BorderColor	An <a href="#">Ignored Value</a> .
AccessControl.BackColor	An Ignored Value.
AccessControl.BackShade	An Ignored Value.
AccessControl.BackTint	An Ignored Value.
AccessControl.BackThemeColorIndex	An Ignored Value.
AccessControl.ForeShade	An Ignored Value.
AccessControl.ForeTint	An Ignored Value.
AccessControl.ForeThemeColorIndex	An Ignored Value.
AccessControl.BorderBrushShade	An Ignored Value.
AccessControl.BorderTint	An Ignored Value.
AccessControl.BorderThemeColorIndex	An Ignored Value.
AccessControl.Bevel	An Ignored Value.
AccessControl.UseTheme	An Ignored Value.
AccessControl.Glow	An Ignored Value.
AccessControl.Shape	An Ignored Value.
AccessControl.Shadow	An Ignored Value.

Value	Meaning
AccessControl.SoftEdge	An Ignored Value.
AccessControl.Gradient	An Ignored Value.
AccessControl.Preset	An Ignored Value.
AccessControl.PresetMask	An Ignored Value.
AccessControl.WebImageTop	Specifies the <a href="#">WebImageTop</a> attribute.
AccessControl.WebImageLeft	Specifies the <a href="#">WebImageLeft</a> attribute.
AccessControl.WebImageWidth	An Ignored Value.
AccessControl.WebImageHeight	An Ignored Value.
AccessControl.EffectSize	Specifies the <a href="#">EffectSize</a> attribute.
AccessControl.ThemeFontIndex	An Ignored Value.
AccessControl.BorderLineStyle	An Ignored Value.
AccessControl.CharSet	An Ignored Value.

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

```
<xs:simpleType name="ST_SetterProperty">
  <xs:restriction base="xs:string">
    <xs:enumeration value="Control.FontFamily" wblid:cname="Control_FontFamily"/>
    <xs:enumeration value="Control.FontSize" wblid:cname="Control_FontSize"/>
    <xs:enumeration value="Control.FontStyle" wblid:cname="Control_FontStyle"/>
    <xs:enumeration value="Control.FontWeight" wblid:cname="Control_FontWeight"/>
    <xs:enumeration value="Control.Foreground" wblid:cname="Control_Foreground"/>
    <xs:enumeration value="Control.Background" wblid:cname="Control_Background"/>
    <xs:enumeration value="Control.TextDecorations" wblid:cname="Control_TextDecorations"/>
    <xs:enumeration value="Control.Padding" wblid:cname="Control_Padding"/>
    <xs:enumeration value="AccessControl.TextAlignment"
wblid:cname="AccessControl_TextAlignment"/>
    <xs:enumeration value="AccessControl.LineHeight" wblid:cname="AccessControl_LineHeight"/>
    <xs:enumeration value="AccessControl.GridlineBorderBrush"
wblid:cname="Control_BorderBrush"/>
    <xs:enumeration value="Control.BorderThickness" wblid:cname="Control_BorderThickness"/>
    <xs:enumeration value="AccessControl.BorderColor"
wblid:cname="AccessControl_BorderColor"/>
    <xs:enumeration value="AccessControl.BackColor" wblid:cname="AccessControl_BackColor"/>
    <xs:enumeration value="AccessControl.BackShade"
wblid:cname="AccessControl_BackgroundShade"/>
    <xs:enumeration value="AccessControl.BackTint"
wblid:cname="AccessControl_BackgroundTint"/>
    <xs:enumeration value="AccessControl.BackThemeColorIndex"
wblid:cname="AccessControl_BackThemeColorIndex"/>
    <xs:enumeration value="AccessControl.ForeShade"
wblid:cname="AccessControl_ForegroundShade"/>
    <xs:enumeration value="AccessControl.ForeTint"
wblid:cname="AccessControl_ForegroundTint"/>
    <xs:enumeration value="AccessControl.ForeThemeColorIndex"
wblid:cname="AccessControl_ForeThemeColorIndex"/>
  </xs:restriction>
</xs:simpleType>
```

```

    <xs:enumeration value="AccessControl.BorderBrushShade"
wblid:cname="AccessControl_BorderBrushShade"/>
    <xs:enumeration value="AccessControl.BorderTint" wblid:cname="AccessControl_BorderTint"/>
    <xs:enumeration value="AccessControl.BorderThemeColorIndex"
wblid:cname="AccessControl_BorderThemeColorIndex"/>
    <xs:enumeration value="AccessControl.Bevel" wblid:cname="AccessControl_Bevel"/>
    <xs:enumeration value="AccessControl.UseTheme" wblid:cname="AccessControl_UseTheme"/>
    <xs:enumeration value="AccessControl.Glow" wblid:cname="AccessControl_Glow"/>
    <xs:enumeration value="AccessControl.Shape" wblid:cname="AccessControl_Shape"/>
    <xs:enumeration value="AccessControl.Shadow" wblid:cname="AccessControl_Shadow"/>
    <xs:enumeration value="AccessControl.SoftEdge" wblid:cname="AccessControl_SoftEdge"/>
    <xs:enumeration value="AccessControl.Gradient" wblid:cname="AccessControl_Gradient"/>
    <xs:enumeration value="AccessControl.Preset" wblid:cname="AccessControl_Preset"/>
    <xs:enumeration value="AccessControl.PresetMask" wblid:cname="AccessControl_PresetMask"/>
    <xs:enumeration value="AccessControl.WebImageTop"
wblid:cname="AccessControl_WebImageTop"/>
    <xs:enumeration value="AccessControl.WebImageLeft"
wblid:cname="AccessControl_WebImageLeft"/>
    <xs:enumeration value="AccessControl.WebImageWidth"
wblid:cname="AccessControl_WebImageWidth"/>
    <xs:enumeration value="AccessControl.WebImageHeight"
wblid:cname="AccessControl_WebImageHeight"/>
    <xs:enumeration value="AccessControl.EffectSize" wblid:cname="AccessControl_EffectSize"/>
    <xs:enumeration value="AccessControl.ThemeFontIndex"
wblid:cname="AccessControl_ThemeFontIndex"/>
    <xs:enumeration value="AccessControl.BorderLineStyle"
wblid:cname="AccessControl_BorderLineStyle"/>
    <xs:enumeration value="AccessControl.CharSet" wblid:cname="AccessControl_CharSet"/>
  </xs:restriction>
</xs:simpleType>

```

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

### 2.3.2.4.2 ST\_Color

*Target namespace:* <http://schemas.microsoft.com/client/2009/11>

*Referenced by:* [CT\\_Form](#)

A string ([\[XMLSCHEMA2\]](#) section 3.2.1) that specifies an **sRGB** color. The value MUST conform to the following ABNF [\[RFC4234\]](#) grammar:

```

Color = "#" RedValue GreenValue BlueValue
RedValue = 2 (ASCII-DIGIT-HEXADECIMAL)
GreenValue = 2 (ASCII-DIGIT-HEXADECIMAL)
BlueValue = 2 (ASCII-DIGIT-HEXADECIMAL)

```

**<ASCII-DIGIT-HEXADECIMAL>** is defined in [\[MS-OSHARED\]](#) section 2.1.

**RedValue** specifies the red **color level** in this color.

**GreenValue** specifies the green color level in this color.

**BlueValue** specifies the blue color level in this color.

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



```

<xs:simpleType name="ST_Color">
  <xs:restriction base="xs:string">
    <xs:pattern value="^[a-f]|[A-F]|[0-9]{6}" />
  </xs:restriction>
</xs:simpleType>

```

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

### 2.3.2.4.3 ST\_ReferenceType

*Target namespace:* <http://schemas.microsoft.com/client/2009/11>

*Referenced by:* [CT Border](#), [CT AccTextBox](#), [CT AccButton](#), [CT AccComboBox](#), [CT AccCheckBox](#), [CT AccListBox](#), [CT AccLabel](#), [CT AccAttachment](#), [CT AccImage](#), [CT AccSubForm](#), [CT AccNavigationControl](#), [CT AccNavigationButton](#), [CT AccTabControl](#), [CT TabItem](#), [CT AccWebBrowser](#), [CT Section](#), [CT Form](#), [CT AccDSTextBox](#), [CT AccDSLabel](#), [CT AccDSAttachment](#), [CT AccDSComboBox](#), [CT AccDSCheckBox](#)

A string ([\[XMLSCHEMA2\]](#) section 3.2.1) that specifies the [Style](#) to be used by the control. The value of this attribute MUST conform to the following ABNF [\[RFC4234\]](#) grammar:

```

Value = "{StaticResource " Key "}"
Key = 1*(ASCII-ALL)

```

**<ASCII-ALL>** is specified in [\[MS-OSHARED\]](#) section 2.1.

**Key** specifies the unique identifier of the Style.

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

```

<xs:simpleType name="ST_ReferenceType">
  <xs:restriction base="xs:string">
    <xs:pattern value="\{StaticResource .*}" />
  </xs:restriction>
</xs:simpleType>

```

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

### 2.3.2.4.4 ST\_FlowDirection

*Target namespace:* <http://schemas.microsoft.com/client/2009/11>

*Referenced by:* [CT Form](#)

A string ([\[XMLSCHEMA2\]](#) section 3.2.1) that MUST be one of the following values.

Value	Meaning
LeftToRight	Specifies that the direction of content flow is left to right.
RightToLeft	Specifies that the direction of content flow is right to left.

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

```
<xs:simpleType name="ST_FlowDirection">
  <xs:restriction base="xs:string">
    <xs:enumeration value="LeftToRight" wblld:cname="LeftToRight"/>
    <xs:enumeration value="RightToLeft" wblld:cname="RightToLeft"/>
  </xs:restriction>
</xs:simpleType>
```

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

### 2.3.2.4.5 ST\_Visibility

*Target namespace:* <http://schemas.microsoft.com/client/2009/11>

*Referenced by:* [CT AccTextBox](#), [CT AccButton](#), [CT AccComboBox](#), [CT AccCheckBox](#), [CT AccListBox](#), [CT AccLabel](#), [CT AccAttachment](#), [CT AccImage](#), [CT AccSubForm](#), [CT AccNavigationControl](#), [CT AccNavigationButton](#), [CT AccTabControl](#), [CT TabItem](#), [CT AccWebBrowser](#), [CT AccDSTextBox](#), [CT AccDSLLabel](#), [CT AccDSAttachment](#), [CT AccDSComboBox](#), [CT AccDSCheckBox](#)

A string ([\[XMLSCHEMA2\]](#) section 3.2.1) that MUST have the following value.

Value	Meaning
Hidden	The control is not displayed and no space is reserved for it in a layout.

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

```
<xs:simpleType name="ST_Visibility">
  <xs:restriction base="xs:string">
    <xs:enumeration value="Hidden" wblld:cname="Hidden"/>
  </xs:restriction>
</xs:simpleType>
```

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

### 2.3.2.4.6 ST\_ScrollBarVisibility

*Target namespace:* <http://schemas.microsoft.com/client/2009/11>

*Referenced by:* [CT AccTextBox](#), [CT AccWebBrowser](#), [CT AccDSTextBox](#)

A string ([\[XMLSCHEMA2\]](#) section 3.2.1) that MUST be one of the following values.

Value	Meaning
Hidden	A scroll bar never appears.
Visible	A scroll bar always appears.
Auto	A scroll bar appears when the control is too small to display all of its content and doesn't appear

Value	Meaning
	otherwise.

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

```
<xs:simpleType name="ST_ScrollBarVisibility">
  <xs:restriction base="xs:string">
    <xs:enumeration value="Hidden" wblid:cname="Hidden"/>
    <xs:enumeration value="Visible" wblid:cname="Visible"/>
    <xs:enumeration value="Auto" wblid:cname="Auto"/>
  </xs:restriction>
</xs:simpleType>
```

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

### 2.3.2.4.7 ST\_Cursor

*Target namespace:* <http://schemas.microsoft.com/client/2009/11>

*Referenced by:* [CT\\_AccButton](#), [CT\\_AccNavigationButton](#)

A string ([\[XMLSCHEMA2\]](#) section 3.2.1) that MUST be the following value.

Value	Meaning
Hand	A hand shaped cursor.

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

```
<xs:simpleType name="ST_Cursor">
  <xs:restriction base="xs:string">
    <xs:enumeration value="Hand" wblid:cname="Hand"/>
  </xs:restriction>
</xs:simpleType>
```

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

## 2.3.3 Form XAML

### 2.3.3.1 Elements

#### 2.3.3.1.1 Form

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/forms>

*Referenced by:* [CT\\_View](#)

A [CT\\_Form](#) element that specifies the definition of a form. A form is a container for other controls that can be used to receive user input or display information to the user.

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

```
<xs:element name="Form" type="CT_Form" wbl:d:cname="Form"/>
```

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

### 2.3.3.1.2 Section

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/forms>

*Referenced by:* [CT\\_DataTemplate](#), [CT\\_FormHeaderFooter](#)

A [CT\\_Section](#) element.

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

```
<xs:element name="Section" type="CT_Section" wbl:d:cname="Section"/>
```

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

### 2.3.3.1.3 TextBox

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/forms>

*Referenced by:* [CT\\_Border](#)

A [CT\\_AccTextBox](#) element that specifies the definition of a text box. A text box control displays text from an organized set of data or from user input.

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

```
<xs:element name="TextBox" type="CT_AccTextBox" wbl:d:cname="TextBox"/>
```

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

### 2.3.3.1.4 Button

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/forms>

*Referenced by:* [CT\\_Border](#)

A [CT\\_AccButton](#) element that specifies the definition of a button control. A button control runs a [Macro](#) or launches a hyperlink when a user clicks it.

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

```
<xs:element name="Button" type="CT_AccButton" wbl:d:cname="Button"/>
```

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

### 2.3.3.1.5 Image

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/forms>

*Referenced by:* [CT Border](#)

A [CT AccImage](#) element that specifies the definition of an image control. An image control displays a picture.

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

```
<xs:element name="Image" type="CT_AccImage" wld:cname="Image"/>
```

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

### 2.3.3.1.6 Label

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/forms>

*Referenced by:* [CT Border](#)

A [CT AccLabel](#) element that specifies the definition of a label control. A label control can display unbound descriptive text or text identification for input controls.

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

```
<xs:element name="Label" type="CT_AccLabel" wld:cname="Label"/>
```

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

### 2.3.3.1.7 Attachment

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/forms>

*Referenced by:* [CT Border](#)

A [CT AccAttachment](#) element that specifies the definition of an attachment control. An attachment control allows users to view, add or remove files in a record.

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

```
<xs:element name="Attachment" type="CT_AccAttachment" wld:cname="Attachment"/>
```

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

### 2.3.3.1.8 ListBox

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/forms>

*Referenced by:* [CT Border](#)

A [CT\\_AccListBox](#) element that specifies the definition of a list box. A list box control displays a list of one or more items from which a user can choose. The value of the list box is the selected item.

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

```
<xs:element name="ListBox" type="CT_AccListBox" wblld:cname="ListBox"/>
```

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

#### 2.3.3.1.9 ComboBox

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/forms>

*Referenced by:* [CT\\_Border](#)

A [CT\\_AccComboBox](#) element that specifies the definition of a combo box. A combo box control combines a text box with a list box to display both the value of the control and a list of possible values for the control. Users can type a value, which can be restricted to the list, or they can choose an item from the list to enter a value. Unless otherwise specified, references to the combo box control are specified to refer to the combo box as it displays its value, not when it also displays the list of possible values.

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

```
<xs:element name="ComboBox" type="CT_AccComboBox" wblld:cname="ComboBox"/>
```

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

#### 2.3.3.1.10 CheckBox

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/forms>

*Referenced by:* [CT\\_Border](#)

A [CT\\_AccCheckBox](#) element that specifies the definition of a check box. A check box control toggles a value that indicates an opposite and unambiguous choice. It has two possible states, selected and cleared.

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

```
<xs:element name="CheckBox" type="CT_AccCheckBox" wblld:cname="CheckBox"/>
```

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

#### 2.3.3.1.11 NavigationControl

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/forms>

*Referenced by:* [CT\\_Border](#)

A [CT\\_AccNavigationControl](#) element that specifies the definition of a navigation control. A navigation control contains a [SubForm](#) and a collection of one or more [NavigationButtons](#) that are either horizontally or vertically stacked. When a navigation button is clicked, it can change the [SourceObject](#) of the SubForm.

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

```
<xs:element name="NavigationControl" type="CT_AccNavigationControl"
  wblld:cname="NavigationControl"/>
```

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

#### 2.3.3.1.12 TabControl

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/forms>

*Referenced by:* [CT\\_Border](#)

A [CT\\_AccTabControl](#) element that specifies the definition of a tab control. A tab control contains a collection of one or more pages and corresponding tabs. Each page is a [CT\\_TabItem](#) that can contain other controls. A page MUST be associated with a tab. A tab is a button on which the user clicks to display the page and its contents.

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

```
<xs:element name="TabControl" type="CT_AccTabControl" wblld:cname="TabControl"/>
```

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

#### 2.3.3.1.13 SubForm

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/forms>

*Referenced by:* [CT\\_Border](#)

A [CT\\_AccSubForm](#) element that specifies the definition of a subform. A subform is a control used to display a [form](#) or [report](#) inside the current form.

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

```
<xs:element name="SubForm" type="CT_AccSubForm" wblld:cname="SubForm"/>
```

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

#### 2.3.3.1.14 WebBrowser

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/forms>

*Referenced by:* [CT\\_Border](#)

A [CT\\_AccWebBrowser](#) element that specifies the definition of a web browser control. A web browser control displays a web page inside a [form](#).

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

```
<xs:element name="WebBrowser" type="CT_AccWebBrowser" wld:cname="WebBrowser"/>
```

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

### 2.3.3.1.15 NavigationButton

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/forms>

*Referenced by:* [CT\\_Border](#)

A [CT\\_AccNavigationButton](#) element that specifies the definition of a navigation button control. MUST be the child of a [NavigationControl](#). When the navigation button is clicked, it can change the [SourceObject](#) of the [SubForm](#) of its parent [NavigationControl](#).

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

```
<xs:element name="NavigationButton" type="CT_AccNavigationButton" wld:cname="NavigationButton"/>
```

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

### 2.3.3.2 Attributes

#### 2.3.3.2.1 LayoutGroup

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/forms>

*Referenced by:* [CT\\_Grid](#)

An [Ignored Value](#).

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

```
<xs:attribute name="LayoutGroup" type="xs:unsignedInt" wld:cname="LayoutGroup"/>
```

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

### 2.3.3.3 Complex Types

#### 2.3.3.3.1 CT\_Form

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/forms>

*Referenced by:* [Form](#), [CT\\_View](#)



*Child Elements:*

**Form.Datasheet** : A [CT\\_FormDatasheet](#) element that specifies the datasheet section property of the [form](#).

**Form.Detail** : A [CT\\_DataTemplateProperty](#) element that specifies the detail section property of the form.

**Form.Footer** : A [CT\\_FormHeaderFooter](#) element that specifies the footer section property of the form.

**Form.Header** : A [CT\\_FormHeaderFooter](#) element that specifies the header section property of the form.

**Form.Resources** : A [CT\\_StackPanelResource](#) element that specifies the collection of [Styles](#) used by either the form element or any of its child objects.

*Attributes:*

**AlternateBackground** : An [ST\\_Color](#) that specifies the [AlternateBackground](#) attribute.

**AlternateShade** : An [Ignored Value](#).

**AlternateThemeColorIndex** : An [Ignored Value](#).

**AlternateTint** : An [Ignored Value](#).

**Bottom** : An [Ignored Value](#).

**Caption** : An [ST\\_AccString2048](#) that specifies the [Caption](#) attribute.

**CustomRibbonID** : An [Ignored Value](#).

**DatasheetFrozenColumns** : An [Ignored Value](#).

**Filter** : An [Ignored Value](#).

**FlowDirection** : An [ST\\_FlowDirection](#) that specifies the [FlowDirection](#) attribute.

**Left** : An [Ignored Value](#).

**NavigationButtons** : A boolean ([\[XMSLSCHEMA2\]](#) section 3.2.2) that specifies the [NavigationButtons](#) attribute.

**Order** : An [Ignored Value](#).

**PageSize** : An unsignedInt ([\[XMSLSCHEMA2\]](#) section 3.3.22) that specifies the [PageSize](#) attribute.

**Right** : An [Ignored Value](#).

**RowHeight** : An [Ignored Value](#).

**ScaleFactor** : An [Ignored Value](#).

**ScrollBars** : An [ST\\_AccScrollBars](#) that specifies the [ScrollBars](#) attribute.

**ShowTotalsRow** : An [Ignored Value](#).

**Style** : An [ST\\_ReferenceType](#) that specifies the [Style](#) attribute.

**TabularBorderStyle** : An [ST\\_AccBorderStyle](#) that specifies the [TabularBorderStyle](#) attribute.

**Tag** : An Ignored Value.

**ThemeName** : An Ignored Value.

**Top** : An Ignored Value.

**WaitForPostProcessing** : An Ignored Value.

**WebImageCluster** : A string ([\[XMLSCHEMA2\]](#) section 3.2.1) that specifies the [WebImageCluster](#) attribute.

**Width** : An unsignedInt ([\[XMLSCHEMA2\]](#) section 3.3.22) that specifies the [Width](#) attribute.

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

```
<xs:complexType name="CT_Form">
  <xs:all>
    <xs:element name="Form.Resources" type="xaml:CT_StackPanelResource" minOccurs="0"
      wblld:cname="Form_Resources"/>
    <xs:element name="Form.Header" type="CT_FormHeaderFooter" minOccurs="0"
      wblld:cname="Form_Header"/>
    <xs:element name="Form.Detail" type="xaml:CT_DataTemplateProperty" minOccurs="0"
      wblld:cname="Form_Detail"/>
    <xs:element name="Form.Footer" type="CT_FormHeaderFooter" minOccurs="0"
      wblld:cname="Form_Footer"/>
    <xs:element name="Form.Datasheet" type="CT_FormDatasheet" minOccurs="0"
      wblld:cname="Form_Datasheet"/>
  </xs:all>
  <xs:attributeGroup ref="AccessFormAttributes"/>
</xs:complexType>
```

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

### 2.3.3.3.2 CT\_FormHeaderFooter

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/forms>

*Referenced by:* [CT\\_Form](#)

Specifies a header or footer section of a [form](#).

*Child Elements:*

**Section** : A [CT\\_Section](#) element.

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

```
<xs:complexType name="CT_FormHeaderFooter">
  <xs:all>
    <xs:element ref="Section"/>
  </xs:all>
</xs:complexType>
```

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

### 2.3.3.3.3 CT\_FormDatasheet

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/forms>

*Referenced by:* [CT\\_Form](#)

Specifies a tabular view of a form.

*Child Elements:*

**Datasheet** : A [CT\\_AccDataSheet](#) element that specifies a tabular view of a [form](#).

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

```
<xs:complexType name="CT_FormDatasheet">
  <xs:all>
    <xs:element name="Datasheet" type="CT_AccDataSheet" wblld:cname="DataSheet"/>
  </xs:all>
</xs:complexType>
```

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

### 2.3.3.3.4 CT\_Section

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/forms>

*Referenced by:* [CT\\_DataTemplate](#), [CT\\_FormHeaderFooter](#), [Section](#)

A **Section** element as specified by [\[MS-WPFXV\]](#) section 1.48.11.1.6.1.4.

*Child Elements:*

**Grid** : A [CT\\_Grid](#) element.

*Attributes:*

**Style** : An [ST\\_ReferenceType](#) that specifies the [Style](#) attribute.

**Tag** : An [Ignored Value](#).

**x:Name** : A string ([\[XMLSCHEMA2\]](#) section 3.2.1) that specifies the [Name](#) attribute.

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

```
<xs:complexType name="CT_Section">
  <xs:complexContent>
    <xs:extension base="xaml:CT_StackPanelSection">
      <xs:attribute name="Style" type="xaml:ST_ReferenceType" use="optional"
wblld:cname="Style"/>
      <xs:attribute name="Tag" type="xs:string" wblld:cname="Tag" use="optional"/>
      <xs:attribute ref="x:Name" use="optional"/>
    </xs:extension>
  </xs:complexContent>
```

```
</xs:complexType>
```

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

### 2.3.3.3.5 CT\_AccTabControl

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/forms>

*Referenced by:* [CT\\_Border](#), [TabControl](#)

*Child Elements:*

**TabItem** : A [CT\\_TabItem](#) element that specifies a selectable page inside this control.

*Attributes:*

**ControlHeight** : An unsignedInt ([\[XMLSCHEMA2\]](#) section 3.3.22) that specifies the [ControlHeight](#) attribute.

**ControlWidth** : An unsignedInt ([\[XMLSCHEMA2\]](#) section 3.3.22) that specifies the [ControlWidth](#) attribute.

**IsEnabled** : A boolean ([\[XMLSCHEMA2\]](#) section 3.2.2) that specifies the [IsEnabled](#) attribute.

**MinHeight** : An unsignedInt ([\[XMLSCHEMA2\]](#) section 3.3.22) that specifies the [MinHeight](#) attribute.

**MinWidth** : An unsignedInt ([\[XMLSCHEMA2\]](#) section 3.3.22) that specifies the [MinWidth](#) attribute.

**StatusBarText** : An [Ignored Value](#).

**Style** : An [ST\\_ReferenceType](#) that specifies the [Style](#) attribute. The properties in this style MUST be applied to the tabs associated with the tab control's pages.

**StyleHover** : An [ST\\_ReferenceType](#) that specifies the [StyleHover](#) attribute. The properties in this style MUST be applied to the tabs associated with the tab control's pages.

**StyleSelected** : An [ST\\_ReferenceType](#) that specifies the [StyleSelected](#) attribute. The properties in this style MUST be applied to the tabs associated with the tab control's pages.

**TabIndex** : An [Ignored Value](#).

**Tag** : An [Ignored Value](#).

**Visibility** : An [ST\\_Visibility](#) that specifies the [Visibility](#) attribute.

**x:Name** : A string ([\[XMLSCHEMA2\]](#) section 3.2.1) that specifies the [Name](#) attribute.

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

```
<xs:complexType name="CT_AccTabControl">
  <xs:sequence>
    <xs:element name="TabItem" type="CT_TabItem" minOccurs="1" maxOccurs="unbounded"
      wblid:cname="TabItem"/>
  </xs:sequence>
  <xs:attribute ref="x:Name" use="required"/>
</xs:complexType>
```

```

    <xs:attribute name="ControlHeight" type="xs:unsignedInt" wblid:cname="ControlHeight"
    use="optional"/>
    <xs:attribute name="ControlWidth" type="xs:unsignedInt" wblid:cname="ControlWidth"
    use="optional"/>
    <xs:attribute name="TabIndex" type="xs:unsignedInt" wblid:cname="TabIndex" use="optional"/>
    <xs:attribute name="MinWidth" type="xs:unsignedInt" wblid:cname="MinWidth" use="optional"/>
    <xs:attribute name="MinHeight" type="xs:unsignedInt" wblid:cname="MinHeight"
    use="optional"/>
    <xs:attribute name="StyleSelected" type="xaml:ST_ReferenceType" wblid:cname="StyleSelected"
    use="optional"/>
    <xs:attribute name="StyleHover" type="xaml:ST_ReferenceType" wblid:cname="StyleHover"
    use="optional"/>
    <xs:attribute name="IsEnabled" type="xs:boolean" wblid:cname="IsEnabled" use="optional"/>
    <xs:attribute name="StatusBarText" type="xs:string" wblid:cname="StatusBarText"
    use="optional"/>
    <xs:attributeGroup ref="ControlAttributes"/>
</xs:complexType>

```

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

### 2.3.3.3.6 CT\_TabItem

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/forms>

*Referenced by:* [CT\\_AccTabControl](#)

*Child Elements:*

**xaml:Grid** : A [CT\\_Grid](#) element that specifies the [Grid](#) containing all the controls in this page.

*Attributes:*

**AccessKey** : An [Ignored Value](#).

**Caption** : An [ST\\_AccString2048](#) that specifies the [Caption](#) attribute for the tab associated with this page.

**ControlHeight** : An unsignedInt ([\[XMLSCHEMA2\]](#) section 3.3.22) that specifies the [ControlHeight](#) attribute for the tab associated with this page.

**ControlWidth** : An unsignedInt ([\[XMLSCHEMA2\]](#) section 3.3.22) that specifies the [ControlWidth](#) attribute for the tab associated with this page.

**Height** : An unsignedInt ([\[XMLSCHEMA2\]](#) section 3.3.22) that specifies the [Height](#) attribute for the tab associated with this page.

**IsEnabled** : A boolean ([\[XMLSCHEMA2\]](#) section 3.2.2) that specifies the [IsEnabled](#) attribute.

**StatusBarText** : An Ignored Value.

**Style** : An [ST\\_ReferenceType](#) that specifies the [Style](#) attribute. The properties in this style MUST be applied to the tabs associated with the tab control's pages.

**StyleHover** : An [ST\\_ReferenceType](#) that specifies the [StyleHover](#) attribute for the tab associated with this page.

**StyleSelected** : An [ST\\_ReferenceType](#) that specifies the [StyleSelected](#) attribute for the tab associated with this page.

**Tag** : An Ignored Value.

**ToolTip** : A string ([\[XMLSCHEMA2\]](#) section 3.2.1) that specifies the [ToolTip](#) attribute for the tab associated with this page.

**Visibility** : An [ST\\_Visibility](#) that specifies the [Visibility](#) attribute.

**Width** : An unsignedInt ([\[XMLSCHEMA2\]](#) section 3.3.22) that specifies the [Width](#) attribute for the tab associated with this page.

**x:Name** : A string ([\[XMLSCHEMA2\]](#) section 3.2.1) that specifies the [Name](#) attribute.

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

```
<xs:complexType name="CT_TabItem">
  <xs:sequence>
    <xs:element ref="xaml:Grid" minOccurs="0"/>
  </xs:sequence>
  <xs:attribute ref="x:Name" use="required"/>
  <xs:attribute name="Caption" type="ST_AccString2048" use="optional" wblid:cname="Caption"/>
  <xs:attribute name="ControlHeight" type="xs:unsignedInt" use="optional"
wblid:cname="ControlHeight"/>
  <xs:attribute name="ControlWidth" type="xs:unsignedInt" use="optional"
wblid:cname="ControlWidth"/>
  <xs:attribute name="ToolTip" type="xs:string" wblid:cname="ToolTip" use="optional"/>
  <xs:attribute name="StyleSelected" type="xaml:ST_ReferenceType" wblid:cname="StyleSelected"
use="optional"/>
  <xs:attribute name="StyleHover" type="xaml:ST_ReferenceType" wblid:cname="StyleHover"
use="optional"/>
  <xs:attribute name="Width" type="xs:unsignedInt" wblid:cname="Width" use="optional"/>
  <xs:attribute name="Height" type="xs:unsignedInt" wblid:cname="Height" use="optional"/>
  <xs:attribute name="IsEnabled" type="xs:boolean" wblid:cname="IsEnabled" use="optional"/>
  <xs:attribute name="StatusBarText" type="xs:string" wblid:cname="StatusBarText"
use="optional"/>
  <xs:attribute name="AccessKey" type="xs:string" wblid:cname="AccessKey" use="optional"/>
  <xs:attributeGroup ref="ControlAttributes"/>
</xs:complexType>
```

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

### 2.3.3.3.7 CT\_AccDataSheet

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/forms>

*Referenced by:* [CT\\_FormDataSheet](#)

*Child Elements:*

**Attachment** : A [CT\\_AccDSAttachment](#) that specifies an [Attachment](#) element in a tabular view.

**CheckBox** : A [CT\\_AccDSCheckBox](#) that specifies a [CheckBox](#) element in a tabular view.

**ComboBox** : A [CT\\_AccDSComboBox](#) that specifies a [ComboBox](#) element in a tabular view.

**Label** : A [CT\\_AccDSLabel](#) that specifies a [Label](#) element in a tabular view.

**TextBox** : A [CT\\_AccDSTextBox](#) that specifies a [TextBox](#) element in a tabular view.

*Attributes:*

**x:Name** : A string ([\[XMLSCHEMA2\]](#) section 3.2.1) that specifies the [Name](#) attribute.

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

```
<xs:complexType name="CT_AccDataSheet">
  <xs:sequence>
    <xs:choice minOccurs="0" maxOccurs="unbounded">
      <xs:element name="TextBox" type="CT_AccDSTextBox" wblid:cname="TextBox"/>
      <xs:element name="Label" type="CT_AccDSLLabel" wblid:cname="Label"/>
      <xs:element name="Attachment" type="CT_AccDSAttachment" wblid:cname="Attachment"/>
      <xs:element name="ComboBox" type="CT_AccDSComboBox" wblid:cname="ComboBox"/>
      <xs:element name="CheckBox" type="CT_AccDSCheckBox" wblid:cname="CheckBox"/>
    </xs:choice>
  </xs:sequence>
  <xs:attribute ref="x:Name" use="optional"/>
</xs:complexType>
```

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

### 2.3.3.3.8 CT\_AccTextBox

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/forms>

*Referenced by:* [CT Border](#), [TextBox](#)

*Attributes:*

**AcceptsReturn** : An [ST\\_AccAcceptsReturn](#) that specifies the [AcceptsReturn](#) attribute.

**AccessKey** : An [Ignored Value](#).

**ControlHeight** : An unsignedInt ([\[XMLSCHEMA2\]](#) section 3.3.22) that specifies the [ControlHeight](#) attribute.

**ControlSource** : A string ([\[XMLSCHEMA2\]](#) section 3.2.1) that specifies the [ControlSource](#) attribute.

**ControlWidth** : An unsignedInt ([\[XMLSCHEMA2\]](#) section 3.3.22) that specifies the [ControlWidth](#) attribute.

**CurrencySymbol** : A string ([\[XMLSCHEMA2\]](#) section 3.2.1) that specifies the [CurrencySymbol](#) attribute.

**DatasheetCaption** : An [ST\\_AccDatasheetCaption](#) that specifies the [DatasheetCaption](#) attribute.

**DecimalPlaces** : An [ST\\_AccDecimalPlaces](#) that specifies the [DecimalPlaces](#) attribute.

**DefaultValue** : A string ([\[XMLSCHEMA2\]](#) section 3.2.1) that specifies the [DefaultValue](#) attribute.

**DisplayAsHyperlink** : An [ST\\_AccDisplayAsHyperlink](#) that specifies the [DisplayAsHyperlink](#) attribute.

**FormatDataAs** : An [ST\\_AccFormat](#) that specifies the [FormatDataAs](#) attribute.

**FuriganaControlName** : An Ignored Value.

**IsEnabled** : A boolean ([\[XMLSCHEMA2\]](#) section 3.2.2) that specifies the [IsEnabled](#) attribute.

**IsHyperlink** : A boolean ([XMLSCHEMA2] section 3.2.2) that specifies the [IsHyperlink](#) attribute.

**Locked** : A boolean ([XMLSCHEMA2] section 3.2.2) that specifies the [Locked](#) attribute.

**MinHeight** : An unsignedInt ([XMLSCHEMA2] section 3.3.22) that specifies the [MinHeight](#) attribute.

**MinWidth** : An unsignedInt ([XMLSCHEMA2] section 3.3.22) that specifies the [MinWidth](#) attribute.

**StatusBarText** : An Ignored Value.

**Style** : An [ST\\_ReferenceType](#) that specifies the [Style](#) attribute. The properties in this style MUST be applied to the tabs associated with the tab control's pages.

**TabIndex** : An Ignored Value.

**Tag** : An Ignored Value.

**TextFormat** : A string ([XMLSCHEMA2] section 3.2.1) that specifies the [TextFormat](#) attribute.

**ToolTip** : A string ([XMLSCHEMA2] section 3.2.1) that specifies the [ToolTip](#) attribute.

**VerticalScrollBarVisibility** : An [ST\\_ScrollBarVisibility](#) that specifies the [VerticalScrollBarVisibility](#) attribute.

**Visibility** : An [ST\\_Visibility](#) that specifies the [Visibility](#) attribute.

**x>Name** : A string ([XMLSCHEMA2] section 3.2.1) that specifies the [Name](#) attribute.

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

```
<xs:complexType name="CT_AccTextBox">
  <xs:attributeGroup ref="TextBoxAttributes"/>
  <xs:attributeGroup ref="AccessControlAttributes"/>
</xs:complexType>
```

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

### 2.3.3.3.9 CT\_AccDSTextBox

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/forms>

*Referenced by:* [CT\\_AccDataSheet](#)

*Attributes:*

**AcceptsReturn** : An [ST\\_AccAcceptsReturn](#) that specifies the [AcceptsReturn](#) attribute.

**AggregateType** : An [Ignored Value](#).

**ControlSource** : A string ([XMLSCHEMA2] section 3.2.1) that specifies the [ControlSource](#) attribute.

**CurrencySymbol** : A string ([XMLSCHEMA2] section 3.2.1) that specifies the [CurrencySymbol](#) attribute.

**DatasheetCaption** : An [ST\\_AccDatasheetCaption](#) that specifies the [DatasheetCaption](#) attribute.

**DecimalPlaces** : An [ST\\_AccDecimalPlaces](#) that specifies the [DecimalPlaces](#) attribute.



**DefaultValue** : A string ([XMLSCHEMA2] section 3.2.1) that specifies the [DefaultValue](#) attribute.

**DisplayAsHyperlink** : An [ST\\_AccDisplayAsHyperlink](#) that specifies the [DisplayAsHyperlink](#) attribute.

**FormatDataAs** : An [ST\\_AccFormat](#) that specifies the [FormatDataAs](#) attribute.

**FuriganaControlName** : An Ignored Value.

**IsEnabled** : A boolean ([XMLSCHEMA2] section 3.2.2) that specifies the [IsEnabled](#) attribute.

**IsHyperlink** : A boolean ([XMLSCHEMA2] section 3.2.2) that specifies the [IsHyperlink](#) attribute.

**Locked** : A boolean ([XMLSCHEMA2] section 3.2.2) that specifies the [Locked](#) attribute.

**StatusBarText** : An Ignored Value.

**Style** : An [ST\\_ReferenceType](#) that specifies the [Style](#) attribute. The properties in this style MUST be applied to the tabs associated with the tab control's pages.

**TabIndex** : An Ignored Value.

**Tag** : An Ignored Value.

**TextFormat** : A string ([XMLSCHEMA2] section 3.2.1) that specifies the [TextFormat](#) attribute.

**ToolTip** : A string ([XMLSCHEMA2] section 3.2.1) that specifies the [ToolTip](#) attribute.

**VerticalScrollBarVisibility** : An [ST\\_ScrollBarVisibility](#) that specifies the [VerticalScrollBarVisibility](#) attribute.

**Visibility** : An [ST\\_Visibility](#) that specifies the [Visibility](#) attribute.

**Width** : An unsignedInt ([XMLSCHEMA2] section 3.3.22) that specifies the [Width](#) attribute.

**x:Name** : A string ([XMLSCHEMA2] section 3.2.1) that specifies the [Name](#) attribute.

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

```
<xs:complexType name="CT_AccDSTextBox">
  <xs:attributeGroup ref="DSTextBoxAttributes"/>
</xs:complexType>
```

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

### 2.3.3.3.10 CT\_AccSubForm

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/forms>

*Referenced by:* [CT\\_Border](#), [SubForm](#)

*Attributes:*

**AccessKey** : An [Ignored Value](#).

**ControlHeight** : An unsignedInt ([XMLSCHEMA2] section 3.3.22) that specifies the [ControlHeight](#) attribute.

**ControlWidth** : An unsignedInt ([XMLESCHEMA2] section 3.3.22) that specifies the [ControlWidth](#) attribute.

**IsEnabled** : A boolean ([XMLESCHEMA2] section 3.2.2) that specifies the [IsEnabled](#) attribute.

**LinkChildFields** : An [ST\\_AccString255](#) that specifies the [LinkChildFields](#) attribute.

**LinkMasterFields** : An [ST\\_AccString255](#) that specifies the [LinkMasterFields](#) attribute.

**Locked** : A boolean ([XMLESCHEMA2] section 3.2.2) that specifies the [Locked](#) attribute.

**MinHeight** : An unsignedInt ([XMLESCHEMA2] section 3.3.22) that specifies the [MinHeight](#) attribute.

**MinWidth** : An unsignedInt ([XMLESCHEMA2] section 3.3.22) that specifies the [MinWidth](#) attribute.

**ShowPageHeaderAndPageFooter** : An Ignored Value.

**SourceObject** : An [ST\\_AccString255](#) that specifies the [SourceObject](#) attribute.

**StatusBarText** : An Ignored Value.

**Style** : An [ST\\_ReferenceType](#) that specifies the [Style](#) attribute. The properties in this style MUST be applied to the tabs associated with the tab control's pages.

**TabIndex** : An Ignored Value.

**Tag** : An Ignored Value.

**Visibility** : An [ST\\_Visibility](#) that specifies the [Visibility](#) attribute.

**WebToolbar** : An [ST\\_WebToolbar](#) attribute that specifies the [WebToolbar](#) attribute.

**x:Name** : A string ([XMLESCHEMA2] section 3.2.1) that specifies the [Name](#) attribute.

The following W3C XML Schema ([XMLESCHEMA1] section 2.1) fragment specifies the contents of this complex type.

```
<xs:complexType name="CT_AccSubForm">
  <xs:attributeGroup ref="SubFormAttributes"/>
  <xs:attributeGroup ref="AccessControlAttributes"/>
</xs:complexType>
```

See section [5.3](#) for the full W3C XML Schema ([XMLESCHEMA1] section 2.1).

### 2.3.3.3.11 CT\_AccButton

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/forms>

*Referenced by:* [CT\\_Border](#), [Button](#)

*Attributes:*

**AccessKey** : An [Ignored Value](#).

**Caption** : An [ST\\_AccString2048](#) that specifies the [Caption](#) attribute.

**ControlHeight** : An unsignedInt ([XMLESCHEMA2] section 3.3.22) that specifies the [ControlHeight](#) attribute.

**ControlWidth** : An unsignedInt ([XMLSCHEMA2] section 3.3.22) that specifies the [ControlWidth](#) attribute.

**Cursor** : An [ST\\_Cursor](#) that specifies the [Cursor](#) attribute.

**HyperlinkAddress** : A string ([XMLSCHEMA2] section 3.2.1) that specifies the [HyperlinkAddress](#) attribute.

**HyperlinkComponents** : An Ignored Value.

**IsEnabled** : A boolean ([XMLSCHEMA2] section 3.2.2) that specifies the [IsEnabled](#) attribute.

**MinHeight** : An unsignedInt ([XMLSCHEMA2] section 3.3.22) that specifies the [MinHeight](#) attribute.

**MinWidth** : An unsignedInt ([XMLSCHEMA2] section 3.3.22) that specifies the [MinWidth](#) attribute.

**Picture** : A string ([XMLSCHEMA2] section 3.2.1) that specifies the [Picture](#) attribute.

**PictureCaptionArrangement** : An [ST\\_AccPictureCaptionArrangement](#) that specifies the [PictureCaptionArrangement](#) attribute.

**StatusBarText** : An Ignored Value.

**Style** : An [ST\\_ReferenceType](#) that specifies the [Style](#) attribute. The properties in this style MUST be applied to the tabs associated with the tab control's pages.

**StyleHover** : An [ST\\_ReferenceType](#) that specifies the [StyleHover](#) attribute.

**StyleSelected** : An [ST\\_ReferenceType](#) that specifies the [StyleSelected](#) attribute.

**TabIndex** : An Ignored Value.

**Tag** : An Ignored Value.

**ToolTip** : A string ([XMLSCHEMA2] section 3.2.1) that specifies the [ToolTip](#) attribute.

**Visibility** : An [ST\\_Visibility](#) that specifies the [Visibility](#) attribute.

**x:Name** : A string ([XMLSCHEMA2] section 3.2.1) that specifies the [Name](#) attribute.

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

```
<xs:complexType name="CT_AccButton">
  <xs:attributeGroup ref="ButtonAttributes"/>
  <xs:attributeGroup ref="AccessControlAttributes"/>
</xs:complexType>
```

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

### 2.3.3.3.12 CT\_AccImage

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/forms>

*Referenced by:* [CT\\_Border](#), [Image](#)

*Attributes:*

**AggregateType** : An [Ignored Value](#).

**ControlHeight** : An unsignedInt ([\[XMLSCHEMA2\]](#) section 3.3.22) that specifies the [ControlHeight](#) attribute.

**ControlWidth** : An unsignedInt ([\[XMLSCHEMA2\]](#) section 3.3.22) that specifies the [ControlWidth](#) attribute.

**HyperlinkAddress** : A string ([\[XMLSCHEMA2\]](#) section 3.2.1) that specifies the [HyperlinkAddress](#) attribute.

**HyperlinkComponents** : An Ignored Value.

**MinHeight** : An unsignedInt ([\[XMLSCHEMA2\]](#) section 3.3.22) that specifies the [MinHeight](#) attribute.

**MinWidth** : An unsignedInt ([\[XMLSCHEMA2\]](#) section 3.3.22) that specifies the [MinWidth](#) attribute.

**Picture** : A string ([\[XMLSCHEMA2\]](#) section 3.2.1) that specifies the [Picture](#) attribute.

**PictureAlignment** : An [ST\\_AccPictureAlignment](#) that specifies the [PictureAlignment](#) attribute.

**PictureTiling** : An [ST\\_AccPictureTiling](#) that specifies the [PictureTiling](#) attribute.

**SizeMode** : An [ST\\_AccPictureSizeMode](#) that specifies the [SizeMode](#) attribute.

**Style** : An [ST\\_ReferenceType](#) that specifies the [Style](#) attribute. The properties in this style MUST be applied to the tabs associated with the tab control's pages.

**TabIndex** : An Ignored Value.

**Tag** : An Ignored Value.

**ToolTip** : A string ([\[XMLSCHEMA2\]](#) section 3.2.1) that specifies the [Tooltip](#) attribute.

**Visibility** : An [ST\\_Visibility](#) that specifies the [Visibility](#) attribute.

**x:Name** : A string ([\[XMLSCHEMA2\]](#) section 3.2.1) that specifies the [Name](#) attribute.

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

```
<xs:complexType name="CT_AccImage">
  <xs:attributeGroup ref="ImageAttributes"/>
  <xs:attributeGroup ref="AccessControlAttributes"/>
</xs:complexType>
```

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

### 2.3.3.3.13 CT\_AccLabel

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/forms>

*Referenced by:* [CT\\_Border](#), [Label](#)

*Attributes:*

**Association** : A string ([\[XMLSCHEMA2\]](#) section 3.2.1) that specifies the [Association](#) attribute.

**Caption** : An [ST\\_AccString2048](#) that specifies the [Caption](#) attribute.

**ControlHeight** : An unsignedInt ([\[XMLSCHEMA2\]](#) section 3.3.22) that specifies the [ControlHeight](#) attribute.

**ControlWidth** : An unsignedInt ([\[XMLSCHEMA2\]](#) section 3.3.22) that specifies the [ControlWidth](#) attribute.

**HyperlinkAddress** : A string ([\[XMLSCHEMA2\]](#) section 3.2.1) that specifies the [HyperlinkAddress](#) attribute.

**HyperlinkComponents** : An [Ignored Value](#).

**MinHeight** : An unsignedInt ([\[XMLSCHEMA2\]](#) section 3.3.22) that specifies the [MinHeight](#) attribute.

**MinWidth** : An unsignedInt ([\[XMLSCHEMA2\]](#) section 3.3.22) that specifies the [MinWidth](#) attribute.

**Style** : An [ST\\_ReferenceType](#) that specifies the [Style](#) attribute. The properties in this style MUST be applied to the tabs associated with the tab control's pages.

**Tag** : An Ignored Value.

**ToolTip** : A string ([\[XMLSCHEMA2\]](#) section 3.2.1) that specifies the [ToolTip](#) attribute.

**Visibility** : An [ST\\_Visibility](#) that specifies the [Visibility](#) attribute.

**x:Name** : A string ([\[XMLSCHEMA2\]](#) section 3.2.1) that specifies the [Name](#) attribute.

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

```
<xs:complexType name="CT_AccLabel">
  <xs:attributeGroup ref="LabelAttributes"/>
  <xs:attributeGroup ref="AccessControlAttributes"/>
</xs:complexType>
```

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

#### 2.3.3.3.14 CT\_AccDSLabel

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/forms>

*Referenced by:* [CT\\_AccDataSheet](#)

*Attributes:*

**Association** : A string ([\[XMLSCHEMA2\]](#) section 3.2.1) that specifies the [Association](#) attribute.

**Caption** : An [ST\\_AccString2048](#) that specifies the [Caption](#) attribute.

**HyperlinkAddress** : A string ([\[XMLSCHEMA2\]](#) section 3.2.1) that specifies the [HyperlinkAddress](#) attribute.

**HyperlinkComponents** : An [Ignored Value](#).

**Style** : An [ST\\_ReferenceType](#) that specifies the [Style](#) attribute. The properties in this style MUST be applied to the tabs associated with the tab control's pages.

**Tag** : An Ignored Value.

**ToolTip** : A string ([XMLSCHEMA2] section 3.2.1) that specifies the [ToolTip](#) attribute.

**Visibility** : An [ST\\_Visibility](#) that specifies the [Visibility](#) attribute.

**x:Name** : A string ([XMLSCHEMA2] section 3.2.1) that specifies the [Name](#) attribute.

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

```
<xs:complexType name="CT_AccDSLabel">
  <xs:attributeGroup ref="DSLabelAttributes"/>
</xs:complexType>
```

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

### 2.3.3.3.15 CT\_AccAttachment

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/forms>

*Referenced by:* [CT\\_Border](#), [Attachment](#)

*Attributes:*

**AccessKey** : An [Ignored Value](#).

**ControlHeight** : An unsignedInt ([XMLSCHEMA2] section 3.3.22) that specifies the [ControlHeight](#) attribute.

**ControlSource** : A string ([XMLSCHEMA2] section 3.2.1) that specifies the [ControlSource](#) attribute.

**ControlWidth** : An unsignedInt ([XMLSCHEMA2] section 3.3.22) that specifies the [ControlWidth](#) attribute.

**DatasheetCaption** : An [ST\\_AccDatasheetCaption](#) that specifies the [DatasheetCaption](#) attribute.

**DefaultPicture** : A string ([XMLSCHEMA2] section 3.2.1) that specifies the [DefaultPicture](#) attribute.

**DisplayAs** : A string ([XMLSCHEMA2] section 3.2.1) that specifies the [DisplayAs](#) attribute.

**IsEnabled** : A boolean ([XMLSCHEMA2] section 3.2.2) that specifies the [IsEnabled](#) attribute.

**Locked** : A boolean ([XMLSCHEMA2] section 3.2.2) that specifies the [Locked](#) attribute.

**MinHeight** : An unsignedInt ([XMLSCHEMA2] section 3.3.22) that specifies the [MinHeight](#) attribute.

**MinWidth** : An unsignedInt ([XMLSCHEMA2] section 3.3.22) that specifies the [MinWidth](#) attribute.

**PictureAlignment** : An [ST\\_AccPictureAlignment](#) that specifies the [PictureAlignment](#) attribute.

**PictureSizeMode** : An [ST\\_AccPictureSizeMode](#) that specifies the [PictureSizeMode](#) attribute.

**PictureTiling** : An [ST\\_AccPictureTiling](#) that specifies the [PictureTiling](#) attribute.

**StatusBarText** : An Ignored Value.

**Style** : An [ST ReferenceType](#) that specifies the [Style](#) attribute. The properties in this style MUST be applied to the tabs associated with the tab control's pages.

**TabIndex** : An Ignored Value.

**Tag** : An Ignored Value.

**ToolTip** : A string ([\[XMLSCHEMA2\]](#) section 3.2.1) that specifies the [ToolTip](#) attribute.

**Visibility** : An [ST Visibility](#) that specifies the [Visibility](#) attribute.

**x:Name** : A string ([\[XMLSCHEMA2\]](#) section 3.2.1) that specifies the [Name](#) attribute.

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

```
<xs:complexType name="CT_AccAttachment">
  <xs:attributeGroup ref="AttachmentAttributes"/>
  <xs:attributeGroup ref="AccessControlAttributes"/>
</xs:complexType>
```

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

### 2.3.3.3.16 CT\_AccDSAttachment

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/forms>

*Referenced by:* [CT\\_AccDataSheet](#)

*Attributes:*

**AggregateType** : An [Ignored Value](#).

**ControlSource** : A string ([\[XMLSCHEMA2\]](#) section 3.2.1) that specifies the [ControlSource](#) attribute.

**DatasheetCaption** : An [ST AccDatasheetCaption](#) that specifies the [DatasheetCaption](#) attribute.

**DefaultPicture** : A string ([\[XMLSCHEMA2\]](#) section 3.2.1) that specifies the [DefaultPicture](#) attribute.

**DisplayAs** : A string ([\[XMLSCHEMA2\]](#) section 3.2.1) that specifies the [DisplayAs](#) attribute.

**IsEnabled** : A boolean ([\[XMLSCHEMA2\]](#) section 3.2.2) that specifies the [IsEnabled](#) attribute.

**Locked** : A boolean ([\[XMLSCHEMA2\]](#) section 3.2.2) that specifies the [Locked](#) attribute.

**PictureAlignment** : An [ST AccPictureAlignment](#) that specifies the [PictureAlignment](#) attribute.

**PictureSizeMode** : An [ST AccPictureSizeMode](#) that specifies the [PictureSizeMode](#) attribute.

**PictureTiling** : An [ST AccPictureTiling](#) that specifies the [PictureTiling](#) attribute.

**StatusBarText** : An Ignored Value.

**Style** : An [ST ReferenceType](#) that specifies the [Style](#) attribute. The properties in this style MUST be applied to the tabs associated with the tab control's pages.

**TabIndex** : An Ignored Value.

**Tag** : An Ignored Value.

**ToolTip** : A string ([\[XMLSCHEMA2\]](#) section 3.2.1) that specifies the [ToolTip](#) attribute.

**Visibility** : An [ST\\_Visibility](#) that specifies the [Visibility](#) attribute.

**Width** : An unsignedInt ([\[XMLSCHEMA2\]](#) section 3.3.22) that specifies the [Width](#) attribute.

**x:Name** : A string ([\[XMLSCHEMA2\]](#) section 3.2.1) that specifies the [Name](#) attribute.

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

```
<xs:complexType name="CT_AccDSAttachment">
  <xs:attributeGroup ref="DSAttachmentAttributes"/>
</xs:complexType>
```

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

### 2.3.3.3.17 CT\_AccListComboBoxRowSource

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/forms>

*Referenced by:* [CT\\_AccComboBox](#), [CT\\_AccListBox](#), [CT\\_AccDSComboBox](#)

Specifies the **RowSource** element of a control. If the value of the control's [RowSourceType](#) attribute is "Table/Query" then either a **Query** child element **MUST** be present, or the value of this element **MUST** be the name of a list (1) or [query](#). Otherwise, the value of the **RowSource** element **MUST** be a list of literal values separated by semi-colons.

*Child Elements:*

**axl:Query** : A [CT\\_Query](#) element that specifies a data source (1).

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

```
<xs:complexType mixed="true" name="CT_AccListComboBoxRowSource">
  <xs:choice>
    <xs:element ref="axl:Query" minOccurs="0"/>
  </xs:choice>
</xs:complexType>
```

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

### 2.3.3.3.18 CT\_AccListBox

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/forms>

*Referenced by:* [CT\\_Border](#), [ListBox](#)

*Child Elements:*

**ListBox.RowSource** : A [CT\\_AccListComboBoxRowSource](#) element that specifies the data source (1) for the list of values displayed by this control. The control **MUST** contain exactly zero or one **ListBox.RowSource** element.



*Attributes:*

**AccessKey** : An [Ignored Value](#).

**AllowValueListEdits** : A boolean ([\[XMLSCHEMA2\]](#) section 3.2.2) that specifies the [AllowValueListEdits](#) attribute.

**ColumnCount** : An unsignedInt ([\[XMLSCHEMA2\]](#) section 3.3.22) that specifies the [ColumnCount](#) attribute.

**ColumnWidths** : A string ([\[XMLSCHEMA2\]](#) section 3.2.1) that specifies the [ColumnWidths](#) attribute.

**ControlHeight** : An unsignedInt ([\[XMLSCHEMA2\]](#) section 3.3.22) that specifies the [ControlHeight](#) attribute.

**ControlSource** : A string ([\[XMLSCHEMA2\]](#) section 3.2.1) that specifies the [ControlSource](#) attribute.

**ControlWidth** : An unsignedInt ([\[XMLSCHEMA2\]](#) section 3.3.22) that specifies the [ControlWidth](#) attribute.

**DatasheetCaption** : An [ST\\_AccDatasheetCaption](#) that specifies the [DatasheetCaption](#) attribute.

**DefaultValue** : A string ([\[XMLSCHEMA2\]](#) section 3.2.1) that specifies the [DefaultValue](#) attribute.

**InheritValueList** : A boolean ([\[XMLSCHEMA2\]](#) section 3.2.2) that specifies the [InheritValueList](#) attribute.

**IsEnabled** : A boolean ([\[XMLSCHEMA2\]](#) section 3.2.2) that specifies the [IsEnabled](#) attribute.

**ListItemsEditForm** : An [ST\\_AccString255](#) that specifies the [ListItemsEditForm](#) attribute.

**Locked** : A boolean ([\[XMLSCHEMA2\]](#) section 3.2.2) that specifies the [Locked](#) attribute.

**MinHeight** : An unsignedInt ([\[XMLSCHEMA2\]](#) section 3.3.22) that specifies the [MinHeight](#) attribute.

**MinWidth** : An unsignedInt ([\[XMLSCHEMA2\]](#) section 3.3.22) that specifies the [MinWidth](#) attribute.

**RowSourceType** : An [ST\\_AccRowSourceType](#) that specifies the [RowSourceType](#) attribute.

**ShowColumnHeader** : A boolean ([\[XMLSCHEMA2\]](#) section 3.2.2) that specifies the [ShowColumnHeader](#) attribute.

**StatusBarText** : An Ignored Value.

**Style** : An [ST\\_ReferenceType](#) that specifies the [Style](#) attribute. The properties in this style MUST be applied to the tabs associated with the tab control's pages.

**TabIndex** : An Ignored Value.

**Tag** : An Ignored Value.

**ToolTip** : A string ([\[XMLSCHEMA2\]](#) section 3.2.1) that specifies the [Tooltip](#) attribute.

**Visibility** : An [ST\\_Visibility](#) that specifies the [Visibility](#) attribute.

**x:Name** : A string ([\[XMLSCHEMA2\]](#) section 3.2.1) that specifies the [Name](#) attribute.

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

```

<xs:complexType name="CT_AccListBox">
  <xs:choice>
    <xs:element name="ListBox.RowSource" minOccurs="0" wblld:cname="ListBox_RowSource"
type="CT_AccListComboBoxRowSource"/>
  </xs:choice>
  <xs:attributeGroup ref="ListBoxAttributes"/>
  <xs:attributeGroup ref="AccessControlAttributes"/>
</xs:complexType>

```

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

### 2.3.3.3.19 CT\_AccComboBox

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/forms>

*Referenced by:* [CT\\_Border](#), [ComboBox](#)

*Child Elements:*

**ComboBox.RowSource** : A [CT\\_AccListComboBoxRowSource](#) element that specifies the data source (1) for the list box part of this control, that is, the list of possible values. The **ComboBox** element MUST contain exactly zero or one **RowSource** elements.

*Attributes:*

**AccessKey** : An [Ignored Value](#).

**AllowValueListEdits** : A boolean ([\[XMLSCHEMA2\]](#) section 3.2.2) that specifies the [AllowValueListEdits](#) attribute.

**ColumnCount** : An unsignedInt ([\[XMLSCHEMA2\]](#) section 3.3.22) that specifies the [ColumnCount](#) attribute.

**ColumnWidths** : A string ([\[XMLSCHEMA2\]](#) section 3.2.1) that specifies the [ColumnWidths](#) attribute.

**ControlHeight** : An unsignedInt ([\[XMLSCHEMA2\]](#) section 3.3.22) that specifies the [ControlHeight](#) attribute.

**ControlSource** : A string ([\[XMLSCHEMA2\]](#) section 3.2.1) that specifies the [ControlSource](#) attribute.

**ControlWidth** : An unsignedInt ([\[XMLSCHEMA2\]](#) section 3.3.22) that specifies the [ControlWidth](#) attribute.

**CurrencySymbol** : A string ([\[XMLSCHEMA2\]](#) section 3.2.1) that specifies the [CurrencySymbol](#) attribute.

**DatasheetCaption** : An [ST\\_AccDatasheetCaption](#) that specifies the [DatasheetCaption](#) attribute.

**DecimalPlaces** : An [ST\\_AccDecimalPlaces](#) that specifies the [DecimalPlaces](#) attribute.

**DefaultValue** : A string ([\[XMLSCHEMA2\]](#) section 3.2.1) that specifies the [DefaultValue](#) attribute.

**FormatDataAs** : An [ST\\_AccFormat](#) that specifies the [FormatDataAs](#) attribute.

**InheritValueList** : A boolean ([\[XMLSCHEMA2\]](#) section 3.2.2) that specifies the [InheritValueList](#) attribute.

**IsEnabled** : A boolean ([XMLSCHEMA2] section 3.2.2) that specifies the [IsEnabled](#) attribute.

**LimitToList** : A boolean ([XMLSCHEMA2] section 3.2.2) that specifies the [LimitToList](#) attribute.

**ListItemsEditForm** : An [ST\\_AccString255](#) that specifies the [ListItemsEditForm](#) attribute.

**ListWidth** : An unsignedInt ([XMLSCHEMA2] section 3.3.22) that specifies the [ListWidth](#) attribute.

**Locked** : A boolean ([XMLSCHEMA2] section 3.2.2) that specifies the [Locked](#) attribute.

**MinHeight** : An unsignedInt ([XMLSCHEMA2] section 3.3.22) that specifies the [MinHeight](#) attribute.

**MinWidth** : An unsignedInt ([XMLSCHEMA2] section 3.3.22) that specifies the [MinWidth](#) attribute.

**RowSourceType** : An [ST\\_AccRowSourceType](#) that specifies the [RowSourceType](#) attribute.

**SeparatorCharacters** : A string ([XMLSCHEMA2] section 3.2.1) that specifies the [SeparatorCharacters](#) attribute.

**ShowColumnHeader** : A boolean ([XMLSCHEMA2] section 3.2.2) that specifies the [ShowColumnHeader](#) attribute.

**StatusBarText** : An Ignored Value.

**Style** : An [ST\\_ReferenceType](#) that specifies the [Style](#) attribute. The properties in this style MUST be applied to the tabs associated with the tab control's pages.

**TabIndex** : An Ignored Value.

**Tag** : An Ignored Value.

**ToolTip** : A string ([XMLSCHEMA2] section 3.2.1) that specifies the [Tooltip](#) attribute.

**Visibility** : An [ST\\_Visibility](#) that specifies the [Visibility](#) attribute.

**x:Name** : A string ([XMLSCHEMA2] section 3.2.1) that specifies the [Name](#) attribute.

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

```
<xs:complexType name="CT_AccComboBox">
  <xs:choice>
    <xs:element name="ComboBox.RowSource" minOccurs="0" wblid:cname="ComboBox_RowSource"
type="CT_AccListComboBoxRowSource"/>
  </xs:choice>
  <xs:attributeGroup ref="ComboBoxAttributes"/>
  <xs:attributeGroup ref="AccessControlAttributes"/>
</xs:complexType>
```

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

### 2.3.3.3.20 CT\_AccDSComboBox

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/forms>

*Referenced by:* [CT\\_AccDataSheet](#)

*Child Elements:*

**ComboBox.RowSource** : A [CT AccListComboBoxRowSource](#) element that specifies the data source (1) for the list of values displayed by this control. The **ComboBox** element MUST contain exactly zero or one **RowSource** elements.

*Attributes:*

**AggregateType** : An [Ignored Value](#).

**AllowValueListEdits** : A boolean ([\[XMLSCHEMA2\]](#) section 3.2.2) that specifies the [AllowValueListEdits](#) attribute.

**ColumnCount** : An unsignedInt ([\[XMLSCHEMA2\]](#) section 3.3.22) that specifies the [ColumnCount](#) attribute.

**ColumnWidths** : A string ([\[XMLSCHEMA2\]](#) section 3.2.1) that specifies the [ColumnWidths](#) attribute.

**ControlSource** : A string ([\[XMLSCHEMA2\]](#) section 3.2.1) that specifies the [ControlSource](#) attribute.

**CurrencySymbol** : A string ([\[XMLSCHEMA2\]](#) section 3.2.1) that specifies the [CurrencySymbol](#) attribute.

**DatasheetCaption** : An [ST AccDatasheetCaption](#) that specifies the [DatasheetCaption](#) attribute.

**DecimalPlaces** : An [ST AccDecimalPlaces](#) that specifies the [DecimalPlaces](#) attribute.

**DefaultValue** : A string ([\[XMLSCHEMA2\]](#) section 3.2.1) that specifies the [DefaultValue](#) attribute.

**FormatDataAs** : An [ST AccFormat](#) that specifies the [FormatDataAs](#) attribute.

**InheritValueList** : A boolean ([\[XMLSCHEMA2\]](#) section 3.2.2) that specifies the [InheritValueList](#) attribute.

**IsEnabled** : A boolean ([\[XMLSCHEMA2\]](#) section 3.2.2) that specifies the [IsEnabled](#) attribute.

**LimitToList** : A boolean ([\[XMLSCHEMA2\]](#) section 3.2.2) that specifies the [LimitToList](#) attribute.

**ListItemsEditForm** : An [ST AccString255](#) that specifies the [ListItemsEditForm](#) attribute.

**ListWidth** : An unsignedInt ([\[XMLSCHEMA2\]](#) section 3.3.22) that specifies the [ListWidth](#) attribute.

**Locked** : A boolean ([\[XMLSCHEMA2\]](#) section 3.2.2) that specifies the [Locked](#) attribute.

**RowSourceType** : An [ST AccRowSourceType](#) that specifies the [RowSourceType](#) attribute.

**SeparatorCharacters** : A string ([\[XMLSCHEMA2\]](#) section 3.2.1) that specifies the [SeparatorCharacters](#) attribute.

**ShowColumnHeader** : A boolean ([\[XMLSCHEMA2\]](#) section 3.2.2) that specifies the [ShowColumnHeader](#) attribute.

**StatusBarText** : An Ignored Value.

**Style** : An [ST ReferenceType](#) that specifies the [Style](#) attribute. The properties in this style MUST be applied to the tabs associated with the tab control's pages.

**TabIndex** : An Ignored Value.

**Tag** : An Ignored Value.

**ToolTip** : A string ([\[XMLSCHEMA2\]](#) section 3.2.1) that specifies the [ToolTip](#) attribute.

**Visibility** : An [ST Visibility](#) that specifies the [Visibility](#) attribute.

**Width** : An unsignedInt ([\[XMLSCHEMA2\]](#) section 3.3.22) that specifies the [Width](#) attribute.

**x:Name** : A string ([\[XMLSCHEMA2\]](#) section 3.2.1) that specifies the [Name](#) attribute.

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

```
<xs:complexType name="CT_AccDSComboBox">
  <xs:choice>
    <xs:element name="ComboBox.RowSource" minOccurs="0" wblid:cname="ComboBox_RowSource"
type="CT_AccListComboBoxRowSource"/>
  </xs:choice>
  <xs:attributeGroup ref="DSComboBoxAttributes"/>
</xs:complexType>
```

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

### 2.3.3.3.21 CT\_AccCheckBox

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/forms>

*Referenced by:* [CT Border](#), [CheckBox](#)

*Attributes:*

**AccessKey** : An [Ignored Value](#).

**ControlHeight** : An unsignedInt ([\[XMLSCHEMA2\]](#) section 3.3.22) that specifies the [ControlHeight](#) attribute.

**ControlSource** : A string ([\[XMLSCHEMA2\]](#) section 3.2.1) that specifies the [ControlSource](#) attribute.

**ControlWidth** : An unsignedInt ([\[XMLSCHEMA2\]](#) section 3.3.22) that specifies the [ControlWidth](#) attribute.

**DatasheetCaption** : An [ST AccDatasheetCaption](#) that specifies the [DatasheetCaption](#) attribute.

**DefaultValue** : A string ([\[XMLSCHEMA2\]](#) section 3.2.1) that specifies the [DefaultValue](#) attribute.

**IsEnabled** : A boolean ([\[XMLSCHEMA2\]](#) section 3.2.2) that specifies the [IsEnabled](#) attribute.

**Locked** : A boolean ([\[XMLSCHEMA2\]](#) section 3.2.2) that specifies the [Locked](#) attribute.

**MinHeight** : An unsignedInt ([\[XMLSCHEMA2\]](#) section 3.3.22) that specifies the [MinHeight](#) attribute.

**MinWidth** : An unsignedInt ([\[XMLSCHEMA2\]](#) section 3.3.22) that specifies the [MinWidth](#) attribute.

**StatusBarText** : An Ignored Value.

**Style** : An [ST ReferenceType](#) that specifies the [Style](#) attribute. The properties in this style MUST be applied to the tabs associated with the tab control's pages.

**TabIndex** : An Ignored Value.

**Tag** : An Ignored Value.

**ToolTip** : A string ([XMLSCHEMA2] section 3.2.1) that specifies the [ToolTip](#) attribute.

**Visibility** : An [ST\\_Visibility](#) that specifies the [Visibility](#) attribute.

**x:Name** : A string ([XMLSCHEMA2] section 3.2.1) that specifies the [Name](#) attribute.

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

```
<xs:complexType name="CT_AccCheckBox">
  <xs:attributeGroup ref="CheckBoxAttributes"/>
  <xs:attributeGroup ref="AccessControlAttributes"/>
</xs:complexType>
```

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

### 2.3.3.3.22 CT\_AccDSCheckBox

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/forms>

*Referenced by:* [CT\\_AccDataSheet](#)

*Attributes:*

**AggregateType** : An [Ignored Value](#).

**ControlSource** : A string ([XMLSCHEMA2] section 3.2.1) that specifies the [ControlSource](#) attribute.

**DatasheetCaption** : An [ST\\_AccDatasheetCaption](#) that specifies the [DatasheetCaption](#) attribute.

**DefaultValue** : A string ([XMLSCHEMA2] section 3.2.1) that specifies the [DefaultValue](#) attribute.

**IsEnabled** : A boolean ([XMLSCHEMA2] section 3.2.2) that specifies the [IsEnabled](#) attribute.

**Locked** : A boolean ([XMLSCHEMA2] section 3.2.2) that specifies the [Locked](#) attribute.

**StatusBarText** : An Ignored Value.

**Style** : An [ST\\_ReferenceType](#) that specifies the [Style](#) attribute. The properties in this style MUST be applied to the tabs associated with the tab control's pages.

**TabIndex** : An Ignored Value.

**Tag** : An Ignored Value.

**ToolTip** : A string ([XMLSCHEMA2] section 3.2.1) that specifies the [ToolTip](#) attribute.

**Visibility** : An [ST\\_Visibility](#) that specifies the [Visibility](#) attribute.

**Width** : An unsignedInt ([XMLSCHEMA2] section 3.3.22) that specifies the [Width](#) attribute.

**x:Name** : A string ([XMLSCHEMA2] section 3.2.1) that specifies the [Name](#) attribute.

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

```
<xs:complexType name="CT_AccDSCheckBox">
  <xs:attributeGroup ref="DSCheckBoxAttributes"/>
</xs:complexType>
```

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

### 2.3.3.3.23 CT\_AccNavigationControl

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/forms>

*Referenced by:* [CT\\_Border](#), [NavigationControl](#)

*Child Elements:*

**xaml:Border** : A [CT\\_Border](#) element.

*Attributes:*

**ControlHeight** : An unsignedInt ([\[XMLSCHEMA2\]](#) section 3.3.22) that specifies the [ControlHeight](#) attribute.

**ControlWidth** : An unsignedInt ([\[XMLSCHEMA2\]](#) section 3.3.22) that specifies the [ControlWidth](#) attribute.

**IsEnabled** : A boolean ([\[XMLSCHEMA2\]](#) section 3.2.2) that specifies the [IsEnabled](#) attribute.

**MinHeight** : An unsignedInt ([\[XMLSCHEMA2\]](#) section 3.3.22) that specifies the [MinHeight](#) attribute.

**MinWidth** : An unsignedInt ([\[XMLSCHEMA2\]](#) section 3.3.22) that specifies the [MinWidth](#) attribute.

**NavigationChild** : An [Ignored Value](#).

**NavigationParent** : A string ([\[XMLSCHEMA2\]](#) section 3.2.1) that specifies the [NavigationParent](#) attribute.

**NavigationTargetSubform** : A string ([\[XMLSCHEMA2\]](#) section 3.2.1) that specifies the [NavigationTargetSubform](#) attribute.

**Span** : A string ([\[XMLSCHEMA2\]](#) section 3.2.1) that specifies the [Span](#) attribute.

**StatusBarText** : An Ignored Value.

**Style** : An [ST\\_ReferenceType](#) that specifies the [Style](#) attribute. The properties in this style MUST be applied to the tabs associated with the tab control's pages.

**TabIndex** : An Ignored Value.

**Tag** : An Ignored Value.

**ToolTip** : A string ([\[XMLSCHEMA2\]](#) section 3.2.1) that specifies the [ToolTip](#) attribute.

**Visibility** : An [ST\\_Visibility](#) that specifies the [Visibility](#) attribute.

**x:Name** : A string ([\[XMLSCHEMA2\]](#) section 3.2.1) that specifies the [Name](#) attribute.

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

```

<xs:complexType name="CT_AccNavigationControl">
  <xs:choice>
    <xs:element ref="xaml:Border" minOccurs="0" maxOccurs="unbounded"/>
  </xs:choice>
  <xs:attributeGroup ref="NavigationControlAttributes"/>
  <xs:attributeGroup ref="AccessControlAttributes"/>
</xs:complexType>

```

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

### 2.3.3.3.24 CT\_AccNavigationButton

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/forms>

*Referenced by:* [CT\\_Border](#), [NavigationButton](#)

*Attributes:*

**AccessKey** : An [Ignored Value](#).

**Caption** : An [ST\\_AccString2048](#) that specifies [Caption](#) attribute.

**ControlHeight** : An unsignedInt ([\[XMLSCHEMA2\]](#) section 3.3.22) that specifies the [ControlHeight](#) attribute.

**ControlWidth** : An unsignedInt ([\[XMLSCHEMA2\]](#) section 3.3.22) that specifies the [ControlWidth](#) attribute.

**Cursor** : An [ST\\_Cursor](#) that specifies the [Cursor](#) attribute.

**DefaultInsertButton** : A string ([\[XMLSCHEMA2\]](#) section 3.2.1) that specifies the [DefaultInsertButton](#) attribute.

**Height** : An unsignedInt ([\[XMLSCHEMA2\]](#) section 3.3.22) that specifies the [Height](#) attribute.

**IsEnabled** : A boolean ([\[XMLSCHEMA2\]](#) section 3.2.2) that specifies the [IsEnabled](#) attribute.

**NavigationParentButton** : A string ([\[XMLSCHEMA2\]](#) section 3.2.1) that specifies the [NavigationParentButton](#) attribute.

**NavigationTargetName** : A string ([\[XMLSCHEMA2\]](#) section 3.2.1) that specifies the [NavigationTargetName](#) attribute.

**NavigationTargetType** : An Ignored Value.

**NavigationWhereClause** : A string ([\[XMLSCHEMA2\]](#) section 3.2.1) that specifies the [NavigationWhereClause](#) attribute.

**Picture** : A string ([\[XMLSCHEMA2\]](#) section 3.2.1) that specifies the [Picture](#) attribute.

**PictureCaptionArrangement** : An [ST\\_AccPictureCaptionArrangement](#) that specifies the [PictureCaptionArrangement](#) attribute.

**StatusBarText** : An Ignored Value.

**Style** : An [ST\\_ReferenceType](#) that specifies the [Style](#) attribute. The properties in this style MUST be applied to the tabs associated with the tab control's pages.



**StyleHover** : An ST\_ReferenceType that specifies the [StyleHover](#) attribute.

**StyleSelected** : An ST\_ReferenceType that specifies the [StyleSelected](#) attribute.

**TabIndex** : An Ignored Value.

**Tag** : An Ignored Value.

**ToolTip** : A string ([\[XMLSCHEMA2\]](#) section 3.2.1) that specifies the [ToolTip](#) attribute.

**Visibility** : An [ST\\_Visibility](#) that specifies the [Visibility](#) attribute.

**Width** : An unsignedInt ([\[XMLSCHEMA2\]](#) section 3.3.22) that specifies the [Width](#) attribute.

**x:Name** : A string ([\[XMLSCHEMA2\]](#) section 3.2.1) that specifies the [Name](#) attribute.

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

```
<xs:complexType name="CT_AccNavigationButton">
  <xs:attributeGroup ref="NavigationButtonAttributes"/>
  <xs:attributeGroup ref="AccessControlAttributes"/>
</xs:complexType>
```

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

### 2.3.3.3.25 CT\_AccWebBrowser

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/forms>

*Referenced by:* [CT\\_Border](#), [WebBrowser](#)

*Attributes:*

**ControlHeight** : An unsignedInt ([\[XMLSCHEMA2\]](#) section 3.3.22) that specifies the [ControlHeight](#) attribute.

**ControlSource** : A string ([\[XMLSCHEMA2\]](#) section 3.2.1) that specifies the [ControlSource](#) attribute.

**ControlWidth** : An unsignedInt ([\[XMLSCHEMA2\]](#) section 3.3.22) that specifies the [ControlWidth](#) attribute.

**HorizontalScrollBarVisibility** : An [ST\\_ScrollBarVisibility](#) that specifies the [HorizontalScrollBarVisibility](#) attribute.

**HyperlinkComponents** : An [Ignored Value](#).

**MinHeight** : An unsignedInt ([\[XMLSCHEMA2\]](#) section 3.3.22) that specifies the [MinHeight](#) attribute.

**MinWidth** : An unsignedInt ([\[XMLSCHEMA2\]](#) section 3.3.22) that specifies the [MinWidth](#) attribute.

**OleData** : An Ignored Value.

**StatusBarText** : An Ignored Value.

**Style** : An [ST\\_ReferenceType](#) that specifies the [Style](#) attribute. The properties in this style MUST be applied to the tabs associated with the tab control's pages.

**TabIndex** : An Ignored Value.

**Tag** : An Ignored Value.

**ToolTip** : A string ([\[XMLSCHEMA2\]](#) section 3.2.1) that specifies the [ToolTip](#) attribute.

**VerticalScrollBarVisibility** : An [ST\\_ScrollBarVisibility](#) that specifies the [VerticalScrollBarVisibility](#) attribute.

**Visibility** : An [ST\\_Visibility](#) that specifies the [Visibility](#) attribute.

**x:Name** : A string ([\[XMLSCHEMA2\]](#) section 3.2.1) that specifies the [Name](#) attribute.

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

```
<xs:complexType name="CT_AccWebBrowser">
  <xs:attributeGroup ref="WebBrowserAttributes"/>
  <xs:attributeGroup ref="AccessControlAttributes"/>
</xs:complexType>
```

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

### 2.3.3.4 Simple Types

#### 2.3.3.4.1 ST\_AccPictureAlignment

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/forms>

*Referenced by:* [CT\\_AccAttachment](#), [CT\\_AccImage](#), [CT\\_AccDSAttachment](#)

A string ([\[XMLSCHEMA2\]](#) section 3.2.1) that **MUST** be one of the following values.

Value	Meaning
top left	The picture is aligned at the top left corner of the control.
top right	The picture is aligned at the top right corner of the control.
center	The picture is aligned at the center of the control.
bottom left	The picture is aligned at the bottom left corner of the control.
bottom right	The picture is aligned at the bottom right corner of the control.

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

```
<xs:simpleType name="ST_AccPictureAlignment">
  <xs:restriction base="xs:string">
    <xs:enumeration value="top left" wblid:cname="PictureAlignmentTopLeft"/>
    <xs:enumeration value="top right" wblid:cname="PictureAlignmentTopRight"/>
    <xs:enumeration value="center" wblid:cname="PictureAlignmentCenterCenter"/>
    <xs:enumeration value="bottom left" wblid:cname="PictureAlignmentBottomLeft"/>
    <xs:enumeration value="bottom right" wblid:cname="PictureAlignmentBottomRight"/>
  </xs:restriction>
</xs:simpleType>
```

```
</xs:simpleType>
```

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

#### 2.3.3.4.2 ST\_AccPictureSizeMode

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/forms>

*Referenced by:* [CT\\_AccAttachment](#), [CT\\_AccImage](#), [CT\\_AccDSAttachment](#)

A string ([\[XMLSCHEMA2\]](#) section 3.2.1) that MUST be one of the following values.

Value	Meaning
Clip	Crops any part of the picture that is larger than the control's available area.
Stretch	Stretches the picture to fill the control's available area.
Zoom	Enlarges or reduces the picture to the largest possible size within the control's available area while preserving the original aspect ratio of the image.

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

```
<xs:simpleType name="ST_AccPictureSizeMode">
  <xs:restriction base="xs:string">
    <xs:enumeration value="Clip" wblid:cname="PictureSizeModeClip"/>
    <xs:enumeration value="Stretch" wblid:cname="PictureSizeModeStretch"/>
    <xs:enumeration value="Zoom" wblid:cname="PictureSizeModeZoom"/>
  </xs:restriction>
</xs:simpleType>
```

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

#### 2.3.3.4.3 ST\_AccAggregateType

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/forms>

*Referenced by:* [CT\\_AccImage](#), [CT\\_AccDSAttachment](#), [CT\\_AccDSCheckBox](#)

A string ([\[XMLSCHEMA2\]](#) section 3.2.1) that MUST be one of the following values.

Value	Meaning
None	An <a href="#">Ignored Value</a> .
Count	An Ignored Value.

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

```
<xs:simpleType name="ST_AccAggregateType">
  <xs:restriction base="xs:string">
    <xs:enumeration value="None" wblid:cname="None"/>
  </xs:restriction>
</xs:simpleType>
```

```

    <xs:enumeration value="Count" wblid:cname="AggregateTypeCount"/>
  </xs:restriction>
</xs:simpleType>

```

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

#### 2.3.3.4.4 ST\_AccAggregateTypeAll

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/forms>

*Referenced by:* [CT\\_AccDSTextBox](#), [CT\\_AccDSComboBox](#)

A string ([\[XMLSCHEMA2\]](#) section 3.2.1) that MUST be one of the following values.

Value	Meaning
None	An <a href="#">Ignored Value</a> .
Sum	An Ignored Value.
Average	An Ignored Value.
Count	An Ignored Value.
Max	An Ignored Value.
Min	An Ignored Value.
StDev	An Ignored Value.
Var	An Ignored Value.

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

```

<xs:simpleType name="ST_AccAggregateTypeAll">
  <xs:restriction base="xs:string">
    <xs:enumeration value="None" wblid:cname="None"/>
    <xs:enumeration value="Sum" wblid:cname="AggregateTypeSum"/>
    <xs:enumeration value="Average" wblid:cname="AggregateTypeAverage"/>
    <xs:enumeration value="Count" wblid:cname="AggregateTypeCount"/>
    <xs:enumeration value="Max" wblid:cname="AggregateTypeMax"/>
    <xs:enumeration value="Min" wblid:cname="AggregateTypeMin"/>
    <xs:enumeration value="StDev" wblid:cname="AggregateTypeStDev"/>
    <xs:enumeration value="Var" wblid:cname="AggregateTypeVar"/>
  </xs:restriction>
</xs:simpleType>

```

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

#### 2.3.3.4.5 ST\_AccPictureTiling

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/forms>

*Referenced by:* [CT\\_AccAttachment](#), [CT\\_AccImage](#), [CT\\_AccDSAttachment](#)

A string ([\[XMLSCHEMA2\]](#) section 3.2.1) that MUST be one of the following values.

Value	Meaning
repeat	The picture is tiled across the background.
no-repeat	The picture is not tiled across the background.

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

```
<xs:simpleType name="ST_AccPictureTiling">  
  <xs:restriction base="xs:string">  
    <xs:enumeration value="repeat" wblid:cname="PictureTilintRepeat"/>  
    <xs:enumeration value="no-repeat" wblid:cname="PictureTilintNoRepeat"/>  
  </xs:restriction>  
</xs:simpleType>
```

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

### 2.3.3.4.6 ST\_AccRowSourceType

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/forms>

*Referenced by:* [CT\\_AccComboBox](#), [CT\\_AccListBox](#), [CT\\_AccDSComboBox](#)

A string ([\[XMLSCHEMA2\]](#) section 3.2.1) that MUST be one of the following values.

Value	Meaning
Value List	The <b>RowSource</b> element of the control specifies a list of literal values.
Table/Query	The <b>RowSource</b> element of the control specifies fields (3) in a list (1) or <a href="#">query</a> , the data in which are the possible values for the control.

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

```
<xs:simpleType name="ST_AccRowSourceType">  
  <xs:restriction base="xs:string">  
    <xs:enumeration value="Value List" wblid:cname="RowSourceTypeValueList"/>  
    <xs:enumeration value="Table/Query" wblid:cname="RowSourceTypeTableOrQuery"/>  
  </xs:restriction>  
</xs:simpleType>
```

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

### 2.3.3.4.7 ST\_AccDecimalPlaces

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/forms>

*Referenced by:* [CT\\_AccTextBox](#), [CT\\_AccComboBox](#), [CT\\_AccDSTextBox](#), [CT\\_AccDSComboBox](#)

A short ([\[XMLSCHEMA2\]](#) section 3.3.18) that MUST be greater than or equal to -1 and less than or equal to 15.

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

```
<xs:simpleType name="ST_AccDecimalPlaces">
  <xs:restriction base="xs:short">
    <xs:minInclusive value="-1"/>
    <xs:maxInclusive value="15"/>
  </xs:restriction>
</xs:simpleType>
```

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

#### 2.3.3.4.8 ST\_AccString2048

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/forms>

*Referenced by:* [CT\\_AccButton](#), [CT\\_AccLabel](#), [CT\\_AccNavigationButton](#), [CT\\_TabItem](#), [CT\\_Form](#), [CT\\_AccDSLabel](#)

A string ([\[XMLSCHEMA2\]](#) section 3.2.1) that MUST be less than or equal to 2048 characters in length.

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

```
<xs:simpleType name="ST_AccString2048">
  <xs:restriction base="xs:string">
    <xs:maxLength value="2048"/>
  </xs:restriction>
</xs:simpleType>
```

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

#### 2.3.3.4.9 ST\_AccDatasheetCaption

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/forms>

*Referenced by:* [CT\\_AccTextBox](#), [CT\\_AccComboBox](#), [CT\\_AccCheckBox](#), [CT\\_AccListBox](#), [CT\\_AccAttachment](#), [CT\\_AccDSTextBox](#), [CT\\_AccDSAttachment](#), [CT\\_AccDSComboBox](#), [CT\\_AccDSCheckBox](#)

A string ([\[XMLSCHEMA2\]](#) section 3.2.1) that MUST be less than or equal to 2011 characters in length.

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

```
<xs:simpleType name="ST_AccDatasheetCaption">
  <xs:restriction base="xs:string">
    <xs:maxLength value="2011"/>
  </xs:restriction>
</xs:simpleType>
```

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

### 2.3.3.4.10 ST\_AccString255

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/forms>

*Referenced by:* [CT\\_AccComboBox](#), [CT\\_AccListBox](#), [CT\\_AccSubForm](#), [CT\\_AccDSComboBox](#)

A string ([\[XMLSCHEMA2\]](#) section 3.2.1) that MUST be less than or equal to 255 characters in length.

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

```
<xs:simpleType name="ST_AccString255">
  <xs:restriction base="xs:string">
    <xs:maxLength value="255"/>
  </xs:restriction>
</xs:simpleType>
```

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

### 2.3.3.4.11 ST\_AccFormat

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/forms>

*Referenced by:* [CT\\_AccTextBox](#), [CT\\_AccComboBox](#), [CT\\_AccDSTextBox](#), [CT\\_AccDSComboBox](#)

A string ([\[XMLSCHEMA2\]](#) section 3.2.1) that MUST be less than or equal to 130 characters in length and SHOULD be set to one of the following values. [<5>](#)

Value	Meaning
General Date	The default date format.
Long Date	A detailed date format.
Short Date	A concise date format.
Long Time	A detailed time format.
Short Time	A concise time format.
General Number	The default number format.
Fixed	A floating-point number format with a fixed number of digits to the right of the decimal point.
Standard	A generic number format.
Percent	A percentage number format.
Scientific	A number format that uses scientific notation.

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

```
<xs:simpleType name="ST_AccFormat">
  <xs:restriction base="xs:string">
```

```

    <xs:maxLength value="130"/>
  </xs:restriction>
</xs:simpleType>

```

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

### 2.3.3.4.12 ST\_AccAcceptsReturn

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/forms>

*Referenced by:* [CT\\_AccTextBox](#), [CT\\_AccDSTextBox](#)

A string ([\[XMLSCHEMA2\]](#) section 3.2.1) that MUST be one of the following values.

Value	Meaning
Default	Follow the default behavior when the ENTER key is pressed.
New Line in Field	Insert a new line when the ENTER key is pressed.

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

```

<xs:simpleType name="ST_AccAcceptsReturn">
  <xs:restriction base="xs:string">
    <xs:enumeration value="Default" wblid:cname="AcceptReturnDefault"/>
    <xs:enumeration value="New Line in Field" wblid:cname="AcceptReturnNewType"/>
  </xs:restriction>
</xs:simpleType>

```

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

### 2.3.3.4.13 ST\_AccPictureCaptionArrangement

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/forms>

*Referenced by:* [CT\\_AccButton](#), [CT\\_AccNavigationButton](#)

A string ([\[XMLSCHEMA2\]](#) section 3.2.1) that MUST be one of the following values.

Value	Meaning
General	The caption is displayed in the default location.
Top	The caption is displayed preceding the picture.
Bottom	The caption is displayed following the picture.
Left	The caption is displayed to the left of the picture.
Right	The caption is displayed to the right of the picture.

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



```

<xs:simpleType name="ST_AccPictureCaptionArrangement">
  <xs:restriction base="xs:string">
    <xs:enumeration value="General" wblid:cname="PictureCaptionArrangementGeneral"/>
    <xs:enumeration value="Top" wblid:cname="Top"/>
    <xs:enumeration value="Bottom" wblid:cname="Bottom"/>
    <xs:enumeration value="Left" wblid:cname="PictureCaptionArrangementLeft"/>
    <xs:enumeration value="Right" wblid:cname="PictureCaptionArrangementRight"/>
  </xs:restriction>
</xs:simpleType>

```

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

#### 2.3.3.4.14 ST\_AccScrollBars

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/forms>

*Referenced by:* [CT\\_Form](#)

A string ([\[XMLSCHEMA2\]](#) section 3.2.1) that MUST be one of the following values.

Value	Meaning
Neither	No scroll bars appear on the form.
Horizontal Only	Only the horizontal scroll bar appears on the form.
Vertical Only	Only the vertical scroll bar appears on the form.
Both	Both vertical and horizontal scroll bars appear on the form.

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

```

<xs:simpleType name="ST_AccScrollBars">
  <xs:restriction base="xs:string">
    <xs:enumeration value="Neither" wblid:cname="Neither"/>
    <xs:enumeration value="Horizontal Only" wblid:cname="ScrollBarsHorizontal"/>
    <xs:enumeration value="Vertical Only" wblid:cname="ScrollBarsVertical"/>
    <xs:enumeration value="Both" wblid:cname="Both"/>
  </xs:restriction>
</xs:simpleType>

```

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

#### 2.3.3.4.15 ST\_AccDisplayAsHyperlink

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/forms>

*Referenced by:* [CT\\_AccTextBox](#), [CT\\_AccDSTextBox](#)

A string ([\[XMLSCHEMA2\]](#) section 3.2.1) that MUST be one of the following values.

Value	Meaning
If	Display text as if it were a hyperlink only if the control is bound to a hyperlink field (3).

Value	Meaning
Hyperlink	
Always	Always display text as if it were a hyperlink, regardless of the type of the bound field (3).
Screen Only	Display all text, regardless of the type of the bound field (3), as if it were a hyperlink when displayed on-screen, but not when printed. The format of the printed text is not affected by this value.

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

```
<xs:simpleType name="ST_AccDisplayAsHyperlink">
  <xs:restriction base="xs:string">
    <xs:enumeration value="If Hyperlink" wblid:cname="IfHyperlink"/>
    <xs:enumeration value="Always" wblid:cname="Always"/>
    <xs:enumeration value="Screen Only" wblid:cname="ScreenOnly"/>
  </xs:restriction>
</xs:simpleType>
```

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

#### 2.3.3.4.16 ST\_AccBorderStyle

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/forms>

*Referenced by:* [CT\\_Form](#)

A string ([\[XMLSCHEMA2\]](#) section 3.2.1) that MUST be one of the following values.

Value	Meaning
None	No <b>gridlines</b> are displayed in the tabular view.
Vertical	Only vertical gridlines are displayed in the tabular view.
Horizontal	Only horizontal gridlines are displayed in the tabular view.
Both	Both vertical and horizontal gridlines are displayed in the tabular view.

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

```
<xs:simpleType name="ST_AccBorderStyle">
  <xs:restriction base="xs:string">
    <xs:enumeration value="None" wblid:cname="None"/>
    <xs:enumeration value="Vertical" wblid:cname="Vertical"/>
    <xs:enumeration value="Horizontal" wblid:cname="Horizontal"/>
    <xs:enumeration value="Both" wblid:cname="Both"/>
  </xs:restriction>
</xs:simpleType>
```

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

### 2.3.3.4.17 ST\_WebToolbar

Target namespace: <http://schemas.microsoft.com/office/accessservices/2009/11/forms>

Referenced by: [CT\\_AccSubForm](#)

A string ([\[XMLSCHEMA2\]](#) section 3.2.1) that MUST be one of the following values.

Value	Meaning
None	No <b>toolbar</b> is displayed in the <a href="#">SubForm</a> .
Top	Toolbar is displayed at the top of the SubForm.
Bottom	Toolbar is displayed at the bottom of the SubForm.

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

```
<xs:simpleType name="ST_WebToolbar">
  <xs:restriction base="xs:string">
    <xs:enumeration value="None" wblid:cname="None"/>
    <xs:enumeration value="Top" wblid:cname="Top"/>
    <xs:enumeration value="Bottom" wblid:cname="Bottom"/>
  </xs:restriction>
</xs:simpleType>
```

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

## 2.3.4 Control Attributes

This section specifies the attributes that can be present as part of complex types in sections [2.3.2.3](#) and [2.3.3.3](#). Each attribute applies to one or more controls and SHOULD NOT be present in instances of types to which they do not apply. [<6>](#) Attribute values that are the same as the default value specified for that attribute SHOULD NOT be present in an instance of the type to which it applies. The value of an attribute that is not present is specified to be the default value of that attribute. Attributes that have no default value MUST be present.

For attributes with a type that is or is derived from string ([\[XMLSCHEMA2\]](#) section 3.2.1), a string with length 0 is specified to be the same value as a null string.

### 2.3.4.1 AcceptsReturn

An [ST\\_AccAcceptsReturn](#) that specifies the behavior of the ENTER key of a control.

The default value is "Default".

Applies to: [CT\\_AccDSTextBox](#), [CT\\_AccTextBox](#)

### 2.3.4.2 AllowValueListEdits

A boolean ([\[XMLSCHEMA2\]](#) section 3.2.2) that specifies whether the list of possible values can be edited from this control.

The default value is true.

Applies to: [CT\\_AccComboBox](#), [CT\\_AccDSComboBox](#), [CT\\_AccListBox](#)

### 2.3.4.3 AlternateBackground

An [ST\\_Color](#) that specifies the background color for the even rows in a tabular view or **form (2)** that can display multiple records, where the first row is considered odd.

The default value is a null string, which specifies that all rows have the same background color.

Applies to: [CT\\_Form](#), [CT\\_AccDataSheet](#)

### 2.3.4.4 Association

A string ([\[XMLSCHEMA2\]](#) section 3.2.1) that specifies the name of an associated control. If a label control is associated with another control, clicking either control brings focus to the associated control. The [Caption](#) attribute of the label control is used as the associated control's column caption in a tabular view, unless the [DatasheetCaption](#) attribute is present on the associated control, in which case that value is used. If a [Macro](#) with the **For** attribute set to the associated control specifies an **Event** attribute of "OnClick" or "OnDbClick" (as specified by [ST\\_UserInterfaceObjectEvent](#)), then the Macro commands will be performed on the associated control when the event is fired by either the label or the associated control.

The default value is a null string, which specifies that the label has no associated control.

Applies to: [CT\\_AccDSLabel](#), [CT\\_AccLabel](#)

### 2.3.4.5 Background

A string ([\[XMLSCHEMA2\]](#) section 3.2.1) that specifies the background color of the control. MUST be "Transparent" or an [ST\\_Color](#). "Transparent" specifies a transparent background.

This attribute does not have a default value.

Applies to: [CT\\_AccAttachment](#), [CT\\_AccButton](#), [CT\\_AccComboBox](#), [CT\\_AccDSAttachment](#), [CT\\_AccDSComboBox](#), [CT\\_AccDSLabel](#), [CT\\_AccDSTextBox](#), [CT\\_AccImage](#), [CT\\_AccLabel](#), [CT\\_AccListBox](#), [CT\\_AccNavigationButton](#), [CT\\_AccNavigationControl](#), [CT\\_AccTabControl](#), [CT\\_AccTextBox](#), [CT\\_Border](#).

### 2.3.4.6 BorderThickness

A string ([\[XMLSCHEMA2\]](#) section 3.2.1) that specifies a comma-delimited list of integers. The list MUST contain four values, which specify the thickness, in pixels, of the left, top, right and bottom borders, respectively, of the control.

The default value is "0,0,0,0".

Applies to: [CT\\_AccAttachment](#), [CT\\_AccButton](#), [CT\\_AccCheckBox](#), [CT\\_AccComboBox](#), [CT\\_AccDSAttachment](#), [CT\\_AccDSCheckBox](#), [CT\\_AccDSComboBox](#), [CT\\_AccDSLabel](#), [CT\\_AccDSTextBox](#), [CT\\_AccImage](#), [CT\\_AccLabel](#), [CT\\_AccListBox](#), [CT\\_AccNavigationButton](#), [CT\\_AccNavigationControl](#), [CT\\_AccSubForm](#), [CT\\_AccTabControl](#), [CT\\_AccTextBox](#), [CT\\_AccWebBrowser](#), [CT\\_Border](#)

### 2.3.4.7 Caption

An [ST\\_AccString2048](#) that specifies the descriptive text that appears on a control to identify or describe it.

The default value is a null string.

Applies to: [CT AccButton](#), [CT AccDSLabel](#), [CT AccLabel](#), [CT AccNavigationButton](#), [CT Form](#), [CT TabItem](#)

#### 2.3.4.8 ColumnCount

An unsignedInt ([\[XMLSCHEMA2\]](#) section 3.3.22) that specifies the number of columns displayed by the control. MUST be less than or equal to 255.

The default value is 1.

Applies to: [CT AccComboBox](#), [CT AccDSComboBox](#), [CT AccListBox](#)

#### 2.3.4.9 ColumnWidths

A string ([\[XMLSCHEMA2\]](#) section 3.2.1) that specifies a comma-delimited list of column widths, in pixels. The format of the list MUST conform to the following ABNF [\[RFC4234\]](#) grammar:

```
ColumnWidths = Value *(CommaValue)
Value         = UINT32 / EmptyValue
EmptyValue    = ""
CommaValue    = "," *(EmptyValue ",")
UINT32        = 1*10 (ASCII-DIGIT)
```

**<ASCII-DIGIT>** is specified in [\[MS-OSHARED\]](#) section 2.1.

An entry in the list is a **<UINT32>** or an **<EmptyValue>**. The first entry MUST correspond to the first column in the **RowSource** of the control, and so on. If the value of the [ColumnCount](#) attribute of the control is greater than the number of entries in the list, then the additional columns are specified to have a width that is automatically determined. If the entry corresponding to a column is **<EmptyValue>**, then that column is specified to have a width that is automatically determined. If the width of the control is greater than the sum of the specified column widths, the width of the last column SHOULD be automatically determined.

The default value is a null string.

Applies to: [CT AccComboBox](#), [CT AccDSComboBox](#), [CT AccListBox](#)

#### 2.3.4.10 ControlHeight

An unsignedInt ([\[XMLSCHEMA2\]](#) section 3.3.22) that specifies the exact height of a control, in pixels. The value of the attribute excludes the top and bottom [Padding](#) and the top and bottom [BorderThickness](#) of the control. If the control has a [WebImageTop](#) attribute, then this attribute also excludes the top and bottom [EffectSize](#).

This attribute does not have a default value.

Applies to: [CT AccAttachment](#), [CT AccButton](#), [CT AccCheckBox](#), [CT AccComboBox](#), [CT AccImage](#), [CT AccLabel](#), [CT AccListBox](#), [CT AccNavigationControl](#), [CT AccSubForm](#), [CT AccTabControl](#), [CT AccTextBox](#), [CT AccWebBrowser](#), [CT Border](#), [CT TabItem](#)

#### 2.3.4.11 ControlSource

A string ([XMLSCHEMA2] section 3.2.1) that specifies the source of the value that appears in the control. MUST be either an [expression](#) or the name of a field (3) in the record source of the [form](#). If the value is an expression, it MUST begin with the character '='. A null string specifies that the control's value is not stored elsewhere in the database application.

The default value is a null string.

Applies to: [CT AccAttachment](#), [CT AccCheckBox](#), [CT AccComboBox](#), [CT AccDSAttachment](#), [CT AccDSCheckBox](#), [CT AccDSComboBox](#), [CT AccDSTextBox](#), [CT AccListBox](#), [CT AccWebBrowser](#)

#### 2.3.4.12 ControlWidth

An unsignedInt ([XMLSCHEMA2] section 3.3.22) that specifies the exact width of a control, in pixels. The value of this attribute excludes the right and left [Padding](#) and the right and left [BorderThickness](#) of the control. If the control has a [WebImageLeft](#) attribute, then this attribute also excludes the right and left [EffectSize](#).

This attribute does not have a default value.

Applies to: [CT AccAttachment](#), [CT AccButton](#), [CT AccCheckBox](#), [CT AccComboBox](#), [CT AccImage](#), [CT AccLabel](#), [CT AccListBox](#), [CT AccNavigationControl](#), [CT AccSubForm](#), [CT AccTabControl](#), [CT AccTextBox](#), [CT AccWebBrowser](#), [CT Border](#), [CT TabItem](#)

#### 2.3.4.13 CurrencySymbol

A string ([XMLSCHEMA2] section 3.2.1) that specifies the character or characters that denote a currency value in the control. When this attribute is present, the [FormatDataAs](#) attribute MUST be ignored.

The default value is a null string, which specifies that the control does not have a currency value.

Applies to: [CT AccComboBox](#), [CT AccDSComboBox](#), [CT AccDSTextBox](#), [CT AccTextBox](#)

#### 2.3.4.14 Cursor

An [ST Cursor](#) that specifies the cursor shape when the mouse hovers over the control.

The default value is a null string, which specifies the default cursor.

Applies to: [CT AccButton](#), [CT AccNavigationButton](#)

#### 2.3.4.15 DatasheetCaption

An [ST AccDatasheetCaption](#) that specifies descriptive text to be displayed in the header row of a tabular view for the column representing the control. A null string specifies that the caption is the name of the control.

The default value is a null string.

Applies to: [CT AccAttachment](#), [CT AccCheckBox](#), [CT AccComboBox](#), [CT AccDSAttachment](#), [CT AccDSCheckBox](#), [CT AccDSComboBox](#), [CT AccDSTextBox](#), [CT AccListBox](#), [CT AccTextBox](#)

#### 2.3.4.16 DecimalPlaces

An [ST AccDecimalPlaces](#) that specifies the number of digits to display to the right of the decimal separator character in the formatted value of the control. A value of -1 specifies that the number of digits is automatically determined.

The default value is -1, automatic.

Applies to: [CT AccComboBox](#), [CT AccDSComboBox](#), [CT AccDSTextBox](#), [CT AccTextBox](#)

#### 2.3.4.17 DefaultInsertButton

A string ([\[XMLSCHEMA2\]](#) section 3.2.1) that specifies whether this control is a **placeholder**. The value MUST be either "true" or a null string. The control is not displayed if the value is "true".

The default value is a null string.

Applies to: [CT AccNavigationButton](#)

#### 2.3.4.18 DefaultPicture

A string ([\[XMLSCHEMA2\]](#) section 3.2.1) that specifies the name of the [shared image](#) to be displayed if the [DisplayAs](#) attribute is not set to "PaperClip" and the control cannot show a preview image of an attachment.

The default value is a null string.

Applies to: [CT AccAttachment](#), [CT AccDSAttachment](#)

#### 2.3.4.19 DefaultValue

A string ([\[XMLSCHEMA2\]](#) section 3.2.1) that specifies the value of the control when a new record is created. MUST be a value or an [expression](#) that SHOULD convert to the type displayed by the control.

The default value is a null string.

Applies to: [CT AccCheckBox](#), [CT AccComboBox](#), [CT AccDSCheckBox](#), [CT AccDSComboBox](#), [CT AccDSTextBox](#), [CT AccListBox](#), [CT AccTextBox](#)

#### 2.3.4.20 DisplayAs

A string ([\[XMLSCHEMA2\]](#) section 3.2.1) that specifies how a file is displayed in the control. MUST be either "PaperClip" or a null string. "PaperClip" specifies that a paper clip icon is displayed in the control; a null string specifies that either a preview picture of the attachments or the default picture as specified by the [DefaultPicture](#) attribute is displayed in the control.

The default value is a null string.

Applies to: [CT AccAttachment](#), [CT AccDSAttachment](#)

#### 2.3.4.21 DisplayAsHyperlink

An [ST AccDisplayAsHyperlink](#) that specifies whether to display the text of the control as a hyperlink, and if so, when.

The default value is "If Hyperlink".

Applies to: [CT\\_AccDSTextBox](#), [CT\\_AccTextBox](#)

#### 2.3.4.22 EffectSize

A string ([\[XMLSCHEMA2\]](#) section 3.2.1) that specifies a comma-delimited list of integers. The list MUST contain exactly four values, which specify the amount of space, in pixels, between the background image of the control and the left, top, right and bottom borders, respectively, of the cell that contains the control.

If this attribute is specified for a [CT\\_TabItem](#), this attribute applies to the tab associated with the page.

The default value is a null string.

Applies to: [CT\\_AccButton](#), [CT\\_AccNavigationButton](#), [CT\\_TabItem](#)

#### 2.3.4.23 FlowDirection

An [ST\\_FlowDirection](#) that specifies the direction of content flow of a form.

The default value is **LeftToRight**.

Applies to: [CT\\_Form](#)

#### 2.3.4.24 FontFamily

An [ST\\_AccString255](#) that specifies the font of the text displayed by a control.

The default value is "MS Sans Serif".

Applies to: [CT\\_AccButton](#), [CT\\_AccComboBox](#), [CT\\_AccDSCombobox](#), [CT\\_AccDSLabel](#), [CT\\_AccDSTextBox](#), [CT\\_AccLabel](#), [CT\\_AccListBox](#), [CT\\_AccNavigationButton](#), [CT\\_AccTabControl](#), [CT\\_AccTextBox](#)

#### 2.3.4.25 FontSize

A string ([\[XMLSCHEMA2\]](#) section 3.2.1) that specifies the size, in pixels, of the text displayed by a control.

The default value is "11".

Applies to: [CT\\_AccButton](#), [CT\\_AccComboBox](#), [CT\\_AccDSCombobox](#), [CT\\_AccDSLabel](#), [CT\\_AccDSTextBox](#), [CT\\_AccLabel](#), [CT\\_AccListBox](#), [CT\\_AccNavigationButton](#), [CT\\_AccTabControl](#), [CT\\_AccTextBox](#)

#### 2.3.4.26 FontStyle

A string ([\[XMLSCHEMA2\]](#) section 3.2.1) that specifies whether a control displays italic text. MUST be either "Italic" or a null string. If the value is "Italic", the control displays italic text; otherwise, the control does not display italic text.

The default value is a null string.



Applies to: [CT\\_AccButton](#), [CT\\_AccComboBox](#), [CT\\_AccDSComboBox](#), [CT\\_AccDSLabel](#), [CT\\_AccDSTextBox](#), [CT\\_AccLabel](#), [CT\\_AccListBox](#), [CT\\_AccNavigationButton](#), [CT\\_AccTabControl](#), [CT\\_AccTextBox](#)

#### 2.3.4.27 FontWeight

A string ([\[XMLSCHEMA2\]](#) section 3.2.1) that specifies the font weight of the text displayed by a control. MUST be set to "100", "200", "300", "400", "500", "600", "700", "800" or "900", where "100" specifies the lightest font and "900" the darkest font.

The default value is "400".

Applies to: [CT\\_AccButton](#), [CT\\_AccComboBox](#), [CT\\_AccDSComboBox](#), [CT\\_AccDSLabel](#), [CT\\_AccDSTextBox](#), [CT\\_AccLabel](#), [CT\\_AccListBox](#), [CT\\_AccNavigationButton](#), [CT\\_AccTabControl](#), [CT\\_AccTextBox](#)

#### 2.3.4.28 Foreground

An [ST\\_Color](#) that specifies the color of the text displayed by a control.

This attribute does not have a default value.

Applies to: [CT\\_AccButton](#), [CT\\_AccComboBox](#), [CT\\_AccDSComboBox](#), [CT\\_AccDSLabel](#), [CT\\_AccDSTextBox](#), [CT\\_AccLabel](#), [CT\\_AccListBox](#), [CT\\_AccNavigationButton](#), [CT\\_AccTabControl](#), [CT\\_AccTextBox](#)

#### 2.3.4.29 FormatDataAs

An [ST\\_AccFormat](#) that specifies the display format of the text in a control. If the [CurrencySymbol](#) attribute is present, the value of this attribute MUST be ignored.

The default value is a null string.

Applies to: [CT\\_AccComboBox](#), [CT\\_AccDSComboBox](#), [CT\\_AccDSTextBox](#), [CT\\_AccTextBox](#)

#### 2.3.4.30 Height

An unsignedInt ([\[XMLSCHEMA2\]](#) section 3.3.22) that specifies the height of the control, in pixels.

If this attribute is not present in a type to which it applies, the height of the control is automatically determined.

Applies to: [CT\\_AccDSAttachment](#), [CT\\_AccDSCheckBox](#), [CT\\_AccDSComboBox](#), [CT\\_AccDSLabel](#), [CT\\_AccDSTextBox](#), [CT\\_AccNavigationButton](#), [CT\\_TabItem](#)

#### 2.3.4.31 HorizontalScrollBarVisibility

An [ST\\_ScrollBarVisibility](#) that specifies whether to display a horizontal scroll bar in the control.

The default value is "Auto".

Applies to: [CT\\_AccWebBrowser](#)

### 2.3.4.32 HyperlinkAddress

A string ([\[XMLSCHEMA2\]](#) section 3.2.1) that specifies a URL, as specified by [\[RFC1738\]](#), or a valid [expression](#) that evaluates to a URL. If the control has associated [Macros](#) for mouse click events, these macros are run after the URL is launched.

The default value is a null string.

Applies to: [CT AccButton](#), [CT AccDSLabel](#), [CT AccImage](#), [CT AccLabel](#)

### 2.3.4.33 InheritValueList

A boolean ([\[XMLSCHEMA2\]](#) section 3.2.2) that specifies whether the control takes the value of its **RowSource** element from the field (3) to which it is bound. MUST be ignored if the value of the [RowSourceType](#) attribute is not "Value List" or if the value of the [ControlSource](#) attribute does not specify a field.

The default value is false.

Applies to: [CT AccComboBox](#), [CT AccDSComboBox](#), [CT AccListBox](#)

### 2.3.4.34 IsEnabled

A boolean ([\[XMLSCHEMA2\]](#) section 3.2.2) that specifies whether the control can receive focus and respond to user-generated events.

The default value is true.

Applies to: [CT AccAttachment](#), [CT AccButton](#), [CT AccCheckBox](#), [CT AccComboBox](#), [CT AccDSAttachment](#), [CT AccDSCheckBox](#), [CT AccDSComboBox](#), [CT AccDSTextBox](#), [CT AccListBox](#), [CT AccNavigationButton](#), [CT AccNavigationControl](#), [CT AccSubForm](#), [CT AccTabControl](#), [CT AccTextBox](#), [CT TabItem](#)

### 2.3.4.35 IsHyperlink

A boolean ([\[XMLSCHEMA2\]](#) section 3.2.2) that specifies whether the data contained in the control is a hyperlink.

The default value is false.

Applies to: [CT AccDSTextBox](#), [CT AccTextBox](#)

### 2.3.4.36 GridlineBorderBrush

A string ([\[XMLSCHEMA2\]](#) section 3.2.1) that specifies a comma-delimited list of border colors. Each color MUST be "Transparent" or an [ST Color](#). "Transparent" specifies a transparent color.

If the [Style.TargetType](#) of the control is "Border", the list MUST contain 4 values, which specify the left, top, right and bottom colors, respectively. Otherwise, the list MUST contain one value.

This attribute does not have a default value.

Applies to: [CT AccAttachment](#), [CT AccButton](#), [CT AccCheckBox](#), [CT AccComboBox](#), [CT AccDSAttachment](#), [CT AccDSCheckBox](#), [CT AccDSComboBox](#), [CT AccDSLabel](#), [CT AccDSTextBox](#), [CT AccImage](#), [CT AccLabel](#), [CT AccListBox](#), [CT AccNavigationButton](#),

[CT\\_AccNavigationControl](#), [CT\\_AccSubForm](#), [CT\\_AccTabControl](#), [CT\\_AccTextBox](#),  
[CT\\_AccWebBrowser](#), [CT\\_Border](#)

#### 2.3.4.37 LimitToList

A boolean ([\[XMLSCHEMA2\]](#) section 3.2.2) that specifies whether the control disallows values that are not in the **RowSource** of the control.

The default value is false.

Applies to: [CT\\_AccComboBox](#), [CT\\_AccDSComboBox](#)

#### 2.3.4.38 LineHeight

An unsignedInt ([\[XMLSCHEMA2\]](#) section 3.3.22) that specifies the height, in pixels, of each line of text displayed by the control. MUST be less than or equal to 2112.

The default value is 0.

Applies to: [CT\\_AccDSLabel](#), [CT\\_AccDSTextBox](#), [CT\\_AccLabel](#), [CT\\_AccTextBox](#)

#### 2.3.4.39 LinkChildFields

An [ST\\_AccString255](#) that specifies, along with the [LinkMasterFields](#) attribute, how to link records in the [SubForm](#) to records in its parent [Form](#). MUST be a semicolon-delimited list. The entries in the list correspond to fields (3) in the data source (1) of the SubForm.

The default value is a null string.

Applies to: [CT\\_AccSubForm](#)

#### 2.3.4.40 LinkMasterFields

An [ST\\_AccString255](#) that specifies, along with the [LinkChildFields](#) attribute, how to link records in a parent [Form](#) to records in the [SubForm](#). MUST be a semicolon-delimited list. The entries in the list correspond to fields (3) in the data source (1) of the parent form or [Names](#) of controls in the parent form.

The default value is a null string.

Applies to: [CT\\_AccSubForm](#)

#### 2.3.4.41 ListItemsEditForm

An [ST\\_AccString255](#) that specifies the name of a [form](#) to display for the user to edit the items in the **RowSource** of the control. MUST be ignored if the value of the [RowSourceType](#) attribute is not "Table/Query".

The default value is a null string.

Applies to: [CT\\_AccComboBox](#), [CT\\_AccDSComboBox](#), [CT\\_AccListBox](#)

#### 2.3.4.42 ListWidth

An unsignedInt ([\[XMLSCHEMA2\]](#) section 3.3.22) that specifies the width, in pixels, of the list box part of the control.

The default value is 0.

Applies to: [CT AccComboBox](#), [CT AccDSComboBox](#)

#### 2.3.4.43 Locked

A boolean ([\[XMLSCHEMA2\]](#) section 3.2.2) that specifies whether the control is read-only.

The default value is false.

Applies to: [CT AccAttachment](#), [CT AccCheckBox](#), [CT AccComboBox](#), [CT AccDSComboBox](#), [CT AccDSTextBox](#), [CT AccListBox](#), [CT AccSubForm](#), [CT AccTextBox](#)

#### 2.3.4.44 MinHeight

An unsignedInt ([\[XMLSCHEMA2\]](#) section 3.3.22) that specifies the minimum height of a control, in pixels. MUST NOT be present if the [ControlHeight](#) attribute is present.

This attribute does not have a default value.

Applies to: [CT AccAttachment](#), [CT AccButton](#), [CT AccCheckBox](#), [CT AccComboBox](#), [CT AccImage](#), [CT AccLabel](#), [CT AccListBox](#), [CT AccNavigationControl](#), [CT AccSubForm](#), [CT AccTabControl](#), [CT AccTextBox](#), [CT AccWebBrowser](#), [CT Border](#)

#### 2.3.4.45 MinWidth

An unsignedInt ([\[XMLSCHEMA2\]](#) section 3.3.22) that specifies the minimum width of a control, in pixels. MUST NOT be present if the [ControlWidth](#) attribute is present.

This attribute does not have a default value.

Applies to: [CT AccAttachment](#), [CT AccButton](#), [CT AccCheckBox](#), [CT AccComboBox](#), [CT AccImage](#), [CT AccLabel](#), [CT AccListBox](#), [CT AccNavigationControl](#), [CT AccSubForm](#), [CT AccTabControl](#), [CT AccTextBox](#), [CT AccWebBrowser](#), [CT Border](#)

#### 2.3.4.46 Name

A string ([\[XMLSCHEMA2\]](#) section 3.2.1) that specifies the unique identifier of the control. MUST conform to the ABNF [\[RFC4234\]](#) grammar specified by section [2.3.1.2.2](#).

This attribute does not have a default value.

Applies to: [CT AccAttachment](#), [CT AccButton](#), [CT AccCheckBox](#), [CT AccComboBox](#), [CT AccDataSheet](#), [CT AccDSComboBox](#), [CT AccDSTextBox](#), [CT AccImage](#), [CT AccLabel](#), [CT AccListBox](#), [CT AccNavigationButton](#), [CT AccNavigationControl](#), [CT AccSubForm](#), [CT AccTabControl](#), [CT AccTextBox](#), [CT AccWebBrowser](#), [CT Border](#), [CT Section](#), [CT TabItem](#)

#### 2.3.4.47 NavigationButtons

A boolean ([\[XMLSCHEMA2\]](#) section 3.2.2) that specifies whether the buttons for record navigation will be displayed in the [form](#).

The default value is true.

Applies to: [CT Form](#)

#### 2.3.4.48 NavigationParent

A string ([XMLSCHEMA2] section 3.2.1) that specifies the [Name](#) attribute of the [NavigationControl](#) that contains this control. MUST be null if the control is the top level [NavigationControl](#).

The default value is a null string.

Applies to: [CT\\_AccNavigationControl](#)

#### 2.3.4.49 NavigationParentButton

A string ([XMLSCHEMA2] section 3.2.1) that specifies the [Name](#) attribute of the control's parent [NavigationButton](#). The control is visible only when its parent [NavigationButton](#) is selected.

The default value is a null string.

Applies to: [CT\\_AccNavigationButton](#)

#### 2.3.4.50 NavigationTargetName

A string ([XMLSCHEMA2] section 3.2.1) that specifies the [SourceObject](#) of the [SubForm](#) of the control's parent [NavigationControl](#).

The default value is a null string, which specifies that the [SubForm](#) is empty.

Applies to: [CT\\_AccNavigationButton](#)

#### 2.3.4.51 NavigationTargetSubform

A string ([XMLSCHEMA2] section 3.2.1) that specifies the name of the [SubForm](#) control whose [SourceObject](#) is changed when the user makes a selection using this [control](#).

The default value is a null string.

Applies to: [CT\\_AccNavigationControl](#)

#### 2.3.4.52 NavigationWhereClause

A string ([XMLSCHEMA2] section 3.2.1) that specifies a [filter expression](#) to apply to the [SourceObject](#) of the target [SubForm](#).

The default value is a null string.

Applies to: [CT\\_AccNavigationButton](#)

#### 2.3.4.53 Padding

A string ([XMLSCHEMA2] section 3.2.1) that specifies a comma-delimited list of integers. The list MUST contain four values, which specify the left, top, right and bottom padding, respectively, in pixels. If the [Style.TargetType](#) of the control is set to "Border", padding is the amount of space between the border and its child content; otherwise, it specifies the amount of space between the border of the control and its text.

If the [Style.TargetType](#) is set to "Border", the default value is "2,2,2,2"; otherwise the default value is "0,0,0,0".

Applies to: [CT\\_Border](#), [CT\\_AccComboBox](#), [CT\\_AccLabel](#), [CT\\_AccTextBox](#)

#### 2.3.4.54 PageSize

An unsignedInt ([\[XMLSCHEMA2\]](#) section 3.3.22) that specifies the number of items to display at a time in a [form](#) that can display multiple records. MUST be greater than or equal to 1 and less than or equal to 200.

The default value is 20.

Applies to: [CT\\_Form](#)

#### 2.3.4.55 Picture

A string ([\[XMLSCHEMA2\]](#) section 3.2.1) that specifies the name of the [shared image](#) to be displayed in the control.

The default value is a null string.

Applies to: [CT\\_AccButton](#), [CT\\_AccImage](#), [CT\\_AccNavigationButton](#)

#### 2.3.4.56 PictureAlignment

An [ST\\_AccPictureAlignment](#) that specifies the relative location of a picture within the control.

The default value is top left.

Applies to: [CT\\_AccAttachment](#), [CT\\_AccImage](#)

#### 2.3.4.57 PictureCaptionArrangement

An [ST\\_AccPictureCaptionArrangement](#) that specifies where to position the caption of the control relative to a picture in the control.

The default value is a null string, which specifies that the caption is not displayed in the control.

Applies to: [CT\\_AccButton](#), [CT\\_AccNavigationButton](#)

#### 2.3.4.58 PictureSizeMode

An [ST\\_AccPictureSizeMode](#) that specifies how to display an image within the control.

This attribute does not have a default value.

Applies to: [CT\\_AccAttachment](#), [CT\\_AccDSAttachment](#)

#### 2.3.4.59 PictureTiling

An [ST\\_AccPictureTiling](#) that specifies whether an image is repeated to fill the background of the control.

The default value is "no-repeat".

Applies to: [CT\\_AccAttachment](#), [CT\\_AccDSAttachment](#), [CT\\_AccImage](#)

#### 2.3.4.60 RowSourceType

An [ST\\_AccRowSourceType](#) that specifies the source of the possible values of a control.

The default value is "Table/Query".

Applies to: [CT\\_AccComboBox](#), [CT\\_AccDSComboBox](#), [CT\\_AccListBox](#)

#### 2.3.4.61 ScrollBars

An [ST\\_AccScrollBars](#) that specifies whether to display the horizontal or vertical scroll bars of the [Form](#).

The default value is "Both".

Applies to: [CT\\_Form](#)

#### 2.3.4.62 SeparatorCharacters

A string ([\[XMLSCHEMA2\]](#) section 3.2.1) that specifies the character or characters to display between items when the value of the control consists of a list of more than one item. If the value of this attribute is "New Line", then a newline character is the list separator; otherwise, the literal value of the attribute is the list separator.

This attribute does not have a default value.

Applies to: [CT\\_AccComboBox](#), [CT\\_AccDSComboBox](#)

#### 2.3.4.63 ShowColumnHeader

A boolean ([\[XMLSCHEMA2\]](#) section 3.2.2) that specifies whether to display a row of column headers preceding the list of possible values of the control. The column headers are the first row of data in the **RowSource** of the control if the value of the [RowSourceType](#) attribute is "Value List" or the names of the fields (3) in the **RowSource** if the value of the [RowSourceType](#) attribute is "Table/Query".

The default value is false.

Applies to: [CT\\_AccComboBox](#), [CT\\_AccDSComboBox](#), [CT\\_AccListBox](#)

#### 2.3.4.64 SizeMode

An [ST\\_AccPictureSizeMode](#) that specifies how to display the image within the control.

This attribute does not have a default value.

Applies to: [CT\\_AccImage](#)

#### 2.3.4.65 SourceObject

An [ST\\_AccString255](#) that specifies the type and name of the object to display inside a control. The format of the value MUST conform to the following ABNF [\[RFC4234\]](#) grammar:

```
SourceObject = *1(Type "." Name)
Type = "Form" / "Report"
Name = OBJECT-NAME
```

**<OBJECT-NAME>** is specified by [ST\\_ObjectName](#).

The default value is a null string.

Applies to: [CT\\_AccSubForm](#)

#### 2.3.4.66 Span

A string ([XMLSCHEMA2] section 3.2.1) that specifies the direction in which [NavigationButtons](#) are displayed. MUST be either "Vertical", which specifies a vertical layout, or a null string, which specifies a horizontal layout.

The default value is a null string.

Applies to: [CT\\_AccNavigationControl](#)

#### 2.3.4.67 Style

An [ST\\_ReferenceType](#) that specifies the style of a control, section (1) or form (2).

The default value is a null string.

Applies to: [CT\\_AccAttachment](#), [CT\\_AccButton](#), [CT\\_AccCheckBox](#), [CT\\_AccComboBox](#), [CT\\_AccDSAttachment](#), [CT\\_AccDSCheckBox](#), [CT\\_AccDSComboBox](#), [CT\\_AccDSLabel](#), [CT\\_AccDSTextBox](#), [CT\\_AccLabel](#), [CT\\_AccListBox](#), [CT\\_AccImage](#), [CT\\_AccNavigationButton](#), [CT\\_AccNavigationControl](#), [CT\\_AccSubForm](#), [CT\\_AccTabControl](#), [CT\\_AccTextBox](#), [CT\\_AccWebBrowser](#), [CT\\_Form](#), [CT\\_Section](#), [CT\\_TabItem](#)

#### 2.3.4.68 StyleHover

An [ST\\_ReferenceType](#) that specifies the style of a control when the mouse hovers over it.

The default value is a null string.

Applies to: [CT\\_AccButton](#), [CT\\_AccNavigationButton](#), [CT\\_AccTabControl](#), [CT\\_TabItem](#)

#### 2.3.4.69 StyleSelected

An [ST\\_ReferenceType](#) that specifies the style of a control when it is selected.

The default value is a null string.

Applies to: [CT\\_AccButton](#), [CT\\_AccNavigationButton](#), [CT\\_AccTabControl](#), [CT\\_TabItem](#)

#### 2.3.4.70 TabularBorderStyle

An [ST\\_AccBorderStyle](#) element that specifies the appearance of gridlines in a tabular view.

This attribute does not have a default value.

Applies to: [CT\\_AccDataSheet](#)

#### 2.3.4.71 TextAlignment

A string ([XMLSCHEMA2] section 3.2.1) that specifies the horizontal alignment of text in a control. MUST be one of the following values.

Value	Meaning
Left	Text is aligned to the left.



Value	Meaning
Center	Text is centered.
Right	Text is aligned to the right.

This attribute does not have a default value.

Applies to: [CT AccAttachment](#), [CT AccButton](#), [CT AccComboBox](#), [CT AccDSAttachment](#), [CT AccDSComboBox](#), [CT AccDSLabel](#), [CT AccDSTextBox](#), [CT AccLabel](#), [CT AccNavigationButton](#), [CT AccTextBox](#)

### 2.3.4.72 TextDecorations

A string ([XMLSCHEMA2] section 3.2.1) that specifies whether to display the text of a control underlined. MUST be set to "Underline" or a null string. If the value is "Underline", the control displays underlined text; otherwise displays text without an underline.

The default value is a null string.

Applies to: [CT AccButton](#), [CT AccComboBox](#), [CT AccDSComboBox](#), [CT AccDSLabel](#), [CT AccDSTextBox](#), [CT AccLabel](#), [CT AccListBox](#), [CT AccNavigationButton](#), [CT AccTabControl](#), [CT AccTextBox](#)

### 2.3.4.73 TextFormat

A string ([XMLSCHEMA2] section 3.2.1) that specifies whether to display **rich text** for the control. The value MUST be either "Rich Text" or a null string. If the value is "Rich Text", the control displays rich text; otherwise, the control displays plain text.

The default value is a null string.

Applies to: [CT AccDsTextbox](#), [CT AccTextBox](#)

### 2.3.4.74 ToolTip

An [ST AccString255](#) that specifies the tooltip of a control.

The default value is a null string.

Applies to: [CT AccAttachment](#), [CT AccButton](#), [CT AccCheckBox](#), [CT AccComboBox](#), [CT AccDSAttachment](#), [CT AccDSCheckBox](#), [CT AccDSComboBox](#), [CT AccDSLabel](#), [CT AccDSTextBox](#), [CT AccImage](#), [CT AccLabel](#), [CT AccListBox](#), [CT AccNavigationButton](#), [CT AccNavigationControl](#), [CT AccTextBox](#), [CT AccWebBrowser](#), [CT TabItem](#)

### 2.3.4.75 VerticalScrollBarVisibility

An [ST ScrollBarVisibility](#) that specifies whether to display a vertical scroll bar in the control.

The default value is "Auto".

Applies to: [CT AccTextBox](#), [CT AccDSTextBox](#), [CT AccWebBrowser](#)

### 2.3.4.76 Visibility

An [ST\\_Visibility](#) that specifies whether the control is hidden. A null string specifies that the control is visible.

The default value is a null string.

Applies to: [CT\\_AccAttachment](#), [CT\\_AccButton](#), [CT\\_AccCheckBox](#), [CT\\_AccComboBox](#), [CT\\_AccDSAttachment](#), [CT\\_AccDSCheckBox](#), [CT\\_AccDSComboBox](#), [CT\\_AccDSLabel](#), [CT\\_AccDSTextBox](#), [CT\\_AccLabel](#), [CT\\_AccListBox](#), [CT\\_AccImage](#), [CT\\_AccNavigationButton](#), [CT\\_AccNavigationControl](#), [CT\\_AccSubForm](#), [CT\\_AccTabControl](#), [CT\\_TabItem](#), [CT\\_AccTextBox](#), [CT\\_AccWebBrowser](#)

### 2.3.4.77 WebImageCluster

A string ([\[XMLSCHEMA2\]](#) section 3.2.1) that specifies the [Shared Image](#) name of the collection of non-overlapping background images used by the controls in the form.

The default value is a null string.

Applies to: [CT\\_Form](#)

### 2.3.4.78 WebImageLeft

A string ([\[XMLSCHEMA2\]](#) section 3.2.1) that specifies the offset from the left, in pixels, of the left coordinate of the background image inside the image cluster specified by [WebImageCluster](#). The width of the image is specified by the [Width](#) of the control.

The default value is a null string.

Applies to: [CT\\_AccButton](#), [CT\\_AccNavigationButton](#), [CT\\_TabItem](#)

### 2.3.4.79 WebImageTop

A string ([\[XMLSCHEMA2\]](#) section 3.2.1) that specifies the offset from the top, in pixels, of the top coordinate of the background image inside the image cluster specified by [WebImageCluster](#). The height of the image is specified by the [Height](#) of the control.

The default value is a null string.

Applies to: [CT\\_AccButton](#), [CT\\_AccNavigationButton](#), [CT\\_TabItem](#)

### 2.3.4.80 WebToolbar

An [ST\\_WebToolbar](#) that specifies the relative location of the toolbar within the [SubForm](#).

The default value is Bottom.

Applies to: [CT\\_AccSubForm](#)

### 2.3.4.81 Width

An unsignedInt ([\[XMLSCHEMA2\]](#) section 3.3.22) that specifies the width of the control, in pixels.

If this attribute is not present in a type to which it applies, the width of the control is automatically determined.

Applies to: [CT\\_AccNavigationButton](#), [CT\\_AccDSAttachment](#), [CT\\_AccDSCheckBox](#), [CT\\_AccDSComboBox](#), [CT\\_AccDSLabel](#), [CT\\_AccDSTextBox](#), [CT\\_Form](#), [CT\\_TabItem](#)

## 2.4 RDL

This section specifies the subset of the **2009/01** schema ([\[MS-RDL\]](#) section [5.4](#)) that is supported by structures that conform to the specifications in this document.

### 2.4.1 Elements

#### 2.4.1.1 Report

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/reports>

A [Report](#) element.

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

```
<xsd:element name="Report" wblid:cname="Report" type="Report"/>
```

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

### 2.4.2 Attributes

This specification does not define any common XML schema attribute definitions.

### 2.4.3 Complex Types

#### 2.4.3.1 Report

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/reports>

*Referenced by:* [Report](#)

A **Report** element as specified by [\[MS-RDL\]](#) section 2.3.

*Child Elements:*

**CustomProperties** : A [CustomPropertiesType](#) element. If the report has a caption, this element MUST contain a **CustomProperty** element with the **Name** attribute set to "Caption" and the **Value** attribute set to the title of the report.

**DataSets** : A [DataSetsType](#) element.

**DataSources** : A [DataSourcesType](#) element.

**Language** : A string ([\[XMLSCHEMA2\]](#) section 3.2.1) element as specified by [\[MS-RDL\]](#) section 2.3.22.

**ReportParameters** : A [ReportParametersType](#) element.

**ReportSections** : A [ReportSectionsType](#) element.

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

```
<xsd:complexType name="Report">
  <xsd:choice maxOccurs="unbounded">
    <xsd:element name="DataSources" wblid:cname="DataSources" type="DataSourcesType"
minOccurs="0"/>
    <xsd:element name="DataSets" wblid:cname="DataSets" type="DataSetsType" minOccurs="0"/>
    <xsd:element name="ReportParameters" wblid:cname="ReportParameters"
type="ReportParametersType" minOccurs="0"/>
    <xsd:element name="Language" wblid:cname="Language" type="xsd:string" minOccurs="0"/>
    <xsd:element name="CustomProperties" wblid:cname="CustomProperties"
type="CustomPropertiesType" minOccurs="0"/>
    <xsd:element name="ReportSections" wblid:cname="ReportSections"
type="ReportSectionsType"/>
  </xsd:choice>
</xsd:complexType>
```

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

### 2.4.3.2 ReportSectionsType

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/reports>

*Referenced by:* [Report](#)

A **ReportSections** element as specified by [\[MS-RDL\]](#) section 2.4.

*Child Elements:*

**ReportSection** : A [ReportSectionType](#) element. MUST appear once.

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

```
<xsd:complexType name="ReportSectionsType">
  <xsd:sequence>
    <xsd:element name="ReportSection" wblid:cname="ReportSection" type="ReportSectionType"
maxOccurs="2"/>
  </xsd:sequence>
</xsd:complexType>
```

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

### 2.4.3.3 ReportSectionType

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/reports>

*Referenced by:* [ReportSectionsType](#)

A **ReportSection** element as specified by [\[MS-RDL\]](#) section 2.5.

*Child Elements:*

**Body** : A [BodyType](#) element.

**Page** : A [PageType](#) element.

**Width** : A [SizeType](#) element as specified by [\[MS-RDL\]](#) section 2.5.3, **ReportSection.Width**.

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

```
<xsd:complexType name="ReportSectionType">
  <xsd:choice maxOccurs="unbounded">
    <xsd:element name="Body" wblid:cname="Body" type="BodyType"/>
    <xsd:element name="Width" wblid:cname="Width" type="SizeType"/>
    <xsd:element name="Page" wblid:cname="Page" type="PageType"/>
  </xsd:choice>
</xsd:complexType>
```

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

#### 2.4.3.4 ReportParametersType

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/reports>

*Referenced by:* [Report](#)

A **ReportParameters** element as specified by [\[MS-RDL\]](#) section 2.311.

*Child Elements:*

**ReportParameter** : A [ReportParameterType](#) element.

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

```
<xsd:complexType name="ReportParametersType">
  <xsd:sequence>
    <xsd:element name="ReportParameter" wblid:cname="ReportParameter"
      type="ReportParameterType" maxOccurs="unbounded"/>
  </xsd:sequence>
</xsd:complexType>
```

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

#### 2.4.3.5 ReportParameterType

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/reports>

*Referenced by:* [ReportParametersType](#)

A **ReportParameter** element as specified by [\[MS-RDL\]](#) section 2.312.

*Child Elements:*

**Data Type** : A [DataTypeReportParameterType](#) element.

**Hidden** : A boolean ([\[XMLSCHEMA2\]](#) section 3.2.2) element as specified by [\[MS-RDL\]](#) section 2.312.5.

**Nullable** : A boolean ([\[XMLSCHEMA2\]](#) section 3.2.2) element as specified by [\[MS-RDL\]](#) section 2.312.7.

**Prompt** : A [StringLocIDType](#) element as specified by [\[MS-RDL\]](#) section 2.312.8,  
**ReportParameter.Prompt**.

*Attributes:*

**Name** : A [normalizedString](#) ([\[XMLSCHEMA2\]](#) section 3.3.1) attribute as specified by [\[MS-RDL\]](#).

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

```
<xsd:complexType name="ReportParameterType">
  <xsd:choice maxOccurs="unbounded">
    <xsd:element name="DataType" wblid:cname="DataType" type="DataTypeReportParameterType"/>
    <xsd:element name="Nullable" wblid:cname="Nullable" type="xsd:boolean" minOccurs="0"/>
    <xsd:element name="Prompt" wblid:cname="Prompt" type="StringLocIDType" minOccurs="0"/>
    <xsd:element name="Hidden" wblid:cname="Hidden" type="xsd:boolean" minOccurs="0"/>
  </xsd:choice>
  <xsd:attribute name="Name" wblid:cname="Name" type="xsd:normalizedString" use="required"/>
</xsd:complexType>
```

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

### 2.4.3.6 DataSetsType

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/reports>

*Referenced by:* [Report](#)

A **DataSets** element as specified by [\[MS-RDL\]](#) section 2.324.

*Child Elements:*

**DataSet** : A [DataSetType](#) element.

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

```
<xsd:complexType name="DataSetsType">
  <xsd:sequence>
    <xsd:element name="DataSet" wblid:cname="DataSet" type="DataSetType"
      maxOccurs="unbounded"/>
  </xsd:sequence>
</xsd:complexType>
```

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

### 2.4.3.7 DataSetType

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/reports>

*Referenced by:* [DataSetsType](#)

A **DataSet** element as specified by [\[MS-RDL\]](#) section 2.325.

*Child Elements:*

**Fields** : A [FieldsType](#) element.

**Query** : A [QueryType](#) element.

*Attributes:*

**Name** : A normalizedString ([\[XMLSCHEMA2\]](#) section 3.3.1) attribute as specified by [\[MS-RDL\]](#) section 2.325.1. MUST be set to "Default".

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

```
<xsd:complexType name="DataSetType">
  <xsd:choice maxOccurs="unbounded">
    <xsd:element name="Fields" wblid:cname="Fields" type="FieldsType" minOccurs="0"/>
    <xsd:element name="Query" wblid:cname="Query" type="QueryType"/>
  </xsd:choice>
  <xsd:attribute name="Name" wblid:cname="Name" type="xsd:normalizedString" use="required"/>
</xsd:complexType>
```

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

#### 2.4.3.8 FieldsType

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/reports>

*Referenced by:* [DataSetType](#)

A **Fields** element as specified by [\[MS-RDL\]](#) section 2.327.

*Child Elements:*

**Field** : A [FieldType](#) element.

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

```
<xsd:complexType name="FieldsType">
  <xsd:sequence>
    <xsd:element name="Field" wblid:cname="Field" type="FieldType" maxOccurs="unbounded"/>
  </xsd:sequence>
</xsd:complexType>
```

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

#### 2.4.3.9 FieldType

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/reports>

*Referenced by:* [FieldsType](#)

A **Field** element as specified by [\[MS-RDL\]](#) section 2.328.

*Child Elements:*

**DataField** : A string ([\[XMLSCHEMA2\]](#) section 3.2.1) element as specified by [\[MS-RDL\]](#) section 2.328.2.

*Attributes:*

**Name** : A normalizedString ([\[XMLSCHEMA2\]](#) section 3.3.1) attribute as specified by [\[MS-RDL\]](#) section 2.328.1.

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

```
<xsd:complexType name="FieldType">
  <xsd:choice minOccurs="0" maxOccurs="unbounded">
    <xsd:element name="DataField" wblld:cname="DataField" type="xsd:string" minOccurs="0"/>
  </xsd:choice>
  <xsd:attribute name="Name" wblld:cname="Name" type="xsd:normalizedString" use="required"/>
</xsd:complexType>
```

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

### 2.4.3.10 QueryType

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/reports>

*Referenced by:* [DataSetType](#)

A **Query** element as specified by [\[MS-RDL\]](#) section 2.332.

*Child Elements:*

**CommandText** : A string ([\[XMLSCHEMA2\]](#) section 3.2.1) element that specifies the name of a list (1), the name of a [Query](#), or a [CT\\_Query](#) enclosed by a CDATA ([\[XML\]](#) section 2.7) block.

**DataSourceName** : A string ([\[XMLSCHEMA2\]](#) section 3.2.1) element as specified by [\[MS-RDL\]](#) section 2.332.3. MUST be set to "ADS".

**QueryParameters** : A [QueryParametersType](#) element.

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

```
<xsd:complexType name="QueryType">
  <xsd:choice maxOccurs="unbounded">
    <xsd:element name="DataSourceName" wblld:cname="DataSourceName" type="xsd:string"/>
    <xsd:element name="CommandText" wblld:cname="CommandText" type="xsd:string"/>
    <xsd:element name="QueryParameters" wblld:cname="QueryParameters"
type="QueryParametersType" minOccurs="0"/>
  </xsd:choice>
</xsd:complexType>
```

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

### 2.4.3.11 DataSourcesType

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/reports>



Referenced by: [Report](#)

A **DataSources** element as specified by [\[MS-RDL\]](#) section 2.321.

*Child Elements:*

**DataSource** : A [DataSourceType](#) element.

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

```
<xsd:complexType name="DataSourcesType">
  <xsd:sequence>
    <xsd:element name="DataSource" wblid:cname="DataSource" type="DataSourceType"
maxOccurs="unbounded"/>
  </xsd:sequence>
</xsd:complexType>
```

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

### 2.4.3.12 DataSourceType

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/reports>

Referenced by: [DataSourcesType](#)

A **DataSource** element as specified by [\[MS-RDL\]](#) section 2.322.

*Child Elements:*

**ConnectionProperties** : A [ConnectionPropertiesType](#) element.

*Attributes:*

**Name** : A string ([\[XMLSCHEMA2\]](#) section 3.2.1) attribute as specified by [\[MS-RDL\]](#) section 2.322.1. MUST be set to "ADS".

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

```
<xsd:complexType name="DataSourceType">
  <xsd:choice minOccurs="0" maxOccurs="unbounded">
    <xsd:element name="ConnectionProperties" wblid:cname="ConnectionProperties"
type="ConnectionPropertiesType" minOccurs="0"/>
  </xsd:choice>
  <xsd:attribute name="Name" wblid:cname="Name" type="xsd:string" use="required"/>
</xsd:complexType>
```

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

### 2.4.3.13 ConnectionPropertiesType

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/reports>

Referenced by: [DataSourceType](#)

A **ConnectionProperties** element as specified by [\[MS-RDL\]](#) section 2.323.

*Child Elements:*

**ConnectString** : A string ([\[XMLSCHEMA2\]](#) section 3.2.1) element as specified by [\[MS-RDL\]](#) section 2.323.1. MUST be empty.

**DataProvider** : A string ([\[XMLSCHEMA2\]](#) section 3.2.1) element as specified by [\[MS-RDL\]](#) section 2.323.2. MUST be empty.

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

```
<xsd:complexType name="ConnectionPropertiesType">
  <xsd:choice minOccurs="1" maxOccurs="unbounded">
    <xsd:element name="DataProvider" wblid:cname="DataProvider" type="xsd:string"/>
    <xsd:element name="ConnectString" wblid:cname="ConnectString" type="xsd:string"/>
  </xsd:choice>
</xsd:complexType>
```

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

#### 2.4.3.14 QueryParametersType

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/reports>

*Referenced by:* [QueryType](#)

A **QueryParameters** element as specified by [\[MS-RDL\]](#) section 2.333.

*Child Elements:*

**QueryParameter** : A [QueryParameterType](#) element.

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

```
<xsd:complexType name="QueryParametersType">
  <xsd:sequence>
    <xsd:element name="QueryParameter" wblid:cname="QueryParameter" type="QueryParameterType"
      maxOccurs="unbounded"/>
  </xsd:sequence>
</xsd:complexType>
```

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

#### 2.4.3.15 QueryParameterType

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/reports>

*Referenced by:* [QueryParametersType](#)

A **QueryParameter** element as specified by [\[MS-RDL\]](#) section 2.334.

*Child Elements:*

**Value** : A string ([\[XMLSCHEMA2\]](#) section 3.2.1) element as specified by [\[MS-RDL\]](#) section 2.334.2.

*Attributes:*

**Name** : A string ([\[XMLSCHEMA2\]](#) section 3.2.1) element as specified by [\[MS-RDL\]](#) section 2.334.1.

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

```
<xsd:complexType name="QueryParameterType">
  <xsd:choice minOccurs="1" maxOccurs="unbounded">
    <xsd:element name="Value" wblid:cname="Value" type="xsd:string"/>
  </xsd:choice>
  <xsd:attribute name="Name" wblid:cname="Name" type="xsd:string" use="required"/>
</xsd:complexType>
```

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

#### 2.4.3.16 BodyType

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/reports>

*Referenced by:* [ReportSectionType](#)

A **Body** element as specified by [\[MS-RDL\]](#) section 2.6.

*Child Elements:*

**Height** : A [SizeType](#) element as specified by [\[MS-RDL\]](#) section 2.6.4, **Body.Height**.

**ReportItems** : A [BodyTypeReportItemsType](#) element.

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

```
<xsd:complexType name="BodyType">
  <xsd:choice maxOccurs="unbounded">
    <xsd:element name="ReportItems" wblid:cname="ReportItems" type="BodyTypeReportItemsType"
      minOccurs="0"/>
    <xsd:element name="Height" wblid:cname="Height" type="SizeType"/>
  </xsd:choice>
</xsd:complexType>
```

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

#### 2.4.3.17 PageType

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/reports>

*Referenced by:* [ReportSectionType](#)

A **Page** element as specified by [\[MS-RDL\]](#) section 2.7.

*Child Elements:*

**BottomMargin** : A [SizeType](#) element as specified by [\[MS-RDL\]](#) section 2.7.3, **Page.BottomMargin**.

**Columns** : An int ([\[XMLSCHEMA2\]](#) section 3.3.17) element as specified by [\[MS-RDL\]](#) section 2.7.1.

**ColumnSpacing** : A [SizeType](#) element as specified by [\[MS-RDL\]](#) section 2.7.2, **Page.ColumnSpacing**.

**LeftMargin** : A [SizeType](#) element as specified by [\[MS-RDL\]](#) section 2.7.6, **Page.LeftMargin**.

**PageFooter** : A [PageFooterSectionType](#) element.

**PageHeader** : A [PageHeaderSectionType](#) element.

**PageHeight** : A [SizeType](#) element as specified by [\[MS-RDL\]](#) section 2.7.9, **Page.PageHeight**.

**PageWidth** : A [SizeType](#) element as specified by [\[MS-RDL\]](#) section 2.7.10, **Page.PageWidth**.

**RightMargin** : A [SizeType](#) element as specified by [\[MS-RDL\]](#) section 2.7.11, **Page.RightMargin**.

**TopMargin** : A [SizeType](#) element as specified by [\[MS-RDL\]](#) section 2.7.13, **Page.TopMargin**.

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

```
<xsd:complexType name="PageType">
  <xsd:choice minOccurs="0" maxOccurs="unbounded">
    <xsd:element name="PageHeader" wblld:cname="PageHeader" type="PageHeaderSectionType"
minOccurs="0"/>
    <xsd:element name="PageFooter" wblld:cname="PageFooter" type="PageFooterSectionType"
minOccurs="0"/>
    <xsd:element name="PageHeight" wblld:cname="PageHeight" type="SizeType" minOccurs="0"/>
    <xsd:element name="PageWidth" wblld:cname="PageWidth" type="SizeType" minOccurs="0"/>
    <xsd:element name="LeftMargin" wblld:cname="LeftMargin" type="SizeType" minOccurs="0"/>
    <xsd:element name="RightMargin" wblld:cname="RightMargin" type="SizeType" minOccurs="0"/>
    <xsd:element name="TopMargin" wblld:cname="TopMargin" type="SizeType" minOccurs="0"/>
    <xsd:element name="BottomMargin" wblld:cname="BottomMargin" type="SizeType"
minOccurs="0"/>
    <xsd:element name="Columns" wblld:cname="Columns" type="xsd:int" minOccurs="0"/>
    <xsd:element name="ColumnSpacing" wblld:cname="ColumnSpacing" type="SizeType"
minOccurs="0"/>
  </xsd:choice>
</xsd:complexType>
```

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

#### 2.4.3.18 PageHeaderSectionType

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/reports>

*Referenced by:* [PageType](#)

A **PageSection** element as specified by [\[MS-RDL\]](#) section 2.8.

*Child Elements:*

**Height** : A [SizeType](#) element as specified by [\[MS-RDL\]](#), **Height**.

**PrintOnFirstPage** : A boolean ([\[XMLSCHEMA2\]](#) section 3.2.2) element as specified by [\[MS-RDL\]](#) section 2.8.3. MUST appear once. MUST be set to "true".

**PrintOnLastPage** : A boolean ([\[XMLSCHEMA2\]](#) section 3.2.2) element as specified by [\[MS-RDL\]](#) section 2.8.4. MUST appear once. MUST be set to "true".

**ReportItems** : A [BodyTypeReportItemsType](#) element.

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

```
<xsd:complexType name="PageHeaderSectionType">
  <xsd:choice maxOccurs="unbounded">
    <xsd:element name="Height" wblid:cname="Height" type="SizeType"/>
    <xsd:element name="PrintOnFirstPage" wblid:cname="PrintOnFirstPage" type="xsd:boolean"
minOccurs="1" fixed="true"/>
    <xsd:element name="PrintOnLastPage" wblid:cname="PrintOnLastPage" type="xsd:boolean"
minOccurs="1" fixed="true"/>
    <xsd:element name="ReportItems" wblid:cname="ReportItems" type="BodyTypeReportItemsType"
minOccurs="0"/>
  </xsd:choice>
</xsd:complexType>
```

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

#### 2.4.3.19 PageFooterSectionType

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/reports>

*Referenced by:* [PageType](#)

A **PageSection** element as specified by [\[MS-RDL\]](#) section 2.8.

*Child Elements:*

**Height** : A [SizeType](#) element as specified by [\[MS-RDL\]](#), **Height**.

**PrintOnFirstPage** : A boolean ([\[XMLSCHEMA2\]](#) section 3.2.2) element as specified by [\[MS-RDL\]](#) section 2.8.3. MUST appear once. MUST be set to "true".

**PrintOnLastPage** : A boolean ([\[XMLSCHEMA2\]](#) section 3.2.2) element as specified by [\[MS-RDL\]](#) section 2.8.4. MUST appear once. MUST be set to "true".

**ReportItems** : A [ControlsReportItemsType](#) element.

**Style** : A [RectangleStyleType](#) element.

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

```
<xsd:complexType name="PageFooterSectionType">
  <xsd:choice maxOccurs="unbounded">
    <xsd:element name="Height" wblid:cname="Height" type="SizeType"/>
    <xsd:element name="PrintOnFirstPage" wblid:cname="PrintOnFirstPage" type="xsd:boolean"
minOccurs="1" fixed="true"/>
    <xsd:element name="PrintOnLastPage" wblid:cname="PrintOnLastPage" type="xsd:boolean"
minOccurs="1" fixed="true"/>
  </xsd:choice>
</xsd:complexType>
```

```

    <xsd:element name="ReportItems" wblid:cname="ReportItems" type="ControlsReportItemsType"
minOccurs="0"/>
    <xsd:element name="Style" wblid:cname="Style" type="RectangleStyleType" minOccurs="0"/>
  </xsd:choice>
</xsd:complexType>

```

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

### 2.4.3.20 TextboxRectangleReportItemsType

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/reports>

*Referenced by:* [TextboxRectangleType](#)

A **ReportItems** element as specified by [\[MS-RDL\]](#) section 2.10. MUST appear once.

*Child Elements:*

**Image** : An [ImageType](#) element.

**Textbox** : A [TextboxType](#) element.

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

```

<xsd:complexType name="TextboxRectangleReportItemsType">
  <xsd:choice minOccurs="1" maxOccurs="1">
    <xsd:element name="Textbox" wblid:cname="Textbox" type="TextboxType"/>
    <xsd:element name="Image" wblid:cname="Image" type="ImageType"/>
  </xsd:choice>
</xsd:complexType>

```

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

### 2.4.3.21 ControlsReportItemsType

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/reports>

*Referenced by:* [CellContentsRectangleType](#), [ReportHeaderRectangleType](#), [PageFooterSectionType](#)

A **ReportItems** element as specified by [\[MS-RDL\]](#) section 2.10.

*Child Elements:*

**Image** : An [ImageType](#) element.

**Rectangle** : A [TextboxRectangleType](#) element.

**Textbox** : A [TextboxType](#) element.

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

```

<xsd:complexType name="ControlsReportItemsType">
  <xsd:choice maxOccurs="unbounded">
    <xsd:element name="Rectangle" wblid:cname="Rectangle" type="TextboxRectangleType"/>
  </xsd:choice>
</xsd:complexType>

```

```

    <xsd:element name="Textbox" wblid:cname="Textbox" type="TextboxType"/>
    <xsd:element name="Image" wblid:cname="Image" type="ImageType"/>
  </xsd:choice>
</xsd:complexType>

```

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

### 2.4.3.22 BodyTypeReportItemsType

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/reports>

*Referenced by:* [BodyType](#), [PageHeaderSectionType](#)

A **ReportItems** element as specified by [\[MS-RDL\]](#) section 2.10. MUST appear once.

*Child Elements:*

**Rectangle** : A [ReportHeaderRectangleType](#) element.

**Tablix** : A [TablixType](#) element.

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

```

<xsd:complexType name="BodyTypeReportItemsType">
  <xsd:choice minOccurs="1" maxOccurs="1">
    <xsd:element name="Tablix" wblid:cname="Tablix" type="TablixType"/>
    <xsd:element name="Rectangle" wblid:cname="Rectangle" type="ReportHeaderRectangleType"/>
  </xsd:choice>
</xsd:complexType>

```

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

### 2.4.3.23 ActionInfoType

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/reports>

*Referenced by:* [TextRunType](#), [ImageType](#), [CellContentsImageType](#)

An **ActionInfo** element as specified by [\[MS-RDL\]](#) section 2.289.

*Child Elements:*

**Actions** : An [ActionsType](#) element.

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

```

<xsd:complexType name="ActionInfoType">
  <xsd:choice minOccurs="0" maxOccurs="unbounded">
    <xsd:element name="Actions" wblid:cname="Actions" type="ActionsType" minOccurs="0"/>
  </xsd:choice>
</xsd:complexType>

```

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

### 2.4.3.24 ActionType

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/reports>

*Referenced by:* [ActionInfoType](#)

An **Actions** element as specified by [\[MS-RDL\]](#) section 2.290.

*Child Elements:*

**Action** : An [ActionType](#) element.

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

```
<xsd:complexType name="ActionTypes">
  <xsd:choice minOccurs="0" maxOccurs="unbounded">
    <xsd:element name="Action" wblid:cname="Action" type="ActionType" maxOccurs="unbounded"/>
  </xsd:choice>
</xsd:complexType>
```

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

### 2.4.3.25 ActionType

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/reports>

*Referenced by:* [ActionsType](#)

An **Action** element as specified by [\[MS-RDL\]](#) section 2.291.

*Child Elements:*

**Hyperlink** : A string ([\[XMLSCHEMA2\]](#) section 3.2.1) element as specified by [\[MS-RDL\]](#) section 2.291.3.

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

```
<xsd:complexType name="ActionType">
  <xsd:choice minOccurs="0" maxOccurs="unbounded">
    <xsd:element name="Hyperlink" wblid:cname="Hyperlink" type="xsd:string" minOccurs="0"/>
  </xsd:choice>
</xsd:complexType>
```

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

### 2.4.3.26 VisibilityType

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/reports>

*Referenced by:* [CellContentsRectangleType](#), [TextboxType](#), [ImageType](#), [CellContentsTextboxType](#), [CellContentsImageType](#), [TablixColumnMemberType](#), [TablixRowMemberType](#), [ReportHeaderRectangleType](#)

A **Visibility** element as specified by [\[MS-RDL\]](#) section 2.305.



*Child Elements:*

**Hidden** : A string ([\[XMLSCHEMA2\]](#) section 3.2.1) element as specified by [\[MS-RDL\]](#) section 2.305.1.

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

```
<xsd:complexType name="VisibilityType">
  <xsd:choice minOccurs="0" maxOccurs="unbounded">
    <xsd:element name="Hidden" wblid:cname="Hidden" type="xsd:string" minOccurs="0"/>
  </xsd:choice>
</xsd:complexType>
```

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

### 2.4.3.27 TextboxRectangleType

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/reports>

*Referenced by:* [ControlsReportItemsType](#)

A **Rectangle** element as specified by [\[MS-RDL\]](#) section 2.13.

*Child Elements:*

**ReportItems** : A [TextboxRectangleReportItemsType](#) element.

**Style** : A [RectangleStyleType](#) element.

*Attributes:*

**Name** : A normalizedString ([\[XMLSCHEMA2\]](#) section 3.3.1) attribute as specified by [\[MS-RDL\]](#) section 2.13.1.

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

```
<xsd:complexType name="TextboxRectangleType">
  <xsd:choice minOccurs="0" maxOccurs="unbounded">
    <xsd:element name="Style" wblid:cname="Style" type="RectangleStyleType" minOccurs="0"/>
    <xsd:element name="ReportItems" wblid:cname="ReportItems"
type="TextboxRectangleReportItemsType" minOccurs="0"/>
  </xsd:choice>
  <xsd:attribute name="Name" wblid:cname="Name" type="xsd:normalizedString" use="required"/>
</xsd:complexType>
```

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

### 2.4.3.28 CellContentsRectangleType

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/reports>

*Referenced by:* [CellContentsType](#)

A **Rectangle** element as specified by [\[MS-RDL\]](#) section 2.13.

*Child Elements:*

**Height** : A [SizeType](#) element as specified by [\[MS-RDL\]](#) section 2.13.9, **Rectangle.Height**.

**Left** : A [SizeType](#) element as specified by [\[MS-RDL\]](#) section 2.13.10, **Rectangle.Left**.

**ReportItems** : A [ControlsReportItemsType](#) element.

**Style** : A [RectangleStyleType](#) element.

**Top** : A [SizeType](#) element as specified by [\[MS-RDL\]](#) section 2.13.13, **Rectangle.Top**.

**Visibility** : A [VisibilityType](#) element.

**Width** : A [SizeType](#) element as specified by [\[MS-RDL\]](#) section 2.13.15, **Rectangle.Width**.

*Attributes:*

**Name** : A [normalizedString](#) ([\[XMLSCHEMA2\]](#) section 3.3.1) attribute as specified by [\[MS-RDL\]](#) section 2.13.1.

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

```
<xsd:complexType name="CellContentsRectangleType">
  <xsd:choice minOccurs="0" maxOccurs="unbounded">
    <xsd:element name="Style" wblld:cname="Style" type="RectangleStyleType" minOccurs="0"/>
    <xsd:element name="Top" wblld:cname="Top" type="SizeType" minOccurs="0"/>
    <xsd:element name="Left" wblld:cname="Left" type="SizeType" minOccurs="0"/>
    <xsd:element name="Height" wblld:cname="Height" type="SizeType" minOccurs="0"/>
    <xsd:element name="Width" wblld:cname="Width" type="SizeType" minOccurs="0"/>
    <xsd:element name="Visibility" wblld:cname="Visibility" type="VisibilityType"
minOccurs="0"/>
    <xsd:element name="ReportItems" wblld:cname="ReportItems" type="ControlsReportItemsType"
minOccurs="0"/>
  </xsd:choice>
  <xsd:attribute name="Name" wblld:cname="Name" type="xsd:normalizedString" use="required"/>
</xsd:complexType>
```

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

### 2.4.3.29 ReportHeaderRectangleType

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/reports>

*Referenced by:* [BodyTypeReportItemsType](#)

A **Rectangle** element as specified by [\[MS-RDL\]](#) section 2.13.

*Child Elements:*

**CustomProperties** : A [CustomPropertiesType](#) element.

**Height** : A [SizeType](#) element as specified by [\[MS-RDL\]](#) section 2.13.9, **Rectangle.Height**.

**PageBreak** : A [PageBreakType](#) element.

**ReportItems** : A [ControlsReportItemsType](#) element.

**Style** : A [RectangleStyleType](#) element.

**Top** : A SizeType element as specified by [\[MS-RDL\]](#) section 2.13.13, **Rectangle.Top**.

**Visibility** : A [VisibilityType](#) element.

*Attributes:*

**Name** : A normalizedString ([\[XMLSCHEMA2\]](#) section 3.3.1) attribute as specified by [\[MS-RDL\]](#) section 2.13.1.

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

```
<xsd:complexType name="ReportHeaderRectangleType">
  <xsd:choice minOccurs="0" maxOccurs="unbounded">
    <xsd:element name="Style" wblld:cname="Style" type="RectangleStyleType" minOccurs="0"/>
    <xsd:element name="Top" wblld:cname="Top" type="SizeType" minOccurs="0"/>
    <xsd:element name="Height" wblld:cname="Height" type="SizeType" minOccurs="0"/>
    <xsd:element name="Visibility" wblld:cname="Visibility" type="VisibilityType"
minOccurs="0"/>
    <xsd:element name="CustomProperties" wblld:cname="CustomProperties"
type="CustomPropertiesType" minOccurs="0"/>
    <xsd:element name="ReportItems" wblld:cname="ReportItems" type="ControlsReportItemsType"
minOccurs="0"/>
    <xsd:element name="PageBreak" wblld:cname="PageBreak" type="PageBreakType" minOccurs="0"/>
  </xsd:choice>
  <xsd:attribute name="Name" wblld:cname="Name" type="xsd:normalizedString" use="required"/>
</xsd:complexType>
```

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

### 2.4.3.30 TextboxType

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/reports>

*Referenced by:* [TextboxRectangleReportItemsType](#), [ControlsReportItemsType](#)

A **Textbox** element as specified by [\[MS-RDL\]](#) section 2.15.

*Child Elements:*

**CanGrow** : A boolean ([\[XMLSCHEMA2\]](#) section 3.2.2) element as specified by [\[MS-RDL\]](#) section 2.15.18.

**CustomProperties** : A [CustomPropertiesType](#) element.

**Height** : A [SizeType](#) element as specified by [\[MS-RDL\]](#) section 2.15.10, **Textbox.Height**.

**KeepTogether** : A boolean ([\[XMLSCHEMA2\]](#) section 3.2.2) element as specified by [\[MS-RDL\]](#) section 2.15.22.

**Left** : A SizeType element as specified by [\[MS-RDL\]](#) section 2.15.11, **Textbox.Left**.

**Paragraphs** : A [ParagraphsType](#) element.

**Style** : A [TextBoxStyleType](#) element.

**ToolTip** : A [StringLocIDType](#) element as specified by [\[MS-RDL\]](#) section 2.15.13.

**Top** : A [SizeType](#) element as specified by [\[MS-RDL\]](#) section 2.15.14, **Textbox.Top**.

**Visibility** : A [VisibilityType](#) element.

**Width** : A [SizeType](#) element as specified by [\[MS-RDL\]](#) section 2.15.16, **Textbox.Width**.

*Attributes:*

**Name** : A [normalizedString](#) ([\[XMLSCHEMA2\]](#) section 3.3.1) attribute as specified by [\[MS-RDL\]](#) section 2.15.1.

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

```
<xsd:complexType name="TextboxType">
  <xsd:choice maxOccurs="unbounded">
    <xsd:element name="Style" wblld:cname="Style" type="TextBoxStyleType" minOccurs="0"/>
    <xsd:element name="Top" wblld:cname="Top" type="SizeType" minOccurs="0"/>
    <xsd:element name="Left" wblld:cname="Left" type="SizeType" minOccurs="0"/>
    <xsd:element name="Height" wblld:cname="Height" type="SizeType" minOccurs="0"/>
    <xsd:element name="Width" wblld:cname="Width" type="SizeType" minOccurs="0"/>
    <xsd:element name="Visibility" wblld:cname="Visibility" type="VisibilityType"
minOccurs="0"/>
    <xsd:element name="CustomProperties" wblld:cname="CustomProperties"
type="CustomPropertiesType" minOccurs="0"/>
    <xsd:element name="Paragraphs" wblld:cname="Paragraphs" type="ParagraphsType"/>
    <xsd:element name="CanGrow" wblld:cname="CanGrow" type="xsd:boolean" minOccurs="0"/>
    <xsd:element name="KeepTogether" wblld:cname="KeepTogether" type="xsd:boolean"
minOccurs="0"/>
    <xsd:element name="ToolTip" wblld:cname="ToolTip" type="StringLocIDType" minOccurs="0"/>
  </xsd:choice>
  <xsd:attribute name="Name" wblld:cname="Name" type="xsd:normalizedString" use="required"/>
</xsd:complexType>
```

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

### 2.4.3.31 CellContentsTextboxType

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/reports>

*Referenced by:* [CellContentsType](#)

A **Textbox** element as specified by [\[MS-RDL\]](#) section 2.15.

*Child Elements:*

**CanGrow** : A [boolean](#) ([\[XMLSCHEMA2\]](#) section 3.2.2) element as specified by [\[MS-RDL\]](#) section 2.15.18.

**CustomProperties** : A [CustomPropertiesType](#) element.

**KeepTogether** : A [boolean](#) ([\[XMLSCHEMA2\]](#) section 3.2.2) element as specified by [\[MS-RDL\]](#) section 2.15.22.

**Paragraphs** : A [ParagraphsType](#) element.

**Style** : A [TextBoxStyleType](#) element.

**ToolTip** : A [StringLocIDType](#) element as specified by [\[MS-RDL\]](#) section 2.15.13.

**Visibility** : A [VisibilityType](#) element.

*Attributes:*

**Name** : A normalizedString ([\[XMLSCHEMA2\]](#) section 3.3.1) attribute as specified by [\[MS-RDL\]](#) section 2.15.1.

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

```
<xsd:complexType name="CellContentsTextboxType">
  <xsd:choice maxOccurs="unbounded">
    <xsd:element name="Style" wblid:cname="Style" type="TextBoxStyleType" minOccurs="0"/>
    <xsd:element name="Visibility" wblid:cname="Visibility" type="VisibilityType"
minOccurs="0"/>
    <xsd:element name="CustomProperties" wblid:cname="CustomProperties"
type="CustomPropertiesType" minOccurs="0"/>
    <xsd:element name="Paragraphs" wblid:cname="Paragraphs" type="ParagraphsType"/>
    <xsd:element name="CanGrow" wblid:cname="CanGrow" type="xsd:boolean" minOccurs="0"/>
    <xsd:element name="KeepTogether" wblid:cname="KeepTogether" type="xsd:boolean"
minOccurs="0"/>
    <xsd:element name="ToolTip" wblid:cname="ToolTip" type="StringLocIDType" minOccurs="0"/>
  </xsd:choice>
  <xsd:attribute name="Name" wblid:cname="Name" type="xsd:normalizedString" use="required"/>
</xsd:complexType>
```

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

### 2.4.3.32 ParagraphsType

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/reports>

*Referenced by:* [TextboxType](#), [CellContentsTextboxType](#)

A **Paragraphs** element as specified by [\[MS-RDL\]](#) section 2.16.

*Child Elements:*

**Paragraph** : A [ParagraphType](#) element.

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

```
<xsd:complexType name="ParagraphsType">
  <xsd:sequence>
    <xsd:element name="Paragraph" wblid:cname="Paragraph" type="ParagraphType" maxOccurs="1"/>
  </xsd:sequence>
</xsd:complexType>
```

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

### 2.4.3.33 ParagraphType

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/reports>

*Referenced by:* [ParagraphsType](#)

A **Paragraph** element as specified by [\[MS-RDL\]](#) section 2.17. MUST appear exactly once.

*Child Elements:*

**Style** : A [ParagraphStyleType](#) element.

**TextRuns** : A [TextRunsType](#) element.

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

```
<xsd:complexType name="ParagraphType">
  <xsd:choice minOccurs="0" maxOccurs="unbounded">
    <xsd:element name="Style" wblid:cname="Style" type="ParagraphStyleType" minOccurs="0"/>
    <xsd:element name="TextRuns" wblid:cname="TextRuns" type="TextRunsType"/>
  </xsd:choice>
</xsd:complexType>
```

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

### 2.4.3.34 TextRunsType

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/reports>

*Referenced by:* [ParagraphType](#)

A **TextRuns** element as specified by [\[MS-RDL\]](#) section 2.18.

*Child Elements:*

**TextRun** : A [TextRunType](#) element.

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

```
<xsd:complexType name="TextRunsType">
  <xsd:sequence>
    <xsd:element name="TextRun" wblid:cname="TextRun" type="TextRunType" maxOccurs="1"/>
  </xsd:sequence>
</xsd:complexType>
```

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

### 2.4.3.35 TextRunType

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/reports>

*Referenced by:* [TextRunsType](#)

A **TextRun** element as specified by [\[MS-RDL\]](#) section 2.19. MUST appear exactly once per **TextRunsType**.

*Child Elements:*

**ActionInfo** : An [ActionInfoType](#) element.

**MarkupType** : A string ([\[XMLSCHEMA2\]](#) section 3.2.1) element as specified by [\[MS-RDL\]](#) section 2.19.3.

**Style** : A [TextRunStyleType](#) element.

**ToolTip** : A [StringLocIDType](#) element as specified by [\[MS-RDL\]](#) section 2.19.5.

**Value** : A [LocIDStringWithDataAttribute](#) element as specified by [\[MS-RDL\]](#) section 2.19.6.

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

```
<xsd:complexType name="TextRunType">
  <xsd:choice minOccurs="0" maxOccurs="unbounded">
    <xsd:element name="Style" wblid:cname="Style" type="TextRunStyleType" minOccurs="0"/>
    <xsd:element name="Value" wblid:cname="Value" type="LocIDStringWithDataAttribute"/>
    <xsd:element name="ActionInfo" wblid:cname="ActionInfo" type="ActionInfoType"
minOccurs="0"/>
    <xsd:element name="MarkupType" wblid:cname="MarkupType" type="xsd:string" minOccurs="0"/>
    <xsd:element name="ToolTip" wblid:cname="ToolTip" type="StringLocIDType" minOccurs="0"/>
  </xsd:choice>
</xsd:complexType>
```

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

### 2.4.3.36 ImageType

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/reports>

*Referenced by:* [TextboxRectangleReportItemsType](#), [ControlsReportItemsType](#)

An **Image** element as specified by [\[MS-RDL\]](#) section 2.11.

*Child Elements:*

**ActionInfo** : An [ActionInfoType](#) element.

**CustomProperties** : A [CustomPropertiesType](#) element.

**Height** : A [SizeType](#) element as specified by [\[MS-RDL\]](#) section 2.11.9, **Image.Height**.

**Left** : A [SizeType](#) element as specified by [\[MS-RDL\]](#) section 2.11.10, **Image.Left**.

**Sizing** : An [ImageTypeSizing](#) element.

**Source** : A string ([\[XMLSCHEMA2\]](#) section 3.2.1) element as specified by [\[MS-RDL\]](#) section 2.11.19. MUST be set to "External".

**Style** : An [ImageStyleType](#) element.

**ToolTip** : A [StringLocIDType](#) element as specified by [\[MS-RDL\]](#) section 2.11.12, **Image.ToolTip**.

**Top** : A SizeType element as specified by [\[MS-RDL\]](#) section 2.11.13, **Image.Top**.

**Value** : A string ([\[XMLSCHEMA2\]](#) section 3.2.1) element as specified by [\[MS-RDL\]](#) section 2.11.20. MUST specify either a [Shared Image](#) or an expression ([\[MS-RDL\]](#) section 2.341) that evaluates to one of the following values:

Value	Meaning
/AppImages/chkDisabled.png	Specifies an 11 x 11 pixel image of a disabled state of a checkbox.
/AppImages/chkCleared.png	Specifies an 11 x 11 pixel image of a cleared state of a checkbox.
/AppImages/chkSelected.png	Specifies an 11 x 11 pixel image of a selected state of a checkbox.

**Visibility** : A [VisibilityType](#) element.

**Width** : A SizeType element as specified by [\[MS-RDL\]](#) section 2.11.15, **Image.Width**.

*Attributes:*

**Name** : A normalizedString ([\[XMLSCHEMA2\]](#) section 3.3.1) attribute as specified by [\[MS-RDL\]](#) section 2.11.1.

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

```
<xsd:complexType name="ImageType">
  <xsd:choice maxOccurs="unbounded">
    <xsd:element name="Style" wblld:cname="Style" type="ImageStyleType" minOccurs="0"/>
    <xsd:element name="ActionInfo" wblld:cname="ActionInfo" type="ActionInfoType"
minOccurs="0"/>
    <xsd:element name="Top" wblld:cname="Top" type="SizeType" minOccurs="0"/>
    <xsd:element name="Left" wblld:cname="Left" type="SizeType" minOccurs="0"/>
    <xsd:element name="Height" wblld:cname="Height" type="SizeType" minOccurs="0"/>
    <xsd:element name="Width" wblld:cname="Width" type="SizeType" minOccurs="0"/>
    <xsd:element name="Visibility" wblld:cname="Visibility" type="VisibilityType"
minOccurs="0"/>
    <xsd:element name="ToolTip" wblld:cname="ToolTip" type="StringLocIDType" minOccurs="0"/>
    <xsd:element name="CustomProperties" wblld:cname="CustomProperties"
type="CustomPropertiesType" minOccurs="0"/>
    <xsd:element name="Source" wblld:cname="Source" type="xsd:string" fixed="External"/>
    <xsd:element name="Value" wblld:cname="Value" type="xsd:string"/>
    <xsd:element name="Sizing" wblld:cname="Sizing" type="ImageTypeSizing" minOccurs="0"/>
  </xsd:choice>
  <xsd:attribute name="Name" wblld:cname="Name" type="xsd:normalizedString" use="required"/>
</xsd:complexType>
```

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

### 2.4.3.37 CellContentsImageType

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/reports>

*Referenced by:* [CellContentsType](#)

An **Image** element as specified by [\[MS-RDL\]](#) section 2.11.



*Child Elements:*

**ActionInfo** : An [ActionInfoType](#) element.

**CustomProperties** : A [CustomPropertiesType](#) element.

**Sizing** : An [ImageTypeSizing](#) element.

**Source** : A string ([\[XMLSCHEMA2\]](#) section 3.2.1) element as specified by [\[MS-RDL\]](#) section 2.11.19. MUST be set to "External".

**Style** : An [ImageStyleType](#) element.

**ToolTip** : A [StringLocIDType](#) element as specified by [\[MS-RDL\]](#) section 2.11.12, **Image.ToolTip**.

**Value** : A string ([\[XMLSCHEMA2\]](#) section 3.2.1) element as specified by [\[MS-RDL\]](#) section 2.11.20. MUST specify a [Shared Image](#) or an expression ([\[MS-RDL\]](#) section 2.341) that evaluates to one of the following values:

Value	Meaning
/AppImages/chkDisabled.png	Specifies an 11 x 11 pixel image of a disabled state of a checkbox.
/AppImages/chkCleared.png	Specifies an 11 x 11 pixel image of a cleared state of a checkbox.
/AppImages/chkSelected.png	Specifies an 11 x 11 pixel image of a selected state of a checkbox.

**Visibility** : A [VisibilityType](#) element.

*Attributes:*

**Name** : A normalizedString ([\[XMLSCHEMA2\]](#) section 3.3.1) attribute as specified by [\[MS-RDL\]](#) section 2.11.1.

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

```
<xsd:complexType name="CellContentsImageType">
  <xsd:choice maxOccurs="unbounded">
    <xsd:element name="Style" wblld:cname="Style" type="ImageStyleType" minOccurs="0"/>
    <xsd:element name="ActionInfo" wblld:cname="ActionInfo" type="ActionInfoType"
minOccurs="0"/>
    <xsd:element name="Visibility" wblld:cname="Visibility" type="VisibilityType"
minOccurs="0"/>
    <xsd:element name="ToolTip" wblld:cname="ToolTip" type="StringLocIDType" minOccurs="0"/>
    <xsd:element name="CustomProperties" wblld:cname="CustomProperties"
type="CustomPropertiesType" minOccurs="0"/>
    <xsd:element name="Source" wblld:cname="Source" type="xsd:string" fixed="External"/>
    <xsd:element name="Value" wblld:cname="Value" type="xsd:string"/>
    <xsd:element name="Sizing" wblld:cname="Sizing" type="ImageTypeSizing" minOccurs="0"/>
  </xsd:choice>
  <xsd:attribute name="Name" wblld:cname="Name" type="xsd:normalizedString" use="required"/>
</xsd:complexType>
```

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

### 2.4.3.38 GroupType

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/reports>

*Referenced by:* [TablixRowMemberType](#)

A **Group** element as specified by [\[MS-RDL\]](#) section 2.80.

*Child Elements:*

**GroupExpressions** : A [GroupExpressionsType](#) element.

**PageBreak** : A [PageBreakType](#) element.

*Attributes:*

**Name** : A normalizedString ([\[XMLSCHEMA2\]](#) section 3.3.1) attribute as specified by [\[MS-RDL\]](#) section 2.80.1.

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

```
<xsd:complexType name="GroupType">
  <xsd:choice maxOccurs="unbounded">
    <xsd:element name="GroupExpressions" wblld:cname="GroupExpressions"
type="GroupExpressionsType" minOccurs="0"/>
    <xsd:element name="PageBreak" wblld:cname="PageBreak" type="PageBreakType" minOccurs="0"/>
  </xsd:choice>
  <xsd:attribute name="Name" wblld:cname="Name" type="xsd:normalizedString" use="required"/>
</xsd:complexType>
```

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

### 2.4.3.39 GroupExpressionsType

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/reports>

*Referenced by:* [GroupType](#)

A **GroupExpressions** element as specified by [\[MS-RDL\]](#) section 2.81.

*Child Elements:*

**GroupExpression** : A string ([\[XMLSCHEMA2\]](#) section 3.2.1) element as specified by [\[MS-RDL\]](#) section 2.81.1.

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

```
<xsd:complexType name="GroupExpressionsType">
  <xsd:sequence>
    <xsd:element name="GroupExpression" wblld:cname="GroupExpression" type="xsd:string"
maxOccurs="1"/>
  </xsd:sequence>
</xsd:complexType>
```

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

#### 2.4.3.40 SortExpressionsType

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/reports>

*Referenced by:* [TablixRowMemberType](#)

A **SortExpressions** element as specified by [\[MS-RDL\]](#) section 2.82.

*Child Elements:*

**SortExpression** : A [SortExpressionType](#) element. MUST appear once.

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

```
<xsd:complexType name="SortExpressionsType">
  <xsd:sequence>
    <xsd:element name="SortExpression" wblid:cname="SortExpression" type="SortExpressionType"
      maxOccurs="1"/>
  </xsd:sequence>
</xsd:complexType>
```

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

#### 2.4.3.41 SortExpressionType

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/reports>

*Referenced by:* [SortExpressionsType](#)

A **SortExpression** element as specified by [\[MS-RDL\]](#) section 2.83.

*Child Elements:*

**Direction** : A [SortExpressionDirection](#) element.

**Value** : A string ([\[XMLSCHEMA2\]](#) section 3.2.1) element as specified by [\[MS-RDL\]](#) section 2.83.3.

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

```
<xsd:complexType name="SortExpressionType">
  <xsd:choice maxOccurs="unbounded">
    <xsd:element name="Value" wblid:cname="Value" type="xsd:string"/>
    <xsd:element name="Direction" wblid:cname="Direction" type="SortExpressionDirection"
      minOccurs="0"/>
  </xsd:choice>
</xsd:complexType>
```

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

#### 2.4.3.42 RectangleStyleType

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/reports>

Referenced by: [CellContentsRectangleType](#), [TextboxRectangleType](#), [ReportHeaderRectangleType](#), [PageFooterSectionType](#)

A **Style** element as specified by [\[MS-RDL\]](#) section 2.297.

*Child Elements:*

**BackgroundColor** : A string ([\[XMLSCHEMA2\]](#) section 3.2.1) element as specified by [\[MS-RDL\]](#) section 2.297.1.

**Border** : A [BorderStyle](#) element.

**BottomBorder** : A [SubBorderStyle](#) element.

**LeftBorder** : A [SubBorderStyle](#) element.

**RightBorder** : A [SubBorderStyle](#) element.

**TopBorder** : A [SubBorderStyle](#) element.

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

```
<xsd:complexType name="RectangleStyleType">
  <xsd:choice minOccurs="0" maxOccurs="unbounded">
    <xsd:element name="BackgroundColor" wblid:cname="BackgroundColor" type="xsd:string"
minOccurs="0"/>
    <xsd:element name="Border" wblid:cname="Border" type="BorderStyle" minOccurs="0"/>
    <xsd:element name="TopBorder" wblid:cname="TopBorder" type="SubBorderStyle" minOccurs="0"/>
    <xsd:element name="BottomBorder" wblid:cname="BottomBorder" type="SubBorderStyle"
minOccurs="0"/>
    <xsd:element name="LeftBorder" wblid:cname="LeftBorder" type="SubBorderStyle"
minOccurs="0"/>
    <xsd:element name="RightBorder" wblid:cname="RightBorder" type="SubBorderStyle"
minOccurs="0"/>
  </xsd:choice>
</xsd:complexType>
```

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

#### 2.4.3.43 ImageStyleType

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/reports>

Referenced by: [ImageType](#), [CellContentsImageType](#)

A **Style** element as specified by [\[MS-RDL\]](#) section 2.297.

*Child Elements:*

**Border** : A [BorderStyle](#) element.

**BottomBorder** : A [SubBorderStyle](#) element.

**LeftBorder** : A [SubBorderStyle](#) element.

**RightBorder** : A [SubBorderStyle](#) element.

**TopBorder** : A SubBorderType element.

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

```
<xsd:complexType name="ImageStyleType">
  <xsd:choice minOccurs="0" maxOccurs="unbounded">
    <xsd:element name="Border" wblid:cname="Border" type="BorderType" minOccurs="0"/>
    <xsd:element name="TopBorder" wblid:cname="TopBorder" type="SubBorderType" minOccurs="0"/>
    <xsd:element name="BottomBorder" wblid:cname="BottomBorder" type="SubBorderType"
minOccurs="0"/>
    <xsd:element name="LeftBorder" wblid:cname="LeftBorder" type="SubBorderType"
minOccurs="0"/>
    <xsd:element name="RightBorder" wblid:cname="RightBorder" type="SubBorderType"
minOccurs="0"/>
  </xsd:choice>
</xsd:complexType>
```

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

#### 2.4.3.44 TextRunStyleType

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/reports>

*Referenced by:* [TextRunType](#)

A **Style** element as specified by [\[MS-RDL\]](#) section 2.297.

*Child Elements:*

**Color** : A string ([\[XMLSCHEMA2\]](#) section 3.2.1) element as specified by [\[MS-RDL\]](#) section 2.297.9.

**FontFamily** : A string ([\[XMLSCHEMA2\]](#) section 3.2.1) element as specified by [\[MS-RDL\]](#) section 2.297.11.

**FontSize** : A string ([\[XMLSCHEMA2\]](#) section 3.2.1) element as specified by [\[MS-RDL\]](#) section 2.297.12.

**FontStyle** : A string ([\[XMLSCHEMA2\]](#) section 3.2.1) element as specified by [\[MS-RDL\]](#) section 2.297.13.

**FontWeight** : A string ([\[XMLSCHEMA2\]](#) section 3.2.1) element as specified by [\[MS-RDL\]](#) section 2.297.14.

**Format** : A string ([\[XMLSCHEMA2\]](#) section 3.2.1) element as specified by [\[MS-RDL\]](#) section 2.297.15.

**TextDecoration** : A string ([\[XMLSCHEMA2\]](#) section 3.2.1) element as specified by [\[MS-RDL\]](#) section 2.297.29. MUST be one of the following values: "Underline" or "None".

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

```
<xsd:complexType name="TextRunStyleType">
  <xsd:choice minOccurs="0" maxOccurs="unbounded">
    <xsd:element name="FontStyle" wblid:cname="FontStyle" type="xsd:string" minOccurs="0"/>
    <xsd:element name="FontFamily" wblid:cname="FontFamily" type="xsd:string" minOccurs="0"/>
  </xsd:choice>
</xsd:complexType>
```

```

<xsd:element name="FontSize" wblid:cname="FontSize" type="xsd:string" minOccurs="0"/>
<xsd:element name="FontWeight" wblid:cname="FontWeight" type="xsd:string" minOccurs="0"/>
<xsd:element name="Format" wblid:cname="Format" type="xsd:string" minOccurs="0"/>
<xsd:element name="TextDecoration" wblid:cname="TextDecoration" type="xsd:string"
minOccurs="0"/>
<xsd:element name="Color" wblid:cname="Color" type="xsd:string" minOccurs="0"/>
</xsd:choice>
</xsd:complexType>

```

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

#### 2.4.3.45 TextBoxStyleType

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/reports>

*Referenced by:* [TextboxType](#), [CellContentsTextboxType](#)

A **Style** element as specified by [\[MS-RDL\]](#) section 2.297.

*Child Elements:*

**BackgroundColor** : A string ([\[XMLSCHEMA2\]](#) section 3.2.1) element as specified by [\[MS-RDL\]](#) section 2.297.1.

**Border** : A [BorderType](#) element.

**BottomBorder** : A [SubBorderType](#) element.

**LeftBorder** : A [SubBorderType](#) element.

**PaddingBottom** : A string ([\[XMLSCHEMA2\]](#) section 3.2.1) element as specified by [\[MS-RDL\]](#) section 2.297.21.

**PaddingLeft** : A string ([\[XMLSCHEMA2\]](#) section 3.2.1) element as specified by [\[MS-RDL\]](#) section 2.297.22.

**PaddingRight** : A string ([\[XMLSCHEMA2\]](#) section 3.2.1) element as specified by [\[MS-RDL\]](#) section 2.297.23.

**PaddingTop** : A string ([\[XMLSCHEMA2\]](#) section 3.2.1) element as specified by [\[MS-RDL\]](#) section 2.297.24.

**RightBorder** : A [SubBorderType](#) element.

**TopBorder** : A [SubBorderType](#) element.

**WritingMode** : A string ([\[XMLSCHEMA2\]](#) section 3.2.1) element as specified by [\[MS-RDL\]](#) section 2.297.33.

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

```

<xsd:complexType name="TextBoxStyleType">
  <xsd:choice minOccurs="0" maxOccurs="unbounded">
    <xsd:element name="Border" wblid:cname="Border" type="BorderType" minOccurs="0"/>
    <xsd:element name="TopBorder" wblid:cname="TopBorder" type="SubBorderType" minOccurs="0"/>
  </xsd:choice>
</xsd:complexType>

```

```

    <xsd:element name="BottomBorder" wblld:cname="BottomBorder" type="SubBorderType"
minOccurs="0"/>
    <xsd:element name="LeftBorder" wblld:cname="LeftBorder" type="SubBorderType"
minOccurs="0"/>
    <xsd:element name="RightBorder" wblld:cname="RightBorder" type="SubBorderType"
minOccurs="0"/>
    <xsd:element name="BackgroundColor" wblld:cname="BackgroundColor" type="xsd:string"
minOccurs="0"/>
    <xsd:element name="PaddingLeft" wblld:cname="PaddingLeft" type="xsd:string"
minOccurs="0"/>
    <xsd:element name="PaddingRight" wblld:cname="PaddingRight" type="xsd:string"
minOccurs="0"/>
    <xsd:element name="PaddingTop" wblld:cname="PaddingTop" type="xsd:string" minOccurs="0"/>
    <xsd:element name="PaddingBottom" wblld:cname="PaddingBottom" type="xsd:string"
minOccurs="0"/>
    <xsd:element name="WritingMode" wblld:cname="WritingMode" type="xsd:string"
minOccurs="0"/>
  </xsd:choice>
</xsd:complexType>

```

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

#### 2.4.3.46 ParagraphStyleType

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/reports>

*Referenced by:* [ParagraphType](#)

A **Style** element as specified by [\[MS-RDL\]](#) section 2.297.

*Child Elements:*

**LineHeight** : A string ([\[XMLSCHEMA2\]](#) section 3.2.1) element as specified by [\[MS-RDL\]](#) section 2.297.18.

**TextAlign** : A string ([\[XMLSCHEMA2\]](#) section 3.2.1) element as specified by [\[MS-RDL\]](#) section 2.297.28.

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

```

<xsd:complexType name="ParagraphStyleType">
  <xsd:choice minOccurs="0" maxOccurs="unbounded">
    <xsd:element name="TextAlign" wblld:cname="TextAlign" type="xsd:string" minOccurs="0"/>
    <xsd:element name="LineHeight" wblld:cname="LineHeight" type="xsd:string" minOccurs="0"/>
  </xsd:choice>
</xsd:complexType>

```

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

#### 2.4.3.47 SubBorderType

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/reports>

*Referenced by:* [RectangleStyleType](#), [TextBoxStyleType](#), [ImageStyleType](#)

A **Border** element as specified by [\[MS-RDL\]](#) section 2.299.

*Child Elements:*

**Style** : A string ([XMLSCHEMA2] section 3.2.1) element as specified by [MS-RDL] section 2.299.2. MUST be one of the following values: "None", "Dotted", "Dashed" or "Solid".

**Width** : A string ([XMLSCHEMA2] section 3.2.1) element as specified by [MS-RDL] section 2.299.3.

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

```
<xsd:complexType name="SubBorderType">
  <xsd:choice minOccurs="0" maxOccurs="unbounded">
    <xsd:element name="Style" wblld:cname="Style" type="xsd:string" minOccurs="0"/>
    <xsd:element name="Width" wblld:cname="Width" type="xsd:string" minOccurs="0"/>
  </xsd:choice>
</xsd:complexType>
```

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

#### 2.4.3.48 BorderType

*Target namespace:* http://schemas.microsoft.com/office/accessservices/2009/11/reports

*Referenced by:* [RectangleStyleType](#), [TextBoxStyleType](#), [ImageStyleType](#)

A **Border** element as specified by [MS-RDL] section 2.299.

*Child Elements:*

**Color** : A string ([XMLSCHEMA2] section 3.2.1) element as specified by [MS-RDL] section 2.299.1.

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

```
<xsd:complexType name="BorderType">
  <xsd:choice minOccurs="0" maxOccurs="unbounded">
    <xsd:element name="Color" wblld:cname="Color" type="xsd:string" minOccurs="0"/>
  </xsd:choice>
</xsd:complexType>
```

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

#### 2.4.3.49 StringLocIDType

*Target namespace:* http://schemas.microsoft.com/office/accessservices/2009/11/reports

*Referenced by:* [ReportParameterType](#), [TextRunType](#), [TextboxType](#), [ImageType](#), [CellContentsTextboxType](#), [CellContentsImageType](#)

A string ([XMLSCHEMA2] section 3.2.1).

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

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



```

    <xsd:simpleContent>
      <xsd:extension base="xsd:string"/>
    </xsd:simpleContent>
  </xsd:complexType>

```

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

#### 2.4.3.50 LocIDStringWithDataModelAttribute

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/reports>

*Referenced by:* [TextRunType](#)

A string ([\[XMLSCHEMA2\]](#) section 3.2.1).

*Attributes:*

**EvaluationMode** : An [EvaluationModeType](#) attribute.

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

```

<xsd:complexType name="LocIDStringWithDataModelAttribute">
  <xsd:simpleContent>
    <xsd:extension base="xsd:string">
      <xsd:attribute name="EvaluationMode" wblid:cname="EvaluationMode"
type="EvaluationModeType" default="Auto"/>
    </xsd:extension>
  </xsd:simpleContent>
</xsd:complexType>

```

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

#### 2.4.3.51 CustomPropertiesType

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/reports>

*Referenced by:* [Report](#), [TextboxType](#), [ImageType](#), [CellContentsTextboxType](#), [CellContentsImageType](#), [TablixRowMemberType](#), [ReportHeaderRectangleType](#)

A **CustomProperties** element as specified by [\[MS-RDL\]](#) section 2.294. The values of the child elements MUST be preserved.

*Child Elements:*

**CustomProperty** : A [CustomPropertyType](#) element.

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

```

<xsd:complexType name="CustomPropertiesType">
  <xsd:sequence>
    <xsd:element name="CustomProperty" wblid:cname="CustomProperty" type="CustomPropertyType"
maxOccurs="unbounded"/>
  </xsd:sequence>

```

</xsd:complexType>

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

#### 2.4.3.52 CustomPropertyType

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/reports>

*Referenced by:* [CustomPropertiesType](#)

A **CustomProperty** element as specified by [\[MS-RDL\]](#) section 2.295.

*Child Elements:*

**Name :** A string ([\[XMLSCHEMA2\]](#) section 3.2.1) element as specified by [\[MS-RDL\]](#) section 2.295.1. MUST be preserved.

**Value :** A string ([\[XMLSCHEMA2\]](#) section 3.2.1) element as specified by [\[MS-RDL\]](#) section 2.295.2. MUST be preserved.

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

```
<xsd:complexType name="CustomPropertyType">
  <xsd:choice maxOccurs="unbounded">
    <xsd:element name="Name" wblid:cname="Name" type="xsd:string"/>
    <xsd:element name="Value" wblid:cname="Value" type="xsd:string"/>
  </xsd:choice>
</xsd:complexType>
```

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

#### 2.4.3.53 TablixType

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/reports>

*Referenced by:* [BodyTypeReportItemsType](#)

A **Tablix** element as specified by [\[MS-RDL\]](#) section 2.22.

*Child Elements:*

**DataSetName :** A string ([\[XMLSCHEMA2\]](#) section 3.2.1) element as specified by [\[MS-RDL\]](#) section 2.22.10. MUST be set to "Default".

**TablixBody :** A [TablixBodyType](#) element.

**TablixColumnHierarchy :** A [TablixColumnHierarchyType](#) element.

**TablixRowHierarchy :** A [TablixRowHierarchyType](#) element.

*Attributes:*

**Name :** A normalizedString ([\[XMLSCHEMA2\]](#) section 3.3.1) attribute as specified by [\[MS-RDL\]](#) section 2.22.1.

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

```
<xsd:complexType name="TablixType">
  <xsd:choice maxOccurs="unbounded">
    <xsd:element name="TablixBody" wblid:cname="TablixBody" type="TablixBodyType"
minOccurs="0"/>
    <xsd:element name="TablixColumnHierarchy" wblid:cname="TablixColumnHierarchy"
type="TablixColumnHierarchyType"/>
    <xsd:element name="TablixRowHierarchy" wblid:cname="TablixRowHierarchy"
type="TablixRowHierarchyType"/>
    <xsd:element name="DataSetName" wblid:cname="DataSetName" type="xsd:string"
minOccurs="0"/>
  </xsd:choice>
  <xsd:attribute name="Name" wblid:cname="Name" type="xsd:normalizedString" use="required"/>
</xsd:complexType>
```

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

#### 2.4.3.54 TablixBodyType

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/reports>

*Referenced by:* [TablixType](#)

A **TablixBody** element as specified by [\[MS-RDL\]](#) section 2.23.

*Child Elements:*

**TablixColumns** : A [TablixColumnsType](#) element.

**TablixRows** : A [TablixRowsType](#) element.

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

```
<xsd:complexType name="TablixBodyType">
  <xsd:choice maxOccurs="unbounded">
    <xsd:element name="TablixColumns" wblid:cname="TablixColumns" type="TablixColumnsType"/>
    <xsd:element name="TablixRows" wblid:cname="TablixRows" type="TablixRowsType"/>
  </xsd:choice>
</xsd:complexType>
```

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

#### 2.4.3.55 TablixRowHierarchyType

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/reports>

*Referenced by:* [TablixType](#)

A **TablixRowHierarchy** element as specified by [\[MS-RDL\]](#) section 2.40.

*Child Elements:*

**TablixMembers** : A [TablixRowMembersType](#) element.

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

```
<xsd:complexType name="TablixRowHierarchyType">
  <xsd:choice maxOccurs="unbounded">
    <xsd:element name="TablixMembers" wblld:cname="TablixMembers"
type="TablixRowMembersType"/>
  </xsd:choice>
</xsd:complexType>
```

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

#### 2.4.3.56 TablixRowMembersType

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/reports>

*Referenced by:* [TablixRowHierarchyType](#), [TablixRowMemberType](#)

A **TablixMembers** element as specified by [\[MS-RDL\]](#) section 2.32.

*Child Elements:*

**TablixMember** : A [TablixRowMemberType](#) element.

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

```
<xsd:complexType name="TablixRowMembersType">
  <xsd:sequence maxOccurs="unbounded">
    <xsd:element name="TablixMember" wblld:cname="TablixMember" type="TablixRowMemberType"
maxOccurs="unbounded"/>
  </xsd:sequence>
</xsd:complexType>
```

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

#### 2.4.3.57 TablixColumnHierarchyType

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/reports>

*Referenced by:* [TablixType](#)

A **TablixColumnHierarchy** element as specified by [\[MS-RDL\]](#) section 2.31.

*Child Elements:*

**TablixMembers** : A [TablixColumnMembersType](#) element.

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

```
<xsd:complexType name="TablixColumnHierarchyType">
  <xsd:choice maxOccurs="unbounded">
    <xsd:element name="TablixMembers" wblld:cname="TablixMembers"
type="TablixColumnMembersType"/>
  </xsd:choice>
```

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

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

### 2.4.3.58 TablixColumnMembersType

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/reports>

*Referenced by:* [TablixColumnHierarchyType](#)

A **TablixMembers** element as specified by [\[MS-RDL\]](#) section 2.32.

*Child Elements:*

**TablixMember** : A [TablixColumnMemberType](#) element.

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

```
<xsd:complexType name="TablixColumnMembersType">
  <xsd:sequence maxOccurs="unbounded">
    <xsd:element name="TablixMember" wblid:cname="TablixMember" maxOccurs="unbounded"
      type="TablixColumnMemberType"/>
  </xsd:sequence>
</xsd:complexType>
```

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

### 2.4.3.59 TablixColumnMemberType

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/reports>

*Referenced by:* [TablixColumnMembersType](#)

A **TablixMember** element as specified by [\[MS-RDL\]](#) section 2.33.

*Child Elements:*

**Visibility** : A [VisibilityType](#) element.

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

```
<xsd:complexType name="TablixColumnMemberType">
  <xsd:choice minOccurs="0" maxOccurs="unbounded">
    <xsd:element name="Visibility" wblid:cname="Visibility" type="VisibilityType"
      minOccurs="0"/>
  </xsd:choice>
</xsd:complexType>
```

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

### 2.4.3.60 TablixRowMemberType

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/reports>

Referenced by: [TablixRowMembersType](#)

A **TablixMember** element as specified by [\[MS-RDL\]](#) section 2.33.

*Child Elements:*

**CustomProperties** : A [CustomPropertiesType](#) element.

**Group** : A [GroupType](#) element.

**KeepTogether** : A boolean ([\[XMLSCHEMA2\]](#) section 3.2.2) element as specified by [\[MS-RDL\]](#) section 2.33.7.

**KeepWithGroup** : A string ([\[XMLSCHEMA2\]](#) section 3.2.1) element as specified by [\[MS-RDL\]](#) section 2.33.8. If this element is present, its value MUST be "After".

**RepeatOnNewPage** : A boolean ([\[XMLSCHEMA2\]](#) section 3.2.2) element as specified by [\[MS-RDL\]](#) section 2.33.9.

**SortExpressions** : A [SortExpressionsType](#) element.

**TablixMembers** : A [TablixRowMembersType](#) element.

**Visibility** : A [VisibilityType](#) element.

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

```
<xsd:complexType name="TablixRowMemberType">
  <xsd:choice minOccurs="0" maxOccurs="unbounded">
    <xsd:element name="Group" wblid:cname="Group" type="GroupType" minOccurs="0"/>
    <xsd:element name="SortExpressions" wblid:cname="SortExpressions"
type="SortExpressionsType" minOccurs="0"/>
    <xsd:element name="TablixMembers" wblid:cname="TablixMembers" type="TablixRowMembersType"
minOccurs="0"/>
    <xsd:element name="CustomProperties" wblid:cname="CustomProperties"
type="CustomPropertiesType" minOccurs="0"/>
    <xsd:element name="Visibility" wblid:cname="Visibility" type="VisibilityType"
minOccurs="0"/>
    <xsd:element name="RepeatOnNewPage" wblid:cname="RepeatOnNewPage" type="xsd:boolean"
minOccurs="0"/>
    <xsd:element name="KeepWithGroup" wblid:cname="KeepWithGroup" type="xsd:string"
minOccurs="0" fixed="After"/>
    <xsd:element name="KeepTogether" wblid:cname="KeepTogether" type="xsd:boolean"
minOccurs="0"/>
  </xsd:choice>
</xsd:complexType>
```

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

#### 2.4.3.61 CellContentsType

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/reports>

Referenced by: [TablixCellType](#)

A **CellContents** element as specified by [\[MS-RDL\]](#) section 2.30.

*Child Elements:*

**ColSpan** : An unsignedInt ([\[XMLSCHEMA2\]](#) section 3.3.22) element as specified by [\[MS-RDL\]](#) section 2.30.2.

**Image** : A [CellContentsImageType](#) element.

**Rectangle** : A [CellContentsRectangleType](#) element.

**Textbox** : A [CellContentsTextboxType](#) element.

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

```
<xsd:complexType name="CellContentsType">
  <xsd:choice maxOccurs="unbounded">
    <xsd:element name="ColSpan" wblid:cname="ColSpan" type="xsd:unsignedInt" minOccurs="0"/>
    <xsd:element name="Rectangle" wblid:cname="Rectangle" type="CellContentsRectangleType"
minOccurs="0"/>
    <xsd:element name="Textbox" wblid:cname="Textbox" type="CellContentsTextboxType"
minOccurs="0"/>
    <xsd:element name="Image" wblid:cname="Image" type="CellContentsImageType" minOccurs="0"/>
  </xsd:choice>
</xsd:complexType>
```

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

#### 2.4.3.62 TablixColumnsType

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/reports>

*Referenced by:* [TablixBodyType](#)

A **TablixColumns** element as specified by [\[MS-RDL\]](#) section 2.24.

*Child Elements:*

**TablixColumn** : A [TablixColumnType](#) element.

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

```
<xsd:complexType name="TablixColumnsType">
  <xsd:choice maxOccurs="unbounded">
    <xsd:element name="TablixColumn" wblid:cname="TablixColumn" type="TablixColumnType"
maxOccurs="unbounded"/>
  </xsd:choice>
</xsd:complexType>
```

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

#### 2.4.3.63 TablixColumnType

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/reports>

*Referenced by:* [TablixColumnsType](#)

A **TablixColumn** element as specified by [\[MS-RDL\]](#) section 2.25.

*Child Elements:*

**Width** : A [SizeType](#) element as specified by [\[MS-RDL\]](#) section 2.25.1, **TablixCounn.Width**.

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

```
<xsd:complexType name="TablixColumnType">
  <xsd:choice maxOccurs="unbounded">
    <xsd:element name="Width" wblid:cname="Width" type="SizeType"/>
  </xsd:choice>
</xsd:complexType>
```

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

### 2.4.3.64 TablixRowsType

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/reports>

*Referenced by:* [TablixBodyType](#)

A **TablixRows** element as specified by [\[MS-RDL\]](#) section 2.26.

*Child Elements:*

**TablixRow** : A [TablixRowType](#) element.

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

```
<xsd:complexType name="TablixRowsType">
  <xsd:choice maxOccurs="unbounded">
    <xsd:element name="TablixRow" wblid:cname="TablixRow" type="TablixRowType"
      maxOccurs="unbounded"/>
  </xsd:choice>
</xsd:complexType>
```

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

### 2.4.3.65 TablixRowType

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/reports>

*Referenced by:* [TablixRowsType](#)

A **TablixRow** element as specified by [\[MS-RDL\]](#) section 2.27.

*Child Elements:*

**Height** : A [SizeType](#) element as specified by [\[MS-RDL\]](#) section 2.27.1, **TablixRow.Height**.

**TablixCells** : A [TablixCellsType](#) element.



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

```
<xsd:complexType name="TablixRowType">
  <xsd:choice maxOccurs="unbounded">
    <xsd:element name="Height" wblid:cname="Height" type="SizeType"/>
    <xsd:element name="TablixCells" wblid:cname="TablixCells" type="TablixCellsType"/>
  </xsd:choice>
</xsd:complexType>
```

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

#### 2.4.3.66 TablixCellsType

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/reports>

*Referenced by:* [TablixRowType](#)

A **TablixCells** element as specified by [\[MS-RDL\]](#) section 2.28.

*Child Elements:*

**TablixCell** : A [TablixCellType](#) element.

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

```
<xsd:complexType name="TablixCellsType">
  <xsd:choice maxOccurs="unbounded">
    <xsd:element name="TablixCell" wblid:cname="TablixCell" type="TablixCellType"
maxOccurs="unbounded"/>
  </xsd:choice>
</xsd:complexType>
```

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

#### 2.4.3.67 TablixCellType

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/reports>

*Referenced by:* [TablixCellsType](#)

A **TablixCell** element as specified by [\[MS-RDL\]](#) section 2.29.

*Child Elements:*

**CellContents** : A [CellContentsType](#) element.

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

```
<xsd:complexType name="TablixCellType">
  <xsd:choice maxOccurs="unbounded">
    <xsd:element name="CellContents" wblid:cname="CellContents" type="CellContentsType"
minOccurs="0"/>
  </xsd:choice>
```

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

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

### 2.4.3.68 PageBreakType

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/reports>

*Referenced by:* [GroupType](#), [ReportHeaderRectangleType](#)

A **PageBreak** element as specified by [\[MS-RDL\]](#) section 2.296.

*Child Elements:*

**BreakLocation** : A [PageBreakLocation](#) element.

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

```
<xsd:complexType name="PageBreakType">
  <xsd:choice maxOccurs="unbounded">
    <xsd:element name="BreakLocation" wblid:cname="BreakLocation" type="PageBreakLocation"/>
  </xsd:choice>
</xsd:complexType>
```

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

## 2.4.4 Simple Types

### 2.4.4.1 DataTypeReportParameterType

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/reports>

*Referenced by:* [ReportParameterType](#)

A **ReportParameter.DataType** element as specified by [\[MS-RDL\]](#) section 2.312.3. MUST be one of the following values, which are the same as those specified by [\[MS-RDL\]](#) section 2.312.3.

Value	Meaning
Boolean	This value is specified by <a href="#">[MS-RDL]</a> section 2.312.3, <b>ReportParameter.DataType</b> .
DateTime	This value is specified by <a href="#">[MS-RDL]</a> section 2.312.3, <b>ReportParameter.DataType</b> .
Integer	This value is specified by <a href="#">[MS-RDL]</a> section 2.312.3, <b>ReportParameter.DataType</b> .
Float	This value is specified by <a href="#">[MS-RDL]</a> section 2.312.3, <b>ReportParameter.DataType</b> .
String	This value is specified by <a href="#">[MS-RDL]</a> section 2.312.3, <b>ReportParameter.DataType</b> .

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

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

```

    <xsd:enumeration value="Boolean" wblid:cname="Boolean"/>
    <xsd:enumeration value="DateTime" wblid:cname="DateTime"/>
    <xsd:enumeration value="Integer" wblid:cname="Integer"/>
    <xsd:enumeration value="Float" wblid:cname="Float"/>
    <xsd:enumeration value="String" wblid:cname="String"/>
  </xsd:restriction>
</xsd:simpleType>

```

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

#### 2.4.4.2 ImageTypeSizing

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/reports>

*Referenced by:* [ImageType](#), [CellContentsImageType](#)

An **Image.Sizing** element as specified by [\[MS-RDL\]](#) section 2.11.18. MUST be one of the following values.

Value	Meaning
FitProportional	This value is specified by <a href="#">[MS-RDL]</a> section 2.11.18, <b>Image.Sizing</b> .
Clip	This value is specified by <a href="#">[MS-RDL]</a> section 2.11.18, <b>Image.Sizing</b> .

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

```

<xsd:simpleType name="ImageTypeSizing">
  <xsd:restriction base="xsd:string">
    <xsd:enumeration value="FitProportional" wblid:cname="FitProportional"/>
    <xsd:enumeration value="Clip" wblid:cname="Clip"/>
  </xsd:restriction>
</xsd:simpleType>

```

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

#### 2.4.4.3 SortExpressionDirection

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/reports>

*Referenced by:* [SortExpressionType](#)

A **SortExpression.Direction** element as specified by [\[MS-RDL\]](#) section 2.83.1. MUST be one of the following values, which are the same as those specified by [\[MS-RDL\]](#) section 2.83.1.

Value	Meaning
Ascending	This value is specified by <a href="#">[MS-RDL]</a> section 2.83.1, <b>SortExpression.Direction</b> .
Descending	This value is specified by <a href="#">[MS-RDL]</a> section 2.83.1, <b>SortExpression.Direction</b> .

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

```

<xsd:simpleType name="SortExpressionDirection">
  <xsd:restriction base="xsd:string">
    <xsd:enumeration value="Ascending" wblid:cname="Ascending"/>
    <xsd:enumeration value="Descending" wblid:cname="Descending"/>
  </xsd:restriction>
</xsd:simpleType>

```

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

#### 2.4.4.4 SizeType

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/reports>

*Referenced by:* [TablixColumnType](#), [TablixRowType](#), [CellContentsRectangleType](#), [TextboxType](#), [ImageType](#), [ReportHeaderRectangleType](#), [BodyType](#), [ReportSectionType](#), [PageHeaderSectionType](#), [PageFooterSectionType](#), [PageType](#)

A normalizedString ([\[XMLSCHEMA2\]](#) section 3.3.1) attribute as specified by [\[MS-RDL\]](#) section 2.2.7, **RdlSize**.

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

```

<xsd:simpleType name="SizeType">
  <xsd:restriction base="xsd:normalizedString"/>
</xsd:simpleType>

```

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

#### 2.4.4.5 EvaluationModeType

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/reports>

*Referenced by:* [LocIDStringWithDataModelAttribute](#)

A **TextRun.Value.EvaluationMode** element as specified by [\[MS-RDL\]](#) section 2.19.8. MUST be one of the following values.

Value	Meaning
Auto	This value is specified by <a href="#">[MS-RDL]</a> section 2.19.8, <b>TextRun.Value.EvaluationMode</b> .
Constant	This value is specified by <a href="#">[MS-RDL]</a> section 2.19.8, <b>TextRun.Value.EvaluationMode</b> .

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

```

<xsd:simpleType name="EvaluationModeType">
  <xsd:restriction base="xsd:string">
    <xsd:enumeration value="Auto" wblid:cname="Auto"/>
    <xsd:enumeration value="Constant" wblid:cname="Constant"/>
  </xsd:restriction>
</xsd:simpleType>

```

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

#### 2.4.4.6 PageBreakLocation

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/11/reports>

*Referenced by:* [PageBreakType](#)

A **PageBreak.BreakLocation** element as specified by [\[MS-RDL\]](#) section 2.296.1. MUST be one of the following values.

Value	Meaning
None	This value is specified by <a href="#">[MS-RDL]</a> section 2.296.1, <b>PageBreak.BreakLocation</b> .
Start	This value is specified by <a href="#">[MS-RDL]</a> section 2.296.1, <b>PageBreak.BreakLocation</b> .
End	This value is specified by <a href="#">[MS-RDL]</a> section 2.296.1, <b>PageBreak.BreakLocation</b> .
StartAndEnd	This value is specified by <a href="#">[MS-RDL]</a> section 2.296.1, <b>PageBreak.BreakLocation</b> .

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

```
<xsd:simpleType name="PageBreakLocation">
  <xsd:restriction base="xsd:string">
    <xsd:enumeration value="None" wblid:cname="None"/>
    <xsd:enumeration value="Start" wblid:cname="Start"/>
    <xsd:enumeration value="End" wblid:cname="End"/>
    <xsd:enumeration value="StartAndEnd" wblid:cname="StartAndEnd"/>
  </xsd:restriction>
</xsd:simpleType>
```

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

## 2.5 Expressions

This section specifies the syntax of expressions used in the XML formats specified in this document. The syntax rules are contextual to the type of XML and where it is used, as specified in the following subsections.

### 2.5.1 Data Macros

This section specifies the syntax for expressions used in **Data Macros**.

#### 2.5.1.1 Syntax

The exact syntax structure MUST be as specified by the following ABNF [\[RFC4234\]](#):

```
formula = "=" expression
```

**formula** MUST be less than or equal to 8192 characters in length.

```
expression = *space nospace-expression *space
```

```
space = " "
```

nospace-expression = ("(" expression ")") / constant / (prefix-operator expression)  
/ (expression infix-operator expression) / data-reference / is-insert / macro-error  
/ function-call

**nospace-expression** can contain an **expression**, which itself contains **nospace-expression**. The latter **nospace-expression** is a nested expression. Expressions MUST NOT nest more than sixty-four levels deep.

**<constant>** MUST be any constant defined by [\[ISO/IEC29500-1:2011\]](#) section 18.17.2.1 excluding **array-constant**.

prefix-operator = "-" / "+"

infix-operator = "^" / "\*" / "/" / "+" / "-" / "=" / "<>" / "<" / "<=" / ">" / ">="

data-reference = field-full-reference local-variable-reference parameter-reference  
return-variable-reference

field-full-reference = [old-qualifier] field-reference

old-qualifier = "OLD."

**old-qualifier** is used to indicate the previous value of the field if the data macro is running in response to a data change.

field-reference = local-field-reference / qualified-field-reference

**field-reference** corresponds to a field (3) in the list (1) to which the **data macro** containing this expression is applied.

local-field-reference = field-name-no-spaces / open-bracket field-name-with-spaces  
closed-bracket

field-name-no-spaces = name-character-no-space-or-equals \*63name-character-no-space

name-character-no-space-or-equals = name-character-no-space

**name-character-no-space-or-equals** MUST NOT be an =.

name-character-no-space = character

**name-character-no-space** MUST NOT be a space, !, `, [, ], ., /, \, :, \*, ?, ", <, >, |, #, {, }, %, ~, &, or any character whose hexadecimal value is less than 0x20.

**<character>** MUST be the production Char as specified by [\[W3C-XML\]](#) section 2.2.

open-bracket= "["

field-name-with-spaces = name-character-no-space-or-equals [\*62name-character name-  
character-no-space]

name-character = name-character-no-space / space

closed-bracket= "]"

qualified-field-reference = list-reference reference-connector local-field-reference

list-reference = list-name-no-spaces / (open-bracket list-name-with-spaces closed-  
bracket)

`list-name-no-spaces = field-name-no-spaces`

`list-name-with-spaces = field-name-with-spaces`

`reference-connector = "." / "!"`

`local-variable-reference = field-name-with-spaces / last-create-record-id`

**local-variable-reference** corresponds to a [local variable](#) that has been declared by the [SetLocalVar](#) macro action.

`return-variable-reference = field-name-with-spaces / last-create-record-id`

**return-variable-reference** corresponds to a [return variable](#) that has been declared by the [SetReturnVar](#) macro action.

`last-create-record-id = "LASTCREATERECORDIDENTITY"`

**last-create-record-id** is used when a data macro causes a new **list item** to be created in a list (1). In this case `last-create-record-id` corresponds to the list item identifier of that new item.

`parameter-reference = field-name-with-spaces`

**parameter-reference** corresponds to a parameter that has been defined by a [CT\\_ParameterDefinition](#).

`is-insert = "ISINSERT"`

**is-insert** is used when the **Event** attribute of the containing [CT\\_DataMacro](#) is set to `BeforeChange`. The value of **is-insert** corresponds to a Boolean value which is true if the current event is an insert and false otherwise.

`macro-error = macro-error-reference [macro-error-attribute]`

**macro-error** corresponds to information about the last error that occurred while running the current data macro.

`macro-error-reference = bracketed-macro-error / unbracket-macro-error`

`bracketed-macro-error = open-bracket unbracketed-macro-error close-bracket`

`unbracketed-macro-error = "MACROERROR"`

`macro-error-attribute = "." macro-error-attribute-reference`

`macro-error-attribute-reference = bracketed-macro-error-attribute / unbracket-macro-error-attribute`

`bracketed-macro-error-attribute = open-bracket unbracketed-macro-error-attribute close-bracket`

`unbracketed-macro-error-attribute = macro-error-number / macro-error-description / macro-error-action-name / macro-error-arguments / macro-error-macro-name`

`macro-error-number = "NUMBER"`

**macro-error-number** specifies that the entire **macro-error** corresponds to the numeric value of the last error that was hit while running the current data macro.

`macro-error-description = "DESCRIPTION"`

**macro-error-description** specifies that the entire **macro-error** corresponds to the description of the last error that was hit while running the current data macro.

```
macro-error-action-name = "ACTIONNAME"
```

**macro-error-action-name** specifies that the entire **macro-error** corresponds to the name of the action that was being run when the last error encountered by the currently running data macro occurred.

```
macro-error-arguments = "ARGUMENTS"
```

**macro-error-arguments** indicates that the entire **macro-error** corresponds to the arguments that were passed into the action that was being run when the last error encountered by the currently running data macro occurred.

```
macro-error-macro-name = "MACRONAME"
```

**macro-error-macro-name** indicates that the entire **macro-error** corresponds to the name of the macro that was running when the last error occurred.

```
function-call = predefined-function-call / defined-function-call
```

```
predefined-function-call = function-name "(" [argument-list] ")"
```

<**function-name**> MUST be one of the functions listed in section [2.5.1.2](#).

```
argument-list = argument *29 (comma argument)
```

```
comma= ", "
```

```
argument = expression
```

```
defined-function-call = ("AND.DB" argument-list-params) / ("CONCATENATE.DB"  
argument-list-params) / ("DATETIME" datetime-params) / ("ISNULL" single-argument-  
params) / ("NOW.TIME()") / ("NULL()") / ("NZ" nz-params) / ("OR.DB" argument-list-  
params) / ("TRIMENDS" single-argument-params) / ("UPDATED" single-argument-params)
```

```
argument-list-params = "(" argument-list ")"
```

```
single-argument-params = "(" argument ")"
```

```
datetime-params = "(" argument 5 (comma argument) ")"
```

```
nz-params = "(" argument comma argument ")"
```

### 2.5.1.2 Function Names

The set of predefined functions for data macro formulas is as follows:

- ABS ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.1)
- ATAN ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.14)
- CHAR ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.35)
- CHOOSE ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.39)
- CODE ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.41)
- COS ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.50)



- DATE ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.74)
- DAY ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.78)
- DDB ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.83)
- EXP ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.113)
- FALSE ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.117)
- FV ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.129)
- HOUR ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.144)
- IF ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.147)
- INT ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.169)
- IPMT ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.172)
- ISBLANK ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.174)
- ISNUMBER ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.181)
- LEFT ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.191)
- LEN ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.193)
- LN ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.196)
- LOWER ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.203)
- MID ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.210)
- MINUTE ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.214)
- MOD ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.218)
- MONTH ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.220)
- NOW ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.234)
- NPER ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.235)
- PMT ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.253)
- PPMT ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.256)
- PV ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.263)
- RATE ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.270)
- REPLACE ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.272)
- REPT ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.274)
- RIGHT ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.275)
- ROUND ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.278)

- SEARCH ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.285)
- SECOND ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.287)
- SIGN ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.289)
- SIN ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.290)
- SLN ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.293)
- SQRT ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.296)
- SYD ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.314)
- TAN ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.316)
- TEXT ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.322)
- TIME ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.323)
- TODAY ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.326)
- TRUE ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.331)
- TRUNC ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.332)
- UPPER ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.335)
- WEEKDAY ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.344)
- YEAR ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.351)

## 2.5.2 Filters

The section specifies the syntax for expressions used for a filter in the **WhereCondition** argument of a **Macro**.

### 2.5.2.1 Syntax

The syntax rules for filter expressions are the same as those specified by [\[ISO/IEC29500-1:2011\]](#) section 18.17.2, but the exact syntax structure **MUST** be as specified by the following ABNF [\[RFC4234\]](#):

```
formula = "=" expression
```

**formula** **MUST** be less than or equal to 8192 characters in length.

```
expression = *space nospace-expression *space
```

```
space = " "
```

```
nospace-expression = ("(" expression ")") / constant / (prefix-operator expression) / (expression infix-operator expression) / data-reference / function-call
```

**nospace-expression** can contain an **expression**, which itself contains **nospace-expression**. The latter **nospace-expression** is a nested expression. Expressions **MUST NOT** nest more than sixty-four levels deep.

**<constant>** MUST be any constant defined by [\[ISO/IEC29500-1:2011\]](#) section 18.17.2.1, excluding **array-constant**.

prefix-operator = "-" / "+"

infix-operator = "^" / "\*" / "/" / "+" / "-" / "=" / "<>" / "<" / "<=" / ">" / ">="

data-reference = local-field-reference / qualified-field-reference

local-field-reference = field-name-no-spaces / (open-bracket field-name-with-spaces closed-bracket)

**local-field-reference** corresponds to a field (3) in one of the lists (1) to which the filter is being applied.

field-name-no-spaces = name-character-no-space-or-equals \*63name-character-no-space

name-character-no-space-or-equals = name-character-no-space

**name-character-no-space-or-equals** MUST NOT be an =.

name-character-no-space = character

**name-character-no-space** MUST NOT be a space, !, `, [, ], ., /, \, :, \*, ?, ", <, >, |, #, {, }, %, ~, or & character, or any character whose hexadecimal value is less than 0x20.

**<character>** MUST be the production **Char** as specified by [\[W3C-XML\]](#) section 2.2

open-bracket = "["

field-name-with-spaces = name-character-no-space-or-equals [\*62name-character name-character-no-space]

name-character = name-character-no-space / space

close-bracket = "]"

qualified-field-reference = list-reference reference-connector local-field-reference / control-reference

**qualified-field-reference** corresponds to a field (3) in the list (1) specified by the **list-reference**.

list-reference = list-name-no-spaces / (open-bracket list-name-with-spaces close-bracket)

list-name-no-spaces = field-name-no-spaces

list-name-with-spaces = field-name-with-spaces

reference-connector = period / bang

function-call = predefined-function-call / defined-function-call

predefined-function-call = function-name "(" [argument-list] ")"

period = "."

bang = "!"

control-reference = [control-qualifier] control-name [period control-name]

```

control-qualifier = forms-reference / general-form-reference / reports-reference
forms-reference = open-bracket "FORMS" close-bracket bang object-name bang
reports-reference = open-bracket "REPORTS" close-bracket bang object-name bang
object-name = list-name-with-spaces
general-form-reference = open-bracket "FORM" close-bracket bang
control-name = open-bracket control-name-first-character *63control-name-character
close-bracket

```

<**function-name**> MUST be one of the functions listed in section [2.5.2.2](#).

```

argument-list = argument *29(comma argument)
comma = ","
argument = expression
defined-function-call = ("AND.DB" argument-list-params) / ("CONCATENATE.DB"
argument-list-params) / ("ISNULL" single-argument-params) / ("NULL()") / ("OR.DB"
argument-list-params) / ("SQL.IN" argument-list-params) / ("SQL.LIKE" sql-like-
params)
argument-list-params = "(" argument-list ")"
single-argument-params = "(" argument ")"
sql-like-params = "(" argument comma argument ")"

```

### 2.5.2.2 Function Names

The set of predefined functions for filter expressions is as follows:

- AVERAGE ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.18)
- COUNTA ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.53)
- DATE ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.74)
- FALSE ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.117)
- LEN ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.193)
- MID ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.210)
- SUM ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.306)
- TRUE ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.331)
- UPPER ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.335)

### 2.5.3 Forms

The section specifies the syntax of expressions used in **forms**.

### 2.5.3.1 Syntax

The syntax rules for [form](#) expressions are the same as those specified by [\[ISO/IEC29500-1:2011\]](#) section 18.17.2, but the exact syntax structure MUST be as specified by the following ABNF [\[RFC4234\]](#):

```
formula = "=" expression
```

**formula** MUST be less than or equal to 8192 characters in length.

```
expression = *space nospace-expression *space
```

```
space = " "
```

```
nospace-expression = ("(" expression ")") / constant / (prefix-operator expression) / (expression infix-operator expression) / data-reference / function-call
```

**nospace-expression** can contain an **expression**, which itself contains **nospace-expression**. The latter **nospace-expression** is a nested expression. Expressions MUST NOT nest more than sixty-four levels deep.

**<constant>** MUST be any constant defined by [\[ISO/IEC29500-1:2011\]](#) section 18.17.2.1 excluding **array-constant**.

```
prefix-operator = "-" / "+"
```

```
infix-operator = "^" / "*" / "/" / "+" / "-" / "=" / "<>" / "<" / "<=" / ">" / ">="
```

```
data-reference = field-reference / control-reference / form-reference
```

```
field-reference = local-field-reference / qualified-field-reference
```

```
local-field-reference = open-bracket field-name-with-spaces closed-bracket
```

**local-field-reference** corresponds to a field (3) in a list (1) that is part of the data source (1) of the form.

```
open-bracket= "["
```

```
field-name-with-spaces = name-character-no-space-or-equals [*62name-character name-character-no-space]
```

```
name-character-no-space-or-equals = name-character-no-space
```

**name-character-no-space-or-equals** MUST NOT be an =.

```
name-character-no-space = character
```

**name-character-no-space** MUST NOT be a space, !, `, [, ], ., /, \, :, \*, ?, ", <, >, |, #, {, }, %, ~, or & character, or any character whose hexadecimal value is less than 0x20.

**<character>** MUST be the production **Char** as specified by [\[W3C-XML\]](#) section 2.2.

```
closed-bracket= "]"
```

```
qualified-field-reference = open-bracket list-name-with-spaces closed-bracket reference-connector open-bracket field-name-with-spaces close-bracket
```

**qualified-field-reference** corresponds to a field (3) in a list (1) that is part of the data source (1) of the form.

```

list-name-with-spaces = field-name-with-spaces
reference-connector = period / bang
period = "."
bang = "!"
control-reference = [control-qualifier] control-name [period property-name]
control-qualifier = forms-reference / general-form-reference
forms-reference = open-bracket "FORMS" close-bracket bang form-name bang
form-name = list-name-with-spaces
general-form-reference = open-bracket "FORM" close-bracket bang
control-name = open-bracket control-name-first-character *63control-name-character
close-bracket
control-name-first-character = ALPHA
control-name-character = control-name-first-character / DIGIT / "_"
property-name = control-name
form-reference = [open-bracket "FORM" close-bracket period] property-name
function-call = predefined-function-call / defined-function-call
predefined-function-call = function-name "(" [argument-list] ")"
<function-name> MUST be one of the functions listed in section 2.5.3.2.
argument-list = argument *29(comma argument)
comma = ","
argument = expression
defined-function-call = ("AND.DB" argument-list-params) / ("CONCATENATE.DB"
argument-list-params) / ("CURRENTWEBUSER" single-argument-params) /
("CURRENTWEBUSERGROUPS" single-argument-params) / ("DATETIME" datetime-params) /
("ISCURRENTWEBUSERINGROUP" iscurrentwebuseringroup-params) / ("ISNULL" single-
argument-params) / ("NULL()") / ("NZ" two-argument-params) / ("OR.DB" argument-list-
params) / ("SQL.LIKE" two-argument-params) / ("TRIMENDS" single-argument-params)
argument-list-params = "(" argument-list ")"
single-argument-params = "(" argument ")"
two-argument-params = "(" argument comma argument ")"
datetime-params = "(" argument 5(comma argument) ")"

```

### 2.5.3.2 Function Names

The set of predefined functions for form expressions is as follows:

- AVERAGE ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.18)

- COUNTA ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.53)
- DATE ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.74)
- FALSE ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.117)
- IF ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.147)
- LEFT ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.191)
- LEN ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.193)
- LOWER ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.203)
- MID ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.210)
- MOD ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.218)
- NOW ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.234)
- RIGHT ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.275)
- ROUND ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.278)
- SEARCH ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.285)
- SUM ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.306)
- TODAY ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.326)
- TRUE ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.331)
- UPPER ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.335)

## 2.5.4 Query Columns

The section specifies the syntax for expressions used in **query columns**.

### 2.5.4.1 Syntax

The syntax rules for **query** column formulas are the same as those specified by [\[ISO/IEC29500-1:2011\]](#) section 18.17.2, but the exact syntax structure **MUST** be as specified by the following ABNF [\[RFC4234\]](#):

```
formula = "=" expression
```

**formula** **MUST** be less than or equal to 8192 characters in length.

```
expression = *space nospace-expression *space
```

```
space = " "
```

```
nospace-expression = ("(" expression ")") / constant / (prefix-operator expression) / (expression infix-operator expression) / data-reference / function-call
```

**nospace-expression** can contain an **expression**, which itself contains **nospace-expression**. The latter **nospace-expression** is a nested expression. Expressions **MUST NOT** nest more than sixty-four levels deep.

**<constant>** MUST be any constant defined by [\[ISO/IEC29500-1:2011\]](#) section 18.17.2.1 excluding **array-constant**.

prefix-operator = "-" / "+"

infix-operator = "^" / "\*" / "/" / "+" / "-" / "=" / "<>" / "<" / "<=" / ">" / ">="

data-reference = field-reference

field-reference = local-field-reference / qualified-field-reference

**field-reference** corresponds to the name of a field (3) in the current query.

local-field-reference = field-name-no-spaces / (open-bracket field-name-with-spaces closed-bracket)

field-name-no-spaces = name-character-no-space-or-equals \*63name-character-no-space

name-character-no-space-or-equals = name-character-no-space

**name-character-no-space-or-equals** MUST NOT be an =.

name-character-no-space = character

**name-character-no-space** MUST NOT be a space, !, `, [, ], ., /, \, :, \*, ?, ", <, >, |, #, {, }, %, ~, &, or any character whose hexadecimal value is less than 0x20.

**<character>** MUST be the production **Char** as specified by [\[W3C-XML\]](#) section 2.2.

open-bracket= "["

field-name-with-spaces = name-character-no-space-or-equals [\*62name-character name-character-no-space]

name-character = name-character-no-space / space

closed-bracket= "]"

qualified-field-reference = list-reference reference-connector local-field-reference

list-reference = list-name-no-spaces / (open-bracket list-name-with-spaces closed-bracket)

list-name-no-spaces = field-name-no-spaces

list-name-with-spaces = field-name-with-spaces

reference-connector = "!" / "."

function-call = predefined-function-call / defined-function-call

predefined-function-call = function-name "(" [argument-list] ")"

**<function-name>** MUST be one of the functions listed in section [2.5.4.2](#).

argument-list = argument \*29(comma argument)

comma= ","

argument = expression



```

defined-function-call = ("AND.DB" argument-list-params) / ("CONCATENATE.DB"
argument-list-params) / ("CURRENTWEBUSER" single-argument-params) /
("CURRENTWEBUSERGROUPS" single-argument-params) / ("DATETIME" datetime-params) /
("ISCURRENTWEBUSERINGROUP" single-argument-params) / ("ISNULL" single-argument-
params) / ("NOW.TIME()") / ("NULL()") / ("NZ" nz-params) / ("OR.DB" argument-list-
params) / ("TRIMENDS" single-argument-params)

argument-list-params = "(" argument-list ")"

single-argument-params = "(" argument ")"

datetime-params = "(" argument 5(comma argument) ")"

nz-params = "(" argument comma argument ")"

```

#### 2.5.4.2 Function Names

The set of predefined functions for query column formulas is as follows:

- ABS ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.1)
- ATAN ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.14)
- CHAR ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.35)
- CHOOSE ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.39)
- CODE ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.41)
- COS ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.50)
- DATE ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.74)
- DAY ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.78)
- DDB ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.83)
- EXP ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.113)
- FALSE ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.117)
- FV ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.129)
- HOUR ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.144)
- IF ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.147)
- INT ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.169)
- IPMT ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.172)
- ISBLANK ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.174)
- LEFT ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.191)
- LEN ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.193)
- LN ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.196)
- LOWER ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.203)

- MID ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.210)
- MINUTE ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.214)
- MOD ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.218)
- MONTH ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.220)
- NOW ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.234)
- NPER ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.235)
- PMT ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.253)
- PPMT ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.256)
- PV ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.263)
- RATE ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.270)
- REPLACE ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.272)
- REPT ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.274)
- RIGHT ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.275)
- ROUND ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.278)
- SEARCH ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.285)
- SECOND ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.287)
- SIGN ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.289)
- SIN ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.290)
- SLN ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.293)
- SQRT ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.296)
- SYD ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.314)
- TAN ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.316)
- TEXT ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.322)
- TIME ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.323)
- TODAY ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.326)
- TRUE ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.331)
- TRUNC ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.332)
- UPPER ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.335)
- WEEKDAY ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.344)
- YEAR ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.351)

## 2.5.5 Query Restrictions

This section specifies the syntax for expressions used in a **query restriction**, that is, the **WHERE** clause of a **query**.

### 2.5.5.1 Syntax

The syntax rules for [query](#) restriction expressions are the same as those specified by [ISO/IEC29500-1:2011](#) section 18.17.2, but the exact syntax structure MUST be as specified by the following ABNF [\[RFC4234\]](#):

```
formula = "=" expression
```

**formula** MUST be less than or equal to 8192 characters in length.

```
expression = *space nospace-expression *space
```

```
space = " "
```

```
nospace-expression = "(" expression ")" / constant / (prefix-operator expression) / (expression infix-operator expression) / data-reference / function-call
```

**nospace-expression** can contain an **expression**, which itself contains **nospace-expression**. The latter **nospace-expression** is a nested expression. Expressions MUST NOT nest more than sixty-four levels deep.

**<constant>** MUST be any constant defined by [\[ISO/IEC29500-1:2011\]](#) section 18.17.2.1 excluding **array-constant**.

```
prefix-operator = "-" / "+"
```

```
infix-operator = "*" / "/" / "+" / "-" / "=" / "<>" / "<" / "<=" / ">" / ">="
```

```
data-reference = field-reference
```

```
field-reference = local-field-reference / qualified-field-reference
```

**field-reference** corresponds to the name of a field (3) in the current **query**.

```
local-field-reference = field-name-no-spaces / (open-bracket field-name-with-spaces closed-bracket)
```

```
field-name-no-spaces = name-character-no-space-or-equals *63name-character-no-space
```

```
name-character-no-space-or-equals = name-character-no-space
```

**name-character-no-space-or-equals** MUST NOT be an =.

```
name-character-no-space = character
```

**name-character-no-space** MUST NOT be a space, !, `, [, ], ,, /, \, :, \*, ?, ", <, >, |, #, {, }, %, ~, &, or any character whose hexadecimal value is less than 0x20.

**<character>** MUST be the production **Char** as specified by [\[W3C-XML\]](#) section 2.2.

```
open-bracket= "["
```

```
field-name-with-spaces = name-character-no-space-or-equals [*62name-character name-character-no-space]
```

```

name-character = name-character-no-space / space
closed-bracket= "]"
qualified-field-reference = list-reference reference-connector local-field-reference
list-reference = list-name-no-spaces / (open-bracket list-name-with-spaces closed-bracket)
list-name-no-spaces = field-name-no-spaces
list-name-with-spaces = field-name-with-spaces
reference-connector = "!" / "."
function-call = predefined-function-call / defined-function-call
predefined-function-call = function-name "(" [argument-list] ")"
<function-name> MUST be one of the functions listed in section 2.5.5.2.
argument-list = argument *29(comma argument)
comma= ","
argument = expression
defined-function-call = ("AND.DB" argument-list-params) / ("CONCATENATE.DB"
argument-list-params) / ("CURRENTWEBUSER" single-argument-params) /
("CURRENTWEBUSERGROUPS" single-argument-params) / ("DATETIME" datetime-params) /
("ISCURRENTWEBUSERINGROUP" single-argument-params) / ("ISNULL" single-argument-
params) / ("NULL()") / ("NZ" two-argument-params) / ("OR.DB" argument-list-params) /
("SQL.LIKE" two-argument-params)
argument-list-params = "(" argument-list ")"
single-argument-params = "(" argument ")"
two-argument-params = "(" argument comma argument ")"
datetime-params = "(" argument 5*5(comma argument) ")"

```

## 2.5.5.2 Function Names

The set of predefined functions for query restriction formulas is as follows:

- CHAR ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.35)
- FALSE ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.117)
- IF ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.147)
- LEN ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.193)
- MOD ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.218)
- NOT ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.233)
- NOW ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.234)
- TODAY ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.326)

- TRUE ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.330)

## 2.5.6 Reports

This section specifies the syntax for expressions used in any formulas in a **report**.

### 2.5.6.1 Syntax

Report expressions support a subset of the functions used in expressions specified by [\[MS-RDL\]](#) section 2.341 and a set of functions specific to this protocol. The syntax of RDL formulas is specified by [\[MS-RDL\]](#) section 2.341, and the syntax of the built-in functions is specified by section [2.5.6.2.1](#) and section [2.5.6.2.2](#).

### 2.5.6.2 Functions

The subset of RDL expressions is as follows:

- AVG
- COUNT
- COUNTROWS
- FIRST
- IIF
- INSTR
- ISNOTHING
- LAST
- MAX
- MIN
- ROWNUMBER
- STDEV
- STDEVP
- SUM
- SYSTEM.TEXT.REGULAREXPRESSIONS.REGEX.MATCH
- SYSTEM.TEXT.REGULAREXPRESSIONS.MATCH.GROUPS
- SYSTEM.OBJECT.TOSTRING
- SYSTEM.STRING.REPLACE
- VAR
- VARP

The set of functions specific to this protocol is as follows:

- MICROSOFT.OFFICE.ACCESS.SERVER.CALCULATION.CALLBACK.EVALUATE (section [2.5.6.2.1](#))
- MICROSOFT.OFFICE.ACCESS.SERVER.CALCULATION.CALLBACK.SANITIZEURLPROTOCOL (section [2.5.6.2.2](#))

### 2.5.6.2.1 Evaluate Function Syntax

The syntax rules for a MICROSOFT.OFFICE.ACCESS.SERVER.CALCULATION.CALLBACK.EVALUATE function MUST conform to the following ABNF [\[RFC4234\]](#):

```
function = "Microsoft.Office.Access.Server.Calculation.Callback.Evaluate(" parameters
          ")"
```

```
parameters = param-expression separator param-fixed separator param-options [param-
values]
```

```
separator = ", "
```

```
double-quote = %x22
```

```
param-expression = double-quote expression double-quote
```

**<expression>** is specified by section [2.5.4.1](#), but MUST NOT contain the CURRENTWEBUSER, CURRENTWEBUSERGROUPS or ISCURRENTWEBUSERINGROUP values for **<defined-function-call>**.

```
param-fixed = "Parameters!AccSrv_DataLCID.Value" separator
             "Parameters!AccSrv_CollationLCID.Value"
```

```
param-options = "Microsoft.Office.Access.Server.Calculation.CallbackOptions.None"/
               "Microsoft.Office.Access.Server.Calculation.CallbackOptions.""ReturnFalseOnFailure"
```

```
param-values = separator param-reference [param-values]
```

**<param-reference>** MUST be a report expression, as specified by section [2.5.6.1](#).

### 2.5.6.2.2 SanitizeUrlProtocol Function Syntax

The syntax rules for a MICROSOFT.OFFICE.ACCESS.SERVER.CALCULATION.CALLBACK.EVALUATE function MUST be as specified by the following ABNF [\[RFC4234\]](#):

```
function =
"Microsoft.Office.Access.Server.Calculation.Callback.SanitizeUrlProtocol ("
expression ")"
```

**<expression>** MUST be a report expression as specified by section [2.5.6.1](#).

## 2.5.7 User Interface Macros

This section specifies the syntax for expressions used in **user interface macros**.

### 2.5.7.1 Syntax

The syntax rules for [user interface macro](#) expressions are the same as those specified by [\[ISO/IEC29500-1:2011\]](#) section 18.17.2, but the exact syntax structure MUST be as specified by the following ABNF grammar [\[RFC4234\]](#):

```
formula = "=" expression
```

**formula** MUST be less than or equal to 8192 characters in length.

```
expression = *space nospace-expression *space
```

```
space = " "
```

```
nospace-expression = ("(" expression ")") / constant / (prefix-operator expression) / (expression infix-operator expression) / data-reference / macro-error / function-call
```

**nospace-expression** can contain an **expression**, which itself contains **nospace-expression**. The latter **nospace-expression** is a nested expression. Expressions MUST NOT nest more than sixty-four levels deep.

**<constant>** MUST be any constant defined by [\[ISO/IEC29500-1:2011\]](#) section 18.17.2.1 excluding **array-constant**.

```
prefix-operator = "-" / "+"
```

```
infix-operator = "^" / "*" / "/" / "+" / "-" / "=" / "<>" / "<" / "<=" / ">" / ">="
```

```
data-reference = form-reference / form-control-reference / report-reference / report-control-reference / local-variable-reference / temp-variable-reference
```

```
form-reference = form-name-reference period property-name
```

```
form-name-reference = [forms-prefix] form-name
```

```
forms-prefix = "[FORMS]" bang
```

```
bang = "!"
```

```
form-name = open-bracket name-character-no-space-or-equals *63name-character close-bracket
```

```
open-bracket = "["
```

```
name-character-no-space-or-equals = name-character-no-space
```

**name-character-no-space-or-equals** MUST NOT be an =.

```
name-character-no-space = characters
```

**name-character-no-space** MUST NOT be a space, !, `, [, ], ., /, \, :, \*, ?, ", <, >, |, #, {, }, %, ~, &, or any character whose hexadecimal value is less than 0x20.

**<character>** MUST be the production **Char** as specified by [\[W3C-XML\]](#) section 2.2.

```
name-character = name-character-no-space / space
```

```
closed-bracket= "]"
```

```
period = "."
```

```
property-name = form-name
```

```
form-control-reference = [form-name-reference bang] control-name [period property-name]
```

```
control-name = open-bracket control-name-first-character *63control-name-character close-bracket
```

control-name-first-character = ALPHA / "\_"  
control-name-character = control-name-first-character / DIGIT  
reprot-reference = report-name-reference period property-name  
report-name-reference = [report-prefix] report-name  
report-prefix = "[REPORTS] " bang  
report-name = form-name  
report-control-reference = [report-name-reference bang] control-name [period  
property-name]  
local-variable-reference = open-bracket local-vars close-bracket bang local-  
variable-name

**local-variable-reference** corresponds to a [local variable](#) that has been created by the [SetLocalVar](#) macro action.

local-vars = "LOCALVARS"  
local-variable-name = bracketed-local-variable-name / unbracket-local-variable-name  
bracketed-local-variable-name = open-bracket unbracketed-local-variable-name close-  
bracket  
unbracketed-local-variable-name name-character-no-space-or-equals [\*62name-character  
name-character-no-space]  
temp-variable-reference = open-bracket temp-vars close-bracket bang temp-variable-  
name

**temp-variable-reference** corresponds to a [temporary variable](#) that has been created by the [SetTempVar](#) macro action.

temp-vars = "TEMPVARS"  
temp-variable-name = local-variable-name  
return-variable-reference = open-bracket return-vars close-bracket bang return-  
variable-name

**return-variable-reference** corresponds to a [return variable](#) that has been created by the [SetReturnVar](#) macro action.

return-vars = "RETURNVARS"  
return-variable-name = local-variable-name  
macro-error = macro-error-reference [macro-error-attribute]

**macro-error** corresponds to information about the last error that occurred while running the current data macro.

macro-error-reference = bracketed-macro-error / unbracket-macro-error  
bracketed-macro-error = open-bracket unbracketed-macro-error close-bracket  
unbracketed-macro-error = "MACROERROR"



macro-error-attribute = "." macro-error-attribute-reference

macro-error-attribute-reference = bracketed-macro-error-attribute / unbracket-macro-error-attribute

bracketed-macro-error-attribute = open-bracket unbracketed-macro-error-attribute close-bracket

unbracketed-macro-error-attribute = macro-error-number / macro-error-description / macro-error-action-name / macro-error-arguments / macro-error-macro-name

macro-error-number = "NUMBER"

**macro-error-number** specifies that the entire **macro-error** corresponds to the numeric value of the last error that was hit while running the current data macro.

macro-error-description = "DESCRIPTION"

**macro-error-description** specifies that the entire **macro-error** corresponds to the description of the last error that was hit while running the current data macro.

macro-error-action-name = "ACTIONNAME"

**macro-error-action-name** specifies that the entire **macro-error** corresponds to the name of the action that was being run when the last error encountered by the currently running data macro occurred.

macro-error-arguments = "ARGUMENTS"

**macro-error-arguments** specifies that the entire **macro-error** corresponds to the arguments that were passed into the action that was being run when the last error encountered by the currently running data macro occurred.

macro-error-macro-name = "MACRONAME"

**macro-error-macro-name** specifies that the entire **macro-error** corresponds to the name of the macro that was running when the last error occurred.

function-call = predefined-function-call / defined-function-call

predefined-function-call = function-name "(" [argument-list] ")"

<**function-name**> MUST be one of the functions listed in section [2.5.7.2](#).

argument-list = argument \*29(comma argument)

comma= ","

argument = expression

defined-function-call = ("AND.DB" argument-list-params) / ("CONCATENATE.DB" argument-list-params) / ("CURRENTWEBUSER" single-argument-params) / ("CURRENTWEBUSERGROUPS" single-argument-params) / ("DATETIME" datetime-params) / ("ISCURRENTWEBUSERINGROUP" single-argument-params) / ("ISNULL" single-argument-params) / ("NULL()") / ("NZ" two-argument-params) / ("OR.DB" argument-list-params) / ("SQL.LIKE" two-argument-params)

argument-list-params = "(" argument-list ")"

single-argument-params = "(" argument ")"

two-argument-params = "(" argument comma argument ")"

datetime-params = "(" argument 5\*5 (comma argument) ")"

## 2.5.7.2 Function Names

The set of predefined functions for user interface macro formulas is as follows:

- DATE ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.74)
- FALSE ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.117)
- IF ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.147)
- LEFT ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.191)
- LEN ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.193)
- LOWER ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.203)
- MID ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.210)
- MOD ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.218)
- NOW ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.234)
- RIGHT ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.275)
- ROUND ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.278)
- SEARCH ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.285)
- TODAY ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.326)
- TRUE ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.330)
- UPPER ([\[ISO/IEC29500-1:2011\]](#) section 18.17.7.335)

## 2.6 ACCDW

### 2.6.1 Elements

#### 2.6.1.1 ApplicationReference

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/04/accdw>

A [CT\\_ApplicationReference](#) element that contains XML that specifies the URL of an [Application](#) and at most one [CT\\_Object](#) in that application.

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

```
<xsd:element name="ApplicationReference" wblld:cname="ApplicationReference"
wblld:codeName="ApplicationReference" type="CT_ApplicationReference"/>
```

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

## 2.6.2 Attributes

This specification does not define any common XML schema attribute definitions.

## 2.6.3 Complex Types

### 2.6.3.1 CT\_Object

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/04/accdw>

*Referenced by:* [CT\\_ApplicationReference](#)

Description of a single object in an [Application](#).

*Child Elements:*

**Mode** : An [ST\\_ShortString](#) element as specified by section [2.2.3.53](#), **Mode**.

**Name** : An [ST\\_ObjectName](#) element as specified by section [2.2.3.53](#), **Name**.

**Type** : An [ST\\_ShortString](#) element as specified by section [2.2.3.53](#), **Type**.

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

```
<xsd:complexType name="CT_Object">
  <xsd:sequence>
    <xsd:element name="Name" type="ST_ObjectName" wblid:cname="Name"/>
    <xsd:element name="Type" type="ST_ShortString" wblid:cname="Type"/>
    <xsd:element name="Mode" type="ST_ShortString" minOccurs="0" wblid:cname="Mode"/>
  </xsd:sequence>
</xsd:complexType>
```

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

### 2.6.3.2 CT\_ApplicationReference

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/04/accdw>

*Referenced by:* [ApplicationReference](#)

Specifies an [Application Reference](#). MUST contain exactly one **URL** element and at most one **Object** element. If no **Object** element is specified, the application as a whole is specified; otherwise, only that object in the application is specified.

*Child Elements:*

**Object** : A [CT\\_Object](#) element as specified by section [2.2.3.54](#), **Object**.

**URL** : An anyURI ([\[XMLSCHEMA2\]](#) section 3.2.17) element as specified by section [2.2.3.54](#), **URL**.

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

```
<xsd:complexType name="CT_ApplicationReference">
  <xsd:sequence>
```

```
<xsd:element name="URL" type="xsd:anyURI" wblld:cname="URL"/>
<xsd:element name="Object" minOccurs="0" wblld:cname="Object" type="CT_Object"/>
</xsd:sequence>
</xsd:complexType>
```

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

## 2.6.4 Simple Types

### 2.6.4.1 ST\_ShortString

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/04/accdw>

*Referenced by:* [CT\\_Object](#)

A string ([\[XMLSCHEMA2\]](#) section 3.2.1) as specified by section [2.2.4.4](#).

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

```
<xsd:simpleType name="ST_ShortString">
  <xsd:restriction base="xsd:string">
    <xsd:maxLength value="255"/>
  </xsd:restriction>
</xsd:simpleType>
```

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

### 2.6.4.2 ST\_ObjectName

*Target namespace:* <http://schemas.microsoft.com/office/accessservices/2009/04/accdw>

*Referenced by:* [CT\\_Object](#)

A string ([\[XMLSCHEMA2\]](#) section 3.2.1) as specified by section [2.2.4.1](#).

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

```
<xsd:simpleType name="ST_ObjectName">
  <xsd:restriction base="xsd:string">
    <xsd:minLength value="1"/>
    <xsd:maxLength value="72"/>
  </xsd:restriction>
</xsd:simpleType>
```

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

## 3 Structure Examples

The following sections contain complete and valid examples of the use of the various elements of AXL to specify a data application. The examples refer to two related lists (1), a **Users** list (1) and a **Tasks** list (1). The lists (1) themselves are not specified in the examples.

The **Users** list contains the fields **FullName**, which specifies a user's full name; **Email**, which specifies the user's e-mail address; and **CurrentTaskCount**, which specifies the number of tasks assigned to the user.

The **Tasks** list contains the fields **TaskTitle**, which specifies the title for a task, **Completed**, which is a Boolean value that specifies whether the task is finished; and **AssignedToUserID**, which specifies a user in the **Users** list to whom the task is assigned. The **AssignedToUserID** field in each record of **Tasks** has the value of the **primary key** of a record in **Users**.

While key elements and attributes are described in detail following each example, some elements and attributes are not described completely, for the sake of brevity and readability of the example.

### 3.1 Application Element

The following example is the Application element for a task-tracking data application named "MS-AXL sample application".

```
<?xml version="1.0" encoding="UTF-16" standalone="no"?>
<Application xmlns="http://schemas.microsoft.com/office/accessservices/2009/04/application">
  <Properties>
    <Property Name="AccessVersion" Type="10">09.50</Property>
    <Property Name="AllowBuiltInToolbars" Type="1">True</Property>
    <Property Name="AllowDatashetSchema" Type="1">True</Property>
    <Property Name="UseMDIMode" Type="2">0</Property>
    <Property Name="WebDesignMode" Type="2">1</Property>
    <Property Name="WebStartupView" Type="10">Navigation Form</Property>
    <Property Name="Project Name" Type="101">MS-AXL sample application</Property>
  </Properties>
</Application>
```

The **Properties** element specifies a [property bag](#) for the data application.

The **Property** element with a **Name** attribute of **WebStartupView** specifies the first object, in this case the form "Navigation Form", to be shown when the data application opens.

### 3.2 Forms

The following subsections contain complete and valid examples of [Forms](#) in data applications.

#### 3.2.1 Detail Form

The following example demonstrates a single-item form. The form contains a [Label](#), two input [Textboxes](#), each with a preceding label, and a [ComboBox](#) with a predefined list of possible values.

```
<?xml version="1.0" encoding="utf-16" standalone="no"?>
<axl:View Name="UserDetails" xmlns="http://schemas.microsoft.com/client/2009/11"
xmlns:a="http://schemas.microsoft.com/office/accessservices/2009/11/forms"
xmlns:axl="http://schemas.microsoft.com/office/accessservices/2009/11/application"
xmlns:x="http://schemas.microsoft.com/winfx/2009/04/xaml">
```

```

<axl:Data>
  <axl:RecordSource>Users</axl:RecordSource>
</axl:Data>
<a:Form NavigationButtons="false" Caption="User Detail" TabularBorderStyle="Both">
  <a:Form.Resources>
    <Style x:Key="FormTitleStyle">
      <Setter Property="Control.FontFamily" Value="Calibri" />
      <Setter Property="Control.FontSize" Value="24" />
      <Setter Property="Control.Foreground" Value="#1f497d" />
      <Setter Property="AccessControl.GridlineBorderBrush" Value="Transparent" />
    </Style>
    <Style x:Key="ButtonStyle">
      <Setter Property="Control.FontFamily" Value="Calibri" />
      <Setter Property="Control.FontSize" Value="15" />
      <Setter Property="Control.Foreground" Value="#444444" />
      <Setter Property="Control.Background" Value="#f3f3f3" />
      <Setter Property="Control.FontWeight" Value="400" />
      <Setter Property="AccessControl.GridlineBorderBrush" Value="#aab5b3" />
      <Setter Property="AccessControl.BorderLineStyle" Value="Solid" />
    </Style>
    <Style x:Key="ButtonHoverStyle">
      <Setter Property="Control.Foreground" Value="#403152" />
      <Setter Property="Control.Background" Value="#fac090" />
      <Setter Property="AccessControl.BackTint" Value="60.0" />
      <Setter Property="AccessControl.BackThemeColorIndex" Value="9" />
    </Style>
    <Style x:Key="ButtonSelectedStyle">
      <Setter Property="Control.Foreground" Value="#215968" />
      <Setter Property="Control.Background" Value="#e46c0a" />
      <Setter Property="AccessControl.BackShade" Value="75.0" />
      <Setter Property="AccessControl.BackThemeColorIndex" Value="9" />
    </Style>
    <Style x:Key="LabelStyle">
      <Setter Property="Control.FontFamily" Value="Calibri" />
      <Setter Property="Control.FontSize" Value="15" />
      <Setter Property="Control.Foreground" Value="#8c8c8c" />
      <Setter Property="AccessControl.GridlineBorderBrush" Value="Transparent" />
    </Style>
    <Style x:Key="TextBoxStyle">
      <Setter Property="Control.FontFamily" Value="Calibri" />
      <Setter Property="Control.FontSize" Value="15" />
      <Setter Property="Control.Foreground" Value="#10253f" />
      <Setter Property="AccessControl.GridlineBorderBrush" Value="#a6a6a6" />
    </Style>
    <Style x:Key="TestBorderStyle" TargetType="Border">
      <Setter Property="AccessControl.GridlineBorderBrush"
Value="#000000,#000000,#000000,#000000" />
      <Setter Property="Control.BorderThickness" Value="1,1,1,1" />
      <Setter Property="AccessControl.EffectSize" Value="0,2,0,0" />
      <Setter Property="Control.Padding" Value="0,2,0,0" />
    </Style>
  </a:Form.Resources>
  <a:Form.Header>
    <a:Section x:Name="FormHeader" />
  </a:Form.Header>
  <a:Form.Detail>
    <DataTemplate>
      <a:Section x:Name="Detail">
        <Grid a:LayoutGroup="1">

```

```

<Grid.ColumnDefinitions>
  <ColumnDefinition Width="20" />
  <ColumnDefinition Width="80" />
  <ColumnDefinition Width="100" />
  <ColumnDefinition Width="110" />
  <ColumnDefinition Width="110" />
</Grid.ColumnDefinitions>
<Grid.RowDefinitions>
  <RowDefinition Height="10" />
  <RowDefinition Height="44" />
  <RowDefinition Height="40" />
  <RowDefinition Height="40" />
  <RowDefinition Height="40" />
</Grid.RowDefinitions>
<Border x:Name="EmptyCell1" ControlHeight="164" ControlWidth="20" Grid.Column="0"
Grid.Row="0" Grid.RowSpan="5" />
<Border Grid.Column="1" Grid.ColumnSpan="2" Grid.Row="1">
  <a:Label x:Name="lblUserDetails" Style="{StaticResource FormTitleStyle}"
ControlWidth="180" Caption="User Details" ControlHeight="28" />
</Border>
<Border Grid.Column="3" Grid.Row="1" Style="{StaticResource TestBorderStyle}">
  <a:Button x:Name="cmdDelete" Style="{StaticResource ButtonStyle}"
StyleHover="{StaticResource ButtonHoverStyle}" StyleSelected="{StaticResource
ButtonSelectedStyle}" ControlWidth="99" Caption="&Delete" ControlHeight="23" />
</Border>
<Border Grid.Column="4" Grid.Row="1">
  <a:Button x:Name="cmdSaveAndClose" Style="{StaticResource ButtonStyle}"
StyleHover="{StaticResource ButtonHoverStyle}" StyleSelected="{StaticResource
ButtonSelectedStyle}" ControlWidth="99" AccessKey="83" Cursor="Hand" Caption="&Save and
Close" ControlHeight="23" />
</Border>
<Border Grid.Column="1" Grid.Row="2">
  <a:Label x:Name="lblEmail" Style="{StaticResource LabelStyle}"
ControlWidth="80" Caption="E-mail" ControlHeight="20" />
</Border>
<Border Grid.Column="2" Grid.ColumnSpan="3" Grid.Row="2">
  <a:TextBox x:Name="txtEmail" Style="{StaticResource TextBoxStyle}"
ControlWidth="309" ControlHeight="24" ControlSource="Email" />
</Border>
<Border Grid.Column="1" Grid.Row="3">
  <a:Label x:Name="lblFullName" Style="{StaticResource LabelStyle}"
ControlWidth="80" Caption="Full Name" ControlHeight="20" />
</Border>
<Border Grid.Column="2" Grid.ColumnSpan="3" Grid.Row="3">
  <a:TextBox x:Name="txtFullName" Style="{StaticResource TextBoxStyle}"
ControlWidth="309" ControlHeight="24" ControlSource="FullName" />
</Border>
<Border Grid.Column="1" Grid.Row="4">
  <a:Label x:Name="lblContact" Style="{StaticResource LabelStyle}"
ControlWidth="80" Caption="Contact" ControlHeight="20" />
</Border>
<Border Grid.Column="2" Grid.ColumnSpan="3" Grid.Row="4">
  <a:ComboBox x:Name="Contact" Style="{StaticResource TextBoxStyle}"
SeparatorCharacters=", " ControlWidth="309" LimitToList="true" AllowValueListEdits="false"
RowSourceType="Value List" ColumnWidths="96" InheritValueList="false" ControlHeight="24"
ListWidth="96" ControlSource="Contact">
    <a:ComboBox.RowSource>"Unknown";"1st";"2nd"</a:ComboBox.RowSource>
  </a:ComboBox>
</Border>
</Grid>

```

```
        </a:Section>
    </DataTemplate>
</a:Form.Detail>
</a:Form>
</axl:View>
```

The **RecordSource** element specifies that the data source (1) for the form is the **Users** list (1).

The **Resources** element specifies the styles used by the form and its controls and sections. In this example, there are seven different styles, named **FormTitleStyle**, **ButtonStyle**, **ButtonHoverStyle**, **ButtonSelectedStyle**, **LabelStyle**, **TextBoxStyle** and **TestBorderStyle**. Each of these is referenced in a [Style](#), [StyleHover](#) or [StyleSelected](#) attribute, which are of type [ST ReferenceType](#), where the name of the style is the **Key** specified in that type.

The style element with **Key:TestBorderStyle** attribute also contains the **TargetType** attribute, which in the example indicates that this style is only to be used by a **Border** element. Within this element are the following properties: **GridlineBorderBrush**, **BorderThickness**, **EffectSize** and **Padding**. The **GridlineBorderBrush** indicates hexadecimal values representing colors for each of the four border lines (Top, Bottom, Left, Right), while the **BorderThickness** indicates the width, in pixels, of the border lines. The **Padding** indicates the distance from each edge of the control to the border edges, while the **EffectSize** provides an offset to account for padding rendering on controls containing effects, such as shadows.

The **Grid** element specifies the layout of the form. In this case, all controls fall into a conceptual grid with five columns and five rows, with width and height specified by the **Width** and **Height** attributes of the **ColumnDefinition** and **RowDefinition** elements, respectively.

The **Border** elements specify the location of controls in the form's conceptual grid. The first **Border** has no child elements; that is, it is an empty cell. The attributes on that element specify that there is empty space on the left side of the form that is 164 pixels high (the [ControlHeight](#) attribute) and 20 pixels wide (the [ControlWidth](#) attribute), and that the empty space stretches down the entire height of the form (the **Grid.RowSpan** attribute of 5). Note that the heights of all the **RowDefinition** elements add up to the height of the first **Border** element, and that the width of the first **ColumnDefinition** element corresponds to the width of the first **Border** element.

The second **Border** element specifies one **Label** control, which uses the style **FormTitleStyle** and displays the text **User Details**. Its **Border** element specifies that it starts in the second column and the second row (**Grid.Column** and **Grid.Row** of 1) and ends in the third column (**Grid.ColumnSpan** of 2). The **ControlWidth** of **lblUserDetails** is equivalent to the sum of the **Width** attributes of the second and third **ColumnDefinition** elements, which means that the control uses up all the available space in the conceptual cells in which it exists.

The rest of the controls are specified in a similar manner.

The **cmdDelete Button** control has a [Caption](#) attribute with a value of "&Delete", which specifies that **Delete** will be displayed on the command button. Its **ControlWidth** attribute of 99 is less than the width of the fourth column which is 110. The difference is the space around the control between its edges and the edges of its parent **Border** element — that is, padding around the control.

The [ControlSource](#) attribute of the **txtEmail TextBox** control specifies that the text box is bound to the **Email** field of the **RecordSource**.

The [RowSourceType](#) attribute of the **Contact ComboBox** control specifies that the **ComboBox.RowSource** element is a value list of literal strings. When the user displays the list of



possible values of the combo box, the options will be "Unknown", "1<sup>st</sup>" and "2<sup>nd</sup>". The [LimitToList](#) attribute of **true** specifies that the user cannot type in a value that is not in the list, and the [AllowValueListEdits](#) attribute of **false** specifies that the user cannot edit the list of values.

### 3.2.2 Navigation Form

The following example demonstrates how to specify a [Form](#) with a [NavigationControl](#).

```
<?xml version="1.0" encoding="utf-16" standalone="no"?>
<axl:View Name="Navigation Form" xmlns="http://schemas.microsoft.com/client/2009/04"
xmlns:a="http://schemas.microsoft.com/office/accessservices/2009/04/forms"
xmlns:axl="http://schemas.microsoft.com/office/accessservices/2009/04/application"
xmlns:x="http://schemas.microsoft.com/winfx/2009/04/xaml">
  <a:Form NavigationButtons="false" TabularBorderStyle="Both">
    <a:Form.Detail>
      <DataTemplate>
        <a:Section x:Name="Detail">
          <Grid a:LayoutGroup="2">
            <Grid.ColumnDefinitions>
              <ColumnDefinition/>
            </Grid.ColumnDefinitions>
            <Grid.RowDefinitions>
              <RowDefinition Height="32"/>
              <RowDefinition/>
            </Grid.RowDefinitions>
            <Border Grid.Column="0" Grid.Row="0">
              <a:NavigationControl x:Name="NavigationControl" MinWidth="500"
ControlHeight="32" NavigationTargetSubform="NavigationSubform">
                <Border>
                  <a:NavigationButton x:Name="UserDetailsNavigationButton" ControlWidth="120"
Caption="User Details" ControlHeight="26" NavigationTargetName="Form.UserDetails"/>
                </Border>
                <Border>
                  <a:NavigationButton x:Name="TasksDatasheetNavigationButton"
ControlWidth="120" Caption="All Tasks" ControlHeight="26"
NavigationTargetName="Form.TasksDatasheet"/>
                </Border>
                <Border>
                  <a:NavigationButton x:Name="TaskReportNavigationButton" ControlWidth="120"
Caption="Task report" ControlHeight="26" NavigationTargetName="Report.Task By Assigned To"/>
                </Border>
              </a:NavigationControl>
            </Border>
            <Border Grid.Column="0" Grid.Row="1">
              <a:SubForm x:Name="NavigationSubform" MinHeight="480" MinWidth="500"
ShowPageHeaderAndPageFooter="true"/>
            </Border>
          </Grid>
        </a:Section>
      </DataTemplate>
    </a:Form.Detail>
  </a:Form>
</axl:View>
```

This form has a detail section specified in the same way as the previous example. The layout of the detail section has one conceptual column and two conceptual rows, the first of which has a fixed height of 32.

The **NavigationControl** element is specified by the first **Border** element, which means that it exists in the top conceptual row of the form. The first **RowDefinition** element specifies a fixed height, the same as the [ControlHeight](#) attribute of **NavigationControl**, but the first and only **ColumnDefinition** element doesn't specify a fixed width. Instead, the **NavigationControl** uses the [MinWidth](#) attribute to specify that the conceptual column is at least 500 pixels wide. Similarly, the second **RowDefinition** element doesn't specify a fixed height, but the [SubForm](#) element uses the [MinHeight](#) attribute to specify that the row is at least 480 pixels high.

The **NavigationControl** has three child [NavigationButton](#) controls, described in the following table. The [NavigationTargetSubform](#) attribute value **NavigationSubform** specifies that when the user clicks on one of the buttons, the associated object specified by the button's [NavigationTargetName](#) attribute will be opened in **NavigationSubform**.

Button Name	Caption	Type of Associated Object	Name of Associated Object
UserDetailsNavigationButton	User Details	Form	UserDetails
TaskDataSheetNavigationButton	All Tasks	Form	TasksDatasheet
TaskReportNavigationButton	Task Report	Report	Task By Assigned To

Each of the buttons specifies a **ControlHeight** that is smaller than the height of the **NavigationControl**, which means that there is padding around the buttons.

### 3.2.3 Datasheet Form

The following example demonstrates a [Form](#) that displays information in a tabular view. This example specifies a view on the **Tasks** list (1).

```
<?xml version="1.0" encoding="utf-16" standalone="no"?>
<axl:View Name="TasksDatasheet" xmlns="http://schemas.microsoft.com/client/2009/04"
xmlns:a="http://schemas.microsoft.com/office/accessservices/2009/04/forms"
xmlns:axl="http://schemas.microsoft.com/office/accessservices/2009/04/application"
xmlns:x="http://schemas.microsoft.com/winfx/2009/04/xaml">

  <axl:Data>
    <axl:RecordSource>Tasks</axl:RecordSource>
  </axl:Data>

  <a:Form AlternateBackground="#f2f2f2" Style="{StaticResource DatasheetStyle}"
  TabularBorderStyle="Both">

    <a:Form.Resources>
      <Style x:Key="DatasheetStyle">
        <Setter Property="Control.FontFamily" Value="Calibri"/>
        <Setter Property="Control.FontSize" Value="15"/>
        <Setter Property="AccessControl.GridlineBorderBrush" Value="#eeeeee1"/>
      </Style>
    </a:Form.Resources>

    <a:Form.Datasheet>
      <a:Datasheet x:Name="Detail">

        <a:Label x:Name="lblPriority" Association="Priority" Caption="Priority"/>
      </a:Datasheet>
    </a:Form.Datasheet>
  </a:Form>
</axl:View>
```

```

    <a:ComboBox x:Name="Priority" SeparatorCharacters=", " LimitToList="true"
RowSourceType="Value List" Width="90" ControlSource="Priority">
    <a:ComboBox.RowSource>"1 - High";"2 - Medium";"3 - Low"</a:ComboBox.RowSource>
    </a:ComboBox>

    <a:Label x:Name="lblCompleted" Association="Completed" Caption="Completed"/>
    <a:CheckBox x:Name="Completed" Width="40" ControlSource="Completed"/>

    <a:Label x:Name="lblTaskTitle" Association="TaskTitle" Caption="Title"/>
    <a:TextBox x:Name="TaskTitle" Width="250" ControlSource="TaskTitle"/>

    <a:Label x:Name="lblStartDate" Association="StartDate" Caption="Start Date"/>
    <a:TextBox x:Name="StartDate" Width="80" ControlSource="StartDate"
FormatDataAs="Short Date"/>

    <a:Label x:Name="lblDueDate" Association="DueDate" Caption="Due Date"/>
    <a:TextBox x:Name="DueDate" Width="80" ControlSource="DueDate" FormatDataAs="Short
Date"/>

    <a:Label x:Name="lblAssignedTo" Association="AssignedToUserID" Caption="Assigned
To"/>
    <a:ComboBox x:Name="AssignedToUserID" SeparatorCharacters=", " LimitToList="true"
ColumnCount="2" ColumnWidths="0,120" ListItemsEditForm="User Details" Width="120"
ListWidth="120" ControlSource="AssignedToUserID">
    <a:ComboBox.RowSource>
    <axl:Query>
    <axl:References>
    <axl:Reference Source="Users"/>
    </axl:References>
    <axl:Results>
    <axl:Property Source="Users" Name="ID"/>
    <axl:Property Source="Users" Name="FullName"/>
    </axl:Results>
    <axl:Ordering>
    <axl:Order Source="Users" Name="FullName"/>
    </axl:Ordering>
    </axl:Query>
    </a:ComboBox.RowSource>
    </a:ComboBox>

    <a:Label x:Name="lblAttachments" Association="Attachments" Caption="Attachments"/>
    <a:Attachment x:Name="Attachments" PictureAlignment="top left"
ControlSource="Attachments"/>

    </a:Datasheet>
</a:Form.Datasheet>

</a:Form>
</axl:View>

```

In contrast to the previous example, which used a **Grid** element to define the layout of controls in a detail section, this example uses a **Form.Datasheet** element, of type [CT\\_FormDatasheet](#), to specify fields (3) from **Tasks**. The **Form** element specifies the [Style DatasheetStyle](#), which applies to the form and all its controls, unlike a detail form, which allows controls to specify individual styles.

For each column (2) in the tabular view, a child element of the **Form.Datasheet** element specifies a control. The [ControlSource](#) attribute specifies the field (3) that will be displayed in that column

(2). For example, the **TextBox** child element named **TaskTitle** specifies a **ControlSource** attribute of **TaskTitle**, which specifies that the control is bound to **Tasks.TaskTitle**.

The **Label** child elements of **Datasheet**, which have type [CT\\_AccDSLLabel](#), are associated with other control types by specifying the [Association](#) attribute. For example, the **Label** named **lblAssignedTo** specifies an **Association** attribute of **AssignedToUserID**. The [Caption](#) attribute of the label, **Assigned To**, will be displayed as the name of the column that corresponds to the control **AssignedToUserID**.

The **ComboBox** control, **AssignedToUserID**, is an example of a multiple-column combo box. The **ComboBox.RowSource** element specifies a [Query](#) that selects two fields, **ID** and **FullName**, from the **Users** list (1). The control specifies a [ColumnCount](#) attribute of 2 and a [ColumnWidths](#) attribute of 0,120, which specifies that the first column in the dropdown list, **Users.ID**, is hidden. The **ControlSource** attribute specifies that the **AssignedToUserID** field (3) of the **Tasks** list will be set to the **Users.ID** field when the control value changes.

### 3.3 UI Macros

The following subsections contain complete and valid examples of UI Macros in data applications.

#### 3.3.1 Validation and Exceptions

The following example demonstrates the use of a [UI Macro](#) for input validation. The **UserInterfaceMacros** element is the child of a [CT\\_View](#) element.

```
<axl:UserInterfaceMacros>

  <axl:UserInterfaceMacro For="cmdDelete" Event="OnClick">
    <axl:Statements>
      <axl:Action Name="DeleteRecord"/>
      <axl:Action Name="RemoveTempVar">
        <axl:Argument Name="Name">tmpDirty</axl:Argument>
      </axl:Action>
      <axl:Action Name="CloseWindow"/>
    </axl:Statements>
  </axl:UserInterfaceMacro>

  <axl:UserInterfaceMacro For="cmdSaveAndClose" Event="OnClick">
    <axl:Statements>
      <axl:Action Name="OnError">
        <axl:Argument Name="Goto">Macro Name</axl:Argument>
        <axl:Argument Name="MacroName">MacroError</axl:Argument>
      </axl:Action>

      <axl:ConditionalBlock>
        <axl:If>
          <axl:Condition>IsNull([txtEmail])</axl:Condition>
          <axl:Statements>
            <axl:Action Name="MessageBox">
              <axl:Argument Name="Message">
                Please enter an e-mail address.
              </axl:Argument>
            </axl:Action>
          </axl:Statements>
        </axl:If>
        <axl:ElseIf>
          <axl:Condition>IsNull([txtFullName])</axl:Condition>
```

```

    <axl:Statements>
      <axl:Action Name="MessageBox">
        <axl:Argument Name="Message">Please enter a full name.</ axl:Argument>
      </axl:Action>
    </axl:Statements>
  </axl:ElseIf>
<axl:Else>
  <axl:Statements>
    <axl:Action Name="SaveRecord"/>
    <axl:Action Name="RemoveTempVar">
      <axl:Argument Name="Name">tmpDirty</axl:Argument>
    </axl:Action>
    <Action Name="CloseWindow"/>
  </axl:Statements>
</axl:Else>
</axl:ConditionalBlock>
</axl:Statements>

<axl:Sub Name="MacroError">
  <axl:Statements>
    <axl:Action Name="MessageBox">
      <axl:Argument Name="Message">=[MacroError]![Description]</axl:Argument>
    </axl:Action>
  </axl:Statements>
</axl:Sub>

</axl:UserInterfaceMacro>
</axl:UserInterfaceMacros>

```

This sample contains two embedded User Interface Macros. The first one is a macro that deletes the current record using the [DeleteRecord](#) action and then closes the form using the [CloseWindow](#) action. This macro is triggered by the **OnClick** event of the **cmdDelete** command button of the form that contains it, as specified by the **For** and **Event** attributes, respectively.

The second UI Macro is triggered by the **OnClick** event of the **cmdSaveAndClose** command button. It uses the [OnError](#) action to register which subroutine will run when an exception, that is, an error, occurs. In this example, the **Sub** is named **MacroError**. If one of the statements in the macro encounters an error situation, the **MacroError** Macro will be run.

The **ConditionalBlock** element is used to validate the contents of the **txtEmail** and **txtFullName** controls. When the **txtEmail** textbox contains no value, the [MessageBox](#) action is used to show the user a dialog box that displays the text, "Please enter an e-mail address". The commands under the **ElseIf** and **Else** conditions are not performed.

The **ElseIf** element specifies a condition that is only evaluated if the initial **If** element condition evaluates to false (that is, when the value of the **txtEmail** control is not null). In this example, if the **txtEmail** control is not empty but the **txtFullName** control is, another message will be displayed to the user.

When the condition for the **ElseIf** element also evaluates to false, the commands specified by **Statements** in the **Else** element are performed. In this example, the **Else** condition indicates that both controls have a non-null value, in which case the Macro commits the record using the [SaveRecord](#) action and closes the form with the **CloseWindow** action.

The commands in the **Sub** element **MacroError** are performed when an exception occurs while the Macro is running. In this example, the **MessageBox** action displays the error to the user by evaluating the expression `[MacroError]![Description]`.

### 3.3.2 Standalone

The following example describes a standalone [UI Macro](#) which is specified by a database object named **RecalculateTotals**.

```
<axl:UserInterfaceMacro MinimumClientDesignVersion="14.0.0000.0000">
  <axl:Statements>
    <axl:Action Name="RunDataMacro">
      <axl:Argument Name="MacroName">Projects.RecalculateTotals</axl:Argument>
    </axl:Action>
    <axl:Action Name="MessageBox">
      <axl:Argument Name="Message">
        The total and open tasks count are now recalculated for all projects.
      </axl:Argument>
    </axl:Action>
  </axl:Statements>
</axl:UserInterfaceMacro>
```

This macro calls a [Data Macro](#) using the [RunDataMacro](#) action and the [MacroName](#) argument **Projects.RecalculateTotals**.

The standalone macro can be called from a command button by specifying the following **UserInterfaceMacros** child element of a [CT View](#) element:

```
<axl:UserInterfaceMacros>
  <axl:MacroReference Event="OnClick" For="cmdRecalculateTotals">
    RecalculateTotals
  </axl:MacroReference>
</axl:UserInterfaceMacros>
```

The **MacroReference** element specifies that the macro named **RecalculateTotals** will be called when the command button named **cmdRecalculateTotals** is clicked.

### 3.3.3 Filtering

The following example demonstrates how to apply a filter to a datasheet form using a [UI Macro](#). The **UserInterfaceMacro** element is a child of the **UserInterfaceMacros** element of a [CT View](#) element.

```
<axl:UserInterfaceMacro For="txtSearch" Event="AfterUpdate">
  <axl:Statements>
    <axl:ConditionalBlock>
      <axl:If>
        <axl:Condition>[txtSearch]=" " Or IsNull ([txtSearch])</axl:Condition>
        <axl:Statements>
          <axl:Action Name="SetProperty">
            <axl:Argument Name="ControlName">txtSearch</axl:Argument>
            <axl:Argument Name="Property">Value</axl:Argument>
            <axl:Argument Name="Value">Search...</axl:Argument>
          </axl:Action>
        </axl:Statements>
      </axl:If>
    </axl:ConditionalBlock>
    <axl:ConditionalBlock>
      <axl:If>
```

```

    <axl:Condition>[txtSearch]="Search..."</axl:Condition>
    <axl:Statements>
      <axl:Action Name="SetFilter">
        <axl:Argument Name="WhereCondition">
          [Searchable] Like "*"</axl:Argument>
        <axl:Argument Name="ControlName">BugDS</axl:Argument>
      </axl:Action>
    </axl:Statements>
  </axl:If>
  <axl:Else>
    <axl:Statements>
      <axl:Action Name="SetFilter">
        <axl:Argument Name="WhereCondition">
          [Searchable] Like "*" &
          [Forms]![Main]![NavigationSubform]![txtSearch] & "*"
        </axl:Argument>
        <axl:Argument Name="ControlName">BugDS</axl:Argument>
      </axl:Action>
    </axl:Statements>
  </axl:Else>
</axl:ConditionalBlock>
</axl:Statements>
</axl:UserInterfaceMacro>

```

The example demonstrates a UI Macro associated with a [Textbox](#), **txtSearch**, as specified by the **For** attribute. When the value of the text box is updated, the AfterUpdate event, as specified by [ST\\_UserInterfaceObjectEvent](#), fires and the UI Macro is run, as specified by the **Event** attribute.

The **ConditionalBlock** elements specify the conditions and actions for the UI Macro. In the first **If** element, the **Condition** element has a value of `=Or.Db([txtSearch]="",IsNull([txtSearch]))`, which specifies that when value of **txtSearch** is the empty string or null, the **SetProperty** Action will set the value of **txtSearch** to "Search...".

In the second **ConditionalBlock** element, the [SetFilter](#) action is used to apply a filter to the subform control named **TasksDatasheet**. If the value of **txtSearch** is equal to "Search...", the filter is essentially removed by specifying the **WhereCondition** to be the expression `[Searchable] Like "*" & [Forms]![Main]![NavigationSubform]![txtSearch] & "*" & [Forms]![Main]![NavigationSubform]![txtSearch] & "*" & "`, which will cause **TasksDatasheet** to display only records from its data source (1) that contain the value of **txtSearch**.

### 3.4 Data Macros

The following examples demonstrate [Data Macros](#) represented in AXL.

#### 3.4.1 Validate Delete

The following example shows a [Data Macro](#) that prevents the user from deleting a record in the **Tasks** list (1) if the task has not been marked as finished. It also specifies an error number and a description to display to the user.

```

<?xml version="1.0" encoding="utf-16" standalone="no"?>
<DataMacros xmlns="http://schemas.microsoft.com/office/accessservices/2009/04/application">
  <DataMacro Event="BeforeDelete">

```

```

<Statements>
  <ConditionalBlock>
    <If>
      <Condition>=[Completed]&lt;&gt;True</Condition>
      <Statements>
        <Action Name="RaiseError">
          <Argument Name="Number">1234</Argument>
          <Argument Name="Description">
            This task cannot be deleted until it has been finished.
          </Argument>
        </Action>
      </Statements>
    </If>
  </ConditionalBlock>
</Statements>
</DataMacro>

</DataMacros>

```

This macro exists in the context of the **Tasks** list (1). The **Condition** element specifies an expression, `=[Completed] <> True`. If the expression evaluates to true, that is, if the value of the **Completed** field in the row about to be deleted is not **True**, then the commands in the **Statements** element will be performed. Here `[Completed]` refers to the field (3) in **Tasks**. In this example, the only command is the [RaiseError](#) action, which will generate an application error and display a dialog box to the user with the message, "This task cannot be deleted until it has been finished."

### 3.4.2 After Insert

This [Data Macro](#) example demonstrates how to increment the value of the **CurrentTaskCount** field (3) in the **Users** list (1) after a new record is added and assigned to that user in the **Tasks** list. The **DataMacro** element is a child of a [CT DataMacros](#).

```

<DataMacro Event="AfterInsert">
  <Statements>
    <LookupRecord>
      <Data Alias="U1">
        <Reference>Users</Reference>
        <WhereCondition>=[ID]=[Tasks].[AssignedToUserID]</WhereCondition>
      </Data>
      <Statements>
        <EditRecord>
          <Data Alias="U1"/>
          <Statements>
            <Action Name="SetField">
              <Argument Name="Field">CurrentTaskCount</Argument>
              <Argument Name="Value">=[CurrentTaskCount]+1</Argument>
            </Action>
          </Statements>
        </EditRecord>
      </Statements>
    </LookupRecord>
  </Statements>
</DataMacro>

```

This macro exists in the context of the **Tasks** list (1). The **Event** attribute of [CT DataMacro](#) is set to **AfterInsert**, as specified by [ST DataObjectEvent](#), which means that this macro will be run after a



record is added to **Tasks**. The **Data** child element of [CT\\_LookupRecord](#) specifies a set of records from the **Users** list (1), and its **Alias** attribute specifies that U1 is the name of that data context. The **EditRecord** element specifies that the [SetField](#) action will be performed on all records specified by the **Data** element, in this case the named context from the **LookupRecord.Data** element. The [Field](#) argument specifies that the field (3) to be updated is **Users.CurrentTaskCount**, and the [Value](#) argument specifies that the new value of the field (3) is its current value plus 1.

### 3.4.3 Named Macro

This [Data Macro](#) represents another way of incrementing the **CurrentTaskCount** field of the **Users** list.

```
<?xml version="1.0" encoding="UTF-16" standalone="no"?>
<DataMacros xmlns="http://schemas.microsoft.com/office/accessservices/2009/04/application">

  <DataMacro Name="IncrementTaskCount">
    <Parameters>
      <Parameter Name="UserID" Description="The identifier of the user that needs to be
incremented"/>
    </Parameters>
    <Statements>
      <LookupRecord>
        <Data>
          <Reference>Users</Reference>
          <WhereCondition>=[ID]=[UserID]</WhereCondition>
        </Data>
        <Statements>
          <EditRecord>
            <Data/>
            <Statements>
              <Action Name="SetField">
                <Argument Name="Field">CurrentTaskCount</Argument>
                <Argument Name="Value">=[CurrentTaskCount]+1</Argument>
              </Action>
            </Statements>
          </EditRecord>
        </Statements>
      </LookupRecord>
    </Statements>
  </DataMacro>
</DataMacros>
```

The first **DataMacro** element is designed to be called from other macros and is referenced by the name **IncrementTaskCount**, as specified by the **Name** attribute. Its behavior when called is the same as that of the previous example. It also specifies a [Parameter](#) element, with the **Name** attribute of **UserID**. The value of the parameter can then be used by referencing the parameter name, as demonstrated in the **Data.WhereCondition** element, which sets a filter on the records retrieved by the **Data** element to include only those where the value of **Users.ID** is equal to the value of the parameter passed in by the calling macro.

The following **DataMacro** element, which is associated with **Tasks**, is an example of how to call a named Data Macro. Its **Event** attribute is set to **AfterInsert**, which is called when a new record is added to the **Tasks** list (1).

```
<DataMacro Event="AfterInsert">
  <Statements>
```

```

<Action Name="RunDataMacro">
  <Argument Name="MacroName">IncrementTaskCount</Argument>
  <Parameters>
    <Parameter Name="UserID" Value="=[Tasks].[AssignedToUserID]"/>
  </Parameters>
</Action>
</Statements>
</DataMacro>

```

The [RunDataMacro](#) action takes the [MacroName](#) argument, the value of which is **IncrementTaskCount**. The **Value** attribute of the **Parameter** element is an [expression](#), which evaluates to the value of the **AssignedToUserID** field (3) in the newly added record in **Tasks**. For example, if the newly added record were assigned to a user with an **ID** of 5, then the **IncrementTaskCount** data macro would be called with a parameter value of 5, and the **WhereCondition** element would evaluate to `[ID]=5`.

### 3.5 Queries

The following examples demonstrate [Queries](#) represented in AXL.

#### 3.5.1 Single Reference Query

The following example shows a [Query](#) that references a single table, **Tasks**. The purpose of this query is to return all fields (3) of the records from the **Tasks** table, in descending order of date due, that meet the following criteria:

1. The task was scheduled to take more than 10 days.
2. The task is due in the next 5 days.

#### SQL:

```

SELECT Tasks.*
FROM Tasks
WHERE ((Tasks.[EndDate]<5+Now()) AND ((Tasks.[EndDate])>10+Tasks.[StartDate]))
ORDER BY Tasks.[EndDate] DESC;

```

#### Query AXL:

```

<?xml version="1.0" encoding="utf-16" standalone="no" ?>
<Query Name="MyQuery"
xmlns="http://schemas.microsoft.com/office/accessservices/2009/04/application">

  <References>
    <Reference Source="Tasks" />
  </References>

  <Results>
    <Property Source="Tasks" All="true" />
  </Results>

  <Restriction>
    =(And.Db((([EndDate]&lt;5+Now()),(([EndDate=""])&gt;10+[StartDate])))
  </Restriction>

```

```

    <Ordering>
      <Order Direction="Descending" Source="Tasks" Name="EndDate" />
    </Ordering>
  </Query>

```

The **References** element specifies the **Tasks** table is the data source (1) for this query.

The **Results** element specifies that the query is returning all the fields from the **Tasks** table.

The **Restriction** element specifies an expression that selects only those records where the task is scheduled to last more than ten days and where the value of **EndDate** is within five days from now. The **Now()** function is specified in section [2.5.5.2](#).

The **Ordering** element specifies that the results are sorted in descending order based on the **EndDate** field.

### 3.5.2 Multiple Reference Query with Join

The following example is a [Query](#) that joins two lists to produce a result.

The query references two lists (1), **Users** and **Tasks**. The query uses an alias to reference the **Users** list (1) twice in the same query. It then performs a join between **Users** and **Tasks** and also between **Tasks** and the aliased list (1), **Owners**.

Each task has two users associated with the task, each with a different role. To differentiate the user names in the result set, aliases are used for the two instances of the **FullName** field, with the resulting names based on the meaning in the query.

#### SQL:

```

SELECT Tasks.TaskTitle, Users.FullName AS AssignedTo, Owners.FullName AS Owner,
Tasks.StartDate, Tasks.DueDate
FROM Users INNER JOIN (Tasks INNER JOIN Users AS Owners ON Tasks.Owner = Owners.ID) ON
Users.ID = Tasks.AssignedToUserID;

```

#### Query AXL:

```

<?xml version="1.0" encoding="UTF-16" standalone="no" ?>
<Query Name="TaskReportQuery"
xmlns="http://schemas.microsoft.com/office/accessservices/2009/11/application">
  <References>
    <Reference Source="Users" />
    <Reference Source="Tasks" />
    <Reference Source="Users" Alias="Owners" />
  </References>
  <Results>
    <Property Source="Tasks" Name="TaskTitle" />
    <Property Source="Users" Name="FullName" Alias="AssignedTo" />
    <Property Source="Owners" Name="FullName" Alias="Owner" />
    <Property Source="Tasks" Name="StartDate" />
    <Property Source="Tasks" Name="DueDate" />
  </Results>
  <Joins>
    <Join Left="Tasks" LeftProperty="Owner" Right="Owners" RightProperty="ID" />
    <Join Left="Users" LeftProperty="ID" Right="Tasks" RightProperty="AssignedToUserID" />
  </Joins>

```

```
</Query>
```

The **References** element specifies the query is using the **Users** and **Tasks** as source lists. The second **Reference** element for the **Users** list also specifies an **Alias** attribute, which specifies the value of **Owners** and can be used later in the query.

The **Results** element specifies that the return fields will be **Tasks.TaskTitle**, **Users.FullName**, **Owners.FullName**, **Tasks.StartDate** and **Tasks.DueDate**. In the results, the **Users.FullName** and the **Owners.FullName** fields will be displayed as **AssignedTo** and **Owner**, respectively.

The **Joins** element specifies two table joins. The **Tasks** and **Owners** tables are joined by **Tasks.Owner** and **Owners.ID**. The **Users** and **Tasks** tables are joined by **Users.ID** and **Tasks.AssignedToUserID**.

## 3.6 Reports

The following example demonstrates a [Report](#) represented in RDL.

### 3.6.1 Grouped Report with Aggregate Expressions

The following example RDL specifies a report with grouping and aggregate expressions. The report is bound to a [Query](#) named **TaskReportQuery**. The query is based on a join between a **Tasks** list (1) and a **Contacts** list (1) as shown here:

```
SELECT Tasks.TaskTitle, Contacts.FullName FROM Tasks INNER JOIN Contacts ON  
Tasks.AssignedToContactId = Contacts.Id
```

This [Report](#) shows **TaskTitle** for assigned tasks, grouped by **Contacts.FullName**. At the bottom of each **FullName** group, the report shows the total number of tasks in the group. The total number of tasks in the report is printed at the bottom of the report.

```
<?xml version="1.0" encoding="UTF-16" standalone="no"?>  
<Report xmlns="http://schemas.microsoft.com/office/accessservices/2009/04/reports">  
  
  <ReportParameters>  
    <ReportParameter Name="TimeOffset">  
      <DataType>Integer</DataType>  
      <Nullable>true</Nullable>  
      <Hidden>true</Hidden>  
      <Prompt>Time Offset</Prompt>  
    </ReportParameter>  
  </ReportParameters>  
  
  <DataSources>  
    <DataSource Name="ADS"/>  
  </DataSources>  
  
  <DataSets>  
    <DataSet Name="Default">  
      <Fields>  
        <Field Name="FullName">  
          <DataField>FullName</DataField>  
        </Field>  
        <Field Name="TaskTitle">  
          <DataField>TaskTitle</DataField>  
        </Field>  
      </Fields>  
    </DataSet>  
  </DataSets>  
</Report>
```

```

    </Fields>
    <Query>
      <DataSourceName>ADS</DataSourceName>
      <CommandText>TaskReportQuery</CommandText>
    </Query>
  </DataSet>
</DataSets>

<ReportSections>
  <ReportSection>
    <Body>
      <ReportItems>
        <Tablix Name="ReportLayout">
          <TablixBody>
            <TablixColumns>
              <TablixColumn>
                <Width>144.5pt</Width>
              </TablixColumn>
            </TablixColumns>
            <TablixRows>

              <TablixRow>
                <TablixCells>
                  <TablixCell>
                    <CellContents>
                      <Textbox Name="AssignedTo">
                        <Paragraphs>
                          <Paragraph>
                            <TextRuns>
                              <TextRun>
                                <Value>=Fields!FullName.value</Value>
                                <Style>
                                  <Color>#c0504d</Color>
                                  <FontWeight>Bold</FontWeight>
                                  <FontFamily>Calibri</FontFamily>
                                  <FontSize>11pt</FontSize>
                                </Style>
                              </TextRun>
                            </TextRuns>
                          </Paragraph>
                        </Paragraphs>
                      </Textbox>
                    </CellContents>
                  </TablixCell>
                </TablixCells>
                <Height>16.75pt</Height>
              </TablixRow>

              <TablixRow>
                <TablixCells>
                  <TablixCell>
                    <CellContents>
                      <Textbox Name="TaskTitle">
                        <CanGrow>true</CanGrow>
                        <Style>
                          <BackgroundColor>=IIF((RowNumber("Group1") Mod 2)=1, "#ffffff",
"#f2f2f2")</BackgroundColor>
                        </Style>
                      <Paragraphs>

```

```

        <Paragraph>
          <TextRuns>
            <TextRun>
              <Value>=Fields!TaskTitle.value</Value>
              <Style>
                <Color>#10253f</Color>
                <FontFamily>Calibri</FontFamily>
                <FontSize>11pt</FontSize>
              </Style>
            </TextRun>
          </TextRuns>
        </Paragraph>
      </Paragraphs>
    </Textbox>
  </CellContents>
</TablixCell>
</TablixCells>
<Height>15.0pt</Height>
</TablixRow>

<TablixRow>
  <TablixCells>
    <TablixCell>
      <CellContents>
        <Textbox Name="AccessTotalsTaskTitle">
          <CanGrow>>true</CanGrow>
          <Paragraphs>
            <Paragraph>
              <Style>
                <TextAlign>Right</TextAlign>
              </Style>
              <TextRuns>
                <TextRun>
                  <Value>=CountRows() & " tasks"</Value>
                  <ToolTip>Record Count</ToolTip>
                  <Style>
                    <Color>#10253f</Color>
                    <FontFamily>Calibri</FontFamily>
                    <FontSize>11pt</FontSize>
                  </Style>
                </TextRun>
              </TextRuns>
            </Paragraph>
          </Paragraphs>
        </Textbox>
      </CellContents>
    </TablixCell>
  </TablixCells>
  <Height>15.0pt</Height>
</TablixRow>

<TablixRow>
  <TablixCells>
    <TablixCell>
      <CellContents>
        <Textbox Name="AccessTotalsTaskTitle1">
          <CanGrow>>true</CanGrow>
          <Paragraphs>
            <Paragraph>

```

```

        <TextRuns>
            <TextRun>
                <Value>="Total: " & CountRows() & " tasks"</Value>
                <ToolTip>Record Count</ToolTip>
                <Style>
                    <FontSize>14pt</FontSize>
                    <Color>#10253f</Color>
                    <FontFamily>Calibri</FontFamily>
                </Style>
            </TextRun>
        </TextRuns>
    </Paragraph>
</Paragraphs>
</Textbox>
</CellContents>
</TablixCell>
</TablixCells>
<Height>18.9pt</Height>
</TablixRow>

</TablixRows>
</TablixBody>

<TablixColumnHierarchy>
    <TablixMembers>
        <TablixMember/>
    </TablixMembers>
</TablixColumnHierarchy>

<TablixRowHierarchy>
    <TablixMembers>
        <TablixMember>
            <SortExpressions>
                <SortExpression>
                    <Value>=Fields!FullName.value</Value>
                </SortExpression>
            </SortExpressions>
            <Group Name="Group1">
                <GroupExpressions>
                    <GroupExpression>=Fields!FullName.value</GroupExpression>
                </GroupExpressions>
            </Group>
            <TablixMembers>
                <TablixMember/>
                <TablixMember>
                    <Group Name="DetailsGroup"/>
                </TablixMember>
            </TablixMembers>
        </TablixMember>
    </TablixMembers>
</TablixRowHierarchy>

    <DataSetName>Default</DataSetName>
</Tablix>
</ReportItems>
<Height>15.0pt</Height>
</Body>

```

```

<Page>
  <PageHeader>
    <PrintOnFirstPage>true</PrintOnFirstPage>
    <PrintOnLastPage>true</PrintOnLastPage>
    <ReportItems>
      <Rectangle Name="ReportHeader">
        <Style>
          <BackgroundColor>#c6d9f1</BackgroundColor>
        </Style>
        <Height>0.0pt</Height>
        <Visibility>
          <Hidden>=IIF(Globals!PageNumber = 1, false, true)</Hidden>
        </Visibility>
      </Rectangle>
      <Rectangle Name="PageHeader">
        <Style>
          <BackgroundColor>#ffffff</BackgroundColor>
        </Style>
        <Height>21.75pt</Height>
        <ReportItems>
          <Textbox Name="PageHeaderLabel">
            <Height>18.75pt</Height>
            <Top>3.0pt</Top>
            <Paragraphs>
              <Paragraph>
                <TextRuns>
                  <TextRun>
                    <Value>Tasks by Assigned to</Value>
                    <Style>
                      <FontSize>14pt</FontSize>
                      <Color>#4f81bd</Color>
                      <FontFamily>Calibri</FontFamily>
                    </Style>
                  </TextRun>
                </TextRuns>
              </Paragraph>
            </Paragraphs>
          </Textbox>
        </ReportItems>
      </Rectangle>
    </ReportItems>
    <Height>21.75pt</Height>
  </PageHeader>
</Page>

<Width>576.0pt</Width>

</ReportSection>
</ReportSections>

<CustomProperties>
  <CustomProperty>
    <Name>Caption</Name>
    <Value>Task report</Value>
  </CustomProperty>
  <CustomProperty>
    <Name>Page Orientation</Name>
    <Value>Portrait</Value>
  </CustomProperty>
</CustomProperties>

```



```
</CustomProperty>
</CustomProperties>

</Report>
```

The name of the query that provides the data, **TaskReportQuery**, is specified in the **CommandText** element. The **DataSourceName** of the **Query** element (see section [2.4.3.10](#)) and the **Name** attribute of the **DataSource** element (see section [2.4.3.12](#)) are both "ADS" as required by the AXL specification. The **DataSets** element specifies the field names that are used for the dynamic elements in the report body, **FullName** and **TaskTitle**.

The report consists of one column and four rows as specified in the **Tablix** element with a **Name** attribute of **ReportLayout**. The columns and rows are specified first with the **TablixRow** and then with the **TablixColumn** elements.

The report shows every other task row in the detail section with an alternating row background color. This is implemented in RDL by using the following expression on the textbox **Style** element:

```
<Style>
  <BackgroundColor>
    =IIF((RowNumber("Group1") Mod 2)=1, "#ffffff", "#f2f2f2")
  </BackgroundColor>
</Style>
```

This expression calculates the modulus of 2 on the logical row number inside Group1. On even row numbers, this is 0; on odd numbers 1. The IIF expression (section [2.5.6.2](#)) sets the background color to #ffffff (white) when the expression evaluates to true (odd row numbers) and #f2f2f2 (light grey) otherwise.

The hierarchy of rows for grouping layout is specified with the **TablixRowHierarchy** element. The **GroupExpression** element specifies the expression =Fields!FullName.value, which will group the results by the **FullName** in the data source. The **SortExpression** element specifies the expression =Fields!FullName.value, which will sort the group on **FullName** in the data source.

## **4 Security**

### **4.1 Security Considerations for Implementers**

None.

### **4.2 Index of Security Fields**

None.

## 5 Appendix A: Full XML Schemas

For ease of implementation, the following sections provide the full XML schema for this protocol.

Schema name	Prefix	Section
<a href="http://schemas.microsoft.com/winfx/2009/04/xaml">http://schemas.microsoft.com/winfx/2009/04/xaml</a>	x or xaml	<a href="#">5.1</a>
<a href="http://schemas.microsoft.com/client/2009/11">http://schemas.microsoft.com/client/2009/11</a>		<a href="#">5.2</a>
<a href="http://schemas.microsoft.com/office/accessservices/2009/11/forms">http://schemas.microsoft.com/office/accessservices/2009/11/forms</a>	a	<a href="#">5.3</a>
<a href="http://schemas.microsoft.com/office/accessservices/2009/11/application">http://schemas.microsoft.com/office/accessservices/2009/11/application</a>		<a href="#">5.4</a>
<a href="http://schemas.microsoft.com/office/accessservices/2009/11/reports">http://schemas.microsoft.com/office/accessservices/2009/11/reports</a>		<a href="#">5.5</a>
<a href="http://schemas.microsoft.com/office/accessservices/2009/04/accdw">http://schemas.microsoft.com/office/accessservices/2009/04/accdw</a>		<a href="#">5.6</a>

### 5.1 <http://schemas.microsoft.com/winfx/2009/04/xaml>

```
<xs:schema targetNamespace="http://schemas.microsoft.com/winfx/2009/04/xaml"
  elementFormDefault="qualified" xmlns="http://schemas.microsoft.com/winfx/2009/04/xaml"
  xmlns:xs="http://www.w3.org/2001/XMLSchema"
  xmlns:wblid="http://schemas.microsoft.com/office/word/2004/5/build" wblid:hash="true"
  wblid:prefix="x" wblid:cname="X" xmlns:odoc="http://schemas.microsoft.com/internal/obd">
  <xs:attribute name="Key" type="xs:string" wblid:cname="Key"/>
  <xs:attribute name="Name" type="xs:string" wblid:cname="Name"/>
</xs:schema>
```

### 5.2 <http://schemas.microsoft.com/client/2009/11>

```
<xs:schema id="WPFSubset" targetNamespace="http://schemas.microsoft.com/client/2009/11"
  elementFormDefault="qualified" xmlns="http://schemas.microsoft.com/client/2009/11"
  xmlns:a="http://schemas.microsoft.com/office/accessservices/2009/11/forms"
  xmlns:xs="http://www.w3.org/2001/XMLSchema"
  xmlns:x="http://schemas.microsoft.com/winfx/2009/04/xaml"
  xmlns:wblid="http://schemas.microsoft.com/office/word/2004/5/build" wblid:hash="true"
  wblid:prefix="xaml" wblid:cname="XAML" xmlns:odoc="http://schemas.microsoft.com/internal/obd">
  <xs:complexType name="CT_StackPanelResource">
    <xs:sequence>
      <xs:element name="Style" type="CT_Style" minOccurs="0" maxOccurs="unbounded"
wblid:cname="Style"/>
    </xs:sequence>
  </xs:complexType>
  <xs:complexType name="CT_Style">
    <xs:sequence>
      <xs:element name="Setter" type="CT_Setter" minOccurs="0" maxOccurs="unbounded"
wblid:cname="Setter"/>
    </xs:sequence>
    <xs:attribute name="TargetType" type="xs:string" fixed="Border" wblid:cname="TargetType"
use="optional"/>
    <xs:attribute ref="x:Key" use="optional"/>
  </xs:complexType>
  <xs:complexType name="CT_Setter">
    <xs:attribute name="Property" type="ST_SetterProperty" wblid:cname="Property"
use="optional"/>
    <xs:attribute name="Value" type="xs:string" wblid:cname="Value" use="optional"/>
  </xs:complexType>
```

```

<xs:simpleType name="ST_SetterProperty">
  <xs:restriction base="xs:string">
    <xs:enumeration value="Control.FontFamily" wblid:name="Control_FontFamily"/>
    <xs:enumeration value="Control.FontSize" wblid:name="Control_FontSize"/>
    <xs:enumeration value="Control.FontStyle" wblid:name="Control_FontStyle"/>
    <xs:enumeration value="Control.FontWeight" wblid:name="Control_FontWeight"/>
    <xs:enumeration value="Control.Foreground" wblid:name="Control_Foreground"/>
    <xs:enumeration value="Control.Background" wblid:name="Control_Background"/>
    <xs:enumeration value="Control.TextDecorations" wblid:name="Control_TextDecorations"/>
    <xs:enumeration value="Control.Padding" wblid:name="Control_Padding"/>
    <xs:enumeration value="AccessControl.TextAlignment"
wblid:name="AccessControl_TextAlignment"/>
    <xs:enumeration value="AccessControl.LineHeight"
wblid:name="AccessControl_LineHeight"/>
    <xs:enumeration value="AccessControl.GridlineBorderBrush"
wblid:name="Control_BorderBrush"/>
    <xs:enumeration value="Control.BorderThickness" wblid:name="Control_BorderThickness"/>
    <xs:enumeration value="AccessControl.BorderColor"
wblid:name="AccessControl_BorderColor"/>
    <xs:enumeration value="AccessControl.BackColor" wblid:name="AccessControl_BackColor"/>
    <xs:enumeration value="AccessControl.BackShade"
wblid:name="AccessControl_BackgroundShade"/>
    <xs:enumeration value="AccessControl.BackTint"
wblid:name="AccessControl_BackgroundTint"/>
    <xs:enumeration value="AccessControl.BackThemeColorIndex"
wblid:name="AccessControl_BackThemeColorIndex"/>
    <xs:enumeration value="AccessControl.ForeShade"
wblid:name="AccessControl_ForegroundShade"/>
    <xs:enumeration value="AccessControl.ForeTint"
wblid:name="AccessControl_ForegroundTint"/>
    <xs:enumeration value="AccessControl.ForeThemeColorIndex"
wblid:name="AccessControl_ForeThemeColorIndex"/>
    <xs:enumeration value="AccessControl.BorderBrushShade"
wblid:name="AccessControl_BorderBrushShade"/>
    <xs:enumeration value="AccessControl.BorderTint"
wblid:name="AccessControl_BorderTint"/>
    <xs:enumeration value="AccessControl.BorderThemeColorIndex"
wblid:name="AccessControl_BorderThemeColorIndex"/>
    <xs:enumeration value="AccessControl.Bevel" wblid:name="AccessControl_Bevel"/>
    <xs:enumeration value="AccessControl.UseTheme" wblid:name="AccessControl_UseTheme"/>
    <xs:enumeration value="AccessControl.Glow" wblid:name="AccessControl_Glow"/>
    <xs:enumeration value="AccessControl.Shape" wblid:name="AccessControl_Shape"/>
    <xs:enumeration value="AccessControl.Shadow" wblid:name="AccessControl_Shadow"/>
    <xs:enumeration value="AccessControl.SoftEdge" wblid:name="AccessControl_SoftEdge"/>
    <xs:enumeration value="AccessControl.Gradient" wblid:name="AccessControl_Gradient"/>
    <xs:enumeration value="AccessControl.Preset" wblid:name="AccessControl_Preset"/>
    <xs:enumeration value="AccessControl.PresetMask"
wblid:name="AccessControl_PresetMask"/>
    <xs:enumeration value="AccessControl.WebImageTop"
wblid:name="AccessControl_WebImageTop"/>
    <xs:enumeration value="AccessControl.WebImageLeft"
wblid:name="AccessControl_WebImageLeft"/>
    <xs:enumeration value="AccessControl.WebImageWidth"
wblid:name="AccessControl_WebImageWidth"/>
    <xs:enumeration value="AccessControl.WebImageHeight"
wblid:name="AccessControl_WebImageHeight"/>
    <xs:enumeration value="AccessControl.EffectSize"
wblid:name="AccessControl_EffectSize"/>
    <xs:enumeration value="AccessControl.ThemeFontIndex"
wblid:name="AccessControl_ThemeFontIndex"/>
  </xs:restriction>
</xs:simpleType>

```

```

    <xs:enumeration value="AccessControl.BorderLineStyle"
wblid:cname="AccessControl_BorderLineStyle"/>
    <xs:enumeration value="AccessControl.CharSet" wblid:cname="AccessControl_CharSet"/>
  </xs:restriction>
</xs:simpleType>
<xs:element name="Grid" type="CT_Grid" wblid:cname="Grid"/>
<xs:complexType name="CT_StackPanelSection">
  <xs:sequence>
    <xs:choice minOccurs="0" maxOccurs="unbounded">
      <xs:element ref="Grid"/>
    </xs:choice>
  </xs:sequence>
</xs:complexType>
<xs:complexType name="CT_Grid">
  <xs:sequence>
    <xs:element name="Grid.ColumnDefinitions" type="CT_GridColumnDefinitions"
wblid:cname="Grid_ColumnDefinitions"/>
    <xs:element name="Grid.RowDefinitions" type="CT_GridRowDefinitions"
wblid:cname="Grid_RowDefinitions"/>
    <xs:element ref="Border" minOccurs="0" maxOccurs="unbounded"/>
  </xs:sequence>
  <xs:attribute ref="a:LayoutGroup" use="required"/>
</xs:complexType>
<xs:complexType name="CT_GridColumnDefinitions">
  <xs:sequence>
    <xs:element name="ColumnDefinition" type="CT_ColumnDefinition" minOccurs="0"
maxOccurs="unbounded" wblid:cname="ColumnDefinition"/>
  </xs:sequence>
</xs:complexType>
<xs:complexType name="CT_ColumnDefinition">
  <xs:attribute name="Width" type="xs:unsignedInt" use="optional" wblid:cname="Width"/>
</xs:complexType>
<xs:complexType name="CT_GridRowDefinitions">
  <xs:sequence>
    <xs:element name="RowDefinition" type="CT_RowDefinition" minOccurs="0"
maxOccurs="unbounded" wblid:cname="RowDefinition"/>
  </xs:sequence>
</xs:complexType>
<xs:complexType name="CT_RowDefinition">
  <xs:attribute name="Height" type="xs:unsignedInt" use="optional" wblid:cname="Height"/>
</xs:complexType>
<xs:complexType name="CT_DataTemplateProperty">
  <xs:all>
    <xs:element name="DataTemplate" type="CT_DataTemplate" wblid:cname="DataTemplate"/>
  </xs:all>
</xs:complexType>
<xs:complexType name="CT_DataTemplate">
  <xs:sequence>
    <xs:element ref="a:Section"/>
  </xs:sequence>
</xs:complexType>
<xs:complexType name="CT_Border">
  <xs:choice minOccurs="0">
    <xs:element ref="a:TextBox"/>
    <xs:element ref="a:Button"/>
    <xs:element ref="a:ComboBox"/>
    <xs:element ref="a:CheckBox"/>
    <xs:element ref="a:ListBox"/>
    <xs:element ref="a:Label"/>
  </xs:choice>
</xs:complexType>

```

```

    <xs:element ref="a:Attachment"/>
    <xs:element ref="a:Image"/>
    <xs:element ref="a:SubForm"/>
    <xs:element ref="a:NavigationControl"/>
    <xs:element ref="a:NavigationButton"/>
    <xs:element ref="a:TabControl"/>
    <xs:element ref="a:WebBrowser"/>
  </xs:choice>
  <xs:attribute name="Style" type="ST_ReferenceType" use="optional" wblid:cname="Style"/>
  <xs:attribute name="Grid.Column" type="xs:unsignedInt" use="optional"
wblid:cname="Grid_Column"/>
  <xs:attribute name="Grid.ColumnSpan" type="xs:unsignedInt" wblid:cname="Grid_ColumnSpan"
use="optional"/>
  <xs:attribute name="Grid.Row" type="xs:unsignedInt" use="optional"
wblid:cname="Grid_Row"/>
  <xs:attribute name="Grid.RowSpan" type="xs:unsignedInt" wblid:cname="Grid_RowSpan"
use="optional"/>
  <xs:attribute name="MinWidth" type="xs:unsignedInt" wblid:cname="MinWidth"
use="optional"/>
  <xs:attribute name="MinHeight" type="xs:unsignedInt" wblid:cname="MinHeight"
use="optional"/>
  <xs:attribute name="ControlHeight" type="xs:unsignedInt" wblid:cname="ControlHeight"
use="optional"/>
  <xs:attribute name="ControlWidth" type="xs:unsignedInt" wblid:cname="ControlWidth"
use="optional"/>
  <xs:attribute ref="x:Name" use="optional"/>
  <xs:attribute name="Tag" type="xs:string" wblid:cname="Tag" use="optional"/>
</xs:complexType>
<xs:element name="Border" wblid:cname="Border" type="CT_Border"/>
<xs:simpleType name="ST_Color">
  <xs:restriction base="xs:string">
    <xs:pattern value="^[a-f]|[A-F]|[0-9]){6}"/>
  </xs:restriction>
</xs:simpleType>
<xs:simpleType name="ST_ReferenceType">
  <xs:restriction base="xs:string">
    <xs:pattern value="\{StaticResource .*\}"/>
  </xs:restriction>
</xs:simpleType>
<xs:simpleType name="ST_FlowDirection">
  <xs:restriction base="xs:string">
    <xs:enumeration value="LeftToRight" wblid:cname="LeftToRight"/>
    <xs:enumeration value="RightToLeft" wblid:cname="RightToLeft"/>
  </xs:restriction>
</xs:simpleType>
<xs:simpleType name="ST_Visibility">
  <xs:restriction base="xs:string">
    <xs:enumeration value="Hidden" wblid:cname="Hidden"/>
  </xs:restriction>
</xs:simpleType>
<xs:simpleType name="ST_ScrollBarVisibility">
  <xs:restriction base="xs:string">
    <xs:enumeration value="Hidden" wblid:cname="Hidden"/>
    <xs:enumeration value="Visible" wblid:cname="Visible"/>
    <xs:enumeration value="Auto" wblid:cname="Auto"/>
  </xs:restriction>
</xs:simpleType>
<xs:simpleType name="ST_Cursor">
  <xs:restriction base="xs:string">
    <xs:enumeration value="Hand" wblid:cname="Hand"/>
  </xs:restriction>
</xs:simpleType>

```

```

    </xs:restriction>
  </xs:simpleType>
  <xs:import namespace="http://schemas.microsoft.com/office/accessservices/2009/11/forms"
    schemaLocation="formxaml.xsd"/>
  <xs:import namespace="http://schemas.microsoft.com/winfx/2009/04/xaml"
    schemaLocation="xaml2006.xsd"/>
</xs:schema>

```

### 5.3 http://schemas.microsoft.com/office/accessservices/2009/11/forms

```

<xs:schema id="XASForms"
  targetNamespace="http://schemas.microsoft.com/office/accessservices/2009/11/forms"
  xmlns="http://schemas.microsoft.com/office/accessservices/2009/11/forms"
  xmlns:xs="http://www.w3.org/2001/XMLSchema"
  xmlns:x="http://schemas.microsoft.com/winfx/2009/04/xaml"
  xmlns:xaml="http://schemas.microsoft.com/client/2009/11"
  xmlns:axl="http://schemas.microsoft.com/office/accessservices/2009/11/application"
  xmlns:wbl="http://schemas.microsoft.com/office/word/2004/5/build" wbl:hash="true"
  wbl:prefix="a" wbl:cname="A" elementFormDefault="qualified"
  xmlns:odoc="http://schemas.microsoft.com/internal/obd">
  <xs:attribute name="LayoutGroup" type="xs:unsignedInt" wbl:cname="LayoutGroup"/>
  <xs:element name="Form" type="CT_Form" wbl:cname="Form"/>
  <xs:complexType name="CT_Form">
    <xs:all>
      <xs:element name="Form.Resources" type="xaml:CT_StackPanelResource" minOccurs="0"
        wbl:cname="Form_Resources"/>
      <xs:element name="Form.Header" type="CT_FormHeaderFooter" minOccurs="0"
        wbl:cname="Form_Header"/>
      <xs:element name="Form.Detail" type="xaml:CT_DataTemplateProperty" minOccurs="0"
        wbl:cname="Form_Detail"/>
      <xs:element name="Form.Footer" type="CT_FormHeaderFooter" minOccurs="0"
        wbl:cname="Form_Footer"/>
      <xs:element name="Form.Datasheet" type="CT_FormDatasheet" minOccurs="0"
        wbl:cname="Form_Datasheet"/>
    </xs:all>
    <xs:attributeGroup ref="AccessFormAttributes"/>
  </xs:complexType>
  <xs:complexType name="CT_FormHeaderFooter">
    <xs:all>
      <xs:element ref="Section"/>
    </xs:all>
  </xs:complexType>
  <xs:complexType name="CT_FormDatasheet">
    <xs:all>
      <xs:element name="Datasheet" type="CT_AccDataSheet" wbl:cname="DataSheet"/>
    </xs:all>
  </xs:complexType>
  <xs:element name="Section" type="CT_Section" wbl:cname="Section"/>
  <xs:complexType name="CT_Section">
    <xs:complexContent>
      <xs:extension base="xaml:CT_StackPanelSection">
        <xs:attribute name="Style" type="xaml:ST_ReferenceType" use="optional"
          wbl:cname="Style"/>
        <xs:attribute name="Tag" type="xs:string" wbl:cname="Tag" use="optional"/>
        <xs:attribute ref="x:Name" use="optional"/>
      </xs:extension>
    </xs:complexContent>
  </xs:complexType>
  <xs:element name="TextBox" type="CT_AccTextBox" wbl:cname="TextBox"/>

```

```

<xs:element name="Button" type="CT_AccButton" wblid:cname="Button"/>
<xs:element name="Image" type="CT_AccImage" wblid:cname="Image"/>
<xs:element name="Label" type="CT_AccLabel" wblid:cname="Label"/>
<xs:element name="Attachment" type="CT_AccAttachment" wblid:cname="Attachment"/>
<xs:element name="ListBox" type="CT_AccListBox" wblid:cname="ListBox"/>
<xs:element name="ComboBox" type="CT_AccComboBox" wblid:cname="ComboBox"/>
<xs:element name="CheckBox" type="CT_AccCheckBox" wblid:cname="CheckBox"/>
<xs:element name="NavigationControl" type="CT_AccNavigationControl"
wblid:cname="NavigationControl"/>
<xs:element name="TabControl" type="CT_AccTabControl" wblid:cname="TabControl"/>
<xs:element name="SubForm" type="CT_AccSubForm" wblid:cname="SubForm"/>
<xs:element name="WebBrowser" type="CT_AccWebBrowser" wblid:cname="WebBrowser"/>
<xs:element name="NavigationButton" type="CT_AccNavigationButton"
wblid:cname="NavigationButton"/>
<xs:complexType name="CT_AccTabControl">
  <xs:sequence>
    <xs:element name="TabItem" type="CT_TabItem" minOccurs="1" maxOccurs="unbounded"
wblid:cname="TabItem"/>
  </xs:sequence>
  <xs:attribute ref="x:Name" use="required"/>
  <xs:attribute name="ControlHeight" type="xs:unsignedInt" wblid:cname="ControlHeight"
use="optional"/>
  <xs:attribute name="ControlWidth" type="xs:unsignedInt" wblid:cname="ControlWidth"
use="optional"/>
  <xs:attribute name="TabIndex" type="xs:unsignedInt" wblid:cname="TabIndex"
use="optional"/>
  <xs:attribute name="MinWidth" type="xs:unsignedInt" wblid:cname="MinWidth"
use="optional"/>
  <xs:attribute name="MinHeight" type="xs:unsignedInt" wblid:cname="MinHeight"
use="optional"/>
  <xs:attribute name="StyleSelected" type="xaml:ST_ReferenceType"
wblid:cname="StyleSelected" use="optional"/>
  <xs:attribute name="StyleHover" type="xaml:ST_ReferenceType" wblid:cname="StyleHover"
use="optional"/>
  <xs:attribute name="IsEnabled" type="xs:boolean" wblid:cname="IsEnabled" use="optional"/>
  <xs:attribute name="StatusBarText" type="xs:string" wblid:cname="StatusBarText"
use="optional"/>
  <xs:attributeGroup ref="ControlAttributes"/>
</xs:complexType>
<xs:complexType name="CT_TabItem">
  <xs:sequence>
    <xs:element ref="xaml:Grid" minOccurs="0"/>
  </xs:sequence>
  <xs:attribute ref="x:Name" use="required"/>
  <xs:attribute name="Caption" type="ST_AccString2048" use="optional"
wblid:cname="Caption"/>
  <xs:attribute name="ControlHeight" type="xs:unsignedInt" use="optional"
wblid:cname="ControlHeight"/>
  <xs:attribute name="ControlWidth" type="xs:unsignedInt" use="optional"
wblid:cname="ControlWidth"/>
  <xs:attribute name="ToolTip" type="xs:string" wblid:cname="ToolTip" use="optional"/>
  <xs:attribute name="StyleSelected" type="xaml:ST_ReferenceType"
wblid:cname="StyleSelected" use="optional"/>
  <xs:attribute name="StyleHover" type="xaml:ST_ReferenceType" wblid:cname="StyleHover"
use="optional"/>
  <xs:attribute name="Width" type="xs:unsignedInt" wblid:cname="Width" use="optional"/>
  <xs:attribute name="Height" type="xs:unsignedInt" wblid:cname="Height" use="optional"/>
  <xs:attribute name="IsEnabled" type="xs:boolean" wblid:cname="IsEnabled" use="optional"/>
  <xs:attribute name="StatusBarText" type="xs:string" wblid:cname="StatusBarText"
use="optional"/>

```



```

    <xs:attribute name="AccessKey" type="xs:string" wblid:cname="AccessKey" use="optional"/>
    <xs:attributeGroup ref="ControlAttributes"/>
  </xs:complexType>
<xs:complexType name="CT_AccDataSheet">
  <xs:sequence>
    <xs:choice minOccurs="0" maxOccurs="unbounded">
      <xs:element name="TextBox" type="CT_AccDSTextBox" wblid:cname="TextBox"/>
      <xs:element name="Label" type="CT_AccDSLLabel" wblid:cname="Label"/>
      <xs:element name="Attachment" type="CT_AccDSAttachment" wblid:cname="Attachment"/>
      <xs:element name="ComboBox" type="CT_AccDSComboBox" wblid:cname="ComboBox"/>
      <xs:element name="CheckBox" type="CT_AccDSCheckBox" wblid:cname="CheckBox"/>
    </xs:choice>
  </xs:sequence>
  <xs:attribute ref="x:Name" use="optional"/>
</xs:complexType>
<xs:complexType name="CT_AccTextBox">
  <xs:attributeGroup ref="TextBoxAttributes"/>
  <xs:attributeGroup ref="AccessControlAttributes"/>
</xs:complexType>
<xs:complexType name="CT_AccDSTextBox">
  <xs:attributeGroup ref="DSTextBoxAttributes"/>
</xs:complexType>
<xs:complexType name="CT_AccSubForm">
  <xs:attributeGroup ref="SubFormAttributes"/>
  <xs:attributeGroup ref="AccessControlAttributes"/>
</xs:complexType>
<xs:complexType name="CT_AccButton">
  <xs:attributeGroup ref="ButtonAttributes"/>
  <xs:attributeGroup ref="AccessControlAttributes"/>
</xs:complexType>
<xs:complexType name="CT_AccImage">
  <xs:attributeGroup ref="ImageAttributes"/>
  <xs:attributeGroup ref="AccessControlAttributes"/>
</xs:complexType>
<xs:complexType name="CT_AccLabel">
  <xs:attributeGroup ref="LabelAttributes"/>
  <xs:attributeGroup ref="AccessControlAttributes"/>
</xs:complexType>
<xs:complexType name="CT_AccDSLLabel">
  <xs:attributeGroup ref="DSLLabelAttributes"/>
</xs:complexType>
<xs:complexType name="CT_AccAttachment">
  <xs:attributeGroup ref="AttachmentAttributes"/>
  <xs:attributeGroup ref="AccessControlAttributes"/>
</xs:complexType>
<xs:complexType name="CT_AccDSAttachment">
  <xs:attributeGroup ref="DSAttachmentAttributes"/>
</xs:complexType>
<xs:complexType mixed="true" name="CT_AccListComboBoxRowSource">
  <xs:choice>
    <xs:element ref="axl:Query" minOccurs="0"/>
  </xs:choice>
</xs:complexType>
<xs:complexType name="CT_AccListBox">
  <xs:choice>
    <xs:element name="ListBox.RowSource" minOccurs="0" wblid:cname="ListBox_RowSource"
type="CT_AccListComboBoxRowSource"/>
  </xs:choice>
  <xs:attributeGroup ref="ListBoxAttributes"/>

```

```

    <xs:attributeGroup ref="AccessControlAttributes"/>
  </xs:complexType>
  <xs:complexType name="CT_AccComboBox">
    <xs:choice>
      <xs:element name="ComboBox.RowSource" minOccurs="0" wblld:cname="ComboBox_RowSource"
type="CT_AccListComboBoxRowSource"/>
    </xs:choice>
    <xs:attributeGroup ref="ComboBoxAttributes"/>
    <xs:attributeGroup ref="AccessControlAttributes"/>
  </xs:complexType>
  <xs:complexType name="CT_AccDSComboBox">
    <xs:choice>
      <xs:element name="ComboBox.RowSource" minOccurs="0" wblld:cname="ComboBox_RowSource"
type="CT_AccListComboBoxRowSource"/>
    </xs:choice>
    <xs:attributeGroup ref="DSComboBoxAttributes"/>
  </xs:complexType>
  <xs:complexType name="CT_AccCheckBox">
    <xs:attributeGroup ref="CheckBoxAttributes"/>
    <xs:attributeGroup ref="AccessControlAttributes"/>
  </xs:complexType>
  <xs:complexType name="CT_AccDSCheckBox">
    <xs:attributeGroup ref="DSCheckBoxAttributes"/>
  </xs:complexType>
  <xs:complexType name="CT_AccNavigationControl">
    <xs:choice>
      <xs:element ref="xaml:Border" minOccurs="0" maxOccurs="unbounded"/>
    </xs:choice>
    <xs:attributeGroup ref="NavigationControlAttributes"/>
    <xs:attributeGroup ref="AccessControlAttributes"/>
  </xs:complexType>
  <xs:complexType name="CT_AccNavigationButton">
    <xs:attributeGroup ref="NavigationButtonAttributes"/>
    <xs:attributeGroup ref="AccessControlAttributes"/>
  </xs:complexType>
  <xs:complexType name="CT_AccWebBrowser">
    <xs:attributeGroup ref="WebBrowserAttributes"/>
    <xs:attributeGroup ref="AccessControlAttributes"/>
  </xs:complexType>
  <xs:attributeGroup name="AccessControlAttributes">
    <xs:attribute ref="x:Name" use="required"/>
    <xs:attribute name="ControlHeight" type="xs:unsignedInt" wblld:cname="ControlHeight"
use="optional"/>
    <xs:attribute name="ControlWidth" type="xs:unsignedInt" wblld:cname="ControlWidth"
use="optional"/>
  </xs:attributeGroup>
  <xs:attributeGroup name="AccessFormAttributes">
    <xs:attribute name="Caption" type="ST_AccString2048" use="optional"
wblld:cname="Caption"/>
    <xs:attribute name="NavigationButtons" type="xs:boolean" wblld:cname="NavigationButtons"
use="optional"/>
    <xs:attribute name="PageSize" type="xs:unsignedInt" wblld:cname="PageSize"
use="optional"/>
    <xs:attribute name="ShowTotalsRow" type="xs:boolean" wblld:cname="ShowTotalsRow"
use="optional"/>
    <xs:attribute name="RowHeight" type="xs:unsignedInt" wblld:cname="RowHeight"
use="optional"/>
    <xs:attribute name="DatasheetFrozenColumns" type="xs:unsignedInt"
wblld:cname="DatasheetFrozenColumns" use="optional"/>
  </xs:attributeGroup>

```

```

    <xs:attribute name="AlternateBackground" type="xaml:ST_Color"
wbld:cname="AlternateBackground" use="optional"/>
    <xs:attribute name="AlternateThemeColorIndex" type="xs:unsignedInt"
wbld:cname="AlternateThemeColorIndex" use="optional"/>
    <xs:attribute name="AlternateShade" type="xs:double" wbld:cname="AlternateShade"
use="optional"/>
    <xs:attribute name="AlternateTint" type="xs:double" wbld:cname="AlternateTint"
use="optional"/>
    <xs:attribute name="ScrollBars" type="ST_AccScrollBars" wbld:cname="ScrollBars"
use="optional"/>
    <xs:attribute name="Width" type="xs:unsignedInt" wbld:cname="Width" use="optional"/>
    <xs:attribute name="Style" type="xaml:ST_ReferenceType" wbld:cname="Style"
use="optional"/>
    <xs:attribute name="Tag" type="xs:string" wbld:cname="Tag" use="optional"/>
    <xs:attribute name="WebImageCluster" type="xs:string" wbld:cname="WebImageCluster"
use="optional"/>
    <xs:attribute name="FlowDirection" type="xaml:ST_FlowDirection"
wbld:cname="FlowDirection" use="optional"/>
    <xs:attribute name="ScaleFactor" type="xs:decimal" wbld:cname="ScaleFactor"
use="optional"/>
    <xs:attribute name="TabularBorderStyle" type="ST_AccBorderStyle"
wbld:cname="TabularBorderStyle" use="optional"/>
    <xs:attribute name="WaitForPostProcessing" type="xs:boolean"
wbld:cname="WaitForPostProcessing" use="optional"/>
    <xs:attribute name="CustomRibbonID" type="xs:string" wbld:cname="CustomRibbonID"
use="optional"/>
    <xs:attribute name="ThemeName" type="xs:string" wbld:cname="ThemeName" use="optional"/>
    <xs:attribute name="Top" type="xs:int" wbld:cname="Top" use="optional"/>
    <xs:attribute name="Left" type="xs:int" wbld:cname="Left" use="optional"/>
    <xs:attribute name="Bottom" type="xs:int" wbld:cname="Bottom" use="optional"/>
    <xs:attribute name="Right" type="xs:int" wbld:cname="Right" use="optional"/>
    <xs:attribute name="Filter" type="xs:string" wbld:cname="Filter" use="optional"/>
    <xs:attribute name="Order" type="xs:string" wbld:cname="Order" use="optional"/>
</xs:attributeGroup>
<xs:attributeGroup name="NavigationButtonAttributes">
    <xs:attribute name="DefaultInsertButton" type="xs:boolean"
wbld:cname="DefaultInsertButton" use="optional"/>
    <xs:attribute name="NavigationParentButton" type="xs:string"
wbld:cname="NavigationParentButton" use="optional"/>
    <xs:attribute name="NavigationTargetName" type="xs:string"
wbld:cname="NavigationTargetName" use="optional"/>
    <xs:attribute name="NavigationTargetType" type="xs:string"
wbld:cname="NavigationTargetType" use="optional"/>
    <xs:attribute name="NavigationWhereClause" type="xs:string"
wbld:cname="NavigationWhereClause" use="optional"/>
    <xs:attribute name="PictureCaptionArrangement" type="ST_AccPictureCaptionArrangement"
wbld:cname="PictureCaptionArrangement" use="optional"/>
    <xs:attribute name="Caption" type="ST_AccString2048" use="optional"
wbld:cname="Caption"/>
    <xs:attribute name="Picture" type="xs:string" wbld:cname="Source" use="optional"/>
    <xs:attribute name="Cursor" type="xaml:ST_Cursor" wbld:cname="Cursor" use="optional"/>
    <xs:attribute name="TabIndex" type="xs:unsignedInt" wbld:cname="TabIndex"
use="optional"/>
    <xs:attribute name="ToolTip" type="xs:string" wbld:cname="ToolTip" use="optional"/>
    <xs:attribute name="StyleSelected" type="xaml:ST_ReferenceType"
wbld:cname="StyleSelected" use="optional"/>
    <xs:attribute name="StyleHover" type="xaml:ST_ReferenceType" wbld:cname="StyleHover"
use="optional"/>
    <xs:attribute name="Width" type="xs:unsignedInt" wbld:cname="Width" use="optional"/>
    <xs:attribute name="Height" type="xs:unsignedInt" wbld:cname="Height" use="optional"/>
    <xs:attribute name="IsEnabled" type="xs:boolean" wbld:cname="IsEnabled" use="optional"/>

```

```

    <xs:attribute name="StatusBarText" type="xs:string" wblid:cname="StatusBarText"
use="optional"/>
    <xs:attribute name="AccessKey" type="xs:string" wblid:cname="AccessKey" use="optional"/>
    <xs:attributeGroup ref="ControlAttributes"/>
  </xs:attributeGroup>
  <xs:attributeGroup name="NavigationControlAttributes">
    <xs:attribute name="NavigationParent" type="xs:string" wblid:cname="NavigationParent"
use="optional"/>
    <xs:attribute name="NavigationChild" type="xs:string" wblid:cname="NavigationChild"
use="optional"/>
    <xs:attribute name="Span" type="xs:string" wblid:cname="Span" use="optional"/>
    <xs:attribute name="NavigationTargetSubform" type="xs:string"
wblid:cname="NavigationTargetSubform" use="optional"/>
    <xs:attribute name="TabIndex" type="xs:unsignedInt" wblid:cname="TabIndex"
use="optional"/>
    <xs:attribute name="IsEnabled" type="xs:boolean" wblid:cname="IsEnabled" use="optional"/>
    <xs:attribute name="ToolTip" type="xs:string" wblid:cname="ToolTip" use="optional"/>
    <xs:attribute name="MinWidth" type="xs:unsignedInt" wblid:cname="MinWidth"
use="optional"/>
    <xs:attribute name="MinHeight" type="xs:unsignedInt" wblid:cname="MinHeight"
use="optional"/>
    <xs:attribute name="StatusBarText" type="xs:string" wblid:cname="StatusBarText"
use="optional"/>
    <xs:attributeGroup ref="ControlAttributes"/>
  </xs:attributeGroup>
  <xs:attributeGroup name="TextBoxAttributes">
    <xs:attribute name="TextFormat" type="xs:string" wblid:cname="TextFormat" use="optional"/>
    <xs:attribute name="DecimalPlaces" type="ST_AccDecimalPlaces" wblid:cname="DecimalPlaces"
use="optional"/>
    <xs:attribute name="DefaultValue" type="xs:string" wblid:cname="DefaultValue"
use="optional"/>
    <xs:attribute name="AcceptsReturn" type="ST_AccAcceptsReturn" wblid:cname="AcceptsReturn"
use="optional"/>
    <xs:attribute name="ControlSource" type="xs:string" wblid:cname="ControlSource"
use="optional"/>
    <xs:attribute name="DatasheetCaption" type="ST_AccDatasheetCaption"
wblid:cname="DatasheetCaption" use="optional"/>
    <xs:attribute name="IsHyperlink" type="xs:boolean" wblid:cname="IsHyperlink"
use="optional"/>
    <xs:attribute name="FormatDataAs" type="ST_AccFormat" wblid:cname="FormatDataAs"
use="optional"/>
    <xs:attribute name="DisplayAsHyperlink" type="ST_AccDisplayAsHyperlink"
wblid:cname="DisplayAsHyperlink" use="optional"/>
    <xs:attribute name="CurrencySymbol" type="xs:string" wblid:cname="CurrencySymbol"
use="optional"/>
    <xs:attribute name="VerticalScrollBarVisibility" type="xaml:ST_ScrollBarVisibility"
wblid:cname="VerticalScrollBarVisibility" use="optional"/>
    <xs:attribute name="FuriganaControlName" type="xs:string"
wblid:cname="FuriganaControlName" use="optional"/>
    <xs:attribute name="Locked" type="xs:boolean" wblid:cname="Locked" use="optional"/>
    <xs:attribute name="TabIndex" type="xs:unsignedInt" wblid:cname="TabIndex"
use="optional"/>
    <xs:attribute name="ToolTip" type="xs:string" wblid:cname="ToolTip" use="optional"/>
    <xs:attribute name="IsEnabled" type="xs:boolean" wblid:cname="IsEnabled" use="optional"/>
    <xs:attribute name="MinWidth" type="xs:unsignedInt" wblid:cname="MinWidth"
use="optional"/>
    <xs:attribute name="MinHeight" type="xs:unsignedInt" wblid:cname="MinHeight"
use="optional"/>
    <xs:attribute name="StatusBarText" type="xs:string" wblid:cname="StatusBarText"
use="optional"/>
    <xs:attribute name="AccessKey" type="xs:string" wblid:cname="AccessKey" use="optional"/>

```

```

    <xs:attributeGroup ref="ControlAttributes"/>
  </xs:attributeGroup>
  <xs:attributeGroup name="DSTextBoxAttributes">
    <xs:attribute ref="x:Name" use="required"/>
    <xs:attribute name="TextFormat" type="xs:string" wblid:cname="TextFormat" use="optional"/>
    <xs:attribute name="AggregateType" type="ST_AccAggregateTypeAll"
wblid:cname="AggregateType" use="optional"/>
    <xs:attribute name="DecimalPlaces" type="ST_AccDecimalPlaces" wblid:cname="DecimalPlaces"
use="optional"/>
    <xs:attribute name="DefaultValue" type="xs:string" wblid:cname="DefaultValue"
use="optional"/>
    <xs:attribute name="AcceptsReturn" type="ST_AccAcceptsReturn" wblid:cname="AcceptsReturn"
use="optional"/>
    <xs:attribute name="ControlSource" type="xs:string" wblid:cname="ControlSource"
use="optional"/>
    <xs:attribute name="DatasheetCaption" type="ST_AccDatasheetCaption"
wblid:cname="DatasheetCaption" use="optional"/>
    <xs:attribute name="IsHyperlink" type="xs:boolean" wblid:cname="IsHyperlink"
use="optional"/>
    <xs:attribute name="FormatDataAs" type="ST_AccFormat" wblid:cname="FormatDataAs"
use="optional"/>
    <xs:attribute name="DisplayAsHyperlink" type="ST_AccDisplayAsHyperlink"
wblid:cname="DisplayAsHyperlink" use="optional"/>
    <xs:attribute name="CurrencySymbol" type="xs:string" wblid:cname="CurrencySymbol"
use="optional"/>
    <xs:attribute name="VerticalScrollBarVisibility" type="xaml:ST_ScrollBarVisibility"
wblid:cname="VerticalScrollBarVisibility" use="optional"/>
    <xs:attribute name="FuriganaControlName" type="xs:string"
wblid:cname="FuriganaControlName" use="optional"/>
    <xs:attribute name="Locked" type="xs:boolean" wblid:cname="Locked" use="optional"/>
    <xs:attribute name="TabIndex" type="xs:unsignedInt" wblid:cname="TabIndex"
use="optional"/>
    <xs:attribute name="ToolTip" type="xs:string" wblid:cname="ToolTip" use="optional"/>
    <xs:attribute name="Width" type="xs:unsignedInt" wblid:cname="Width" use="optional"/>
    <xs:attribute name="IsEnabled" type="xs:boolean" wblid:cname="IsEnabled" use="optional"/>
    <xs:attribute name="StatusBarText" type="xs:string" wblid:cname="StatusBarText"
use="optional"/>
    <xs:attributeGroup ref="ControlAttributes"/>
  </xs:attributeGroup>
  <xs:attributeGroup name="WebBrowserAttributes">
    <xs:attribute name="ControlSource" type="xs:string" wblid:cname="ControlSource"
use="optional"/>
    <xs:attribute name="VerticalScrollBarVisibility" type="xaml:ST_ScrollBarVisibility"
wblid:cname="VerticalScrollBarVisibility" use="optional"/>
    <xs:attribute name="HorizontalScrollBarVisibility" type="xaml:ST_ScrollBarVisibility"
wblid:cname="HorizontalScrollBarVisibility" use="optional"/>
    <xs:attribute name="HyperlinkComponents" type="xs:string"
wblid:cname="HyperlinkComponents" use="optional"/>
    <xs:attribute name="TabIndex" type="xs:unsignedInt" wblid:cname="TabIndex"
use="optional"/>
    <xs:attribute name="ToolTip" type="xs:string" wblid:cname="ToolTip" use="optional"/>
    <xs:attribute name="MinWidth" type="xs:unsignedInt" wblid:cname="MinWidth"
use="optional"/>
    <xs:attribute name="MinHeight" type="xs:unsignedInt" wblid:cname="MinHeight"
use="optional"/>
    <xs:attribute name="StatusBarText" type="xs:string" wblid:cname="StatusBarText"
use="optional"/>
    <xs:attribute name="OleData" type="xs:string" wblid:cname="OleData" use="optional"/>
    <xs:attributeGroup ref="ControlAttributes"/>
  </xs:attributeGroup>
  <xs:attributeGroup name="ButtonAttributes">

```

```

    <xs:attribute name="PictureCaptionArrangement" type="ST_AccPictureCaptionArrangement"
wblld:cname="PictureCaptionArrangement" use="optional"/>
    <xs:attribute name="Caption" type="ST_AccString2048" use="optional"
wblld:cname="Caption"/>
    <xs:attribute name="HyperlinkAddress" type="xs:string" wblld:cname="HyperlinkAddress"
use="optional"/>
    <xs:attribute name="HyperlinkComponents" type="xs:string"
wblld:cname="HyperlinkComponents" use="optional"/>
    <xs:attribute name="Picture" type="xs:string" wblld:cname="Source" use="optional"/>
    <xs:attribute name="Cursor" type="xaml:ST_Cursor" wblld:cname="Cursor" use="optional"/>
    <xs:attribute name="TabIndex" type="xs:unsignedInt" wblld:cname="TabIndex"
use="optional"/>
    <xs:attribute name="ToolTip" type="xs:string" wblld:cname="ToolTip" use="optional"/>
    <xs:attribute name="StyleSelected" type="xaml:ST_ReferenceType"
wblld:cname="StyleSelected" use="optional"/>
    <xs:attribute name="StyleHover" type="xaml:ST_ReferenceType" wblld:cname="StyleHover"
use="optional"/>
    <xs:attribute name="IsEnabled" type="xs:boolean" wblld:cname="IsEnabled" use="optional"/>
    <xs:attribute name="MinWidth" type="xs:unsignedInt" wblld:cname="MinWidth"
use="optional"/>
    <xs:attribute name="MinHeight" type="xs:unsignedInt" wblld:cname="MinHeight"
use="optional"/>
    <xs:attribute name="StatusBarText" type="xs:string" wblld:cname="StatusBarText"
use="optional"/>
    <xs:attribute name="AccessKey" type="xs:string" wblld:cname="AccessKey" use="optional"/>
    <xs:attributeGroup ref="ControlAttributes"/>
  </xs:attributeGroup>
  <xs:attributeGroup name="ImageAttributes">
    <xs:attribute name="Picture" type="xs:string" wblld:cname="Source" use="optional"/>
    <xs:attribute name="PictureAlignment" type="ST_AccPictureAlignment"
wblld:cname="PictureAlignment" use="optional"/>
    <xs:attribute name="AggregateType" type="ST_AccAggregateType" wblld:cname="AggregateType"
use="optional"/>
    <xs:attribute name="PictureTiling" type="ST_AccPictureTiling" wblld:cname="PictureTiling"
use="optional"/>
    <xs:attribute name="SizeMode" type="ST_AccPictureSizeMode" wblld:cname="SizeMode"
use="optional"/>
    <xs:attribute name="HyperlinkAddress" type="xs:string" wblld:cname="HyperlinkAddress"
use="optional"/>
    <xs:attribute name="HyperlinkComponents" type="xs:string"
wblld:cname="HyperlinkComponents" use="optional"/>
    <xs:attribute name="ToolTip" type="xs:string" wblld:cname="ToolTip" use="optional"/>
    <xs:attribute name="MinWidth" type="xs:unsignedInt" wblld:cname="MinWidth"
use="optional"/>
    <xs:attribute name="MinHeight" type="xs:unsignedInt" wblld:cname="MinHeight"
use="optional"/>
    <xs:attribute name="TabIndex" type="xs:unsignedInt" wblld:cname="TabIndex"
use="optional"/>
    <xs:attributeGroup ref="ControlAttributes"/>
  </xs:attributeGroup>
  <xs:attributeGroup name="SubFormAttributes">
    <xs:attribute name="LinkChildFields" type="ST_AccString255" wblld:cname="LinkChildFields"
use="optional"/>
    <xs:attribute name="LinkMasterFields" type="ST_AccString255"
wblld:cname="LinkMasterFields" use="optional"/>
    <xs:attribute name="SourceObject" type="ST_AccString255" wblld:cname="SourceObject"
use="optional"/>
    <xs:attribute name="ShowPageHeaderAndPageFooter" type="xs:boolean"
wblld:cname="ShowPageHeaderAndPageFooter" use="optional"/>
    <xs:attribute name="Locked" type="xs:boolean" wblld:cname="Locked" use="optional"/>

```

```

    <xs:attribute name="TabIndex" type="xs:unsignedInt" wblld:cname="TabIndex"
use="optional"/>
    <xs:attribute name="IsEnabled" type="xs:boolean" wblld:cname="IsEnabled" use="optional"/>
    <xs:attribute name="MinWidth" type="xs:unsignedInt" wblld:cname="MinWidth"
use="optional"/>
    <xs:attribute name="MinHeight" type="xs:unsignedInt" wblld:cname="MinHeight"
use="optional"/>
    <xs:attribute name="StatusBarText" type="xs:string" wblld:cname="StatusBarText"
use="optional"/>
    <xs:attribute name="AccessKey" type="xs:string" wblld:cname="AccessKey" use="optional"/>
    <xs:attribute name="WebToolbar" type="ST_WebToolbar" wblld:cname="WebToolbar"
use="optional"/>
    <xs:attributeGroup ref="ControlAttributes"/>
  </xs:attributeGroup>
  <xs:attributeGroup name="LabelAttributes">
    <xs:attribute name="Caption" type="ST_AccString2048" use="optional"
wblld:cname="Caption"/>
    <xs:attribute name="HyperlinkAddress" type="xs:string" wblld:cname="HyperlinkAddress"
use="optional"/>
    <xs:attribute name="HyperlinkComponents" type="xs:string"
wblld:cname="HyperlinkComponents" use="optional"/>
    <xs:attribute name="Association" type="xs:string" wblld:cname="Association"
use="optional"/>
    <xs:attribute name="ToolTip" type="xs:string" wblld:cname="ToolTip" use="optional"/>
    <xs:attribute name="MinWidth" type="xs:unsignedInt" wblld:cname="MinWidth"
use="optional"/>
    <xs:attribute name="MinHeight" type="xs:unsignedInt" wblld:cname="MinHeight"
use="optional"/>
    <xs:attributeGroup ref="ControlAttributes"/>
  </xs:attributeGroup>
  <xs:attributeGroup name="DSLabelAttributes">
    <xs:attribute ref="x:Name" use="required"/>
    <xs:attribute name="Caption" type="ST_AccString2048" use="optional"
wblld:cname="Caption"/>
    <xs:attribute name="HyperlinkAddress" type="xs:string" wblld:cname="HyperlinkAddress"
use="optional"/>
    <xs:attribute name="HyperlinkComponents" type="xs:string"
wblld:cname="HyperlinkComponents" use="optional"/>
    <xs:attribute name="Association" type="xs:string" wblld:cname="Association"
use="optional"/>
    <xs:attribute name="ToolTip" type="xs:string" wblld:cname="ToolTip" use="optional"/>
    <xs:attributeGroup ref="ControlAttributes"/>
  </xs:attributeGroup>
  <xs:attributeGroup name="AttachmentAttributes">
    <xs:attribute name="DefaultPicture" type="xs:string" wblld:cname="DefaultPicture"
use="optional"/>
    <xs:attribute name="DisplayAs" type="xs:string" wblld:cname="DisplayAs" use="optional"/>
    <xs:attribute name="ControlSource" type="xs:string" wblld:cname="ControlSource"
use="optional"/>
    <xs:attribute name="PictureAlignment" type="ST_AccPictureAlignment"
wblld:cname="PictureAlignment" use="optional"/>
    <xs:attribute name="PictureSizeMode" type="ST_AccPictureSizeMode"
wblld:cname="PictureSizeMode" use="optional"/>
    <xs:attribute name="PictureTiling" type="ST_AccPictureTiling" wblld:cname="PictureTiling"
use="optional"/>
    <xs:attribute name="DatasheetCaption" type="ST_AccDatasheetCaption"
wblld:cname="DatasheetCaption" use="optional"/>
    <xs:attribute name="Locked" type="xs:boolean" wblld:cname="Locked" use="optional"/>
    <xs:attribute name="TabIndex" type="xs:unsignedInt" wblld:cname="TabIndex"
use="optional"/>
    <xs:attribute name="ToolTip" type="xs:string" wblld:cname="ToolTip" use="optional"/>

```

```

        <xs:attribute name="IsEnabled" type="xs:boolean" wblid:cname="IsEnabled" use="optional"/>
        <xs:attribute name="MinWidth" type="xs:unsignedInt" wblid:cname="MinWidth"
use="optional"/>
        <xs:attribute name="MinHeight" type="xs:unsignedInt" wblid:cname="MinHeight"
use="optional"/>
        <xs:attribute name="StatusBarText" type="xs:string" wblid:cname="StatusBarText"
use="optional"/>
        <xs:attribute name="AccessKey" type="xs:string" wblid:cname="AccessKey" use="optional"/>
        <xs:attributeGroup ref="ControlAttributes"/>
    </xs:attributeGroup>
    <xs:attributeGroup name="DSAttachmentAttributes">
        <xs:attribute ref="x:Name" use="required"/>
        <xs:attribute name="DefaultPicture" type="xs:string" wblid:cname="DefaultPicture"
use="optional"/>
        <xs:attribute name="DisplayAs" type="xs:string" wblid:cname="DisplayAs" use="optional"/>
        <xs:attribute name="AggregateType" type="ST_AccAggregateType" wblid:cname="AggregateType"
use="optional"/>
        <xs:attribute name="ControlSource" type="xs:string" wblid:cname="ControlSource"
use="optional"/>
        <xs:attribute name="PictureAlignment" type="ST_AccPictureAlignment"
wblid:cname="PictureAlignment" use="optional"/>
        <xs:attribute name="PictureSizeMode" type="ST_AccPictureSizeMode"
wblid:cname="PictureSizeMode" use="optional"/>
        <xs:attribute name="PictureTiling" type="ST_AccPictureTiling" wblid:cname="PictureTiling"
use="optional"/>
        <xs:attribute name="DatasheetCaption" type="ST_AccDatasheetCaption"
wblid:cname="DatasheetCaption" use="optional"/>
        <xs:attribute name="Locked" type="xs:boolean" wblid:cname="Locked" use="optional"/>
        <xs:attribute name="TabIndex" type="xs:unsignedInt" wblid:cname="TabIndex"
use="optional"/>
        <xs:attribute name="ToolTip" type="xs:string" wblid:cname="ToolTip" use="optional"/>
        <xs:attribute name="IsEnabled" type="xs:boolean" wblid:cname="IsEnabled" use="optional"/>
        <xs:attribute name="Width" type="xs:unsignedInt" wblid:cname="Width" use="optional"/>
        <xs:attribute name="StatusBarText" type="xs:string" wblid:cname="StatusBarText"
use="optional"/>
        <xs:attributeGroup ref="ControlAttributes"/>
    </xs:attributeGroup>
    <xs:attributeGroup name="ListBoxAttributes">
        <xs:attribute name="AllowValueListEdits" type="xs:boolean"
wblid:cname="AllowValueListEdits" use="optional"/>
        <xs:attribute name="DefaultValue" type="xs:string" wblid:cname="DefaultValue"
use="optional"/>
        <xs:attribute name="ControlSource" type="xs:string" wblid:cname="ControlSource"
use="optional"/>
        <xs:attribute name="InheritValueList" type="xs:boolean" wblid:cname="InheritValueList"
use="optional"/>
        <xs:attribute name="DatasheetCaption" type="ST_AccDatasheetCaption"
wblid:cname="DatasheetCaption" use="optional"/>
        <xs:attribute name="ListItemsEditForm" type="ST_AccString255"
wblid:cname="ListItemsEditForm" use="optional"/>
        <xs:attribute name="RowSourceType" type="ST_AccRowSourceType"
wblid:cname="RowSourceType"/>
        <xs:attribute name="ColumnCount" type="xs:unsignedInt" wblid:cname="ColumnCount"
use="optional"/>
        <xs:attribute name="ShowColumnHeader" type="xs:boolean" wblid:cname="ColumnHeads"
use="optional"/>
        <xs:attribute name="ColumnWidths" type="xs:string" wblid:cname="ColumnWidths"
use="optional"/>
        <xs:attribute name="Locked" type="xs:boolean" wblid:cname="Locked" use="optional"/>
        <xs:attribute name="TabIndex" type="xs:unsignedInt" wblid:cname="TabIndex"
use="optional"/>

```



```

    <xs:attribute name="ToolTip" type="xs:string" wblid:cname="ToolTip" use="optional"/>
    <xs:attribute name="IsEnabled" type="xs:boolean" wblid:cname="IsEnabled" use="optional"/>
    <xs:attribute name="MinWidth" type="xs:unsignedInt" wblid:cname="MinWidth"
use="optional"/>
    <xs:attribute name="MinHeight" type="xs:unsignedInt" wblid:cname="MinHeight"
use="optional"/>
    <xs:attribute name="StatusBarText" type="xs:string" wblid:cname="StatusBarText"
use="optional"/>
    <xs:attribute name="AccessKey" type="xs:string" wblid:cname="AccessKey" use="optional"/>
    <xs:attributeGroup ref="ControlAttributes"/>
</xs:attributeGroup>
<xs:attributeGroup name="ComboBoxAttributes">
    <xs:attribute name="AllowValueListEdits" type="xs:boolean"
wblid:cname="AllowValueListEdits" use="optional"/>
    <xs:attribute name="DecimalPlaces" type="ST_AccDecimalPlaces" wblid:cname="DecimalPlaces"
use="optional"/>
    <xs:attribute name="DefaultValue" type="xs:string" wblid:cname="DefaultValue"
use="optional"/>
    <xs:attribute name="ControlSource" type="xs:string" wblid:cname="ControlSource"
use="optional"/>
    <xs:attribute name="InheritValueList" type="xs:boolean" wblid:cname="InheritValueList"
use="optional"/>
    <xs:attribute name="DatasheetCaption" type="ST_AccDatasheetCaption"
wblid:cname="DatasheetCaption" use="optional"/>
    <xs:attribute name="ListWidth" type="xs:unsignedInt" wblid:cname="ListWidth"
use="optional"/>
    <xs:attribute name="SeparatorCharacters" type="xs:string"
wblid:cname="SeparatorCharacters" use="optional"/>
    <xs:attribute name="ListItemsEditForm" type="ST_AccString255"
wblid:cname="ListItemsEditForm" use="optional"/>
    <xs:attribute name="RowSourceType" type="ST_AccRowSourceType" wblid:cname="RowSourceType"
use="optional"/>
    <xs:attribute name="ColumnCount" type="xs:unsignedInt" wblid:cname="ColumnCount"
use="optional"/>
    <xs:attribute name="ShowColumnHeader" type="xs:boolean" wblid:cname="ColumnHeads"
use="optional"/>
    <xs:attribute name="FormatDataAs" type="ST_AccFormat" wblid:cname="FormatDataAs"
use="optional"/>
    <xs:attribute name="CurrencySymbol" type="xs:string" wblid:cname="CurrencySymbol"
use="optional"/>
    <xs:attribute name="ColumnWidths" type="xs:string" wblid:cname="ColumnWidths"
use="optional"/>
    <xs:attribute name="LimitToList" type="xs:boolean" wblid:cname="LimitToList"
use="optional"/>
    <xs:attribute name="Locked" type="xs:boolean" wblid:cname="Locked" use="optional"/>
    <xs:attribute name="TabIndex" type="xs:unsignedInt" wblid:cname="TabIndex"
use="optional"/>
    <xs:attribute name="ToolTip" type="xs:string" wblid:cname="ToolTip" use="optional"/>
    <xs:attribute name="IsEnabled" type="xs:boolean" wblid:cname="IsEnabled" use="optional"/>
    <xs:attribute name="MinWidth" type="xs:unsignedInt" wblid:cname="MinWidth"
use="optional"/>
    <xs:attribute name="MinHeight" type="xs:unsignedInt" wblid:cname="MinHeight"
use="optional"/>
    <xs:attribute name="StatusBarText" type="xs:string" wblid:cname="StatusBarText"
use="optional"/>
    <xs:attribute name="AccessKey" type="xs:string" wblid:cname="AccessKey" use="optional"/>
    <xs:attributeGroup ref="ControlAttributes"/>
</xs:attributeGroup>
<xs:attributeGroup name="DSComboBoxAttributes">
    <xs:attribute ref="x:Name" use="required"/>

```

```

    <xs:attribute name="AggregateType" type="ST_AccAggregateTypeAll"
wblld:cname="AggregateType" use="optional"/>
    <xs:attribute name="AllowValueListEdits" type="xs:boolean"
wblld:cname="AllowValueListEdits" use="optional"/>
    <xs:attribute name="DecimalPlaces" type="ST_AccDecimalPlaces" wblld:cname="DecimalPlaces"
use="optional"/>
    <xs:attribute name="DefaultValue" type="xs:string" wblld:cname="DefaultValue"
use="optional"/>
    <xs:attribute name="ControlSource" type="xs:string" wblld:cname="ControlSource"
use="optional"/>
    <xs:attribute name="InheritValueList" type="xs:boolean" wblld:cname="InheritValueList"
use="optional"/>
    <xs:attribute name="DatasheetCaption" type="ST_AccDatasheetCaption"
wblld:cname="DatasheetCaption" use="optional"/>
    <xs:attribute name="ListWidth" type="xs:unsignedInt" wblld:cname="ListWidth"
use="optional"/>
    <xs:attribute name="SeparatorCharacters" type="xs:string"
wblld:cname="SeparatorCharacters" use="optional"/>
    <xs:attribute name="ListItemsEditForm" type="ST_AccString255"
wblld:cname="ListItemsEditForm" use="optional"/>
    <xs:attribute name="RowSourceType" type="ST_AccRowSourceType" wblld:cname="RowSourceType"
use="optional"/>
    <xs:attribute name="ColumnCount" type="xs:unsignedInt" wblld:cname="ColumnCount"
use="optional"/>
    <xs:attribute name="ShowColumnHeader" type="xs:boolean" wblld:cname="ColumnHeads"
use="optional"/>
    <xs:attribute name="FormatDataAs" type="ST_AccFormat" wblld:cname="FormatDataAs"
use="optional"/>
    <xs:attribute name="CurrencySymbol" type="xs:string" wblld:cname="CurrencySymbol"
use="optional"/>
    <xs:attribute name="ColumnWidths" type="xs:string" wblld:cname="ColumnWidths"
use="optional"/>
    <xs:attribute name="LimitToList" type="xs:boolean" wblld:cname="LimitToList"
use="optional"/>
    <xs:attribute name="Locked" type="xs:boolean" wblld:cname="Locked" use="optional"/>
    <xs:attribute name="TabIndex" type="xs:unsignedInt" wblld:cname="TabIndex"
use="optional"/>
    <xs:attribute name="ToolTip" type="xs:string" wblld:cname="ToolTip" use="optional"/>
    <xs:attribute name="Width" type="xs:unsignedInt" wblld:cname="Width" use="optional"/>
    <xs:attribute name="IsEnabled" type="xs:boolean" wblld:cname="IsEnabled" use="optional"/>
    <xs:attribute name="StatusBarText" type="xs:string" wblld:cname="StatusBarText"
use="optional"/>
    <xs:attributeGroup ref="ControlAttributes"/>
  </xs:attributeGroup>
  <xs:attributeGroup name="CheckBoxAttributes">
    <xs:attribute name="DefaultValue" type="xs:string" wblld:cname="DefaultValue"
use="optional"/>
    <xs:attribute name="ControlSource" type="xs:string" wblld:cname="ControlSource"
use="optional"/>
    <xs:attribute name="DatasheetCaption" type="ST_AccDatasheetCaption"
wblld:cname="DatasheetCaption" use="optional"/>
    <xs:attribute name="Locked" type="xs:boolean" wblld:cname="Locked" use="optional"/>
    <xs:attribute name="TabIndex" type="xs:unsignedInt" wblld:cname="TabIndex"
use="optional"/>
    <xs:attribute name="ToolTip" type="xs:string" wblld:cname="ToolTip" use="optional"/>
    <xs:attribute name="IsEnabled" type="xs:boolean" wblld:cname="IsEnabled" use="optional"/>
    <xs:attribute name="MinWidth" type="xs:unsignedInt" wblld:cname="MinWidth"
use="optional"/>
    <xs:attribute name="MinHeight" type="xs:unsignedInt" wblld:cname="MinHeight"
use="optional"/>

```

```

    <xs:attribute name="StatusBarText" type="xs:string" wblid:cname="StatusBarText"
use="optional"/>
    <xs:attribute name="AccessKey" type="xs:string" wblid:cname="AccessKey" use="optional"/>
    <xs:attributeGroup ref="ControlAttributes"/>
</xs:attributeGroup>
<xs:attributeGroup name="DSCheckBoxAttributes">
    <xs:attribute ref="x:Name" use="required"/>
    <xs:attribute name="AggregateType" type="ST_AccAggregateType" wblid:cname="AggregateType"
use="optional"/>
    <xs:attribute name="DefaultValue" type="xs:string" wblid:cname="DefaultValue"
use="optional"/>
    <xs:attribute name="ControlSource" type="xs:string" wblid:cname="ControlSource"
use="optional"/>
    <xs:attribute name="DatasheetCaption" type="ST_AccDatasheetCaption"
wblid:cname="DatasheetCaption" use="optional"/>
    <xs:attribute name="Locked" type="xs:boolean" wblid:cname="Locked" use="optional"/>
    <xs:attribute name="TabIndex" type="xs:unsignedInt" wblid:cname="TabIndex"
use="optional"/>
    <xs:attribute name="ToolTip" type="xs:string" wblid:cname="ToolTip" use="optional"/>
    <xs:attribute name="Width" type="xs:unsignedInt" wblid:cname="Width" use="optional"/>
    <xs:attribute name="IsEnabled" type="xs:boolean" wblid:cname="IsEnabled" use="optional"/>
    <xs:attribute name="StatusBarText" type="xs:string" wblid:cname="StatusBarText"
use="optional"/>
    <xs:attributeGroup ref="ControlAttributes"/>
</xs:attributeGroup>
<xs:attributeGroup name="ControlAttributes">
    <xs:attribute name="Style" type="xaml:ST_ReferenceType" wblid:cname="Style"
use="optional"/>
    <xs:attribute name="Tag" type="xs:string" wblid:cname="Tag" use="optional"/>
    <xs:attribute name="Visibility" type="xaml:ST_Visibility" wblid:cname="Visibility"
use="optional"/>
</xs:attributeGroup>
<xs:simpleType name="ST_AccPictureAlignment">
    <xs:restriction base="xs:string">
        <xs:enumeration value="top left" wblid:cname="PictureAlignmentTopLeft"/>
        <xs:enumeration value="top right" wblid:cname="PictureAlignmentTopRight"/>
        <xs:enumeration value="center" wblid:cname="PictureAlignmentCenterCenter"/>
        <xs:enumeration value="bottom left" wblid:cname="PictureAlignmentBottomLeft"/>
        <xs:enumeration value="bottom right" wblid:cname="PictureAlignmentBottomRight"/>
    </xs:restriction>
</xs:simpleType>
<xs:simpleType name="ST_AccPictureSizeMode">
    <xs:restriction base="xs:string">
        <xs:enumeration value="Clip" wblid:cname="PictureSizeModeClip"/>
        <xs:enumeration value="Stretch" wblid:cname="PictureSizeModeStretch"/>
        <xs:enumeration value="Zoom" wblid:cname="PictureSizeModeZoom"/>
    </xs:restriction>
</xs:simpleType>
<xs:simpleType name="ST_AccAggregateType">
    <xs:restriction base="xs:string">
        <xs:enumeration value="None" wblid:cname="None"/>
        <xs:enumeration value="Count" wblid:cname="AggregateTypeCount"/>
    </xs:restriction>
</xs:simpleType>
<xs:simpleType name="ST_AccAggregateTypeAll">
    <xs:restriction base="xs:string">
        <xs:enumeration value="None" wblid:cname="None"/>
        <xs:enumeration value="Sum" wblid:cname="AggregateTypeSum"/>
        <xs:enumeration value="Average" wblid:cname="AggregateTypeAverage"/>
        <xs:enumeration value="Count" wblid:cname="AggregateTypeCount"/>
    </xs:restriction>
</xs:simpleType>

```

```

    <xs:enumeration value="Max" wblid:cname="AggregateTypeMax"/>
    <xs:enumeration value="Min" wblid:cname="AggregateTypeMin"/>
    <xs:enumeration value="StDev" wblid:cname="AggregateTypeStDev"/>
    <xs:enumeration value="Var" wblid:cname="AggregateTypeVar"/>
  </xs:restriction>
</xs:simpleType>
<xs:simpleType name="ST_AccPictureTiling">
  <xs:restriction base="xs:string">
    <xs:enumeration value="repeat" wblid:cname="PictureTilintRepeat"/>
    <xs:enumeration value="no-repeat" wblid:cname="PictureTilintNoRepeat"/>
  </xs:restriction>
</xs:simpleType>
<xs:simpleType name="ST_AccRowSourceType">
  <xs:restriction base="xs:string">
    <xs:enumeration value="Value List" wblid:cname="RowSourceTypeValueList"/>
    <xs:enumeration value="Table/Query" wblid:cname="RowSourceTypeTableOrQuery"/>
  </xs:restriction>
</xs:simpleType>
<xs:simpleType name="ST_AccDecimalPlaces">
  <xs:restriction base="xs:short">
    <xs:minInclusive value="-1"/>
    <xs:maxInclusive value="15"/>
  </xs:restriction>
</xs:simpleType>
<xs:simpleType name="ST_AccString2048">
  <xs:restriction base="xs:string">
    <xs:maxLength value="2048"/>
  </xs:restriction>
</xs:simpleType>
<xs:simpleType name="ST_AccDatasheetCaption">
  <xs:restriction base="xs:string">
    <xs:maxLength value="2011"/>
  </xs:restriction>
</xs:simpleType>
<xs:simpleType name="ST_AccString255">
  <xs:restriction base="xs:string">
    <xs:maxLength value="255"/>
  </xs:restriction>
</xs:simpleType>
<xs:simpleType name="ST_AccFormat">
  <xs:restriction base="xs:string">
    <xs:maxLength value="130"/>
  </xs:restriction>
</xs:simpleType>
<xs:simpleType name="ST_AccAcceptsReturn">
  <xs:restriction base="xs:string">
    <xs:enumeration value="Default" wblid:cname="AcceptReturnDefault"/>
    <xs:enumeration value="New Line in Field" wblid:cname="AcceptReturnNewType"/>
  </xs:restriction>
</xs:simpleType>
<xs:simpleType name="ST_AccPictureCaptionArrangement">
  <xs:restriction base="xs:string">
    <xs:enumeration value="General" wblid:cname="PictureCaptionArrangementGeneral"/>
    <xs:enumeration value="Top" wblid:cname="Top"/>
    <xs:enumeration value="Bottom" wblid:cname="Bottom"/>
    <xs:enumeration value="Left" wblid:cname="PictureCaptionArrangementLeft"/>
    <xs:enumeration value="Right" wblid:cname="PictureCaptionArrangementRight"/>
  </xs:restriction>
</xs:simpleType>

```

```

<xs:simpleType name="ST_AccScrollBars">
  <xs:restriction base="xs:string">
    <xs:enumeration value="Neither" wblid:cname="Neither"/>
    <xs:enumeration value="Horizontal Only" wblid:cname="ScrollBarsHorizontal"/>
    <xs:enumeration value="Vertical Only" wblid:cname="ScrollBarsVertical"/>
    <xs:enumeration value="Both" wblid:cname="Both"/>
  </xs:restriction>
</xs:simpleType>
<xs:simpleType name="ST_AccDisplayAsHyperlink">
  <xs:restriction base="xs:string">
    <xs:enumeration value="If Hyperlink" wblid:cname="IfHyperlink"/>
    <xs:enumeration value="Always" wblid:cname="Always"/>
    <xs:enumeration value="Screen Only" wblid:cname="ScreenOnly"/>
  </xs:restriction>
</xs:simpleType>
<xs:simpleType name="ST_AccBorderStyle">
  <xs:restriction base="xs:string">
    <xs:enumeration value="None" wblid:cname="None"/>
    <xs:enumeration value="Vertical" wblid:cname="Vertical"/>
    <xs:enumeration value="Horizontal" wblid:cname="Horizontal"/>
    <xs:enumeration value="Both" wblid:cname="Both"/>
  </xs:restriction>
</xs:simpleType>
<xs:simpleType name="ST_WebToolbar">
  <xs:restriction base="xs:string">
    <xs:enumeration value="None" wblid:cname="None"/>
    <xs:enumeration value="Top" wblid:cname="Top"/>
    <xs:enumeration value="Bottom" wblid:cname="Bottom"/>
  </xs:restriction>
</xs:simpleType>
<xs:import namespace="http://schemas.microsoft.com/client/2009/11"
schemaLocation="wpfsubset.xsd"/>
<xs:import
namespace="http://schemas.microsoft.com/office/accessservices/2009/11/application"
schemaLocation="axl.xsd"/>
<xs:import namespace="http://schemas.microsoft.com/winfx/2009/04/xaml"
schemaLocation="xaml2006.xsd"/>
</xs:schema>

```

## 5.4 <http://schemas.microsoft.com/office/accessservices/2009/11/application>

```

<xsd:schema xmlns="http://schemas.microsoft.com/office/accessservices/2009/11/application"
xmlns:xsd="http://www.w3.org/2001/XMLSchema"
targetNamespace="http://schemas.microsoft.com/office/accessservices/2009/11/application"
xmlns:a="http://schemas.microsoft.com/office/accessservices/2009/11/forms"
xmlns:wblid="http://schemas.microsoft.com/office/word/2004/5/build" wblid:hash="true"
wblid:prefix="axl" wblid:cname="AXL" elementFormDefault="qualified"
xmlns:odoc="http://schemas.microsoft.com/internal/obd">
  <xsd:import namespace="http://schemas.microsoft.com/office/accessservices/2009/11/forms"
schemaLocation="formxaml.xsd"/>
  <xsd:simpleType name="ST_ObjectName">
    <xsd:restriction base="xsd:string">
      <xsd:minLength value="1"/>
      <xsd:maxLength value="72"/>
    </xsd:restriction>
  </xsd:simpleType>
  <xsd:simpleType name="ST_UserInterfaceObjectEvent">
    <xsd:restriction base="xsd:string">

```

```

    <xsd:minLength value="1"/>
    <xsd:maxLength value="64"/>
    <xsd:enumeration value="OnClick" wblid:cname="OnClick"/>
    <xsd:enumeration value="OnDbClick" wblid:cname="OnDbClick"/>
    <xsd:enumeration value="AfterUpdate" wblid:cname="AfterUpdate"/>
    <xsd:enumeration value="OnChange" wblid:cname="OnChange"/>
    <xsd:enumeration value="OnCurrent" wblid:cname="OnCurrent"/>
    <xsd:enumeration value="OnLoad" wblid:cname="OnLoad"/>
  </xsd:restriction>
</xsd:simpleType>
<xsd:simpleType name="ST_DataObjectEvent">
  <xsd:restriction base="xsd:string">
    <xsd:minLength value="1"/>
    <xsd:maxLength value="64"/>
    <xsd:enumeration value="AfterInsert" wblid:cname="AfterInsert"/>
    <xsd:enumeration value="AfterUpdate" wblid:cname="AfterUpdate"/>
    <xsd:enumeration value="AfterDelete" wblid:cname="AfterDelete"/>
    <xsd:enumeration value="BeforeChange" wblid:cname="BeforeChange"/>
    <xsd:enumeration value="BeforeDelete" wblid:cname="BeforeDelete"/>
  </xsd:restriction>
</xsd:simpleType>
<xsd:simpleType name="ST_ShortString">
  <xsd:restriction base="xsd:string">
    <xsd:maxLength value="255"/>
  </xsd:restriction>
</xsd:simpleType>
<xsd:simpleType name="ST_LongString">
  <xsd:restriction base="xsd:string">
    <xsd:maxLength value="1024"/>
  </xsd:restriction>
</xsd:simpleType>
<xsd:complexType name="CT_Expression" mixed="true"/>
<xsd:simpleType name="ST_JoinDirection">
  <xsd:restriction base="xsd:string">
    <xsd:enumeration value="Inner" wblid:cname="Inner"/>
    <xsd:enumeration value="Left Outer" wblid:cname="LeftOuter"/>
    <xsd:enumeration value="Right Outer" wblid:cname="RightOuter"/>
  </xsd:restriction>
</xsd:simpleType>
<xsd:simpleType name="ST_FieldType">
  <xsd:restriction base="xsd:string">
    <xsd:enumeration value="Text" wblid:cname="Text"/>
    <xsd:enumeration value="Number" wblid:cname="Number"/>
    <xsd:enumeration value="Yes/No" wblid:cname="YesNo"/>
    <xsd:enumeration value="Currency" wblid:cname="Currency"/>
    <xsd:enumeration value="Date/Time" wblid:cname="DateTime"/>
  </xsd:restriction>
</xsd:simpleType>
<xsd:simpleType name="ST_SortDirection">
  <xsd:restriction base="xsd:string">
    <xsd:enumeration value="Ascending" wblid:cname="Ascending"/>
    <xsd:enumeration value="Descending" wblid:cname="Descending"/>
  </xsd:restriction>
</xsd:simpleType>
<xsd:complexType name="CT_Property">
  <xsd:complexContent>
    <xsd:extension base="CT_Expression">
      <xsd:attribute name="Name" type="xsd:string" use="required" wblid:cname="Name"/>
      <xsd:attribute name="Type" type="xsd:string" use="required" wblid:cname="Type"/>
    </xsd:extension>
  </xsd:complexContent>
</xsd:complexType>

```

```

        </xsd:extension>
    </xsd:complexContent>
</xsd:complexType>
<xsd:complexType name="CT_PropertyBag">
    <xsd:sequence>
        <xsd:element name="Property" maxOccurs="unbounded" wblid:cname="Property"
type="CT_Property"/>
    </xsd:sequence>
</xsd:complexType>
<xsd:complexType name="CT_Order">
    <xsd:attribute name="Name" type="ST_LongString" use="required" wblid:cname="Name"/>
    <xsd:attribute name="Source" type="ST_ObjectName" use="required" wblid:cname="Source"/>
    <xsd:attribute name="Direction" type="ST_SortDirection" default="Ascending"
wblid:cname="Direction" use="optional"/>
</xsd:complexType>
<xsd:complexType name="CT_Ordering">
    <xsd:sequence>
        <xsd:element name="Order" maxOccurs="255" wblid:cname="Order" type="CT_Order"/>
    </xsd:sequence>
</xsd:complexType>
<xsd:complexType name="CT_AdHocOrder">
    <xsd:attribute name="Name" type="ST_LongString" use="required" wblid:cname="Name"/>
    <xsd:attribute name="Direction" type="ST_SortDirection" default="Ascending"
wblid:cname="Direction" use="optional"/>
</xsd:complexType>
<xsd:complexType name="CT_AdHocOrdering">
    <xsd:sequence>
        <xsd:element name="Order" maxOccurs="255" wblid:cname="Order" type="CT_AdHocOrder"/>
    </xsd:sequence>
</xsd:complexType>
<xsd:complexType name="CT_Reference">
    <xsd:attribute name="Source" type="ST_ObjectName" use="required" wblid:cname="Source"/>
    <xsd:attribute name="Alias" type="ST_ObjectName" wblid:cname="Alias" use="optional"/>
</xsd:complexType>
<xsd:complexType name="CT_References">
    <xsd:sequence>
        <xsd:element name="Reference" maxOccurs="unbounded" wblid:cname="Reference"
type="CT_Reference"/>
    </xsd:sequence>
</xsd:complexType>
<xsd:complexType name="CT_Result">
    <xsd:all>
        <xsd:element name="Expression" type="CT_Expression" minOccurs="0"
wblid:cname="Expression"/>
    </xsd:all>
    <xsd:attribute name="Source" type="ST_ObjectName" wblid:cname="Source" use="optional"/>
    <xsd:attribute name="Name" type="ST_LongString" wblid:cname="Name" use="optional"/>
    <xsd:attribute name="Alias" type="ST_ObjectName" wblid:cname="Alias" use="optional"/>
    <xsd:attribute name="All" type="xsd:boolean" default="false" wblid:cname="All"
use="optional"/>
</xsd:complexType>
<xsd:complexType name="CT_Results">
    <xsd:sequence>
        <xsd:element name="Property" maxOccurs="255" wblid:cname="Property" type="CT_Result"/>
    </xsd:sequence>
</xsd:complexType>
<xsd:complexType name="CT_Join">
    <xsd:attribute name="Left" type="ST_ObjectName" use="required" wblid:cname="Left"/>
    <xsd:attribute name="Right" type="ST_ObjectName" use="required" wblid:cname="Right"/>

```

```

    <xsd:attribute name="LeftProperty" type="ST_LongString" use="required"
wbld:cname="LeftProperty"/>
    <xsd:attribute name="RightProperty" type="ST_LongString" use="required"
wbld:cname="RightProperty"/>
    <xsd:attribute name="Type" type="ST_JoinDirection" default="Inner" wbld:cname="Type"
use="optional"/>
  </xsd:complexType>
  <xsd:complexType name="CT_Joins">
    <xsd:sequence>
      <xsd:element name="Join" wbld:cname="Join" minOccurs="0" maxOccurs="unbounded"
type="CT_Join"/>
    </xsd:sequence>
  </xsd:complexType>
  <xsd:complexType name="CT_Parameter">
    <xsd:attribute name="Name" type="ST_ObjectName" use="required" wbld:cname="Name"/>
    <xsd:attribute name="Type" type="ST_FieldType" use="required" wbld:cname="Type"/>
  </xsd:complexType>
  <xsd:complexType name="CT_Parameters">
    <xsd:sequence>
      <xsd:element name="Parameter" maxOccurs="unbounded" wbld:cname="Parameter"
type="CT_Parameter"/>
    </xsd:sequence>
  </xsd:complexType>
  <xsd:complexType name="CT_ParameterDefinition">
    <xsd:attribute name="Name" type="ST_ObjectName" use="required" wbld:cname="Name"/>
    <xsd:attribute name="Description" type="ST_LongString" wbld:cname="Description"
use="optional"/>
  </xsd:complexType>
  <xsd:complexType name="CT_ParameterDefinitions">
    <xsd:sequence>
      <xsd:element name="Parameter" maxOccurs="unbounded" wbld:cname="Parameter"
type="CT_ParameterDefinition"/>
    </xsd:sequence>
  </xsd:complexType>
  <xsd:complexType name="CT_ParameterValue">
    <xsd:attribute name="Name" type="ST_ObjectName" use="required" wbld:cname="Name"/>
    <xsd:attribute name="Value" type="ST_LongString" use="required" wbld:cname="Value"/>
  </xsd:complexType>
  <xsd:complexType name="CT_ParameterValues">
    <xsd:sequence>
      <xsd:element name="Parameter" maxOccurs="unbounded" wbld:cname="Parameter"
type="CT_ParameterValue"/>
    </xsd:sequence>
  </xsd:complexType>
  <xsd:complexType name="CT_Query">
    <xsd:sequence>
      <xsd:element name="Parameters" minOccurs="0" type="CT_Parameters"
wbld:cname="Parameters"/>
      <xsd:element name="References" type="CT_References" wbld:cname="References"/>
      <xsd:element name="Results" type="CT_Results" wbld:cname="Results"/>
      <xsd:element name="Joins" minOccurs="0" type="CT_Joins" wbld:cname="Joins"/>
      <xsd:element name="Restriction" type="CT_Expression" minOccurs="0"
wbld:cname="Restriction"/>
      <xsd:element name="Ordering" minOccurs="0" type="CT_Ordering" wbld:cname="Ordering"/>
    </xsd:sequence>
    <xsd:attribute name="Name" type="ST_ObjectName" wbld:cname="Name" use="optional"/>
    <xsd:attribute name="Caption" type="ST_LongString" wbld:cname="Caption" use="optional"/>
    <xsd:attribute name="MinimumClientDesignVersion" type="ST_ShortString"
wbld:cname="MinimumClientDesignVersion" use="optional"/>
  </xsd:complexType>

```



```

<xsd:complexType name="CT_Argument">
  <xsd:complexContent>
    <xsd:extension base="CT_Expression">
      <xsd:attribute name="Name" type="ST_ObjectName" use="required" wblid:cname="Name"/>
    </xsd:extension>
  </xsd:complexContent>
</xsd:complexType>
<xsd:complexType name="CT_Action">
  <xsd:sequence>
    <xsd:element name="Argument" minOccurs="0" maxOccurs="unbounded" wblid:cname="Argument"
type="CT_Argument"/>
    <xsd:element name="Parameters" minOccurs="0" type="CT_ParameterValues"
wblid:cname="Parameters"/>
  </xsd:sequence>
  <xsd:attribute name="Name" type="ST_ObjectName" use="required" wblid:cname="Name"/>
  <xsd:attribute name="Collapsed" type="xsd:boolean" wblid:cname="Collapsed"
use="optional"/>
</xsd:complexType>
<xsd:complexType name="CT_ForEachRecordData">
  <xsd:sequence>
    <xsd:choice>
      <xsd:element name="Query" type="CT_Query" wblid:cname="Query"/>
      <xsd:element name="Reference" type="ST_ObjectName" wblid:cname="Reference"/>
    </xsd:choice>
    <xsd:element name="WhereCondition" minOccurs="0" type="CT_Expression"
wblid:cname="WhereCondition"/>
    <xsd:element name="Parameters" minOccurs="0" type="CT_ParameterValues"
wblid:cname="Parameters"/>
  </xsd:sequence>
  <xsd:attribute name="Alias" type="ST_ObjectName" wblid:cname="Alias" use="optional"/>
</xsd:complexType>
<xsd:complexType name="CT_ForEachRecord">
  <xsd:sequence>
    <xsd:element name="Data" wblid:cname="Data" type="CT_ForEachRecordData"/>
    <xsd:element name="Statements" type="CT_DataMacroStatements" wblid:cname="Statements"/>
  </xsd:sequence>
  <xsd:attribute name="Collapsed" type="xsd:boolean" wblid:cname="Collapsed"
use="optional"/>
</xsd:complexType>
<xsd:complexType name="CT_LookupRecordData">
  <xsd:sequence>
    <xsd:choice>
      <xsd:element name="Query" type="CT_Query" wblid:cname="Query"/>
      <xsd:element name="Reference" type="ST_ObjectName" wblid:cname="Reference"/>
    </xsd:choice>
    <xsd:element name="WhereCondition" minOccurs="0" type="CT_Expression"
wblid:cname="WhereCondition"/>
    <xsd:element name="Parameters" minOccurs="0" type="CT_ParameterValues"
wblid:cname="Parameters"/>
  </xsd:sequence>
  <xsd:attribute name="Alias" type="ST_ObjectName" wblid:cname="Alias" use="optional"/>
</xsd:complexType>
<xsd:complexType name="CT_LookupRecord">
  <xsd:sequence>
    <xsd:element name="Data" wblid:cname="Data" type="CT_LookupRecordData"/>
    <xsd:element name="Statements" type="CT_DataMacroStatements" wblid:cname="Statements"/>
  </xsd:sequence>
  <xsd:attribute name="Collapsed" type="xsd:boolean" wblid:cname="Collapsed"
use="optional"/>
</xsd:complexType>

```

```

<xsd:complexType name="CT_CreateRecordData">
  <xsd:choice>
    <xsd:element name="Reference" type="ST_ObjectName" wblid:cname="Reference"/>
  </xsd:choice>
  <xsd:attribute name="Alias" type="ST_ObjectName" wblid:cname="Alias" use="optional"/>
</xsd:complexType>
<xsd:complexType name="CT_CreateRecord">
  <xsd:sequence>
    <xsd:element name="Data" wblid:cname="Data" type="CT_CreateRecordData"/>
    <xsd:element name="Statements" type="CT_DataMacroStatements" wblid:cname="Statements"/>
  </xsd:sequence>
  <xsd:attribute name="Collapsed" type="xsd:boolean" wblid:cname="Collapsed"
use="optional"/>
</xsd:complexType>
<xsd:complexType name="CT_EditRecordData">
  <xsd:attribute name="Alias" type="ST_ObjectName" wblid:cname="Alias" use="optional"/>
</xsd:complexType>
<xsd:complexType name="CT_EditRecord">
  <xsd:sequence>
    <xsd:element name="Data" type="CT_EditRecordData" wblid:cname="Data"/>
    <xsd:element name="Statements" type="CT_DataMacroStatements" wblid:cname="Statements"/>
  </xsd:sequence>
  <xsd:attribute name="Collapsed" type="xsd:boolean" wblid:cname="Collapsed"
use="optional"/>
</xsd:complexType>
<xsd:complexType name="CT_UserInterfaceIf">
  <xsd:sequence>
    <xsd:element name="Condition" type="CT_Expression" wblid:cname="Condition"/>
    <xsd:element name="Statements" type="CT_UserInterfaceMacroStatements"
wblid:cname="Statements"/>
  </xsd:sequence>
  <xsd:attribute name="Collapsed" type="xsd:boolean" wblid:cname="Collapsed"
use="optional"/>
</xsd:complexType>
<xsd:complexType name="CT_UserInterfaceElseIf">
  <xsd:sequence>
    <xsd:element name="Condition" type="CT_Expression" wblid:cname="Condition"/>
    <xsd:element name="Statements" type="CT_UserInterfaceMacroStatements"
wblid:cname="Statements"/>
  </xsd:sequence>
  <xsd:attribute name="Collapsed" type="xsd:boolean" wblid:cname="Collapsed"
use="optional"/>
</xsd:complexType>
<xsd:complexType name="CT_UserInterfaceElse">
  <xsd:sequence>
    <xsd:element name="Statements" type="CT_UserInterfaceMacroStatements"
wblid:cname="Statements"/>
  </xsd:sequence>
  <xsd:attribute name="Collapsed" type="xsd:boolean" wblid:cname="Collapsed"
use="optional"/>
</xsd:complexType>
<xsd:complexType name="CT_DataIf">
  <xsd:sequence>
    <xsd:element name="Condition" type="CT_Expression" wblid:cname="Condition"/>
    <xsd:element name="Statements" type="CT_DataMacroStatements" wblid:cname="Statements"/>
  </xsd:sequence>
  <xsd:attribute name="Collapsed" type="xsd:boolean" wblid:cname="Collapsed"
use="optional"/>
</xsd:complexType>
<xsd:complexType name="CT_DataElseIf">

```

```

    <xsd:sequence>
      <xsd:element name="Condition" type="CT_Expression" wblld:cname="Condition"/>
      <xsd:element name="Statements" type="CT_DataMacroStatements" wblld:cname="Statements"/>
    </xsd:sequence>
    <xsd:attribute name="Collapsed" type="xsd:boolean" wblld:cname="Collapsed"
use="optional"/>
  </xsd:complexType>
  <xsd:complexType name="CT_DataElse">
    <xsd:sequence>
      <xsd:element name="Statements" type="CT_DataMacroStatements" wblld:cname="Statements"/>
    </xsd:sequence>
    <xsd:attribute name="Collapsed" type="xsd:boolean" wblld:cname="Collapsed"
use="optional"/>
  </xsd:complexType>
  <xsd:complexType name="CT_UserInterfaceConditionalBlock">
    <xsd:sequence>
      <xsd:element name="If" wblld:cname="If" type="CT_UserInterfaceIf"/>
      <xsd:element name="ElseIf" minOccurs="0" maxOccurs="unbounded" wblld:cname="ElseIf"
type="CT_UserInterfaceElseIf"/>
      <xsd:element name="Else" minOccurs="0" wblld:cname="Else" type="CT_UserInterfaceElse"/>
    </xsd:sequence>
  </xsd:complexType>
  <xsd:complexType name="CT_DataConditionalBlock">
    <xsd:sequence>
      <xsd:element name="If" wblld:cname="If" type="CT_DataIf"/>
      <xsd:element name="ElseIf" minOccurs="0" maxOccurs="unbounded" wblld:cname="ElseIf"
type="CT_DataElseIf"/>
      <xsd:element name="Else" minOccurs="0" wblld:cname="Else" type="CT_DataElse"/>
    </xsd:sequence>
  </xsd:complexType>
  <xsd:complexType name="CT_Sub">
    <xsd:sequence>
      <xsd:element name="Statements" minOccurs="0" maxOccurs="unbounded"
type="CT_UserInterfaceMacroStatements" wblld:cname="Statements"/>
    </xsd:sequence>
    <xsd:attribute name="Name" type="ST_ObjectName" use="required" wblld:cname="Name"/>
    <xsd:attribute name="Collapsed" type="xsd:boolean" wblld:cname="Collapsed"
use="optional"/>
  </xsd:complexType>
  <xsd:complexType name="CT_UserInterfaceMacroStatements">
    <xsd:choice minOccurs="0" maxOccurs="unbounded">
      <xsd:element name="Action" type="CT_Action" wblld:cname="Action"/>
      <xsd:element name="Comment" type="ST_LongString" wblld:cname="Comment"/>
      <xsd:element name="ConditionalBlock" type="CT_UserInterfaceConditionalBlock"
wblld:cname="ConditionalBlock"/>
      <xsd:element name="StatementGroup" type="CT_UserInterfaceMacroStatementGroup"
wblld:cname="StatementGroup"/>
    </xsd:choice>
  </xsd:complexType>
  <xsd:complexType name="CT_DataMacroStatements">
    <xsd:choice minOccurs="0" maxOccurs="unbounded">
      <xsd:element name="Action" type="CT_Action" wblld:cname="Action"/>
      <xsd:element name="Comment" type="ST_LongString" wblld:cname="Comment"/>
      <xsd:element name="ForEachRecord" type="CT_ForEachRecord" wblld:cname="ForEachRecord"/>
      <xsd:element name="LookUpRecord" type="CT_LookupRecord" wblld:cname="LookupRecord"/>
      <xsd:element name="CreateRecord" type="CT_CreateRecord" wblld:cname="CreateRecord"/>
      <xsd:element name="EditRecord" type="CT_EditRecord" wblld:cname="EditRecord"/>
      <xsd:element name="ConditionalBlock" type="CT_DataConditionalBlock"
wblld:cname="ConditionalBlock"/>
    </xsd:choice>
  </xsd:complexType>

```

```

        <xsd:element name="StatementGroup" type="CT_DataMacroStatementGroup"
wblid:cname="StatementGroup"/>
    </xsd:choice>
</xsd:complexType>
<xsd:complexType name="CT_UserInterfaceMacroStatementGroup">
    <xsd:sequence>
        <xsd:element name="Statements" type="CT_UserInterfaceMacroStatements"
wblid:cname="Statements"/>
    </xsd:sequence>
    <xsd:attribute name="Description" type="ST_LongString" wblid:cname="Description"
use="optional"/>
    <xsd:attribute name="Collapsed" type="xsd:boolean" wblid:cname="Collapsed"
use="optional"/>
</xsd:complexType>
<xsd:complexType name="CT_DataMacroStatementGroup">
    <xsd:sequence>
        <xsd:element name="Statements" type="CT_DataMacroStatements" wblid:cname="Statements"/>
    </xsd:sequence>
    <xsd:attribute name="Description" type="ST_LongString" wblid:cname="Description"
use="optional"/>
    <xsd:attribute name="Collapsed" type="xsd:boolean" wblid:cname="Collapsed"
use="optional"/>
</xsd:complexType>
<xsd:complexType name="CT_Application">
    <xsd:all>
        <xsd:element name="Properties" type="CT_PropertyBag" wblid:cname="Properties"/>
    </xsd:all>
</xsd:complexType>
<xsd:element name="Application" wblid:cname="Application" wblid:codeName="Application"
type="CT_Application"/>
    <xsd:element name="Query" type="CT_Query" wblid:cname="Query" wblid:codeName="Query"/>
    <xsd:element name="Ordering" type="CT_AdHocOrdering" wblid:cname="Ordering"
wblid:codeName="Ordering"/>
    <xsd:complexType mixed="true" name="CT_MacroReference">
        <xsd:attribute name="For" type="ST_ObjectName" wblid:cname="For" use="optional"/>
        <xsd:attribute name="Event" type="ST_UserInterfaceObjectEvent" wblid:cname="Event"
use="optional"/>
    </xsd:complexType>
    <xsd:complexType name="CT_UserInterfaceMacros">
        <xsd:choice maxOccurs="unbounded">
            <xsd:element name="UserInterfaceMacro" minOccurs="0" maxOccurs="unbounded"
type="CT_UserInterfaceMacro" wblid:cname="UserInterfaceMacro"/>
            <xsd:element name="MacroReference" wblid:cname="MacroReference"
type="CT_MacroReference"/>
        </xsd:choice>
    </xsd:complexType>
    <xsd:complexType name="CT_DataMacros">
        <xsd:choice maxOccurs="unbounded">
            <xsd:element name="DataMacro" minOccurs="0" maxOccurs="unbounded" type="CT_DataMacro"
wblid:cname="DataMacro"/>
        </xsd:choice>
    </xsd:complexType>
    <xsd:element name="UserInterfaceMacros" wblid:cname="UserInterfaceMacros"
wblid:codeName="UserInterfaceMacros" type="CT_UserInterfaceMacros"/>
    <xsd:element name="DataMacros" wblid:cname="DataMacros" wblid:codeName="DataMacros"
type="CT_DataMacros"/>
    <xsd:element name="UserInterfaceMacro" wblid:cname="UserInterfaceMacro"
wblid:codeName="UserInterfaceMacro" type="CT_UserInterfaceMacro"/>
    <xsd:complexType name="CT_UserInterfaceMacro">
        <xsd:sequence>

```

```

    <xsd:element name="Statements" minOccurs="0" type="CT_UserInterfaceMacroStatements"
wblld:cname="Statements"/>
    <xsd:element name="Sub" minOccurs="0" maxOccurs="unbounded" type="CT_Sub"
wblld:cname="Sub"/>
  </xsd:sequence>
  <xsd:attribute name="For" type="ST_ObjectName" wblld:cname="For" use="optional"/>
  <xsd:attribute name="Event" type="ST_UserInterfaceObjectEvent" wblld:cname="Event"
use="optional"/>
  <xsd:attribute name="MinimumClientDesignVersion" type="ST_ShortString"
wblld:cname="MinimumClientDesignVersion" use="optional"/>
</xsd:complexType>
<xsd:complexType name="CT_DataMacro">
  <xsd:sequence>
    <xsd:element name="Parameters" minOccurs="0" type="CT_ParameterDefinitions"
wblld:cname="Parameters"/>
    <xsd:element name="Statements" minOccurs="0" type="CT_DataMacroStatements"
wblld:cname="Statements"/>
  </xsd:sequence>
  <xsd:attribute name="Event" type="ST_DataObjectEvent" wblld:cname="Event" use="optional"/>
  <xsd:attribute name="Name" type="ST_ObjectName" wblld:cname="Name" use="optional"/>
</xsd:complexType>
<xsd:complexType mixed="true" name="CT_RecordSource">
  <xsd:sequence>
    <xsd:element name="Query" type="CT_Query" minOccurs="0" wblld:cname="Query"/>
  </xsd:sequence>
</xsd:complexType>
<xsd:complexType name="CT_ViewData">
  <xsd:all>
    <xsd:element name="RecordSource" minOccurs="0" wblld:cname="RecordSource"
type="CT_RecordSource"/>
  </xsd:all>
  <xsd:attribute name="AllowEdits" type="xsd:boolean" default="true"
wblld:cname="AllowEdits" use="optional"/>
  <xsd:attribute name="AllowDeletions" type="xsd:boolean" default="true"
wblld:cname="AllowDeletions" use="optional"/>
  <xsd:attribute name="AllowAdditions" type="xsd:boolean" default="true"
wblld:cname="AllowAdditions" use="optional"/>
  <xsd:attribute name="DataEntry" type="xsd:boolean" default="false" wblld:cname="DataEntry"
use="optional"/>
  <xsd:attribute name="RecordSetType" type="xsd:string" wblld:cname="RecordSetType"
use="optional"/>
</xsd:complexType>
<xsd:complexType name="CT_View">
  <xsd:sequence>
    <xsd:choice>
      <xsd:element ref="UserInterfaceMacros" minOccurs="0"
wblld:cname="UserInterfaceMacros"/>
    </xsd:choice>
    <xsd:element name="Data" wblld:cname="Data" minOccurs="0" type="CT_ViewData"/>
    <xsd:element ref="a:Form" wblld:cname="Form"/>
  </xsd:sequence>
  <xsd:attribute name="Name" type="ST_ObjectName" use="required" wblld:cname="Name"/>
  <xsd:attribute name="MinimumClientDesignVersion" type="ST_ShortString" use="optional"
wblld:cname="MinimumClientDesignVersion"/>
</xsd:complexType>
<xsd:element name="View" wblld:cname="View" wblld:codeName="View" type="CT_View"/>
<xsd:complexType name="CT_Object">
  <xsd:sequence>
    <xsd:element name="Name" type="ST_ObjectName" wblld:cname="Name"/>
    <xsd:element name="Type" type="ST_ShortString" wblld:cname="Type"/>

```

```

    <xsd:element name="Mode" type="ST_ShortString" minOccurs="0" wblid:cname="Mode"/>
  </xsd:sequence>
</xsd:complexType>
<xsd:complexType name="CT_ApplicationReference">
  <xsd:sequence>
    <xsd:element name="URL" type="xsd:anyURI" wblid:cname="URL"/>
    <xsd:element name="Object" minOccurs="0" wblid:cname="Object" type="CT_Object"/>
  </xsd:sequence>
</xsd:complexType>
<xsd:element name="ApplicationReference" wblid:cname="ApplicationReference"
wblid:codeName="ApplicationReference" type="CT_ApplicationReference"/>
</xsd:schema>

```

## 5.5 <http://schemas.microsoft.com/office/accessservices/2009/11/reports>

```

<xsd:schema
targetNamespace="http://schemas.microsoft.com/office/accessservices/2009/11/reports"
xmlns:xsd="http://www.w3.org/2001/XMLSchema"
xmlns="http://schemas.microsoft.com/office/accessservices/2009/11/reports"
elementFormDefault="qualified"
xmlns:wblid="http://schemas.microsoft.com/office/word/2004/5/build" wblid:prefix="rdl"
wblid:hash="true" wblid:cname="RDL" xmlns:odoc="http://schemas.microsoft.com/internal/obd">
  <xsd:complexType name="Report">
    <xsd:choice maxOccurs="unbounded">
      <xsd:element name="DataSources" wblid:cname="DataSources" type="DataSourcesType"
minOccurs="0"/>
      <xsd:element name="DataSets" wblid:cname="DataSets" type="DataSetsType" minOccurs="0"/>
      <xsd:element name="ReportParameters" wblid:cname="ReportParameters"
type="ReportParametersType" minOccurs="0"/>
      <xsd:element name="Language" wblid:cname="Language" type="xsd:string" minOccurs="0"/>
      <xsd:element name="CustomProperties" wblid:cname="CustomProperties"
type="CustomPropertiesType" minOccurs="0"/>
      <xsd:element name="ReportSections" wblid:cname="ReportSections"
type="ReportSectionsType"/>
    </xsd:choice>
  </xsd:complexType>
  <xsd:element name="Report" wblid:cname="Report" type="Report"/>
  <xsd:complexType name="ReportSectionsType">
    <xsd:sequence>
      <xsd:element name="ReportSection" wblid:cname="ReportSection" type="ReportSectionType"
maxOccurs="2"/>
    </xsd:sequence>
  </xsd:complexType>
  <xsd:complexType name="ReportSectionType">
    <xsd:choice maxOccurs="unbounded">
      <xsd:element name="Body" wblid:cname="Body" type="BodyType"/>
      <xsd:element name="Width" wblid:cname="Width" type="SizeType"/>
      <xsd:element name="Page" wblid:cname="Page" type="PageType"/>
    </xsd:choice>
  </xsd:complexType>
  <xsd:complexType name="ReportParametersType">
    <xsd:sequence>
      <xsd:element name="ReportParameter" wblid:cname="ReportParameter"
type="ReportParameterType" maxOccurs="unbounded"/>
    </xsd:sequence>
  </xsd:complexType>
  <xsd:simpleType name="DataTypeReportParameterType">
    <xsd:restriction base="xsd:string">
      <xsd:enumeration value="Boolean" wblid:cname="Boolean"/>
    </xsd:restriction>
  </xsd:simpleType>

```

```

    <xsd:enumeration value="DateTime" wblid:cname="DateTime"/>
    <xsd:enumeration value="Integer" wblid:cname="Integer"/>
    <xsd:enumeration value="Float" wblid:cname="Float"/>
    <xsd:enumeration value="String" wblid:cname="String"/>
  </xsd:restriction>
</xsd:simpleType>
<xsd:complexType name="ReportParameterType">
  <xsd:choice maxOccurs="unbounded">
    <xsd:element name="DataType" wblid:cname="DataType" type="DataTypeReportParameterType"/>
    <xsd:element name="Nullable" wblid:cname="Nullable" type="xsd:boolean" minOccurs="0"/>
    <xsd:element name="Prompt" wblid:cname="Prompt" type="StringLocIDType" minOccurs="0"/>
    <xsd:element name="Hidden" wblid:cname="Hidden" type="xsd:boolean" minOccurs="0"/>
  </xsd:choice>
  <xsd:attribute name="Name" wblid:cname="Name" type="xsd:normalizedString" use="required"/>
</xsd:complexType>
<xsd:complexType name="DataSetsType">
  <xsd:sequence>
    <xsd:element name="DataSet" wblid:cname="DataSet" type="DataSetType"
maxOccurs="unbounded"/>
  </xsd:sequence>
</xsd:complexType>
<xsd:complexType name="DataSetType">
  <xsd:choice maxOccurs="unbounded">
    <xsd:element name="Fields" wblid:cname="Fields" type="FieldsType" minOccurs="0"/>
    <xsd:element name="Query" wblid:cname="Query" type="QueryType"/>
  </xsd:choice>
  <xsd:attribute name="Name" wblid:cname="Name" type="xsd:normalizedString" use="required"/>
</xsd:complexType>
<xsd:complexType name="FieldsType">
  <xsd:sequence>
    <xsd:element name="Field" wblid:cname="Field" type="FieldType" maxOccurs="unbounded"/>
  </xsd:sequence>
</xsd:complexType>
<xsd:complexType name="FieldType">
  <xsd:choice minOccurs="0" maxOccurs="unbounded">
    <xsd:element name="DataField" wblid:cname="DataField" type="xsd:string" minOccurs="0"/>
  </xsd:choice>
  <xsd:attribute name="Name" wblid:cname="Name" type="xsd:normalizedString" use="required"/>
</xsd:complexType>
<xsd:complexType name="QueryType">
  <xsd:choice maxOccurs="unbounded">
    <xsd:element name="DataSourceName" wblid:cname="DataSourceName" type="xsd:string"/>
    <xsd:element name="CommandText" wblid:cname="CommandText" type="xsd:string"/>
    <xsd:element name="QueryParameters" wblid:cname="QueryParameters"
type="QueryParametersType" minOccurs="0"/>
  </xsd:choice>
</xsd:complexType>
<xsd:complexType name="DataSourcesType">
  <xsd:sequence>
    <xsd:element name="DataSource" wblid:cname="DataSource" type="DataSourceType"
maxOccurs="unbounded"/>
  </xsd:sequence>
</xsd:complexType>
<xsd:complexType name="DataSourceType">
  <xsd:choice minOccurs="0" maxOccurs="unbounded">
    <xsd:element name="ConnectionProperties" wblid:cname="ConnectionProperties"
type="ConnectionPropertiesType" minOccurs="0"/>
  </xsd:choice>
  <xsd:attribute name="Name" wblid:cname="Name" type="xsd:string" use="required"/>

```

```

</xsd:complexType>
<xsd:complexType name="ConnectionPropertiesType">
  <xsd:choice minOccurs="1" maxOccurs="unbounded">
    <xsd:element name="DataProvider" wblid:cname="DataProvider" type="xsd:string"/>
    <xsd:element name="ConnectString" wblid:cname="ConnectString" type="xsd:string"/>
  </xsd:choice>
</xsd:complexType>
<xsd:complexType name="QueryParametersType">
  <xsd:sequence>
    <xsd:element name="QueryParameter" wblid:cname="QueryParameter"
type="QueryParameterType" maxOccurs="unbounded"/>
  </xsd:sequence>
</xsd:complexType>
<xsd:complexType name="QueryParameterType">
  <xsd:choice minOccurs="1" maxOccurs="unbounded">
    <xsd:element name="Value" wblid:cname="Value" type="xsd:string"/>
  </xsd:choice>
  <xsd:attribute name="Name" wblid:cname="Name" type="xsd:string" use="required"/>
</xsd:complexType>
<xsd:complexType name="BodyType">
  <xsd:choice maxOccurs="unbounded">
    <xsd:element name="ReportItems" wblid:cname="ReportItems" type="BodyTypeReportItemsType"
minOccurs="0"/>
    <xsd:element name="Height" wblid:cname="Height" type="SizeType"/>
  </xsd:choice>
</xsd:complexType>
<xsd:complexType name="PageType">
  <xsd:choice minOccurs="0" maxOccurs="unbounded">
    <xsd:element name="PageHeader" wblid:cname="PageHeader" type="PageHeaderSectionType"
minOccurs="0"/>
    <xsd:element name="PageFooter" wblid:cname="PageFooter" type="PageFooterSectionType"
minOccurs="0"/>
    <xsd:element name="PageHeight" wblid:cname="PageHeight" type="SizeType" minOccurs="0"/>
    <xsd:element name="PageWidth" wblid:cname="PageWidth" type="SizeType" minOccurs="0"/>
    <xsd:element name="LeftMargin" wblid:cname="LeftMargin" type="SizeType" minOccurs="0"/>
    <xsd:element name="RightMargin" wblid:cname="RightMargin" type="SizeType"
minOccurs="0"/>
    <xsd:element name="TopMargin" wblid:cname="TopMargin" type="SizeType" minOccurs="0"/>
    <xsd:element name="BottomMargin" wblid:cname="BottomMargin" type="SizeType"
minOccurs="0"/>
    <xsd:element name="Columns" wblid:cname="Columns" type="xsd:int" minOccurs="0"/>
    <xsd:element name="ColumnSpacing" wblid:cname="ColumnSpacing" type="SizeType"
minOccurs="0"/>
  </xsd:choice>
</xsd:complexType>
<xsd:complexType name="PageHeaderSectionType">
  <xsd:choice maxOccurs="unbounded">
    <xsd:element name="Height" wblid:cname="Height" type="SizeType"/>
    <xsd:element name="PrintOnFirstPage" wblid:cname="PrintOnFirstPage" type="xsd:boolean"
minOccurs="1" fixed="true"/>
    <xsd:element name="PrintOnLastPage" wblid:cname="PrintOnLastPage" type="xsd:boolean"
minOccurs="1" fixed="true"/>
    <xsd:element name="ReportItems" wblid:cname="ReportItems" type="BodyTypeReportItemsType"
minOccurs="0"/>
  </xsd:choice>
</xsd:complexType>
<xsd:complexType name="PageFooterSectionType">
  <xsd:choice maxOccurs="unbounded">
    <xsd:element name="Height" wblid:cname="Height" type="SizeType"/>
  </xsd:choice>
</xsd:complexType>

```



```

    <xsd:element name="PrintOnFirstPage" wblid:cname="PrintOnFirstPage" type="xsd:boolean"
minOccurs="1" fixed="true"/>
    <xsd:element name="PrintOnLastPage" wblid:cname="PrintOnLastPage" type="xsd:boolean"
minOccurs="1" fixed="true"/>
    <xsd:element name="ReportItems" wblid:cname="ReportItems" type="ControlsReportItemsType"
minOccurs="0"/>
    <xsd:element name="Style" wblid:cname="Style" type="RectangleStyleType" minOccurs="0"/>
  </xsd:choice>
</xsd:complexType>
<xsd:complexType name="TextboxRectangleReportItemsType">
  <xsd:choice minOccurs="1" maxOccurs="1">
    <xsd:element name="Textbox" wblid:cname="Textbox" type="TextboxType"/>
    <xsd:element name="Image" wblid:cname="Image" type="ImageType"/>
  </xsd:choice>
</xsd:complexType>
<xsd:complexType name="ControlsReportItemsType">
  <xsd:choice maxOccurs="unbounded">
    <xsd:element name="Rectangle" wblid:cname="Rectangle" type="TextboxRectangleType"/>
    <xsd:element name="Textbox" wblid:cname="Textbox" type="TextboxType"/>
    <xsd:element name="Image" wblid:cname="Image" type="ImageType"/>
  </xsd:choice>
</xsd:complexType>
<xsd:complexType name="BodyTypeReportItemsType">
  <xsd:choice minOccurs="1" maxOccurs="1">
    <xsd:element name="Tablix" wblid:cname="Tablix" type="TablixType"/>
    <xsd:element name="Rectangle" wblid:cname="Rectangle" type="ReportHeaderRectangleType"/>
  </xsd:choice>
</xsd:complexType>
<xsd:complexType name="ActionInfoType">
  <xsd:choice minOccurs="0" maxOccurs="unbounded">
    <xsd:element name="Actions" wblid:cname="Actions" type="ActionsType" minOccurs="0"/>
  </xsd:choice>
</xsd:complexType>
<xsd:complexType name="ActionsType">
  <xsd:choice minOccurs="0" maxOccurs="unbounded">
    <xsd:element name="Action" wblid:cname="Action" type="ActionType"
maxOccurs="unbounded"/>
  </xsd:choice>
</xsd:complexType>
<xsd:complexType name="ActionType">
  <xsd:choice minOccurs="0" maxOccurs="unbounded">
    <xsd:element name="Hyperlink" wblid:cname="Hyperlink" type="xsd:string" minOccurs="0"/>
  </xsd:choice>
</xsd:complexType>
<xsd:complexType name="VisibilityType">
  <xsd:choice minOccurs="0" maxOccurs="unbounded">
    <xsd:element name="Hidden" wblid:cname="Hidden" type="xsd:string" minOccurs="0"/>
  </xsd:choice>
</xsd:complexType>
<xsd:complexType name="TextboxRectangleType">
  <xsd:choice minOccurs="0" maxOccurs="unbounded">
    <xsd:element name="Style" wblid:cname="Style" type="RectangleStyleType" minOccurs="0"/>
    <xsd:element name="ReportItems" wblid:cname="ReportItems"
type="TextboxRectangleReportItemsType" minOccurs="0"/>
  </xsd:choice>
  <xsd:attribute name="Name" wblid:cname="Name" type="xsd:normalizedString" use="required"/>
</xsd:complexType>
<xsd:complexType name="CellContentsRectangleType">
  <xsd:choice minOccurs="0" maxOccurs="unbounded">

```

```

        <xsd:element name="Style" wblid:cname="Style" type="RectangleStyleType" minOccurs="0"/>
        <xsd:element name="Top" wblid:cname="Top" type="SizeType" minOccurs="0"/>
        <xsd:element name="Left" wblid:cname="Left" type="SizeType" minOccurs="0"/>
        <xsd:element name="Height" wblid:cname="Height" type="SizeType" minOccurs="0"/>
        <xsd:element name="Width" wblid:cname="Width" type="SizeType" minOccurs="0"/>
        <xsd:element name="Visibility" wblid:cname="Visibility" type="VisibilityType"
minOccurs="0"/>
        <xsd:element name="ReportItems" wblid:cname="ReportItems" type="ControlsReportItemsType"
minOccurs="0"/>
    </xsd:choice>
    <xsd:attribute name="Name" wblid:cname="Name" type="xsd:normalizedString" use="required"/>
</xsd:complexType>
<xsd:complexType name="ReportHeaderRectangleType">
    <xsd:choice minOccurs="0" maxOccurs="unbounded">
        <xsd:element name="Style" wblid:cname="Style" type="RectangleStyleType" minOccurs="0"/>
        <xsd:element name="Top" wblid:cname="Top" type="SizeType" minOccurs="0"/>
        <xsd:element name="Height" wblid:cname="Height" type="SizeType" minOccurs="0"/>
        <xsd:element name="Visibility" wblid:cname="Visibility" type="VisibilityType"
minOccurs="0"/>
        <xsd:element name="CustomProperties" wblid:cname="CustomProperties"
type="CustomPropertiesType" minOccurs="0"/>
        <xsd:element name="ReportItems" wblid:cname="ReportItems" type="ControlsReportItemsType"
minOccurs="0"/>
        <xsd:element name="PageBreak" wblid:cname="PageBreak" type="PageBreakType"
minOccurs="0"/>
    </xsd:choice>
    <xsd:attribute name="Name" wblid:cname="Name" type="xsd:normalizedString" use="required"/>
</xsd:complexType>
<xsd:complexType name="TextboxType">
    <xsd:choice maxOccurs="unbounded">
        <xsd:element name="Style" wblid:cname="Style" type="TextBoxStyleType" minOccurs="0"/>
        <xsd:element name="Top" wblid:cname="Top" type="SizeType" minOccurs="0"/>
        <xsd:element name="Left" wblid:cname="Left" type="SizeType" minOccurs="0"/>
        <xsd:element name="Height" wblid:cname="Height" type="SizeType" minOccurs="0"/>
        <xsd:element name="Width" wblid:cname="Width" type="SizeType" minOccurs="0"/>
        <xsd:element name="Visibility" wblid:cname="Visibility" type="VisibilityType"
minOccurs="0"/>
        <xsd:element name="CustomProperties" wblid:cname="CustomProperties"
type="CustomPropertiesType" minOccurs="0"/>
        <xsd:element name="Paragraphs" wblid:cname="Paragraphs" type="ParagraphsType"/>
        <xsd:element name="CanGrow" wblid:cname="CanGrow" type="xsd:boolean" minOccurs="0"/>
        <xsd:element name="KeepTogether" wblid:cname="KeepTogether" type="xsd:boolean"
minOccurs="0"/>
        <xsd:element name="ToolTip" wblid:cname="ToolTip" type="StringLocIDType" minOccurs="0"/>
    </xsd:choice>
    <xsd:attribute name="Name" wblid:cname="Name" type="xsd:normalizedString" use="required"/>
</xsd:complexType>
<xsd:complexType name="CellContentsTextboxType">
    <xsd:choice maxOccurs="unbounded">
        <xsd:element name="Style" wblid:cname="Style" type="TextBoxStyleType" minOccurs="0"/>
        <xsd:element name="Visibility" wblid:cname="Visibility" type="VisibilityType"
minOccurs="0"/>
        <xsd:element name="CustomProperties" wblid:cname="CustomProperties"
type="CustomPropertiesType" minOccurs="0"/>
        <xsd:element name="Paragraphs" wblid:cname="Paragraphs" type="ParagraphsType"/>
        <xsd:element name="CanGrow" wblid:cname="CanGrow" type="xsd:boolean" minOccurs="0"/>
        <xsd:element name="KeepTogether" wblid:cname="KeepTogether" type="xsd:boolean"
minOccurs="0"/>
        <xsd:element name="ToolTip" wblid:cname="ToolTip" type="StringLocIDType" minOccurs="0"/>
    </xsd:choice>

```

```

    <xsd:attribute name="Name" wblid:cname="Name" type="xsd:normalizedString" use="required"/>
  </xsd:complexType>
  <xsd:complexType name="ParagraphsType">
    <xsd:sequence>
      <xsd:element name="Paragraph" wblid:cname="Paragraph" type="ParagraphType"
maxOccurs="1"/>
    </xsd:sequence>
  </xsd:complexType>
  <xsd:complexType name="ParagraphType">
    <xsd:choice minOccurs="0" maxOccurs="unbounded">
      <xsd:element name="Style" wblid:cname="Style" type="ParagraphStyleType" minOccurs="0"/>
      <xsd:element name="TextRuns" wblid:cname="TextRuns" type="TextRunsType"/>
    </xsd:choice>
  </xsd:complexType>
  <xsd:complexType name="TextRunsType">
    <xsd:sequence>
      <xsd:element name="TextRun" wblid:cname="TextRun" type="TextRunType" maxOccurs="1"/>
    </xsd:sequence>
  </xsd:complexType>
  <xsd:complexType name="TextRunType">
    <xsd:choice minOccurs="0" maxOccurs="unbounded">
      <xsd:element name="Style" wblid:cname="Style" type="TextRunStyleType" minOccurs="0"/>
      <xsd:element name="Value" wblid:cname="Value" type="LocIDStringWithDataAttribute"/>
      <xsd:element name="ActionInfo" wblid:cname="ActionInfo" type="ActionInfoType"
minOccurs="0"/>
      <xsd:element name="MarkupType" wblid:cname="MarkupType" type="xsd:string"
minOccurs="0"/>
      <xsd:element name="ToolTip" wblid:cname="ToolTip" type="StringLocIDType" minOccurs="0"/>
    </xsd:choice>
  </xsd:complexType>
  <xsd:simpleType name="ImageTypeSizing">
    <xsd:restriction base="xsd:string">
      <xsd:enumeration value="FitProportional" wblid:cname="FitProportional"/>
      <xsd:enumeration value="Clip" wblid:cname="Clip"/>
    </xsd:restriction>
  </xsd:simpleType>
  <xsd:complexType name="ImageType">
    <xsd:choice maxOccurs="unbounded">
      <xsd:element name="Style" wblid:cname="Style" type="ImageStyleType" minOccurs="0"/>
      <xsd:element name="ActionInfo" wblid:cname="ActionInfo" type="ActionInfoType"
minOccurs="0"/>
      <xsd:element name="Top" wblid:cname="Top" type="SizeType" minOccurs="0"/>
      <xsd:element name="Left" wblid:cname="Left" type="SizeType" minOccurs="0"/>
      <xsd:element name="Height" wblid:cname="Height" type="SizeType" minOccurs="0"/>
      <xsd:element name="Width" wblid:cname="Width" type="SizeType" minOccurs="0"/>
      <xsd:element name="Visibility" wblid:cname="Visibility" type="VisibilityType"
minOccurs="0"/>
      <xsd:element name="ToolTip" wblid:cname="ToolTip" type="StringLocIDType" minOccurs="0"/>
      <xsd:element name="CustomProperties" wblid:cname="CustomProperties"
type="CustomPropertiesType" minOccurs="0"/>
      <xsd:element name="Source" wblid:cname="Source" type="xsd:string" fixed="External"/>
      <xsd:element name="Value" wblid:cname="Value" type="xsd:string"/>
      <xsd:element name="Sizing" wblid:cname="Sizing" type="ImageTypeSizing" minOccurs="0"/>
    </xsd:choice>
    <xsd:attribute name="Name" wblid:cname="Name" type="xsd:normalizedString" use="required"/>
  </xsd:complexType>
  <xsd:complexType name="CellContentsImageType">
    <xsd:choice maxOccurs="unbounded">
      <xsd:element name="Style" wblid:cname="Style" type="ImageStyleType" minOccurs="0"/>

```

```

    <xsd:element name="ActionInfo" wblld:cname="ActionInfo" type="ActionInfoType"
minOccurs="0"/>
    <xsd:element name="Visibility" wblld:cname="Visibility" type="VisibilityType"
minOccurs="0"/>
    <xsd:element name="ToolTip" wblld:cname="ToolTip" type="StringLocIDType" minOccurs="0"/>
    <xsd:element name="CustomProperties" wblld:cname="CustomProperties"
type="CustomPropertiesType" minOccurs="0"/>
    <xsd:element name="Source" wblld:cname="Source" type="xsd:string" fixed="External"/>
    <xsd:element name="Value" wblld:cname="Value" type="xsd:string"/>
    <xsd:element name="Sizing" wblld:cname="Sizing" type="ImageTypeSizing" minOccurs="0"/>
  </xsd:choice>
  <xsd:attribute name="Name" wblld:cname="Name" type="xsd:normalizedString" use="required"/>
</xsd:complexType>
<xsd:complexType name="GroupType">
  <xsd:choice maxOccurs="unbounded">
    <xsd:element name="GroupExpressions" wblld:cname="GroupExpressions"
type="GroupExpressionsType" minOccurs="0"/>
    <xsd:element name="PageBreak" wblld:cname="PageBreak" type="PageBreakType"
minOccurs="0"/>
  </xsd:choice>
  <xsd:attribute name="Name" wblld:cname="Name" type="xsd:normalizedString" use="required"/>
</xsd:complexType>
<xsd:complexType name="GroupExpressionsType">
  <xsd:sequence>
    <xsd:element name="GroupExpression" wblld:cname="GroupExpression" type="xsd:string"
maxOccurs="1"/>
  </xsd:sequence>
</xsd:complexType>
<xsd:complexType name="SortExpressionsType">
  <xsd:sequence>
    <xsd:element name="SortExpression" wblld:cname="SortExpression"
type="SortExpressionType" maxOccurs="1"/>
  </xsd:sequence>
</xsd:complexType>
<xsd:simpleType name="SortExpressionDirection">
  <xsd:restriction base="xsd:string">
    <xsd:enumeration value="Ascending" wblld:cname="Ascending"/>
    <xsd:enumeration value="Descending" wblld:cname="Descending"/>
  </xsd:restriction>
</xsd:simpleType>
<xsd:complexType name="SortExpressionType">
  <xsd:choice maxOccurs="unbounded">
    <xsd:element name="Value" wblld:cname="Value" type="xsd:string"/>
    <xsd:element name="Direction" wblld:cname="Direction" type="SortExpressionDirection"
minOccurs="0"/>
  </xsd:choice>
</xsd:complexType>
<xsd:complexType name="RectangleStyleType">
  <xsd:choice minOccurs="0" maxOccurs="unbounded">
    <xsd:element name="BackgroundColor" wblld:cname="BackgroundColor" type="xsd:string"
minOccurs="0"/>
    <xsd:element name="Border" wblld:cname="Border" type="BorderType" minOccurs="0"/>
    <xsd:element name="TopBorder" wblld:cname="TopBorder" type="SubBorderType"
minOccurs="0"/>
    <xsd:element name="BottomBorder" wblld:cname="BottomBorder" type="SubBorderType"
minOccurs="0"/>
    <xsd:element name="LeftBorder" wblld:cname="LeftBorder" type="SubBorderType"
minOccurs="0"/>
    <xsd:element name="RightBorder" wblld:cname="RightBorder" type="SubBorderType"
minOccurs="0"/>
  </xsd:choice>
</xsd:complexType>

```

```

    </xsd:choice>
  </xsd:complexType>
  <xsd:complexType name="ImageStyleType">
    <xsd:choice minOccurs="0" maxOccurs="unbounded">
      <xsd:element name="Border" wblid:cname="Border" type="BorderType" minOccurs="0"/>
      <xsd:element name="TopBorder" wblid:cname="TopBorder" type="SubBorderType"
minOccurs="0"/>
      <xsd:element name="BottomBorder" wblid:cname="BottomBorder" type="SubBorderType"
minOccurs="0"/>
      <xsd:element name="LeftBorder" wblid:cname="LeftBorder" type="SubBorderType"
minOccurs="0"/>
      <xsd:element name="RightBorder" wblid:cname="RightBorder" type="SubBorderType"
minOccurs="0"/>
    </xsd:choice>
  </xsd:complexType>
  <xsd:complexType name="TextRunStyleType">
    <xsd:choice minOccurs="0" maxOccurs="unbounded">
      <xsd:element name="FontStyle" wblid:cname="FontStyle" type="xsd:string" minOccurs="0"/>
      <xsd:element name="FontFamily" wblid:cname="FontFamily" type="xsd:string"
minOccurs="0"/>
      <xsd:element name="FontSize" wblid:cname="FontSize" type="xsd:string" minOccurs="0"/>
      <xsd:element name="FontWeight" wblid:cname="FontWeight" type="xsd:string"
minOccurs="0"/>
      <xsd:element name="Format" wblid:cname="Format" type="xsd:string" minOccurs="0"/>
      <xsd:element name="TextDecoration" wblid:cname="TextDecoration" type="xsd:string"
minOccurs="0"/>
      <xsd:element name="Color" wblid:cname="Color" type="xsd:string" minOccurs="0"/>
    </xsd:choice>
  </xsd:complexType>
  <xsd:complexType name="TextBoxStyleType">
    <xsd:choice minOccurs="0" maxOccurs="unbounded">
      <xsd:element name="Border" wblid:cname="Border" type="BorderType" minOccurs="0"/>
      <xsd:element name="TopBorder" wblid:cname="TopBorder" type="SubBorderType"
minOccurs="0"/>
      <xsd:element name="BottomBorder" wblid:cname="BottomBorder" type="SubBorderType"
minOccurs="0"/>
      <xsd:element name="LeftBorder" wblid:cname="LeftBorder" type="SubBorderType"
minOccurs="0"/>
      <xsd:element name="RightBorder" wblid:cname="RightBorder" type="SubBorderType"
minOccurs="0"/>
      <xsd:element name="BackgroundColor" wblid:cname="BackgroundColor" type="xsd:string"
minOccurs="0"/>
      <xsd:element name="PaddingLeft" wblid:cname="PaddingLeft" type="xsd:string"
minOccurs="0"/>
      <xsd:element name="PaddingRight" wblid:cname="PaddingRight" type="xsd:string"
minOccurs="0"/>
      <xsd:element name="PaddingTop" wblid:cname="PaddingTop" type="xsd:string"
minOccurs="0"/>
      <xsd:element name="PaddingBottom" wblid:cname="PaddingBottom" type="xsd:string"
minOccurs="0"/>
      <xsd:element name="WritingMode" wblid:cname="WritingMode" type="xsd:string"
minOccurs="0"/>
    </xsd:choice>
  </xsd:complexType>
  <xsd:complexType name="ParagraphStyleType">
    <xsd:choice minOccurs="0" maxOccurs="unbounded">
      <xsd:element name="TextAlign" wblid:cname="TextAlign" type="xsd:string" minOccurs="0"/>
      <xsd:element name="LineHeight" wblid:cname="LineHeight" type="xsd:string"
minOccurs="0"/>
    </xsd:choice>
  </xsd:complexType>

```

```

<xsd:complexType name="SubBorderType">
  <xsd:choice minOccurs="0" maxOccurs="unbounded">
    <xsd:element name="Style" wblid:cname="Style" type="xsd:string" minOccurs="0"/>
    <xsd:element name="Width" wblid:cname="Width" type="xsd:string" minOccurs="0"/>
  </xsd:choice>
</xsd:complexType>
<xsd:complexType name="BorderType">
  <xsd:choice minOccurs="0" maxOccurs="unbounded">
    <xsd:element name="Color" wblid:cname="Color" type="xsd:string" minOccurs="0"/>
  </xsd:choice>
</xsd:complexType>
<xsd:simpleType name="SizeType">
  <xsd:restriction base="xsd:normalizedString"/>
</xsd:simpleType>
<xsd:complexType name="StringLocIDType">
  <xsd:simpleContent>
    <xsd:extension base="xsd:string"/>
  </xsd:simpleContent>
</xsd:complexType>
<xsd:complexType name="LocIDStringWithDataAttribute">
  <xsd:simpleContent>
    <xsd:extension base="xsd:string">
      <xsd:attribute name="EvaluationMode" wblid:cname="EvaluationMode"
type="EvaluationModeType" default="Auto"/>
    </xsd:extension>
  </xsd:simpleContent>
</xsd:complexType>
<xsd:simpleType name="EvaluationModeType">
  <xsd:restriction base="xsd:string">
    <xsd:enumeration value="Auto" wblid:cname="Auto"/>
    <xsd:enumeration value="Constant" wblid:cname="Constant"/>
  </xsd:restriction>
</xsd:simpleType>
<xsd:complexType name="CustomPropertiesType">
  <xsd:sequence>
    <xsd:element name="CustomProperty" wblid:cname="CustomProperty"
type="CustomPropertyType" maxOccurs="unbounded"/>
  </xsd:sequence>
</xsd:complexType>
<xsd:complexType name="CustomPropertyType">
  <xsd:choice maxOccurs="unbounded">
    <xsd:element name="Name" wblid:cname="Name" type="xsd:string"/>
    <xsd:element name="Value" wblid:cname="Value" type="xsd:string"/>
  </xsd:choice>
</xsd:complexType>
<xsd:complexType name="TablixType">
  <xsd:choice maxOccurs="unbounded">
    <xsd:element name="TablixBody" wblid:cname="TablixBody" type="TablixBodyType"
minOccurs="0"/>
    <xsd:element name="TablixColumnHierarchy" wblid:cname="TablixColumnHierarchy"
type="TablixColumnHierarchyType"/>
    <xsd:element name="TablixRowHierarchy" wblid:cname="TablixRowHierarchy"
type="TablixRowHierarchyType"/>
    <xsd:element name="DataSetName" wblid:cname="DataSetName" type="xsd:string"
minOccurs="0"/>
  </xsd:choice>
  <xsd:attribute name="Name" wblid:cname="Name" type="xsd:normalizedString" use="required"/>
</xsd:complexType>
<xsd:complexType name="TablixBodyType">

```

```

    <xsd:choice maxOccurs="unbounded">
      <xsd:element name="TablixColumns" wblid:cname="TablixColumns" type="TablixColumnsType"/>
      <xsd:element name="TablixRows" wblid:cname="TablixRows" type="TablixRowsType"/>
    </xsd:choice>
  </xsd:complexType>
  <xsd:complexType name="TablixRowHierarchyType">
    <xsd:choice maxOccurs="unbounded">
      <xsd:element name="TablixMembers" wblid:cname="TablixMembers"
type="TablixRowMembersType"/>
    </xsd:choice>
  </xsd:complexType>
  <xsd:complexType name="TablixRowMembersType">
    <xsd:sequence maxOccurs="unbounded">
      <xsd:element name="TablixMember" wblid:cname="TablixMember" type="TablixRowMemberType"
maxOccurs="unbounded"/>
    </xsd:sequence>
  </xsd:complexType>
  <xsd:complexType name="TablixColumnHierarchyType">
    <xsd:choice maxOccurs="unbounded">
      <xsd:element name="TablixMembers" wblid:cname="TablixMembers"
type="TablixColumnMembersType"/>
    </xsd:choice>
  </xsd:complexType>
  <xsd:complexType name="TablixColumnMembersType">
    <xsd:sequence maxOccurs="unbounded">
      <xsd:element name="TablixMember" wblid:cname="TablixMember" maxOccurs="unbounded"
type="TablixColumnMemberType"/>
    </xsd:sequence>
  </xsd:complexType>
  <xsd:complexType name="TablixColumnMemberType">
    <xsd:choice minOccurs="0" maxOccurs="unbounded">
      <xsd:element name="Visibility" wblid:cname="Visibility" type="VisibilityType"
minOccurs="0"/>
    </xsd:choice>
  </xsd:complexType>
  <xsd:complexType name="TablixRowMemberType">
    <xsd:choice minOccurs="0" maxOccurs="unbounded">
      <xsd:element name="Group" wblid:cname="Group" type="GroupType" minOccurs="0"/>
      <xsd:element name="SortExpressions" wblid:cname="SortExpressions"
type="SortExpressionsType" minOccurs="0"/>
      <xsd:element name="TablixMembers" wblid:cname="TablixMembers"
type="TablixRowMembersType" minOccurs="0"/>
      <xsd:element name="CustomProperties" wblid:cname="CustomProperties"
type="CustomPropertiesType" minOccurs="0"/>
      <xsd:element name="Visibility" wblid:cname="Visibility" type="VisibilityType"
minOccurs="0"/>
      <xsd:element name="RepeatOnNewPage" wblid:cname="RepeatOnNewPage" type="xsd:boolean"
minOccurs="0"/>
      <xsd:element name="KeepWithGroup" wblid:cname="KeepWithGroup" type="xsd:string"
minOccurs="0" fixed="After"/>
      <xsd:element name="KeepTogether" wblid:cname="KeepTogether" type="xsd:boolean"
minOccurs="0"/>
    </xsd:choice>
  </xsd:complexType>
  <xsd:complexType name="CellContentsType">
    <xsd:choice maxOccurs="unbounded">
      <xsd:element name="ColSpan" wblid:cname="ColSpan" type="xsd:unsignedInt" minOccurs="0"/>
      <xsd:element name="Rectangle" wblid:cname="Rectangle" type="CellContentsRectangleType"
minOccurs="0"/>
    </xsd:choice>
  </xsd:complexType>

```

```

        <xsd:element name="Textbox" wblid:cname="Textbox" type="CellContentsTextboxType"
minOccurs="0"/>
        <xsd:element name="Image" wblid:cname="Image" type="CellContentsImageType"
minOccurs="0"/>
    </xsd:choice>
</xsd:complexType>
<xsd:complexType name="TablixColumnsType">
    <xsd:choice maxOccurs="unbounded">
        <xsd:element name="TablixColumn" wblid:cname="TablixColumn" type="TablixColumnType"
maxOccurs="unbounded"/>
    </xsd:choice>
</xsd:complexType>
<xsd:complexType name="TablixColumnType">
    <xsd:choice maxOccurs="unbounded">
        <xsd:element name="Width" wblid:cname="Width" type="SizeType"/>
    </xsd:choice>
</xsd:complexType>
<xsd:complexType name="TablixRowsType">
    <xsd:choice maxOccurs="unbounded">
        <xsd:element name="TablixRow" wblid:cname="TablixRow" type="TablixRowType"
maxOccurs="unbounded"/>
    </xsd:choice>
</xsd:complexType>
<xsd:complexType name="TablixRowType">
    <xsd:choice maxOccurs="unbounded">
        <xsd:element name="Height" wblid:cname="Height" type="SizeType"/>
        <xsd:element name="TablixCells" wblid:cname="TablixCells" type="TablixCellsType"/>
    </xsd:choice>
</xsd:complexType>
<xsd:complexType name="TablixCellsType">
    <xsd:choice maxOccurs="unbounded">
        <xsd:element name="TablixCell" wblid:cname="TablixCell" type="TablixCellType"
maxOccurs="unbounded"/>
    </xsd:choice>
</xsd:complexType>
<xsd:complexType name="TablixCellType">
    <xsd:choice maxOccurs="unbounded">
        <xsd:element name="CellContents" wblid:cname="CellContents" type="CellContentsType"
minOccurs="0"/>
    </xsd:choice>
</xsd:complexType>
<xsd:simpleType name="PageBreakLocation">
    <xsd:restriction base="xsd:string">
        <xsd:enumeration value="None" wblid:cname="None"/>
        <xsd:enumeration value="Start" wblid:cname="Start"/>
        <xsd:enumeration value="End" wblid:cname="End"/>
        <xsd:enumeration value="StartAndEnd" wblid:cname="StartAndEnd"/>
    </xsd:restriction>
</xsd:simpleType>
<xsd:complexType name="PageBreakType">
    <xsd:choice maxOccurs="unbounded">
        <xsd:element name="BreakLocation" wblid:cname="BreakLocation" type="PageBreakLocation"/>
    </xsd:choice>
</xsd:complexType>
</xsd:schema>

```



## 5.6 http://schemas.microsoft.com/office/accessservices/2009/04/accdw

```
<xsd:schema xmlns="http://schemas.microsoft.com/office/accessservices/2009/04/accdw"
xmlns:xsd="http://www.w3.org/2001/XMLSchema"
xmlns:wblid="http://schemas.microsoft.com/office/word/2004/5/build"
targetNamespace="http://schemas.microsoft.com/office/accessservices/2009/04/accdw"
wblid:hash="true" wblid:prefix="accdw" wblid:cname="ACCDW" elementFormDefault="qualified"
xmlns:odoc="http://schemas.microsoft.com/internal/obd">
  <xsd:simpleType name="ST_ShortString">
    <xsd:restriction base="xsd:string">
      <xsd:maxLength value="255"/>
    </xsd:restriction>
  </xsd:simpleType>
  <xsd:simpleType name="ST_ObjectName">
    <xsd:restriction base="xsd:string">
      <xsd:minLength value="1"/>
      <xsd:maxLength value="72"/>
    </xsd:restriction>
  </xsd:simpleType>
  <xsd:complexType name="CT_Object">
    <xsd:sequence>
      <xsd:element name="Name" type="ST_ObjectName" wblid:cname="Name"/>
      <xsd:element name="Type" type="ST_ShortString" wblid:cname="Type"/>
      <xsd:element name="Mode" type="ST_ShortString" minOccurs="0" wblid:cname="Mode"/>
    </xsd:sequence>
  </xsd:complexType>
  <xsd:complexType name="CT_ApplicationReference">
    <xsd:sequence>
      <xsd:element name="URL" type="xsd:anyURI" wblid:cname="URL"/>
      <xsd:element name="Object" minOccurs="0" wblid:cname="Object" type="CT_Object"/>
    </xsd:sequence>
  </xsd:complexType>
  <xsd:element name="ApplicationReference" wblid:cname="ApplicationReference"
wblid:codeName="ApplicationReference" type="CT_ApplicationReference"/>
</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 Access 2010
- Microsoft Access 2013
- Microsoft SharePoint Server 2010
- Microsoft SharePoint Server 2013

Exceptions, if any, are noted below. If a service pack or Quick Fix Engineering (QFE) number appears with the product version, behavior changed in that service pack or QFE. The new behavior also applies to subsequent service packs of the product unless otherwise specified. If a product edition appears with the product version, behavior is different in that product edition.

Unless otherwise specified, any statement of optional behavior in this specification that is prescribed using the terms SHOULD or SHOULD NOT implies product behavior in accordance with the SHOULD or SHOULD NOT prescription. Unless otherwise specified, the term MAY implies that the product does not follow the prescription.

[<1> Section 2.1.7:](#) Access Services in SharePoint Server 2010 and SharePoint Server 2013 preserves these values.

[<2> Section 2.2.1.8:](#) Access Services in SharePoint Server 2010 and SharePoint Server 2013 uses the **ApplicationReference** element specified in section [2.6.1.1](#).

[<3> Section 2.2.4.1:](#) Access Services in SharePoint Server 2010 and SharePoint Server 2013 reserves eight characters for internal use.

[<4> Section 2.2.4.2:](#) Access Services in SharePoint Server 2010 and SharePoint Server 2013 does not support the AfterUpdate event on datasheet views.

[<5> Section 2.3.3.4.11:](#) Access Services in SharePoint Server 2010 and SharePoint Server 2013 ignores other values.

[<6> Section 2.3.4:](#) Access Services in SharePoint Server 2010 and SharePoint Server 2013 ignores properties that are present in instances of types to which they do not apply.

## 7 Change Tracking

This section identifies changes that were made to the [MS-AXL] protocol document between the July 2013 and November 2013 releases. Changes are classified as New, Major, Minor, Editorial, or No change.

The revision class **New** means that a new document is being released.

The revision class **Major** means that the technical content in the document was significantly revised. Major changes affect protocol interoperability or implementation. Examples of major changes are:

- A document revision that incorporates changes to interoperability requirements or functionality.
- The removal of a document from the documentation set.

The revision class **Minor** means that the meaning of the technical content was clarified. Minor changes do not affect protocol interoperability or implementation. Examples of minor changes are updates to clarify ambiguity at the sentence, paragraph, or table level.

The revision class **Editorial** means that the formatting in the technical content was changed. Editorial changes apply to grammatical, formatting, and style issues.

The revision class **No change** means that no new technical changes were introduced. Minor editorial and formatting changes may have been made, but the technical content of the document is identical to the last released version.

Major and minor changes can be described further using the following change types:

- New content added.
- Content updated.
- Content removed.
- New product behavior note added.
- Product behavior note updated.
- Product behavior note removed.
- New protocol syntax added.
- Protocol syntax updated.
- Protocol syntax removed.
- New content added due to protocol revision.
- Content updated due to protocol revision.
- Content removed due to protocol revision.
- New protocol syntax added due to protocol revision.
- Protocol syntax updated due to protocol revision.
- Protocol syntax removed due to protocol revision.

- Obsolete document removed.

Editorial changes are always classified with the change type **Editorially updated**.

Some important terms used in the change type descriptions are defined as follows:

- **Protocol syntax** refers to data elements (such as packets, structures, enumerations, and methods) as well as interfaces.
- **Protocol revision** refers to changes made to a protocol that affect the bits that are sent over the wire.

The changes made to this document are listed in the following table. For more information, please contact [dochelp@microsoft.com](mailto:dochelp@microsoft.com).

Section	Tracking number (if applicable) and description	Major change (Y or N)	Change type
<a href="#">2.1.2 Forms</a>	Revised description to eliminate the words "usually" and "always" for clarity.	N	Content updated.
<a href="#">2.2.5.1.20 RunMacro</a>	Changed "a User Interface Macro" to "a standalone User Interface Macro".	N	Content updated.

## 8 Index

### A

#### ACCDW

- [attributes](#) 211
- [complex types](#) 211
  - [CT\\_ApplicationReference](#) 211
  - [CT\\_Object](#) 211
- [elements](#) 210
  - [ApplicationReference](#) 210
  - [simple types](#) 212
    - [ST\\_ObjectName](#) 212
    - [ST\\_ShortString](#) 212
- [AcceptsReturn control attribute](#) 131
- [ActionInfoType complex type](#) 159
- [ActionsType complex type](#) 160
- [ActionType complex type](#) 160
- [After insert example](#) 224
- [AllowValueListEdits control attribute](#) 131
- [AlternateBackground control attribute](#) 132
- [Applicability](#) 19
- [Application complex type](#) 52
- [Application element](#) 24
- [Application Element example](#) 213
- [Application element overview](#) 16
- [Application reference overview](#) 19
- [ApplicationReference complex type](#) 58
- ApplicationReference element ([section 2.2.1.8](#) 25, [section 2.6.1.1](#) 210)
- [Association control attribute](#) 132
- Attributes
  - [RDL](#) 147

### B

- [Background control attribute](#) 132
- [BodyType complex type](#) 155
- [BodyTypeReportItemsType complex type](#) 159
- [BorderThickness control attribute](#) 132
- [BorderType complex type](#) 176

### C

- [Caption control attribute](#) 132
- [CellContentsImageType complex type](#) 168
- [CellContentsRectangleType complex type](#) 161
- [CellContentsTextboxType complex type](#) 164
- [CellContentsType complex type](#) 182
- [Change tracking](#) 275
- [ColumnCount control attribute](#) 133
- [ColumnWidths control attribute](#) 133
- Complex type
  - [CT\\_MacroReference](#) 52
  - [CT\\_UserInterfaceMcroStatements](#) 49
- Complex types
  - [ActionInfoType](#) 159
  - [ActionsType](#) 160
  - [ActionType](#) 160
  - [Application](#) 52

- [ApplicationReference](#) 58
- [BodyType](#) 155
- [BodyTypeReportItemsType](#) 159
- [BorderType](#) 176
- [CellContentsImageType](#) 168
- [CellContentsRectangleType](#) 161
- [CellContentsTextboxType](#) 164
- [CellContentsType](#) 182
- [ConnectionPropertiesType](#) 153
- [ControlsReportItemsType](#) 158
- [CT\\_Action](#) 38
- [CT\\_AdHocOrder](#) 29
- [CT\\_AdHocOrdering](#) 29
- [CT\\_Argument](#) 37
- [CT\\_CreateRecord](#) 42
- [CT\\_CreateRecordData](#) 41
- [CT\\_DataConditionalBlock](#) 48
- [CT\\_DataElse](#) 47
- [CT\\_DataElseIf](#) 46
- [CT\\_DataIf](#) 45
- [CT\\_DataMacro](#) 55
- [CT\\_DataMacros](#) 53
- [CT\\_DataMacroStatementGroup](#) 51
- [CT\\_DataMacroStatements](#) 50
- [CT\\_EditRecord](#) 43
- [CT\\_EditRecordData](#) 43
- [CT\\_Expression](#) 26
- [CT\\_ForEachRecord](#) 39
- [CT\\_ForEachRecordData](#) 38
- [CT\\_Join](#) 32
- [CT\\_Joins](#) 33
- [CT\\_LookupRecord](#) 41
- [CT\\_LookupRecordData](#) 40
- [CT\\_Object](#) 57
- [CT\\_Order](#) 28
- [CT\\_Ordering](#) 28
- [CT\\_Parameter](#) 33
- CT\_ParameterDefinitions ([section 2.2.3.16](#) 34, [section 2.2.3.17](#) 35)
- [CT\\_Parameters](#) 34
- [CT\\_ParameterValue](#) 35
- [CT\\_ParameterValues](#) 36
- [CT\\_Property](#) 27
- [CT\\_PropertyBag](#) 27
- [CT\\_Query](#) 36
- [CT\\_RecordSource](#) 55
- [CT\\_Reference](#) 30
- [CT\\_References](#) 30
- [CT\\_Result](#) 31
- [CT\\_Results](#) 32
- [CT\\_Sub](#) 49
- [CT\\_UserInterfaceConditionalBlock](#) 47
- [CT\\_UserInterfaceElse](#) 45
- [CT\\_UserInterfaceElseIf](#) 44
- [CT\\_UserInterfaceIf](#) 44
- [CT\\_UserInterfaceMacro](#) 54
- [CT\\_UserInterfaceMacros](#) 53
- [CT\\_UserInterfaceMacroStatementGroup](#) 51

[CT\\_View](#) 57  
[CT\\_ViewData](#) 56  
[CustomPropertiesType](#) 177  
[CustomPropertyType](#) 178  
[DataSetsType](#) 150  
[DataSetType](#) 150  
[DataSourcesType](#) 152  
[DataSourceType](#) 153  
[FieldsType](#) 151  
[FieldType](#) 151  
[GroupExpressionsType](#) 170  
[GroupType](#) 170  
[ImageStyleType](#) 172  
[ImageType](#) 167  
[PageBreakType](#) 186  
[PageFooterSectionType](#) 157  
[PageHeaderSectionType](#) 156  
[PageType](#) 155  
[ParagraphStyleType](#) 175  
[ParagraphsType](#) 165  
[ParagraphType](#) 166  
[QueryParametersType](#) 154  
[QueryParameterType](#) 154  
[QueryType](#) 152  
[RectangleStyleType](#) 171  
[Report](#) 147  
[ReportHeaderRectangleType](#) 162  
[ReportParametersType](#) 149  
[ReportParameterType](#) 149  
[ReportSectionsType](#) 148  
[ReportSectionType](#) 148  
[SortExpressionsType](#) 171  
[SortExpressionType](#) 171  
[StringLocIDType](#) 176  
[SubBorderType](#) 175  
[TablixBodyType](#) 179  
[TablixCellsType](#) 185  
[TablixCellType](#) 185  
[TablixColumnHierarchyType](#) 180  
[TablixColumnMembersType](#) 181  
[TablixColumnsType](#) 183  
[TablixColumnType](#) 183  
[TablixRowHierarchyType](#) 179  
[TablixRowMembersType](#) 180  
[TablixRowMemberType](#) 181  
[TablixRowsType](#) 184  
[TablixRowType](#) 184  
[TablixType](#) 178  
[TextboxRectangleReportItemsType](#) 158  
[TextboxRectangleType](#) 161  
[TextBoxStyleType](#) 174  
[TextboxType](#) 163  
[TextRunStyleType](#) 173  
[TextRunsType](#) 166  
[TextRunType](#) 166  
[VisibilityType](#) 160  
[ConnectionPropertiesType complex type](#) 153  
Control attribute  
[DefaultValue](#) 135  
[DisplayAsHyperlink](#) 135  
[MinWidth](#) 140  
[NavigationButtons](#) 140  
[Visibility](#) 146  
Control attributes  
[AcceptsReturn](#) 131  
[AllowValueListEdits](#) 131  
[AlternateBackground](#) 132  
[Association](#) 132  
[Background](#) 132  
[BorderThickness](#) 132  
[Caption](#) 132  
[ColumnCount](#) 133  
[ColumnWidths](#) 133  
[ControlHeight](#) 133  
[ControlSource](#) 134  
[ControlWidth](#) 134  
[CurrencySymbol](#) 134  
[Cursor](#) 134  
[DatashheetCaption](#) 134  
[DecimalPlaces](#) 135  
[DefaultInsertButton](#) 135  
[DefaultPicture](#) 135  
[DisplayAs](#) 135  
[EffectSize](#) 136  
[FlowDirection](#) 136  
[FontFamily](#) 136  
[FontSize](#) 136  
[FontStyle](#) 136  
[FontWeight](#) 137  
[Foreground](#) 137  
[FormatDataAs](#) 137  
[GridlineBorderBrush](#) 138  
[Height](#) 137  
[HorizontalScrollBarVisibility](#) 137  
[HyperlinkAddress](#) 138  
[InheritValueList](#) 138  
[IsEnabled](#) 138  
[IsHyperlink](#) 138  
[LimitToList](#) 139  
[LineHeight](#) 139  
[LinkChildFields](#) 139  
[LinkMasterFields](#) 139  
[ListItemsEditForm](#) 139  
[ListWidth](#) 139  
[Locked\\_control attribute](#) 140  
[MinHeight](#) 140  
[Name](#) 140  
[NavigationParent](#) 141  
[NavigationParentButton](#) 141  
[NavigationTargetName](#) 141  
[NavigationTargetSubform](#) 141  
[NavigationWhereClause](#) 141  
[Padding](#) 141  
[PageSize](#) 142  
[Picture](#) 142  
[PictureAlignment](#) 142  
[PictureCaptionArrangement](#) 142  
[PictureSizeMode](#) 142  
[PictureTiling](#) 142  
[RowSourceType](#) 142  
[ScrollBars](#) 143  
[SeparatorCharacters](#) 143

[ShowColumnHeader](#) 143  
[SizeMode](#) 143  
[SourceObject](#) 143  
[Span](#) 144  
[structures](#) 131  
[Style](#) 144  
[StyleHover](#) 144  
[StyleSelected](#) 144  
[TabularBorderStyle](#) 144  
[TextAlignment](#) 144  
[TextDecorations](#) 145  
[TextFormat](#) 145  
[ToolTip](#) 145  
[VerticalScrollBarVisibility](#) 145  
[WebImageCluster](#) 146  
[WebImageLeft](#) 146  
[WebImageTop](#) 146  
[Width](#) 146  
[ControlHeight control attribute](#) 133  
[ControlSource control attribute](#) 134  
[ControlsReportItemsType complex type](#) 158  
[ControlWidth control attribute](#) 134  
[CT Action complex type](#) 38  
[CT AdHocOrder complex type](#) 29  
[CT AdHocOrdering complex type](#) 29  
[CT ApplicationReference complex type](#) 211  
[CT Argument complex type](#) 37  
[CT CreateRecord complex types](#) 42  
[CT CreateRecordData complex type](#) 41  
[CT DataConditionalBlock complex type](#) 48  
[CT DataElse complex type](#) 47  
[CT DataElseIf complex type](#) 46  
[CT DataIf complex type](#) 45  
[CT DataMacro complex type](#) 55  
[CT DataMacros complex types](#) 53  
[CT DataMacroStatementGroup complex type](#) 51  
[CT DataMacroStatements complex type](#) 50  
[CT EditRecord complex type](#) 43  
[CT EditRecordData complex type](#) 43  
[CT Expression complex type](#) 26  
[CT ForEachRecord complex type](#) 39  
[CT ForEachRecordData complex type](#) 38  
[CT Join complex type](#) 32  
[CT Joins complex type](#) 33  
[CT LookupRecord complex type](#) 41  
[CT LookupRecordData complex type](#) 40  
[CT MacroReference complex type](#) 52  
[CT\\_Object complex type \(section 2.2.3.53 57, section 2.6.3.1 211\)](#)  
[CT Order complex type](#) 28  
[CT Ordering complex type](#) 28  
[CT Parameter complex type](#) 33  
[CT\\_ParameterDefinitions complex type \(section 2.2.3.16 34, section 2.2.3.17 35\)](#)  
[CT Parameters complex type](#) 34  
[CT ParameterValue complex type](#) 35  
[CT ParameterValues complex type](#) 36  
[CT Property complex types](#) 27  
[CT PropertyBag complex type](#) 27  
[CT Query complex type](#) 36  
[CT RecordSource complex type](#) 55

[CT Reference complex type](#) 30  
[CT References complex type](#) 30  
[CT Result complex type](#) 31  
[CT Results complex type](#) 32  
[CT Sub complex type](#) 49  
[CT UserInterfaceConditionalBlock complex type](#) 47  
[CT UserInterfaceElse complex type](#) 45  
[CT UserInterfaceElseIf complex type](#) 44  
[CT UserInterfaceIf complex type](#) 44  
[CT UserInterfaceMacro complex types](#) 54  
[CT UserInterfaceMacros complex type](#) 53  
[CT UserInterfaceMacroStatementGroup complex type](#) 51  
[CT UserInterfaceMcroStatements complex type](#) 49  
[CT View complex type](#) 57  
[CT ViewData complex type](#) 56  
[CurrencySymbol control attribute](#) 134  
[Cursor control attribute](#) 134  
[CustomPropertiesType complex type](#) 177  
[CustomPropertyType complex type](#) 178

## D

Data macros  
   [function names](#) 192  
   [syntax](#) 189  
[Data Macros example](#) 223  
[Data macros overview](#) 18  
[DataMacros element](#) 25  
[DataSetsType complex type](#) 150  
[DataSetType complex type](#) 150  
[Datasheet form example](#) 218  
[DatasheetCaption control attribute](#) 134  
[DataSourcesType complex type](#) 152  
[DataSourceType complex type](#) 153  
[DataTypeReportParameterType simple type](#) 186  
[DecimalPlaces control attribute](#) 135  
[DefaultInsertButton control attribute](#) 135  
[DefaultPicture control attribute](#) 135  
[DefaultValue control attribute](#) 135  
[Detail form example](#) 213

## Details

[AcceptsReturn control attribute](#) 131  
[ActionInfoType complex type](#) 159  
[ActionsType complex type](#) 160  
[ActionType complex type](#) 160  
[AllowValueListEdits control attribute](#) 131  
[AlternateBackground control attribute](#) 132  
[Application complex type](#) 52  
[Application element](#) 24  
[ApplicationReference complex type](#) 58  
[ApplicationReference element](#) 25  
[Association control attribute](#) 132  
[attributes](#) 26  
[Background control attribute](#) 132  
[BodyType complex type](#) 155  
[BodyTypeReportItemsType complex type](#) 159  
[BorderThickness control attribute](#) 132  
[BorderType complex type](#) 176  
[Caption control attribute](#) 132  
[CellContentsImageType complex type](#) 168  
[CellContentsRectangleType complex type](#) 161

<a href="#">CellContentsTextboxType complex type</a>	164
<a href="#">CellContentsType complex type</a>	182
<a href="#">ColumnCount control attribute</a>	133
<a href="#">ColumnWidths control attribute</a>	133
<a href="#">ConnectionPropertiesType complex type</a>	153
<a href="#">ControlHeight control attribute</a>	133
<a href="#">ControlSource control attribute</a>	134
<a href="#">ControlsReportItemsType complex type</a>	158
<a href="#">ControlWidth control attribute</a>	134
<a href="#">CT Action complex type</a>	38
<a href="#">CT AdHocOrder complex type</a>	29
<a href="#">CT AdHocOrdering complex type</a>	29
<a href="#">CT Argument complex type</a>	37
<a href="#">CT CreateRecord complex types</a>	42
<a href="#">CT CreateRecordData complex type</a>	41
<a href="#">CT DataConditionalBlock complex type</a>	48
<a href="#">CT DataElse complex type</a>	47
<a href="#">CT DataElseIf complex type</a>	46
<a href="#">CT DataIf complex type</a>	45
<a href="#">CT DataMacro complex type</a>	55
<a href="#">CT DataMacros complex types</a>	53
<a href="#">CT DataMacroStatementGroup complex type</a>	51
<a href="#">CT DataMacroStatements complex type</a>	50
<a href="#">CT EditRecord complex type</a>	43
<a href="#">CT EditRecordData complex type</a>	43
<a href="#">CT Expression complex type</a>	26
<a href="#">CT ForEachRecord complex type</a>	39
<a href="#">CT ForEachRecordData complex type</a>	38
<a href="#">CT Join complex type</a>	32
<a href="#">CT Joins complex type</a>	33
<a href="#">CT LookupRecord complex type</a>	41
<a href="#">CT LookupRecordData complex type</a>	40
<a href="#">CT MacroReference complex type</a>	52
<a href="#">CT Object complex type</a>	57
<a href="#">CT Order complex type</a>	28
<a href="#">CT Ordering complex type</a>	28
<a href="#">CT Parameter complex type</a>	33
<a href="#">CT_ParameterDefinitions complex type</a>	( <a href="#">section 2.2.3.16</a> 34, <a href="#">section 2.2.3.17</a> 35)
<a href="#">CT Parameters complex type</a>	34
<a href="#">CT ParameterValue complex type</a>	35
<a href="#">CT ParameterValues complex type</a>	36
<a href="#">CT Property complex types</a>	27
<a href="#">CT PropertyBag complex type</a>	27
<a href="#">CT Query complex type</a>	36
<a href="#">CT RecordSource complex type</a>	55
<a href="#">CT Reference complex type</a>	30
<a href="#">CT References complex type</a>	30
<a href="#">CT Result complex type</a>	31
<a href="#">CT Results complex type</a>	32
<a href="#">CT Sub complex type</a>	49
<a href="#">CT_UserInterfaceConditionalBlock complex type</a>	47
<a href="#">CT_UserInterfaceElse complex type</a>	45
<a href="#">CT_UserInterfaceElseIf complex type</a>	44
<a href="#">CT_UserInterfaceIf complex type</a>	44
<a href="#">CT_UserInterfaceMacro complex types</a>	54
<a href="#">CT_UserInterfaceMacros complex type</a>	53
<a href="#">CT_UserInterfaceMacroStatementGroup complex type</a>	51
<a href="#">CT_UserInterfaceMcroStatements complex type</a>	49
<a href="#">CT_View complex type</a>	57
<a href="#">CT_ViewData complex type</a>	56
<a href="#">CurrencySymbol control attribute</a>	134
<a href="#">Cursor control attribute</a>	134
<a href="#">CustomPropertiesType complex type</a>	177
<a href="#">CustomPropertyType complex type</a>	178
<a href="#">DataMacros element</a>	25
<a href="#">DataSetsType complex type</a>	150
<a href="#">DataSetType complex type</a>	150
<a href="#">DatashheetCaption control attribute</a>	134
<a href="#">DataSourcesType complex type</a>	152
<a href="#">DataSourceType complex type</a>	153
<a href="#">DataTypeReportParameterType simple type</a>	186
<a href="#">DecimalPlaces control attribute</a>	135
<a href="#">DefaultInsertButton control attribute</a>	135
<a href="#">DefaultPicture control attribute</a>	135
<a href="#">DefaultValue control attribute</a>	135
<a href="#">DisplayAs control attribute</a>	135
<a href="#">DisplayAsHyperlink control attribute</a>	135
<a href="#">EffectSize control attribute</a>	136
<a href="#">FieldsType complex type</a>	151
<a href="#">FieldType complex type</a>	151
<a href="#">FlowDirection control attribute</a>	136
<a href="#">FontFamily control attribute</a>	136
<a href="#">FontSize control attribute</a>	136
<a href="#">FontStyle control attribute</a>	136
<a href="#">FontWeight control attribute</a>	137
<a href="#">Foreground control attribute</a>	137
<a href="#">FormatDataAs control attribute</a>	137
<a href="#">GridlineBorderBrush control attribute</a>	138
<a href="#">GroupExpressionsType complex type</a>	170
<a href="#">GroupType complex type</a>	170
<a href="#">Height control attribute</a>	137
<a href="#">HorizontalScrollBarVisibility control attribute</a>	137
<a href="#">HyperlinkAddress control attribute</a>	138
<a href="#">ImageStyleType complex type</a>	172
<a href="#">ImageType complex type</a>	167
<a href="#">ImageTypeSizingType simple type</a>	187
<a href="#">InheritValueList control attribute</a>	138
<a href="#">IsEnabled control attribute</a>	138
<a href="#">IsHyperlink control attribute</a>	138
<a href="#">LimitToList control attribute</a>	139
<a href="#">LineHeight control attribute</a>	139
<a href="#">LinkChildFields control attribute</a>	139
<a href="#">LinkMasterFields control attribute</a>	139
<a href="#">ListItemsEditForm control attribute</a>	139
<a href="#">ListWidth control attribute</a>	139
<a href="#">Locked control attribute</a>	140
<a href="#">MinHeight control attribute</a>	140
<a href="#">MinWidth control attribute</a>	140
<a href="#">Name control attribute</a>	140
<a href="#">NavigationButtons control attribute</a>	140
<a href="#">NavigationParent control attribute</a>	141
<a href="#">NavigationParentButton control attribute</a>	141
<a href="#">NavigationTargetName control attribute</a>	141
<a href="#">NavigationTargetSubform control attribute</a>	141
<a href="#">NavigationWhereClause control attribute</a>	141
<a href="#">Ordering element</a>	24
<a href="#">Padding control attributes</a>	141



[PageBreakLocationType simple type](#) 189  
[PageBreakType complex type](#) 186  
[PageFooterSectionType complex type](#) 157  
[PageHeaderSectionType complex type](#) 156  
[PageSize control attribute](#) 142  
[PageType complex type](#) 155  
[ParagraphStyleType complex type](#) 175  
[ParagraphsType complex type](#) 165  
[ParagraphType complex type](#) 166  
[Picture control attributes](#) 142  
[PictureAlignment control attribute](#) 142  
[PictureCaptionArrangement control attribute](#) 142  
[PictureSizeMode control attribute](#) 142  
[PictureTiling control attribute](#) 142  
[Query element](#) 24  
[QueryParametersType complex type](#) 154  
[QueryParameterType complex type](#) 154  
[QueryType complex type](#) 152  
[RectangleStyleType complex type](#) 171  
[Report complex type](#) 147  
[Report element](#) 147  
[ReportHeaderRectangleType complex type](#) 162  
[ReportParametersType complex type](#) 149  
[ReportParameterType complex type](#) 149  
[ReportSectionsType complex type](#) 148  
[ReportSectionType complex type](#) 148  
[RowSourceType control attribute](#) 142  
[ScrollBars control attribute](#) 143  
[SeparatorCharacters control attribute](#) 143  
[ShowColumnHeader control attributes](#) 143  
[SizeMode control attribute](#) 143  
[SizeType simple type](#) 188  
[SortExpressionDirectionType simple type](#) 187  
[SortExpressionsType complex type](#) 171  
[SortExpressionType complex type](#) 171  
[SourceObject control attribute](#) 143  
[Span control attribute](#) 144  
[ST\\_FieldType simple type](#) 63  
[ST\\_JoinDirection simple type](#) 62  
[ST\\_LongString simple type](#) 62  
[ST\\_ObjectName simple type](#) 59  
[ST\\_ShortString simple type](#) 61  
[ST\\_SortDirection simple type](#) 63  
[ST\\_UserInterfaceObjectEvent simple type](#)  
 ( [section 2.2.4.2](#) 60, [section 2.2.4.3](#) 61)  
[StringLocIDType complex type](#) 176  
[Style control attribute](#) 144  
[StyleHover control attribute](#) 144  
[StyleSelected control attribute](#) 144  
[SubBorderType complex type](#) 175  
[TablixBodyType complex type](#) 179  
[TablixCellsType complex type](#) 185  
[TablixCellType complex type](#) 185  
[TablixColumnHierarchyType complex type](#) 180  
[TablixColumnMembersType complex type](#) 181  
[TablixColumnsType complex type](#) 183  
[TablixColumnType complex type](#) 183  
[TablixRowHierarchyType complex type](#) 179  
[TablixRowMembersType complex type](#) 180  
[TablixRowMemberType complex type](#) 181  
[TablixRowsType complex type](#) 184  
[TablixRowType complex type](#) 184  
[TablixType complex type](#) 178  
[TabularBorderStyle control attribute](#) 144  
[TextAlignment control attribute](#) 144  
[TextboxRectangleReportItemsType complex type](#)  
 158  
[TextboxRectangleType complex type](#) 161  
[TextBoxStyleType complex type](#) 174  
[TextboxType complex type](#) 163  
[TextDecorations control attribute](#) 145  
[TextFormat control attribute](#) 145  
[TextRunStyleType complex type](#) 173  
[TextRunsType complex type](#) 166  
[TextRunType complex type](#) 166  
[ToolTip control attribute](#) 145  
[UserInterfaceMacro elements](#) 25  
[UserInterfaceMacros elements](#) 24  
[VerticalScrollBarVisibility control attribute](#) 145  
[View element](#) 25  
[Visibility control attribute](#) 146  
[VisibilityType complex type](#) 160  
[WebImageCluster control attribute](#) 146  
[WebImageLeft control attribute](#) 146  
[WebImageTop control attribute](#) 146  
[Width control attribute](#) 146  
[DisplayAs control attribute](#) 135  
[DisplayAsHyperlink control attribute](#) 135

## E

[EffectSize control attribute](#) 136  
 Elements  
[Application](#) 24  
[ApplicationReference](#) 25  
[DataMacros](#) 25  
[Ordering](#) 24  
[Query](#) 24  
[Report](#) 147  
[UserInterfaceMacro](#) 25  
[UserInterfaceMacros](#) 24  
[View](#) 25  
[XAML](#) 77  
[Examples](#) 213  
[after insert](#) 224  
[Application Element](#) 213  
[Data Macros](#) 223  
[datasheet form](#) 218  
[detail form](#) 213  
[filtering](#) 222  
[Forms](#) 213  
[grouped report with aggregate expressions](#) 228  
[multiple reference query with join](#) 227  
[named macro](#) 225  
[navigation form](#) 217  
[overview](#) 213  
[Queries](#) 226  
[Reports](#) 228  
[single reference query](#) 226  
[standalone](#) 222  
[UI Macros](#) 220  
[validate delete](#) 223  
[validation and exceptions](#) 220

## Expressions

- [data macros](#) 189
- [filters](#) 194
- [forms](#) 196
- [query columns](#) 199
- [query restrictions](#) 203
- [reports](#) 205
- [user interface macros](#) 206

## F

- [Fields - security index](#) 234
- [Fields - vendor-extensible](#) 20
- [FieldType complex type](#) 151
- [Filtering example](#) 222
- Filters
  - [function names](#) 196
  - [syntax](#) 194
- [FlowDirection control attribute](#) 136
- [FontFamily control attribute](#) 136
- [FontSize control attribute](#) 136
- [FontStyle control attribute](#) 136
- [FontWeight control attribute](#) 137
- [Foreground control attribute](#) 137
- [Form controls overview](#) 17
- [Form sections overview](#) 16
- [Form styles overview](#) 17
- [FormatDataAs control attribute](#) 137

## Forms

- [function names](#) 198
- [syntax](#) 197
- [Forms example](#) 213
- [Forms overview](#) 16
  - [controls](#) 17
  - [sections](#) 16
  - [styles](#) 17
- [Full XML schema](#) 235
- Function names
  - [data macro](#) 192
  - [filters](#) 196
  - [forms](#) 198
  - [query columns](#) 201
  - [query restrictions](#) 204
  - [user interface macros](#) 210

## Functions

- [reports](#) 205

## G

- [Glossary](#) 14
- [GridlineBorderBrush control attribute](#) 138
- [Grouped report with aggregate expressions example](#) 228
- [GroupExpressionsType complex type](#) 170
- [GroupType complex type](#) 170

## H

- [Height control attribute](#) 137
- [HorizontalScrollBarVisibility control attribute](#) 137
- [HyperlinkAddress control attribute](#) 138

## I

- [ImageStyleType complex type](#) 172
- [ImageType complex type](#) 167
- [ImageTypeSizingType simple type](#) 187
- [Implementer - security considerations](#) 234
- [Index of security fields](#) 234
- [Informative references](#) 16
- [InheritValueList control attribute](#) 138
- [Introduction](#) 14
- [IsEnabled control attribute](#) 138
- [IsHyperlink control attribute](#) 138

## L

- [LimitToList control attribute](#) 139
- [LineHeight control attribute](#) 139
- [LinkChildFields control attribute](#) 139
- [LinkMasterFields control attribute](#) 139
- [ListItemsEditForm control attribute](#) 139
- [ListWidth control attribute](#) 139
- [Localization](#) 19
- [Locked control attribute](#) 140

## M

- [MinHeight control attribute](#) 140
- [MinWidth control attribute](#) 140
- [Multiple reference query with join example](#) 227

## N

- [Name control attribute](#) 140
- [Named macro example](#) 225
- [Navigation form example](#) 217
- [NavigationButtons control attribute](#) 140
- [NavigationParent control attribute](#) 141
- [NavigationParentButton control attribute](#) 141
- [NavigationTargetName control attribute](#) 141
- [NavigationTargetSubform control attribute](#) 141
- [NavigationWhereClause control attribute](#) 141
- [Normative references](#) 15

## O

- [Ordering element](#) 24
- [Overview \(synopsis\)](#) 16
  - [application element](#) 16
  - [application reference](#) 19
  - [data macros](#) 18
  - [forms](#) 16
  - [queries](#) 18
  - [reports](#) 19
  - [UI macros](#) 17

## P

- [Padding control attributes](#) 141
- [PageBreakLocationType simple type](#) 189
- [PageBreakType complex type](#) 186
- [PageFooterSectionType complex type](#) 157
- [PageHeaderSectionType complex type](#) 156

[PageSize control attribute](#) 142  
[PageType complex type](#) 155  
[ParagraphStyleType complex type](#) 175  
[ParagraphsType complex type](#) 165  
[ParagraphType complex type](#) 166  
[Picture control attributes](#) 142  
[PictureAlignment control attribute](#) 142  
[PictureCaptionArrangement control attribute](#) 142  
[PictureSizeMode control attribute](#) 142  
[PictureTiling control attribute](#) 142  
[Product behavior](#) 274

## Q

[Queries example](#) 226  
[Queries overview](#) 18  
Query columns  
  [function names](#) 201  
  [syntax](#) 199  
[Query element](#) 24  
Query restrictions  
  [function names](#) 204  
  [syntax](#) ([section 2.5.5.1](#) 203, [section 2.5.5.1](#) 203)  
[QueryParametersType complex type](#) 154  
[QueryParameterType complex type](#) 154  
[QueryType complex type](#) 152

## R

[RDL attributes](#) 147  
[RectangleStyleType complex type](#) 171  
[References](#) 15  
  [informative](#) 16  
  [normative](#) 15  
[Relationship to protocols and other structures](#) 19  
[Report complex type](#) 147  
[Report element](#) 147  
[ReportHeaderRectangleType complex type](#) 162  
[ReportParametersType complex type](#) 149  
[ReportParameterType complex type](#) 149  
Reports  
  [functions](#) 205  
    [evaluate syntax](#) 206  
    [sanitizeUrlProtocol syntax](#) 206  
  [syntax](#) ([section 2.5.6.1](#) 205, [section 2.5.6.1](#) 205)  
[Reports example](#) 228  
[Reports overview](#) 19  
[ReportSectionsType complex type](#) 148  
[ReportSectionType complex type](#) 148  
[RowSourceType control attribute](#) 142

## S

[ScrollBars control attribute](#) 143  
Security  
  [field index](#) 234  
  [implementer considerations](#) 234  
[SeparatorCharacters control attribute](#) 143  
[ShowColumnHeader control attributes](#) 143  
Simple types  
  [DataTypeReportParameterType](#) 186  
  [ImageTypeSizingType](#) 187

[PageBreakLocationType](#) 189  
[SizeType](#) 188  
[SortExpressionDirectionType](#) 187  
[ST\\_FieldType](#) 63  
[ST\\_JoinDirection](#) 62  
[ST\\_LongString](#) 62  
[ST\\_ObjectName](#) 59  
[ST\\_ShortString](#) 61  
[ST\\_SortDirection](#) 63  
ST\_UserInterfaceObjectEvent ([section 2.2.4.2](#) 60, [section 2.2.4.3](#) 61)  
[Single reference query example](#) 226  
[SizeMode control attribute](#) 143  
[SizeType simple type](#) 188  
[SortExpressionDirectionType simple type](#) 187  
[SortExpressionsType complex type](#) 171  
[SortExpressionType complex type](#) 171  
[SourceObject control attribute](#) 143  
[Span control attribute](#) 144  
[ST\\_FieldType simple type](#) 63  
[ST\\_JoinDirection simple type](#) 62  
[ST\\_LongString simple type](#) 62  
ST\_ObjectName simple type ([section 2.2.4.1](#) 59, [section 2.6.4.2](#) 212)  
ST\_ShortString simple type ([section 2.2.4.4](#) 61, [section 2.6.4.1](#) 212)  
[ST\\_SortDirection simple type](#) 63  
ST\_UserInterfaceObjectEvent simple type ([section 2.2.4.2](#) 60, [section 2.2.4.3](#) 61)  
[Standalone example](#) 222  
[StringLocIDType complex type](#) 176  
Structures  
  [ACCDW](#) 210  
  [application](#) 21  
  [arguments](#) 71  
  [AXL](#) 23  
  [conceptual overview](#) 21  
  [control attributes](#) 131  
  [data macros](#) 22  
  [expressions](#) 189  
  [forms](#) 21  
  [ignored value](#) 23  
  [macros](#) ([section 2.1.3](#) 21, [section 2.2.5](#) 64)  
  [queries](#) 22  
  [RDL](#) 147  
  [reports](#) 23  
  [shared images](#) 23  
  [user interface macros](#) 22  
  [variables](#) 22  
  [XAML](#) 77  
[Style control attribute](#) 144  
[StyleHover control attribute](#) 144  
[StyleSelected control attribute](#) 144  
[SubBorderType complex type](#) 175  
Syntax  
  [data macro](#) 189  
  [filters](#) 194  
  [forms](#) 197  
  [query columns](#) 199  
  [query restrictions](#) 203  
  [reports](#) 205

[user interface macros](#) 206

[XAML elements](#) 77

[XML schema](#) 235

## T

[TablixBodyType complex type](#) 179  
[TablixCellsType complex type](#) 185  
[TablixCellType complex type](#) 185  
[TablixColumnHierarchyType complex type](#) 180  
[TablixColumnMembersType complex type](#) 181  
[TablixColumnsType complex type](#) 183  
[TablixColumnType complex type](#) 183  
[TablixRowHierarchyType complex type](#) 179  
[TablixRowMembersType complex type](#) 180  
[TablixRowMemberType complex type](#) 181  
[TablixRowsType complex type](#) 184  
[TablixRowType complex type](#) 184  
[TablixType complex type](#) 178  
[TabularBorderStyle control attribute](#) 144  
[TextAlignment control attribute](#) 144  
[TextboxRectangleReportItemsType complex type](#)  
158  
[TextboxRectangleType complex type](#) 161  
[TextBorderStyleType complex type](#) 174  
[TextboxType complex type](#) 163  
[TextDecorations control attribute](#) 145  
[TextFormat control attribute](#) 145  
[TextRunStyleType complex type](#) 173  
[TextRunsType complex type](#) 166  
[TextRunType complex type](#) 166  
[ToolTip control attribute](#) 145  
[Tracking changes](#) 275

## U

[UI Macros example](#) 220  
[UI macros overview](#) 17  
User interface macros  
    [function names](#) 210  
    [syntax](#) 206  
[UserInterfaceMacro elements](#) 25  
[UserInterfaceMacros elements](#) 24

## V

[Validate delete example](#) 223  
[Validation and exceptions example](#) 220  
[Vendor-extensible fields](#) 20  
[Versioning](#) 19  
[VerticalScrollBarVisibility control attribute](#) 145  
[View element](#) 25  
[Visibility control attribute](#) 146  
[VisibilityType complex type](#) 160

## W

[WebImageCluster control attribute](#) 146  
[WebImageLeft control attribute](#) 146  
[WebImageTop control attribute](#) 146  
[Width control attribute](#) 146

## X