#### path (Shape Path)

This element defines the path that makes up the shape. This is done through a string that contains a rich set of pen movement commands.  This element also describes the limo-stretch point, inscribed [textbox](textbox.docx) rectangle locations and connection site locations.  The limo-stretch definition and the [formulas](formulas.docx) element (§) allow greater designer control of how the path scales.  They allow, for example, definition of a true rounded corner rectangle where the corners remain circular even though the rectangle is scaled anisotropically.

|  |
| --- |
| Parent Elements |
| [arc](arc.docx) (§); [background](background.docx) (§); [curve](curve.docx) (§); [group](group.docx) (§); [image](image.docx) (§); [line](line.docx) (§); object (§); [oval](oval.docx) (§); pict (§); pict (§); [polyline](polyline.docx) (§); [rect](rect.docx) (§); [roundrect](roundrect.docx) (§); shape (§); [shapetype](shapetype.docx) (§) |

|  |  |
| --- | --- |
| Attributes | Description |
| arrowok (Arrowhead Display Toggle) | Specifies whether arrowheads are allowed to be displayed. This attribute overrides all other arrowhead attributes in the parent or the [stroke](stroke.docx) element (§). [Default](Default.docx) is false.  [Example:  <v:[shape](shape.docx) style="width:50;height:50">  <v:[stroke](stroke.docx) endarrow="block"/>  <v:path arrowok="true"  v="m 0,0 l 1000,0 1000,1000 e"/>  </v:[shape](shape.docx)>    end example]  The possible values for this attribute are defined by the [ST\_TrueFalse](ST_TrueFalse.docx) simple type (§). |
| connectangles (Connection Point Connect Angles)  Namespace: urn:schemas-microsoft-com:office:office | Specifies the angle at which curves connect to a shape's connection points. The connection angles are defined by a string consisting of angle values delimited by commas. [Default](Default.docx) is no value.  [Example: Connections are made along the horizontal and vertical axes:  <v:path ... o:connectangles="0,90,180,270" ... >  </v:path>  end example]  The possible values for this attribute are defined by the XML Schema string datatype. |
| connectlocs (Connection Points)  Namespace: urn:schemas-microsoft-com:office:office | Specifies the location of connection points on a path. The connection points are defined by a string consisting of pairs of x and y values, delimited by commas. This is used if connecttype is custom. [Default](Default.docx) is no value.  [Example: Connection points exist at the midpoints of the sides of the square:  <v:path ... v="m 0,0 l 100,0 100,100 0,100 x e"  o:connectlocs="50,0;100,50;50,100;0,50" ... >  </v:path>  end example]  The possible values for this attribute are defined by the XML Schema string datatype. |
| connecttype (Connection Point Type)  Namespace: urn:schemas-microsoft-com:office:office | Specifies the type of connection points used for attaching shapes to other shapes. [Default](Default.docx) is none. If set to custom, connectlocs is used. Allowed values are:  [Example:  <v:path ... o:connecttype="custom"  o:connectlocs="50,0;100,50;50,100;0,50" ... >  </v:path>  end example]  The possible values for this attribute are defined by the [ST\_ConnectType](ST_ConnectType.docx) simple type (§). |
| extrusionok (Extrusion Toggle)  Namespace: urn:schemas-microsoft-com:office:office | Specifies whether an [extrusion](extrusion.docx) is allowed to be displayed. This attribute overrides all other [extrusion](extrusion.docx) attributes in the parent or the [extrusion](extrusion.docx) element (§). [Default](Default.docx) is true.  [Example:  <v:[rect](rect.docx) fillcolor="lime"  style="width:50;height:50">  <v:[extrusion](extrusion.docx) on="true"/>  <v:path o:extrusionok="false"/>  </v:[rect](rect.docx)>  <v:path o:extrusionok="false"/>  <v:path o:extrusionok="true"/>  end example]  The possible values for this attribute are defined by the [ST\_TrueFalse](ST_TrueFalse.docx) simple type (§). |
| fillok (Shape Fill Toggle) | Specifies whether a [fill](fill.docx) is allowed to be displayed. This attribute overrides all other [fill](fill.docx) attributes in the parent or [fill](fill.docx) element (§). [Default](Default.docx) is true.  [Example:  <v:[shape](shape.docx) style="width:50;height:50"  fillcolor="red">  <v:path fillok="false"  v="m 0,0 l 0,1000, 1000,1000, 1000,0 x e"/>  </v:[shape](shape.docx)>    end example]  The possible values for this attribute are defined by the [ST\_TrueFalse](ST_TrueFalse.docx) simple type (§). |
| gradientshapeok (Gradient Shape Toggle) | Specifies whether a gradient path will be made up of repeated concentric paths. [Default](Default.docx) is false.  If true, a gradient [fill](fill.docx) can be produced by repeated drawing of scaled versions of the path - this must only be set if it is possible to scale the path in such a way that a [fill](fill.docx) is always contained in the original path.  This controls the interpretation of the type="gradientradial" attribute of the [fill](fill.docx) element (§).  [Example: In the first case, the radial gradient is aligned irrespective of the shape's path:  <v:[shape](shape.docx) style="width:50;height:50;rotation:45"  path="m 0,0 l 0,1000, 1000,1000, 1000,0 x e">  <v:path gradientshapeok="false"/>  <v:[fill](fill.docx) type="gradientradial"  color="red" color2="blue"/>  </v:[shape](shape.docx)>  gradientshapeok="false"  gradientshapeok="true"  end example]  The possible values for this attribute are defined by the [ST\_TrueFalse](ST_TrueFalse.docx) simple type (§). |
| id (Unique Identifier) | Specifies a unique identifier that can be used to reference a [VML](VML.docx) object.  [Default](Default.docx) is no value.  [Example:  <v:shape ... id="myShape" ... >  </v:[shape](shape.docx)>  end example]  The possible values for this attribute are defined by the XML Schema string datatype. |
| insetpenok (Inset Stroke From Path Flag) | Specifies whether the [stroke](stroke.docx) may be inset from the path. If this is false, it overrides the insetpen attribute and prevents the [stroke](stroke.docx) from being inset.  [Example: The [stroke](stroke.docx) is not inset:  <v:[shape](shape.docx) ... insetpen="true">  <v:path ... insetpenok="false"/>  </v:[shape](shape.docx)>  end example]  The possible values for this attribute are defined by the [ST\_TrueFalse](ST_TrueFalse.docx) simple type (§). |
| limo (Limo Stretch Point) | Specifies a stretch point on the shape's edge that defines where and how a shape is allowed to be stretched by a user in a graphical editor. [Default](Default.docx) is "0,0".  [Example:  <v:[line](line.docx) from="20pt,20pt" to="100pt,20pt">    <v:path limo="60pt,20pt"/>  </v:[line](line.docx)>  end example]  The possible values for this attribute are defined by the XML Schema string datatype. |
| shadowok (Shadow Toggle) | Specifies whether a [shadow](shadow.docx) is allowed to be displayed. This attribute overrides all other [shadow](shadow.docx) attributes in the parent or the [shadow](shadow.docx) element (§). [Default](Default.docx) is true.  [Example: The shape has no shadow:  <v:[shape](shape.docx) style="width:50;height:50">  <v:path v="m 0,0 l 0,1000, 1000,1000, 1000,0 x e"  shadowok="false"/>  <v:[shadow](shadow.docx) on="true"/>  </v:[shape](shape.docx)>  end example]  The possible values for this attribute are defined by the [ST\_TrueFalse](ST_TrueFalse.docx) simple type (§). |
| strokeok (Stroke Toggle) | Specifies whether a [stroke](stroke.docx) will be displayed. This attribute overrides all other [stroke](stroke.docx) attributes in the parent or the [stroke](stroke.docx) element (§). [Default](Default.docx) is true.  [Example: The shape's red [stroke](stroke.docx) is not shown:  <v:[shape](shape.docx) style="width:50;height:50"  fillcolor="blue" strokecolor="red">  <v:path v="m 0,0 l 0,1000, 1000,1000, 1000,0 x e"  strokeok="false"/>  </v:[shape](shape.docx)>    end example]  The possible values for this attribute are defined by the [ST\_TrueFalse](ST_TrueFalse.docx) simple type (§). |
| textboxrect (Text Box Bounding Box) | Specifies one or more text boxes inside a shape. [Default](Default.docx) is the same as the geometry's bounding box.  A [textbox](textbox.docx) is defined by one or more sets of numbers specifying (in order) the left, top, right, and bottom points of the rectangle. Multiple sets are delimited by a semicolon. The default value is the same dimension value as the containing rectangle. If more than one [textbox](textbox.docx) is defined, the comma-delimited quadruple sets that define each [textbox](textbox.docx) are separated by semicolons. Normally textboxes come in sets of 1, 2, 3, or 6 rectangles on a shape. The textboxrect dimensions clip any text that extends beyond its region.  [Example: The [textbox](textbox.docx) is 25% down from the top and the exclamation point is clipped:  <v:[shape](shape.docx) style="width:60;height:50">  <v:path v="m 0,0 l 0,1000, 1000,1000, 1000,0 x e"  textboxrect="0,250,850,1000"/>  <v:[textbox](textbox.docx)>VML!</v:[textbox](textbox.docx)>  </v:[shape](shape.docx)>    end example]  The possible values for this attribute are defined by the XML Schema string datatype. |
| textpathok (Text Path Toggle) | Specifies whether a text path will be displayed. [Default](Default.docx) is false.  If true, this indicates that the path is an appropriate warping path for the [textpath](textpath.docx) element (§).  Otherwise, the [textpath](textpath.docx) element must be ignored.  [Example: The defined [textpath](textpath.docx) is ignored:  <v:[curve](curve.docx) from="50,100" to="400,100"   control1="200,200" control2="300,200">  <v:path textpathok="false"/>  <v:[textpath](textpath.docx) on="false" style="font:normal normal  normal 36pt Arial" string="[textpath](textpath.docx)"/>  </v:[curve](curve.docx)>    end example]  The possible values for this attribute are defined by the [ST\_TrueFalse](ST_TrueFalse.docx) simple type (§). |
| v (Path Definition) | Specifies a string containing the commands that define the shape's path. This value consists of commands followed by zero or more parameters. [Default](Default.docx) is no value.  The following [rules](rules.docx) apply to path strings:   * Commas or spaces delimit parameters for each command.  Both "m 0,0" and "m0 0" are acceptable. * A parameter that is omitted using commas is treated as having a value of zero. Thus, "c 10,10,0,0,25,13" and "c 10,10,,,25,13" are equivalent. * Parameterized paths are also allowed. In this case, the shape must also have a [formulas](formulas.docx) element (§) with a list of [formulas](formulas.docx) that are substituted into the path using the @ symbol followed by the number of the formula. The adj property of the shape contains the input parameters for these formulas.  For example, "moveto @1@4".   The evaluations of the [formulas](formulas.docx) are substituted into the appropriate positions.  Note that @ also serves as a delimiter.   The allowed commands are given below. An asterisk (\*) indicates that the command is allowed to be repeated. For the qb command, the controlpoint parameter is also allowed to be repeated.   |  |  |  |  | | --- | --- | --- | --- | | Command | Name | Parameters | Description | | m | moveto | 2 | Start a new sub-path at the given (x,y) coordinate. | | l | lineto | 2\* | Draw a [line](line.docx) from the current point to the given (x,y) coordinate which becomes the new current point. Specifying a number of coordinate pairs forms a polyline. | | c | curveto | 6\* | Draw a cubic bézier [curve](curve.docx) from the current point to the coordinate given by the final two parameters. The control points are given by the first four parameters. | | x | close | 0 | Close the current sub-path by drawing a straight [line](line.docx) from the current point to the original moveto point. | | e | end | 0 | End the current set of sub-paths. A given set of sub-paths (as delimited by end) is filled. Subsequent sets of sub-paths are filled independently and superimposed on existing ones. | | t | rmoveto | 2\* | Start a new sub-path at a coordinate relative to the current point, cp (cpx+x, cpy+y). | | [r](r.docx) | rlineto | 2\* | Draw a [line](line.docx) from the current point to the given relative coordinate (cpx+x, cpy+y). | | v | rcurveto | 6\* | Cubic bézier [curve](curve.docx) using the given coordinate relative to the current point. | | nf | nofill | 0 | The current set of sub-paths (delimited by e) will not be filled. | | ns | nostroke | 0 | The current set of sub-paths (delimited by e) will not be stroked. | | ae | angleellipseto | 6\* | Draws a segment of an ellipse as described using these parameters. A straight [line](line.docx) is drawn from the current point to the start point of the segment. The parameters are: center (x,y), size(w,h), start angle, end angle. | | al | angleellipse | 6\* | Same as angleellipseto except that there is an implied moveto the starting point of the segment. | | at | arcto | 8\* | A segment of the ellipse is drawn which starts at the angle defined by the start radius vector and ends at the angle defined by the end vector. A straight [line](line.docx) is drawn from the current point to the start of the arc. The [arc](arc.docx) is always drawn in a counterclockwise direction. The parameters are: left, top, right, bottom, start(x,y), end(x,y). The first four values define the bounding box of an ellipse. The last four define two radial vectors. | | ar | [arc](arc.docx) | 8\* | Same as arcto except there is an implied moveto the start point of the arc. | | wa | clockwisearcto | 8\* | Same as arcto but the [arc](arc.docx) is drawn in a clockwise direction. | | wr | clockwisearc | 8\* | Same as [arc](arc.docx) but the [arc](arc.docx) is drawn in a clockwise direction | | qx | ellipticalqaudrantx | 2\* | A quarter ellipse is drawn from the current point to the given end point. The elliptical segment is initially tangential to a [line](line.docx) parallel to the x-axis. (i.e. the segment starts out horizontal). The parameters are: end(x,y). | | qy | ellipticalquadranty | 2\* | Same as ellipticalquadrantx except that the elliptical segment is initially tangential to a [line](line.docx) parallel to the y-axis (i.e. the segment starts out vertical). | | qb | quadraticbezier | 2+2\* | Defines one or more quadratic bézier curves by means of control points and an end point.  Intermediate (on-curve) points are obtained by interpolation between successive control points as in the OpenType font specification.  The sub-path need not be started in which case the sub-path will be closed.  In this case the last point of the sub-path defines the start point of the quadratic bézier. The parameters are: controlpoint(x,y)\*, end(x,y). |   The possible values for this attribute are defined by the XML Schema string datatype. |

The following XML Schema fragment defines the contents of this element:

<complexType name="CT\_Path">

<attributeGroup ref="AG\_Id"/>

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

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

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

<attribute name="fillok" type="[ST\_TrueFalse](ST_TrueFalse.docx)" use="optional"/>

<attribute name="strokeok" type="[ST\_TrueFalse](ST_TrueFalse.docx)" use="optional"/>

<attribute name="shadowok" type="[ST\_TrueFalse](ST_TrueFalse.docx)" use="optional"/>

<attribute name="arrowok" type="[ST\_TrueFalse](ST_TrueFalse.docx)" use="optional"/>

<attribute name="gradientshapeok" type="[ST\_TrueFalse](ST_TrueFalse.docx)" use="optional"/>

<attribute name="textpathok" type="[ST\_TrueFalse](ST_TrueFalse.docx)" use="optional"/>

<attribute name="insetpenok" type="[ST\_TrueFalse](ST_TrueFalse.docx)" use="optional"/>

<attribute ref="o:connecttype"/>

<attribute ref="o:connectlocs"/>

<attribute ref="o:connectangles"/>

<attribute ref="o:extrusionok"/>

</complexType>