# z3c.RML Reference

Version 1.1

## Introduction

RML is a XML dialect for generating PDF files. Like HTML produces a page within the browser, RML produces a PDF file. The RML processor uses the ReportLab library to convert the RML text into a full PDF template.

The original version of RML was developed by ReportLab, Inc. as a commercial extension to the free ReportLab library. This original version of RML is still available and supported by ReportLab, Inc. This version of RML, z3c.RML, is a free implementation of the XML dialect based on the available documentation. While it tries to keep some level of compatibility with the original version of RML, it is intended to provde a as clean and feature-rich API as possible.

The contents of this document is auto-generated from the code itself and should thus be very accurate and complete.

# **Attribute Types**

This section list the types of attributes used for the attributes within the RML elements.

## **Boolean**

A boolean value. For true the values "true", "yes", and "1" are allowed. For false, the values "false", "no", "1" are allowed.

## **BooleanWithDefault**

This is a boolean field that can also receive the value "default".

## Choice

A choice of several values. The values are always case-insensitive.

#### Color

Requires the input of a color. There are several supported formats. Three values in a row are interpreted as RGB value ranging from 0-255. A string is interpreted as a name to a pre-defined color. The 'CMYK()' wrapper around four values represents a CMYK color specification.

## **Combination**

A combination of several other attribute types.

## **File**

This field will return a file object. The value itself can eith be be a relative or absolute path. Additionally the following syntax is supported: [path.to.python.mpackage]/path/to/file

## **FirstLevelTextNode**

Gets all the text content of an element without traversing into any child-elements.

#### **Float**

An flaoting point. A minimum and maximum value can be specified.

#### **Image**

Similar to the file File attribute, except that an image is internally expected.

#### Integer

An integer. A minimum and maximum value can be specified.

## Measurement

This field represents a length value. The units "in" (inch), "cm", and "mm" are allowed. If no units are specified, the value is given in points/pixels.

## **PageSize**

A simple measurement pair that specifies the page size. Optionally you can also specify a the name of a page size, such as A4, letter, or legal.

## **RawXMLContent**

Retrieve the raw content of an element. Only some special element substitution will be made.

## Sequence

A list of values of a specified type.

## String

A simple Bytes string.

## **StringOrInt**

A (bytes) string or an integer.

## **Style**

Requires a valid style to be entered. Whether the style is a paragraph, table or box style is irrelevant, except that it has to fit the tag.

## **Symbol**

This attribute should contain the text representation of a symbol to be used.

## **Text**

A simple unicode string.

## **TextNode**

Return the text content of an element.

## **TextNodeGrid**

A grid/matrix of values retrieved from the element's content. The number of columns is specified for every case, but the number of rows is dynamic.

## **TextNodeSequence**

A sequence of values retrieved from the element's content.

## **XMLContent**

Same as 'RawXMLContent', except that the whitespace is normalized.

## **Directives**

## addMapping

Map various styles(bold, italic) of a font name to the actual ps fonts used.

```
Attributes
```

```
faceName (required) - String
Name: The name of the font to be mapped
bold (required) - Integer
Bold: Bold

italic (required) - Integer
Italic: Italic

psName (required) - String
psName: Actual font name mapped
```

## **Examples**

#### alias

Defines an alias for a given style.

#### Attributes

```
id (required) - StringId: The id as which the style will be known.value (required) - StyleValue: The style that is represented.
```

#### **Examples**

## har

Define the look of a bar.

#### Attributes

## barChart

Creates a two-dimensional bar chart.

#### Attributes

#### dx - Measurement

*Drawing X-Position*: The x-position of the entire drawing on the canvas.

#### dy - Measurement

*Drawing Y-Position*: The y-position of the entire drawing on the canvas.

#### **dwidth** - Measurement

Drawing Width: The width of the entire drawing

#### **dheight** - Measurement

Drawing Height: The height of the entire drawing

#### angle - Float

Angle: The orientation of the drawing as an angle in degrees.

#### **x** - Measurement

Chart X-Position: The x-position of the chart within the drawing.

#### y - Measurement

Chart Y-Position: The y-position of the chart within the drawing.

#### width - Measurement

Chart Width: The width of the chart.

## **height** - Measurement

*Chart Height*: The height of the chart.

#### strokeColor - Color

Stroke Color: Color of the chart border.

#### strokeWidth - Measurement

Stroke Width: Width of the chart border.

## fillColor - Color

Fill Color: Color of the chart interior.

#### debug - Boolean

Debugging: A flag that when set to True turns on debug messages.

#### direction - Choice of ('horizontal', 'vertical')

Direction: The direction of the bars within the chart.

#### useAbsolute - Boolean

Use Absolute Spacing: Flag to use absolute spacing values.

## **barWidth** - Measurement

Bar Width: The width of an individual bar.

## groupSpacing - Measurement

Group Spacing: Width between groups of bars.

## barSpacing - Measurement

Bar Spacing: Width between individual bars.

#### barLabelFormat - String

Bar Label Text Format: Formatting string for bar labels.

## Sub-Directives

data (One)

bars (ZeroOrOne)

categoryAxis (ZeroOrOne)

valueAxis (ZeroOrOne)

barLabels (ZeroOrOne)

texts (ZeroOrOne)

```
<barChart xmlns:doc="http://namespaces.zope.org/rml/doc" dx="2in" dy="7in"</pre>
            dwidth="6in" dheight="4in" x="0" y="0" width="5in" height="3in"
            barSpacing="7" groupSpacing="15">
    <bars>
      <bar fillColor="blue" strokeColor="red" strokeWidth="0.5"/>
      <bar fillColor="yellow" strokeColor="green" strokeWidth="1"/>
    </bars>
    <categoryAxis strokeColor="black" strokeWidth="1">
      <labels fontName="Helvetica" fontSize="20"/>
      <categoryNames>
        <name>Category 1
        <name>Category 2
        <name>Category 3
        <name>Category 4</name>
      </categoryNames>
    </categoryAxis>
    <valueAxis valueMin="0" valueMax="150" valueStep="30" visibleTicks="true"</pre>
               visibleLabels="true">
      <labels fontName="Helvetica"/>
    </valueAxis>
    <data>
      <series>100 110 120 130
      <series> 70  80  85  90</series>
    </data>
  </barChart>
                                         [PDF]
  (Extracted from file tag-barChart.rml, line 19)
Creates a three-dimensional bar chart.
  dx - Measurement
```

## barChart3D

#### Attributes

*Drawing X-Position*: The x-position of the entire drawing on the canvas.

**dv** - Measurement

Drawing Y-Position: The y-position of the entire drawing on the canvas.

**dwidth** - Measurement

Drawing Width: The width of the entire drawing

**dheight** - Measurement

Drawing Height: The height of the entire drawing

angle - Float

Angle: The orientation of the drawing as an angle in degrees.

**x** - Measurement

*Chart X-Position*: The x-position of the chart within the drawing.

*Chart Y-Position*: The y-position of the chart within the drawing.

width - Measurement

Chart Width: The width of the chart.

**height** - Measurement

Chart Height: The height of the chart.

strokeColor - Color

Stroke Color: Color of the chart border.

strokeWidth - Measurement

Stroke Width: Width of the chart border.

fillColor - Color

Fill Color: Color of the chart interior.

```
Debugging: A flag that when set to True turns on debug messages.
  direction - Choice of ('horizontal', 'vertical')
     Direction: The direction of the bars within the chart.
  useAbsolute - Boolean
     Use Absolute Spacing: Flag to use absolute spacing values.
  barWidth - Measurement
     Bar Width: The width of an individual bar.
  groupSpacing - Measurement
     Group Spacing: Width between groups of bars.
  barSpacing - Measurement
     Bar Spacing: Width between individual bars.
  barLabelFormat - String
     Bar Label Text Format: Formatting string for bar labels.
  thetaX - Float
     Theta-X: Fraction of dx/dz.
  thetaY - Float
     Theta-Y: Fraction of dy/dz.
  zDepth - Measurement
     Z-Depth: Depth of an individual series/bar.
  zSpace - Measurement
     Z-Space: Z-Gap around a series/bar.
Sub-Directives
  data (One)
  bars (ZeroOrOne)
  categoryAxis (ZeroOrOne)
  valueAxis (ZeroOrOne)
  barLabels (ZeroOrOne)
  texts (ZeroOrOne)
Examples
   <barchart3D xmlns:doc="http://namespaces.zope.org/rml/doc" dx="2in" dy="4in"</pre>
                 dwidth="6in" dheight="4in" x="0" y="0" width="5in" height="2in"
                 thetaX="0.3" thetaY="0.3" zDepth="5" zSpace="10"
                 direction="vertical">
     <categoryAxis strokeColor="black" strokeWidth="1" visibleGrid="true">
       <labels fontName="Helvetica"/>
       <categoryNames>
          <name>Category 1
          <name>Category 2
          <name>Category 3
          <name>Category 4</name>
       </categoryNames>
     </categoryAxis>
     <valueAxis valueMin="0" valueMax="150" valueStep="30" visibleTicks="true"</pre>
                 visibleLabels="true" visibleGrid="true">
       <labels fontName="Helvetica"/>
     </valueAxis>
     <data>
       <series>100 110 120 130
       <series> 70  80  85  90</series>
     </data>
   </barChart3D>
                                               [PDF]
  (Extracted from file tag-barChart3d.rml, line 48)
```

debug - Boolean

## barCode

A barcode graphic.

## Attributes

code (required) - Choice of ('ean13', 'qr', 'extended39', 'standard39', 'upca', 'ean8', 'extended93', 'usps\_4state', 'codabar', 'msi', 'postnet', 'fim', 'code11', 'standard93', 'i2of5', 'code128')

*Code*: The name of the type of code to use.

#### width - Measurement

Width: The width of the barcode.

#### height - Measurement

*Height*: The height of the barcode.

#### strokeColor - Color

Stroke Color: The color of the line strokes in the area.

#### strokeWidth - Measurement

Stroke Width: The width of the line strokes in the area.

#### fillColor - Color

Fill Color: The color of the filled shapes in the area.

#### barStrokeColor - Color

Bar Stroke Color: The color of the line strokes in the barcode.

#### barStrokeWidth - Measurement

Bar Stroke Width: The width of the line strokes in the barcode.

#### barFillColor - Color

Bar Fill Color: The color of the filled shapes in the barcode.

#### **gap** - Measurement

*Gap*: The width of the inter-character gaps.

#### barWidth - Measurement

Bar Width: The width of the smallest bar within the barcode

#### barHeight - Measurement

*Bar Height*: The height of the symbol.

#### ratio - Float

*Ratio*: The ratio of wide elements to narrow elements. Must be between 2.0 and 3.0 (or 2.2 and 3.0 if the barWidth is greater than 20 mils (.02 inch)).

#### **checksum** - Integer

*Ratio*: A flag that enables the computation and inclusion of the check digit.

#### bearers - Float

*Bearers*: Height of bearer bars (horizontal bars along the top and bottom of the barcode). Default is 3 x-dimensions. Set to zero for no bearer bars.(Bearer bars help detect misscans, so it is suggested to leave them on).

#### quiet - Boolean

Quiet Zone: A flag to include quiet zones in the symbol.

#### **lauiet** - Measurement

*Left Quiet Zone*: Quiet zone size to the left of code, if quiet is true. Default is the greater of .25 inch or .15 times the symbol's length.

#### rquiet - Measurement

*Right Quiet Zone*: Quiet zone size to the right of code, if quiet is true. Default is the greater of .25 inch or .15 times the symbol's length.

#### fontName - String

Font Name: The font used to print the value.

#### **fontSize** - Measurement

Font Size: The size of the value text.

#### humanReadable - Boolean

Human Readable: A flag when set causes the value to be printed below the bar code.

#### stop - Boolean

Show Start/Stop: A flag to specify whether the start/stop symbols are to be shown.

#### spaceWidth - Measurement

Space Width: The space of the inter-character gaps.

## **shortHeight** - Measurement

Short Height: The height of the short bar.

#### textColor - Color

Text Color: The color of human readable text.

#### x - Measurement

*X-Position*: The x-position of the lower-left corner of the barcode.

#### y - Measurement

*Y-Position*: The y-position of the lower-left corner of the barcode.

#### Content

TextNode (required)

*Value*: The value represented by the code.

## **Examples**

## barCodeFlowable

Creates a bar code as a flowable.

#### Attributes

```
code (required) - Choice of ('ean13', 'qr', 'extended39', 'standard39', 'upca', 'ean8', 'extended93', 'usps_4state', 'codabar', 'msi', 'postnet', 'fim', 'code11', 'standard93', 'i2of5', 'code128')
Code: The name of the type of code to use.
```

#### width - Measurement

Width: The width of the barcode.

#### **height** - Measurement

Height: The height of the barcode.

#### strokeColor - Color

Stroke Color: The color of the line strokes in the area.

#### strokeWidth - Measurement

Stroke Width: The width of the line strokes in the area.

## fillColor - Color

Fill Color: The color of the filled shapes in the area.

## barStrokeColor - Color

Bar Stroke Color: The color of the line strokes in the barcode.

barStrokeWidth - Measurement

Bar Stroke Width: The width of the line strokes in the barcode.

#### barFillColor - Color

Bar Fill Color: The color of the filled shapes in the barcode.

#### gap - Measurement

*Gap*: The width of the inter-character gaps.

#### **barWidth** - Measurement

Bar Width: The width of the smallest bar within the barcode

#### **barHeight** - Measurement

Bar Height: The height of the symbol.

#### ratio - Float

*Ratio*: The ratio of wide elements to narrow elements. Must be between 2.0 and 3.0 (or 2.2 and 3.0 if the barWidth is greater than 20 mils (.02 inch)).

#### checksum - Integer

Ratio: A flag that enables the computation and inclusion of the check digit.

#### bearers - Float

*Bearers*: Height of bearer bars (horizontal bars along the top and bottom of the barcode). Default is 3 x-dimensions. Set to zero for no bearer bars.(Bearer bars help detect misscans, so it is suggested to leave them on).

#### quiet - Boolean

Quiet Zone: A flag to include quiet zones in the symbol.

## **lquiet** - Measurement

*Left Quiet Zone*: Quiet zone size to the left of code, if quiet is true. Default is the greater of .25 inch or .15 times the symbol's length.

#### rquiet - Measurement

*Right Quiet Zone*: Quiet zone size to the right of code, if quiet is true. Default is the greater of .25 inch or .15 times the symbol's length.

#### fontName - String

Font Name: The font used to print the value.

#### **fontSize** - Measurement

Font Size: The size of the value text.

#### humanReadable - Boolean

Human Readable: A flag when set causes the value to be printed below the bar code.

#### stop - Boolean

Show Start/Stop: A flag to specify whether the start/stop symbols are to be shown.

## spaceWidth - Measurement

Space Width: The space of the inter-character gaps.

#### shortHeight - Measurement

Short Height: The height of the short bar.

#### textColor - Color

Text Color: The color of human readable text.

#### **value** (required) - String

*Value*: The value represented by the code.

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## barLabels

A set of labels for a bar chart

#### Attributes

#### dx - Measurement

Horizontal Extension: The width of the label.

#### dy - Measurement

Vertical Extension: The height of the label.

#### angle - Float

*Angle*: The angle to rotate the label.

**boxAnchor** - Choice of ('c', 'e', 'sw', 'ne', 'n', 's', 'w', 'autox', 'autoy', 'se', 'nw') *Box Anchor*: The position relative to the label.

#### boxStrokeColor - Color

Box Stroke Color: The color of the box border line.

#### boxStrokeWidth - Measurement

Box Stroke Width: The width of the box border line.

#### boxFillColor - Color

Box Fill Color: The color in which the box is filled.

#### **boxTarget** - Text

Box Target: The box target.

#### fillColor - Color

Fill Color: The color in which the label is filled.

#### strokeColor - Color

Stroke Color: The color of the label.

#### strokeWidth - Measurement

Stroke Width: The width of the label line.

#### **fontName** - String

Font Name: The font used to print the value.

#### fontSize - Measurement

Font Size: The size of the value text.

#### **leading** - Measurement

Leading: The height of a single text line. It includes character height.

#### width - Measurement

Width: The width the label.

## maxWidth - Measurement

Maximum Width: The maximum width the label.

## height - Measurement

Height: The height the label.

#### textAnchor - Choice of ('start', 'boxauto', 'end', 'middle')

*Text Anchor*: The position in the text to which the coordinates refer.

#### visible - Boolean

Visible: A flag making the label text visible.

#### leftPadding - Measurement

Left Padding: The size of the padding on the left side.

#### rightPadding - Measurement

Right Padding: The size of the padding on the right side.

#### topPadding - Measurement

Top Padding: The size of the padding on the top.

#### bottomPadding - Measurement

Bottom Padding: The size of the padding on the bottom.

#### Sub-Directives

label (ZeroOrMore)

#### bars

Collection of bar subscriptions.

#### Attributes

strokeColor - Color

Stroke Color: The color in which the bar border is drawn.

strokeWidth - Measurement

Stroke Width: The width of the bar border line.

fillColor - Color

Fill Color: The color with which the bar is filled.

#### Sub-Directives

bar (ZeroOrMore)

## blockAlignment

Set the text alignment.

#### Attributes

```
start (required) - Sequence of Combination of Integer, Choice of ('splitfirst', 'splitlast') 
Start Coordinates: The start table coordinates for the style instruction
```

```
stop (required) - Sequence of Combination of Integer, Choice of ('splitfirst', 'splitlast') 
End Coordinates: The end table coordinates for the style instruction
```

```
value (required) - Choice of ('decimal', 'right', 'center', 'centre', 'left')
Text Alignment: The text alignment within the cell.
```

#### **Examples**

## blockBackground

Define the background color of the cells. It also supports alternating colors.

#### Attributes

```
start (required) - Sequence of Combination of Integer, Choice of ('splitfirst', 'splitlast') 
Start Coordinates: The start table coordinates for the style instruction
```

**stop** (*required*) - Sequence of Combination of Integer, Choice of ('splitfirst', 'splitlast') *End Coordinates*: The end table coordinates for the style instruction

colorName - Color

Color Name: The color to use as the background for every cell.

colorsByRow - Sequence of Color

Colors By Row: A list of colors to be used circularly for rows.

colorsByCol - Sequence of Color

Colors By Column: A list of colors to be used circularly for columns.

## blockBottomPadding

Set the bottom padding of the cells.

#### Attributes

```
start (required) - Sequence of Combination of Integer, Choice of ('splitfirst', 'splitlast') 
Start Coordinates: The start table coordinates for the style instruction
```

**stop** (*required*) - Sequence of Combination of Integer, Choice of ('splitfirst', 'splitlast') *End Coordinates*: The end table coordinates for the style instruction

**length** (required) - Measurement Length: The size of the padding.

#### **Examples**

## blockColBackground

Define the background colors for columns.

#### Attributes

```
    start (required) - Sequence of Combination of Integer, Choice of ('splitfirst', 'splitlast')
        Start Coordinates: The start table coordinates for the style instruction
    stop (required) - Sequence of Combination of Integer, Choice of ('splitfirst', 'splitlast')
        End Coordinates: The end table coordinates for the style instruction
    colorNames (required) - Sequence of Color
        Colors By Row: A list of colors to be used circularly for rows.
```

## **Examples**

## blockFont

Set the font properties for the texts.

#### Attributes

```
    start (required) - Sequence of Combination of Integer, Choice of ('splitfirst', 'splitlast') Start Coordinates: The start table coordinates for the style instruction
    stop (required) - Sequence of Combination of Integer, Choice of ('splitfirst', 'splitlast') End Coordinates: The end table coordinates for the style instruction
    name - String
        Font Name: The name of the font for the cell.

    size - Measurement
        Font Size: The font size for the text of the cell.
```

## leading - Measurement

Leading: The height of a single text line. It includes character height.

## blockLeading

Set the text leading.

#### Attributes

```
start (required) - Sequence of Combination of Integer, Choice of ('splitfirst', 'splitlast') 
Start Coordinates: The start table coordinates for the style instruction
```

**stop** (*required*) - Sequence of Combination of Integer, Choice of ('splitfirst', 'splitlast') *End Coordinates*: The end table coordinates for the style instruction

**length** (required) - Measurement

Length: The height of a single text line. It includes character height.

#### **Examples**

## blockLeftPadding

Set the left padding of the cells.

#### Attributes

```
    start (required) - Sequence of Combination of Integer, Choice of ('splitfirst', 'splitlast')
        Start Coordinates: The start table coordinates for the style instruction
    stop (required) - Sequence of Combination of Integer, Choice of ('splitfirst', 'splitlast')
        End Coordinates: The end table coordinates for the style instruction
    length (required) - Measurement
        Length: The size of the padding.
```

## **Examples**

## blockRightPadding

Set the right padding of the cells.

#### Attributes

```
    start (required) - Sequence of Combination of Integer, Choice of ('splitfirst', 'splitlast')
        Start Coordinates: The start table coordinates for the style instruction
    stop (required) - Sequence of Combination of Integer, Choice of ('splitfirst', 'splitlast')
        End Coordinates: The end table coordinates for the style instruction
    length (required) - Measurement
        Length: The size of the padding.
```

## **Examples**

## blockRowBackground

Define the background colors for rows.

#### Attributes

```
    start (required) - Sequence of Combination of Integer, Choice of ('splitfirst', 'splitlast')
        Start Coordinates: The start table coordinates for the style instruction
    stop (required) - Sequence of Combination of Integer, Choice of ('splitfirst', 'splitlast')
        End Coordinates: The end table coordinates for the style instruction
    colorNames (required) - Sequence of Color
        Colors By Row: A list of colors to be used circularly for rows.
```

## **Examples**

## blockSpan

Define a span over multiple cells (rows and columns).

#### Attributes

```
    start (required) - Sequence of Combination of Integer, Choice of ('splitfirst', 'splitlast')
    Start Coordinates: The start table coordinates for the style instruction
    stop (required) - Sequence of Combination of Integer, Choice of ('splitfirst', 'splitlast')
    End Coordinates: The end table coordinates for the style instruction
```

#### **Examples**

## blockTable

A typical block table.

#### Attributes

#### Sub-Directives

```
tr (ZeroOrMore)
bulkData (ZeroOrOne)
blockTableStyle (ZeroOrMore)
```

```
is

a
```

## blockTableStyle

A style defining the look of a table.

#### Attributes

```
id (required) - StringId: The name/id of the style.
```

#### keepWithNext - Boolean

Keep with Next: When set, this paragraph will always be in the same frame as the following flowable.

#### Sub-Directives

```
blockFont (ZeroOrMore)
blockLeading (ZeroOrMore)
blockTextColor (ZeroOrMore)
blockAlignment (ZeroOrMore)
blockLeftPadding (ZeroOrMore)
blockRightPadding (ZeroOrMore)
blockBottomPadding (ZeroOrMore)
blockTopPadding (ZeroOrMore)
blockBackground (ZeroOrMore)
blockRowBackground (ZeroOrMore)
blockColBackground (ZeroOrMore)
blockValign (ZeroOrMore)
blockSpan (ZeroOrMore)
```

#### **Examples**

## blockTextColor

Set the text color.

#### Attributes

```
    start (required) - Sequence of Combination of Integer, Choice of ('splitfirst', 'splitlast')
        Start Coordinates: The start table coordinates for the style instruction
    stop (required) - Sequence of Combination of Integer, Choice of ('splitfirst', 'splitlast')
        End Coordinates: The end table coordinates for the style instruction
    colorName (required) - Color
        Color Name: The color in which the text will appear.
```

## blockTopPadding

Set the top padding of the cells.

#### Attributes

```
    start (required) - Sequence of Combination of Integer, Choice of ('splitfirst', 'splitlast')
        Start Coordinates: The start table coordinates for the style instruction
    stop (required) - Sequence of Combination of Integer, Choice of ('splitfirst', 'splitlast')
        End Coordinates: The end table coordinates for the style instruction
    length (required) - Measurement
        Length: The size of the padding.
```

## **Examples**

## blockValign

Define the vertical alignment of the cells.

#### Attributes

```
    start (required) - Sequence of Combination of Integer, Choice of ('splitfirst', 'splitlast')
        Start Coordinates: The start table coordinates for the style instruction
    stop (required) - Sequence of Combination of Integer, Choice of ('splitfirst', 'splitlast')
        End Coordinates: The end table coordinates for the style instruction
    value (required) - Choice of ('middle', 'top', 'bottom')
        Vertical Alignment: The vertical alignment of the text with the cells.
```

## **Examples**

#### bookmark

This creates a bookmark to the current page which can be referred to with the given key elsewhere. PDF offers very fine grained control over how Acrobat reader is zoomed when people link to this. The default is to keep the user's current zoom settings. the last arguments may or may not be needed depending on the choice of 'fitType'.

#### Attributes

```
name (required) - Text
Name: The name of the bookmark.
fitType - Choice of ('fitr', 'fith', 'fitv', 'fit')
Fit Type: The Fit Type.
left - Measurement
Left: The left position.
top - Measurement
Top: The top position.
right - Measurement
Right: The right position.
zoom - Float
Zoom: The zoom level when clicking on the bookmark.
```

## bulkData

Bulk Data allows one to quickly create a table.

#### Content

TextNodeSequence of Sequence of Text (required) Content: The bulk data.

## **Examples**

```
<bulkData xmlns:doc="http://namespaces.zope.org/rml/doc">
Product,Profit
Sprockets,26
Widgets,34
Thingummies,217
Bits &amp; Bobs,23
Total,277
</bulkData>
(Extracted from file tag-blockTable-bulkData.rml, line
16) [PDF]
```

#### **buttonField**

A button field within the PDF

#### Attributes

## categoryAxis

An axis displaying categories (instead of numerical values).

#### Attributes

```
visible - Boolean Visible: When tr
```

Visible: When true, draw the entire axis with all details.

visibleAxis - Boolean

Visible Axis: When true, draw the axis line.

visibleTicks - Boolean

Visible Ticks: When true, draw the axis ticks on the line.

visibleLabels - Boolean

Visible Labels: When true, draw the axis labels.

visibleGrid - Boolean

Visible Grid: When true, draw the grid lines for the axis.

strokeWidth - Measurement

Stroke Width: The width of axis line and ticks.

```
strokeColor - Color
```

Stroke Color: The color in which the axis line and ticks are drawn.

## strokeDashArray - Sequence of Float

Stroke Dash Array: The dash array that is used for the axis line and ticks.

#### gridStrokeWidth - Measurement

*Grid Stroke Width*: The width of the grid lines.

#### gridStrokeColor - Color

*Grid Stroke Color*: The color in which the grid lines are drawn.

#### gridStrokeDashArray - Sequence of Float

Grid Stroke Dash Array: The dash array that is used for the grid lines.

#### gridStart - Measurement

Grid Start: The start of the grid lines with respect to the axis origin.

#### gridEnd - Measurement

Grid End: The end of the grid lines with respect to the axis origin.

```
style - Choice of ('stacked', 'parallel', 'parallel_3d')
```

*Style*: The plot style of the common categories.

#### categoryNames - Sequence of Text

Category Names: A simple list of category names.

#### joinAxis - Boolean

Join Axis: When true, both axes join together.

#### joinAxisPos - Measurement

Join Axis Position: The position at which the axes should join together.

#### reverseDirection - Boolean

*Reverse Direction*: A flag to reverse the direction of category names.

#### labelAxisMode - Choice of ('high', 'low', 'axis')

Label Axis Mode: Defines the relative position of the axis labels.

#### tickShift - Boolean

Tick Shift: When true, place the ticks in the center of a category instead the beginning and end.

## Sub-Directives

```
categoryNames (ZeroOrOne) labels (ZeroOrMore)
```

#### **Examples**

## categoryNames

A list of category names.

#### Sub-Directives

name (OneOrMore)

```
<categoryNames xmlns:doc="http://namespaces.zope.org/rml/doc">
  <name>Category 1</name>
  <name>Category 2</name>
  <name>Category 3</name>
  <name>Category 4</name>
</categoryNames>
(Extracted from file tag-barChart.rml, line 29) [PDF]
```

#### circle

Draws a circle on the canvas.

#### Attributes

```
    x (required) - Measurement
        X-Coordinate: The X-coordinate of the lower-left position of the shape.
    y (required) - Measurement
        Y-Coordinate: The Y-coordinate of the lower-left position of the shape.
    fill - Boolean
        Fill: A flag to specify whether the shape should be filled.
```

stroke - Boolean

Stroke: A flag to specify whether the shape's outline should be drawn.

**radius** (*required*) - Measurement *Radius*: The radius of the circle.

#### **Examples**

#### color

Define a new color and give it a name to be known under.

#### Attributes

```
id (required) - String
    Id: The id/name the color will be available under.
value (required) - Color
    Color: The color value that is represented.
RGB (required) - Color
    Deprecated: Ensures compatibility with ReportLab RML. Please use the "value" attribute.
    Color: The color value that is represented.
```

## **Examples**

## condPageBreak

Switch to the next page if not enough vertical space is available.

#### Attributes

```
height (required) - Measurement 
height: The minimal height that must be remaining on the page.
```

```
<condPageBreak xmlns:doc="http://namespaces.zope.org/rml/doc" height="8cm"/>
```

#### curves

A path of connected bezier curves drawn on the canvas.

#### Content

TextNodeGrid with 8 cols of Measurement (required) Curve List: A list of curve coordinates to draw.

## **Examples**

```
<curves xmlns:doc="http://namespaces.zope.org/rml/doc">
  lin lin 2in 2in 2in 3in lin 3in
  lin 2in 2in 3in 2in 4in lin 4in
  lin 3in 2in 4in 2in 5in lin 5in
</curves>
(Extracted from file tag-curves.rml, line 9)
[PDF]
```

#### curvesto

**Deprecated:** Available for ReportLab RML compatibility. Please use the "curveto" directive instead.

#### Content

```
TextNodeGrid with 6 cols of Measurement (required)

Curve Specification: Describes the end position and the curve properties.
```

#### curveto

Create a bezier curve from the current location to the specified one.

#### Content

```
TextNodeGrid with 6 cols of Measurement (required)

Curve Specification: Describes the end position and the curve properties.
```

#### **Examples**

```
<curveto xmlns:doc="http://namespaces.zope.org/rml/doc">
  10cm 12cm 10cm 9cm 8cm 9cm
</curveto>
(Extracted from file tag-path.rml, line 51)
[PDF]
```

#### data

A 1-D data set.

#### Sub-Directives

```
series (OneOrMore)
```

#### **Examples**

## data

A 2-D data set.

#### Sub-Directives

```
series (OneOrMore)
```

```
Examples
```

```
<data xmlns:doc="http://namespaces.zope.org/rml/doc">
     <series>
       1
          1
       2
           2.
       2.5 1
       4
           5
     </series>
     <series>
       1 2
       2
           3
       2.5 2
       3.5 5
       4
     </series>
  </data>
                                             [PDF]
  (Extracted from file tag-linePlot.rml, line 32)
data
A 1-D data set.
Sub-Directives
  series (One)
Examples
  <data xmlns:doc="http://namespaces.zope.org/rml/doc">
    <series>10 20 30 40 50 60
  </data>
                                             [PDF]
  (Extracted from file tag-pieChart.rml, line 38)
docinit
Sub-Directives
  registerType1Face (ZeroOrMore)
  {\bf registerFont}~(ZeroOrMore)
  registerTTFont (ZeroOrMore)
  registerCidFont (ZeroOrMore)
  color (ZeroOrMore)
  addMapping (ZeroOrMore)
Examples
  <docinit xmlns:doc="http://namespaces.zope.org/rml/doc">
     <registerTTFont faceName="Vera" fileName="Vera.ttf"/>
     <addMapping faceName="times" bold="1" italic="0" psName="Vera"/>
  </docinit>
  (Extracted from file tag-addMapping.rml, line 8)
                                             [PDF]
  <docinit xmlns:doc="http://namespaces.zope.org/rml/doc">
     <registerTTFont faceName="Vera" fileName="Vera.ttf"/>
  </docinit>
```

[PDF]

#### document

(Extracted from file tag-registerTTFont.rml, line 8)

#### Attributes

#### **filename** (required) - String

File Name: The default name of the output file, if no output file was provided.

#### debug - Boolean

Debug: A flag to activate the debug output.

#### compression - BooleanWithDefault

Compression: A flag determining whether page compression should be used.

#### invariant - BooleanWithDefault

*Invariant*: A flag that determines whether the produced PDF should be invariant with respect to the date and the exact contents.

#### Sub-Directives

```
docinit (ZeroOrOne)
stylesheet (ZeroOrOne)
template (ZeroOrOne)
story (ZeroOrOne)
pageInfo (ZeroOrOne)
pageDrawing (ZeroOrMore)
```

## **Examples**

```
<document xmlns:doc="http://namespaces.zope.org/rml/doc"</pre>
           filename="tag-document.pdf">
  <template>
    <pageTemplate id="main">
      <frame id="first" x1="1cm" y1="1cm" width="19cm" height="26cm"/>
    </pageTemplate>
  </template>
  <story>
    <title>Hello World!</title>
  </story>
</document>
(Extracted from file tag-document-story.rml, line 7)
                                          [PDF]
<document xmlns:doc="http://namespaces.zope.org/rml/doc"</pre>
           filename="tag-document-pageDrawing.pdf">
<pageDrawing>
  <drawString x="4.1in" y="8in">Hello World!</drawString>
</pageDrawing>
</document>
(Extracted from file tag-document-pageDrawing.rml,
line 7)
                                          [PDF]
```

## drawAlignedString

Draws a simple string (aligned to the pivot character) onto the canvas at the specified location.

#### Attributes

```
    x (required) - Measurement
        X-Coordinate: The X-coordinate of the lower-left position of the string.
    y (required) - Measurement
        Y-Coordinate: The Y-coordinate of the lower-left position of the string.
    pivotChar (required) - Text
        Text: The string/text that is put onto the canvas.
```

#### Content

```
TextNode (required)
```

*Text*: The string/text that is put onto the canvas.

## **Examples**

## drawCenteredString

Draws a simple string (centered aligned) onto the canvas at the specified location.

#### Attributes

```
    x (required) - Measurement
        X-Coordinate: The X-coordinate of the lower-left position of the string.
    y (required) - Measurement
        Y-Coordinate: The Y-coordinate of the lower-left position of the string.
```

#### Content

```
TextNode (required)
Text: The string/text that is put onto the canvas.
```

#### **Examples**

## drawRightString

Draws a simple string (right aligned) onto the canvas at the specified location.

#### Attributes

```
    x (required) - Measurement
        X-Coordinate: The X-coordinate of the lower-left position of the string.
    y (required) - Measurement
        Y-Coordinate: The Y-coordinate of the lower-left position of the string.
```

## Content

```
TextNode (required)
Text: The string/text that is put onto the canvas.
```

## **Examples**

## drawString

Draws a simple string (left aligned) onto the canvas at the specified location.

#### Attributes

```
x (required) - Measurement
    X-Coordinate: The X-coordinate of the lower-left position of the string.
y (required) - Measurement
    Y-Coordinate: The Y-coordinate of the lower-left position of the string.
```

#### Content

TextNode (required)

*Text*: The string/text that is put onto the canvas.

#### **Examples**

## ellipse

Draws an ellipse on the canvas.

#### Attributes

```
x (required) - Measurement
```

*X-Coordinate*: The X-coordinate of the lower-left position of the shape.

y (required) - Measurement

*Y-Coordinate*: The Y-coordinate of the lower-left position of the shape.

fill - Boolean

Fill: A flag to specify whether the shape should be filled.

stroke - Boolean

Stroke: A flag to specify whether the shape's outline should be drawn.

width (required) - Measurement Width: The width of the ellipse.

**height** (*required*) - Measurement *Height*: The height of the ellipse.

## **Examples**

## fill

Set the fill color.

#### Attributes

```
color (required) - Color Color: The color value to be set.
```

#### **Examples**

## fixedSize

Create a container flowable of a fixed size.

#### Attributes

```
width (required) - Measurement
```

Width: The width the flowables are allotted.

**height** (required) - Measurement

Height: The height the flowables are allotted.

```
This tag allows keeping a set of flowables in a confined space.
     </para>
     <para>
       Lot's of text goes here. Lot's of text goes here. Lot's of text goes
       here. Lot's of text goes here. Lot's of text goes here. Lot's of text
       goes here. Lot's of text goes here. Lot's of text goes here. Lot's of
        text goes here. Lot's of text goes here. Lot's of text goes here. Lot's
       of text goes here.
     </para>
   </fixedSize>
                                                  [PDF]
   (Extracted from file tag-fixedSize.rml, line 34)
frame
A frame on a page.
Attributes
  x1 (required) - Measurement
     X-Position: The X-Position of the lower-left corner of the frame.
  v1 (required) - Measurement
     Y-Position: The Y-Position of the lower-left corner of the frame.
   width (required) - Measurement
     Width: The width of the frame.
  height (required) - Measurement
     Height: The height of the frame.
  id - Text
     Id: The id of the frame.
  leftPadding - Measurement
     Left Padding: The left padding of the frame.
  rightPadding - Measurement
     Right Padding: The right padding of the frame.
  topPadding - Measurement
     Top Padding: The top padding of the frame.
  bottomPadding - Measurement
     Bottom Padding: The bottom padding of the frame.
  showBoundary - Boolean
     Show Boundary: A flag to show the boundary of the frame.
Examples
   <frame xmlns:doc="http://namespaces.zope.org/rml/doc" id="first" x1="1cm"</pre>
           y1="1cm" width="19cm" height="26cm"/>
  (Extracted from file tag-document-story.rml, line 11) [PDF]
grid
A shape to be drawn on the canvas.
Attributes
  xs (required) - Sequence of Measurement
     X-Coordinates: A sequence x-coordinates that represent the vertical line positions.
  vs (required) - Sequence of Measurement
     Y-Coordinates: A sequence y-coordinates that represent the horizontal line positions.
```

```
<grid xmlns:doc="http://namespaces.zope.org/rml/doc" xs="lin 2in 3in 4in 5in
6in" ys="7in 7.2in 7.4in 7.6in 7.8in 8.0in"/>
```

## h1

Heading 1 is a simple paragraph with a special heading 1 style.

#### Attributes

#### fontName - String

Font Name: The name of the font for the paragraph.

#### fontSize - Measurement

Font Size: The font size for the text of the paragraph.

#### **leading** - Measurement

Leading: The height of a single paragraph line. It includes character height.

#### leftIndent - Measurement

Left Indentation: General indentation on the left side.

#### rightIndent - Measurement

Right Indentation: General indentation on the right side.

#### **firstLineIndent** - Measurement

First Line Indentation: The indentation of the first line in the paragraph.

#### spaceBefore - Measurement

*Space Before*: The vertical space before the paragraph.

#### spaceAfter - Measurement

Space After: The vertical space after the paragraph.

#### alignment - Choice of ('right', 'justify', 'center', 'centre', 'left')

Alignment: The text alignment.

#### **bulletFontName** - String

Bullet Font Name: The font in which the bullet character will be rendered.

#### bulletFontSize - Measurement

Bullet Font Size: The font size of the bullet character.

#### bulletIndent - Measurement

Bullet Indentation: The indentation that is kept for a bullet point.

#### textColor - Color

Text Color: The color in which the text will appear.

#### backColor - Color

Background Color: The background color of the paragraph.

#### keepWithNext - Boolean

Keep with Next: When set, this paragraph will always be in the same frame as the following flowable.

## wordWrap - String

Word Wrap Method: When set to "CJK", invoke CJK word wrapping

#### borderColor - Color

Border Color: The color in which the paragraph border will appear.

#### borderWidth - Measurement

Paragraph Border Width: The width of the paragraph border.

#### **borderPadding** - Sequence of Integer

Paragraph Border Padding: Padding of the paragraph.

#### borderRadius - Measurement

Paragraph Border Radius: The radius of the paragraph border.

#### bulletText - String

Bullet Character: The bullet character is the ASCII representation of the symbol making up the bullet in a listing.

#### dedent - Integer

*Dedent*: Number of characters to be removed in front of every line of the text.

#### style (required) - Style

Style: The paragraph style that is applied to the paragraph. See the ``paraStyle`` tag for creating a paragraph style.

#### Content

#### XMLContent (required)

Text: The text that will be layed out.

#### **Examples**

```
<h1 xmlns:doc="http://namespaces.zope.org/rml/doc">Header 1</h1>
(Extracted from file tag-para.rml, line 21) [PDF]
```

#### h2

Heading 2 is a simple paragraph with a special heading 2 style.

#### Attributes

## fontName - String

Font Name: The name of the font for the paragraph.

#### fontSize - Measurement

Font Size: The font size for the text of the paragraph.

## leading - Measurement

Leading: The height of a single paragraph line. It includes character height.

#### **leftIndent** - Measurement

Left Indentation: General indentation on the left side.

#### rightIndent - Measurement

Right Indentation: General indentation on the right side.

#### firstLineIndent - Measurement

First Line Indentation: The indentation of the first line in the paragraph.

#### **spaceBefore** - Measurement

Space Before: The vertical space before the paragraph.

#### spaceAfter - Measurement

Space After: The vertical space after the paragraph.

## alignment - Choice of ('right', 'justify', 'center', 'centre', 'left')

Alignment: The text alignment.

#### **bulletFontName** - String

Bullet Font Name: The font in which the bullet character will be rendered.

## bulletFontSize - Measurement

Bullet Font Size: The font size of the bullet character.

#### bulletIndent - Measurement

Bullet Indentation: The indentation that is kept for a bullet point.

#### textColor - Color

*Text Color*: The color in which the text will appear.

#### backColor - Color

Background Color: The background color of the paragraph.

#### keepWithNext - Boolean

Keep with Next: When set, this paragraph will always be in the same frame as the following flowable.

#### wordWrap - String

Word Wrap Method: When set to "CJK", invoke CJK word wrapping

#### borderColor - Color

Border Color: The color in which the paragraph border will appear.

#### borderWidth - Measurement

Paragraph Border Width: The width of the paragraph border.

#### borderPadding - Sequence of Integer

Paragraph Border Padding: Padding of the paragraph.

#### borderRadius - Measurement

Paragraph Border Radius: The radius of the paragraph border.

#### **bulletText** - String

Bullet Character: The bullet character is the ASCII representation of the symbol making up the bullet in a listing.

#### dedent - Integer

Dedent: Number of characters to be removed in front of every line of the text.

#### style (required) - Style

Style: The paragraph style that is applied to the paragraph. See the ``paraStyle`` tag for creating a paragraph style.

#### Content

#### XMLContent (required)

Text: The text that will be layed out.

## **Examples**

```
<h2 xmlns:doc="http://namespaces.zope.org/rml/doc">Header 2</h2> (Extracted from file tag-para.rml, line 22) [PDF]
```

## h3

Heading 3 is a simple paragraph with a special heading 3 style.

#### Attributes

#### fontName - String

Font Name: The name of the font for the paragraph.

#### **fontSize** - Measurement

Font Size: The font size for the text of the paragraph.

#### **leading** - Measurement

Leading: The height of a single paragraph line. It includes character height.

#### leftIndent - Measurement

Left Indentation: General indentation on the left side.

## rightIndent - Measurement

Right Indentation: General indentation on the right side.

#### firstLineIndent - Measurement

First Line Indentation: The indentation of the first line in the paragraph.

#### **spaceBefore** - Measurement

Space Before: The vertical space before the paragraph.

#### **spaceAfter** - Measurement

Space After: The vertical space after the paragraph.

## alignment - Choice of ('right', 'justify', 'center', 'centre', 'left')

Alignment: The text alignment.

#### bulletFontName - String

Bullet Font Name: The font in which the bullet character will be rendered.

#### bulletFontSize - Measurement

Bullet Font Size: The font size of the bullet character.

#### bulletIndent - Measurement

Bullet Indentation: The indentation that is kept for a bullet point.

#### textColor - Color

Text Color: The color in which the text will appear.

#### backColor - Color

Background Color: The background color of the paragraph.

#### keepWithNext - Boolean

Keep with Next: When set, this paragraph will always be in the same frame as the following flowable.

## wordWrap - String

Word Wrap Method: When set to "CJK", invoke CJK word wrapping

#### borderColor - Color

Border Color: The color in which the paragraph border will appear.

#### borderWidth - Measurement

Paragraph Border Width: The width of the paragraph border.

#### borderPadding - Sequence of Integer

Paragraph Border Padding: Padding of the paragraph.

#### borderRadius - Measurement

Paragraph Border Radius: The radius of the paragraph border.

#### bulletText - String

Bullet Character: The bullet character is the ASCII representation of the symbol making up the bullet in a listing.

#### dedent - Integer

Dedent: Number of characters to be removed in front of every line of the text.

#### **style** (required) - Style

Style: The paragraph style that is applied to the paragraph. See the ``paraStyle`` tag for creating a paragraph style.

#### Content

#### XMLContent (required)

Text: The text that will be layed out.

#### **Examples**

```
<h3 xmlns:doc="http://namespaces.zope.org/rml/doc">Header 3</h3> (Extracted from file tag-para.rml, line 23)
```

#### hr

Create a horizontal line on the page.

#### Attributes

#### width - Measurement

Width: The width of the line on the page.

#### thickness - Measurement

Thickness: Line Thickness

#### color - Color

Color: The color of the line.

#### **lineCap** - Choice of ('default', 'square', 'round', 'butt')

Cap: The cap at the end of the line.

#### **spaceBefore** - Measurement

Space Before: The vertical space before the line.

#### spaceAfter - Measurement

Space After: The vertical space after the line.

## align - Choice of ('decimal', 'right', 'center', 'centre', 'left')

*Alignment*: The alignment of the line within the frame.

#### valign - Choice of ('middle', 'top', 'bottom')

Vertical Alignment: The vertical alignment of the line.

#### dash - Sequence of Measurement

Dash-Pattern: The dash-pattern of a line.

```
<hr xmlns:doc="http://namespaces.zope.org/rml/doc" width="80%" thickness="2"
    color="blue" dash="1 3" spaceAfter="5" spaceBefore="5" align="center"/>
(Extracted from file tag-hr.rml, line 16)
[PDF]
```

#### illustration

Inserts an illustration with graphics elements.

#### Attributes

```
width (required) - Measurement
Width: The width of the illustration.height (required) - Measurement
Height: The height of the illustration.
```

## **Examples**

## image

Draws an external image on the canvas.

#### Attributes

```
file (required) - Image
    File: Reference to the external file of the iamge.
x (required) - Measurement
    X-Coordinate: The X-coordinate of the lower-left position of the shape.
y (required) - Measurement
    Y-Coordinate: The Y-coordinate of the lower-left position of the shape.
width - Measurement
    Width: The width of the image.
height - Measurement
    Height: The height of the image.
```

showBoundary - Boolean

Show Boundary: A flag determining whether a border should be drawn around the image.

#### preserveAspectRatio - Boolean

Preserve Aspect Ratio: A flag determining whether the image's aspect ration should be conserved under any circumstances.

#### **Examples**

## imageAndFlowables

An image with flowables around it.

#### Attributes

```
imageName (required) - Image
```

*Image*: The file that is used to extract the image data.

#### imageWidth - Measurement

*Image Width*: The width of the image.

#### imageHeight - Measurement

*Image Height*: The height the image.

#### imageMask - Color

Mask: The height the image.

#### imageLeftPadding - Measurement

Image Left Padding: The padding on the left side of the image.

#### imageRightPadding - Measurement

*Image Right Padding*: The padding on the right side of the image.

#### imageTopPadding - Measurement

*Image Top Padding*: The padding on the top of the image.

#### imageBottomPadding - Measurement

Image Bottom Padding: The padding on the bottom of the image.

## imageSide - Choice of ('right', 'left')

*Image Side*: The side at which the image will be placed.

#### **Examples**

#### indent

Indent the contained flowables.

## Attributes

left - Measurement

*Left*: The indentation to the left.

#### right - Measurement

*Right*: The indentation to the right.

#### initialize

Do some RML processing initialization.

```
Sub-Directives
```

```
name (ZeroOrMore)
alias (ZeroOrMore)
```

#### **Examples**

## keepInFrame

Ask a flowable to stay within the frame.

#### Attributes

```
maxWidth - Measurement
```

Maximum Width: The maximum width the flowables are allotted.

#### maxHeight - Measurement

Maximum Height: The maximum height the flowables are allotted.

#### mergeSpace - Boolean

Merge Space: A flag to set whether the space should be merged.

```
onOverflow - Choice of ('overflow', 'shrink', 'truncate', 'error')
```

On Overflow: Defines what has to be done, if an overflow is detected.

#### id - Text

Name/Id: The name/id of the flowable.

## frame - StringOrInt

*Frame*: The frame to which the flowable should be fitted.

#### **Examples**

## keepTogether

Keep the child flowables in the same frame. Add frame break when necessary.

### Attributes

#### maxHeight - Measurement

Maximum Height: The maximum height the flowables are allotted.

```
<keepTogether xmlns:doc="http://namespaces.zope.org/rml/doc">
    <para style="normal">
      This is the 1st paragraph of 3 that we wish to keep together. <br/>
      Some nonsense text to fill up the space.
      Some nonsense text to fill up the space.
```

```
Some nonsense text to fill up the space.
     </para>
     <spacer length="1cm"/>
     <para style="normal">
       This is the 2nd paragraph of 3 that we wish to keep together. <br/>op/>
       Some nonsense text to fill up the space.
       Some nonsense text to fill up the space.
     </para>
     <spacer length="1cm"/>
     <para style="normal">
       This is the 3rd paragraph of 3 that we wish to keep together. <br/>
       Some nonsense text to fill up the space.
       Some nonsense text to fill up the space.
     </para>
   </keepTogether>
  (Extracted from file tag-keepTogether.rml, line 34)
                                                [PDF]
label
A label for a strand.
Attributes
   dx - Measurement
     Horizontal Extension: The width of the label.
   dy - Measurement
     Vertical Extension: The height of the label.
  angle - Float
     Angle: The angle to rotate the label.
  boxAnchor - Choice of ('c', 'e', 'sw', 'ne', 'n', 's', 'w', 'autox', 'autoy', 'se', 'nw')
     Box Anchor: The position relative to the label.
  boxStrokeColor - Color
     Box Stroke Color: The color of the box border line.
  boxStrokeWidth - Measurement
     Box Stroke Width: The width of the box border line.
  boxFillColor - Color
     Box Fill Color: The color in which the box is filled.
  boxTarget - Text
     Box Target: The box target.
  fillColor - Color
     Fill Color: The color in which the label is filled.
  strokeColor - Color
     Stroke Color: The color of the label.
  strokeWidth - Measurement
     Stroke Width: The width of the label line.
  fontName - String
     Font Name: The font used to print the value.
```

```
fontSize - Measurement
```

Font Size: The size of the value text.

#### **leading** - Measurement

Leading: The height of a single text line. It includes character height.

#### width - Measurement

Width: The width the label.

#### maxWidth - Measurement

Maximum Width: The maximum width the label.

#### **height** - Measurement

Height: The height the label.

#### **textAnchor** - Choice of ('start', 'boxauto', 'end', 'middle')

*Text Anchor*: The position in the text to which the coordinates refer.

#### visible - Boolean

Visible: A flag making the label text visible.

#### **leftPadding** - Measurement

Left Padding: The size of the padding on the left side.

#### rightPadding - Measurement

Right Padding: The size of the padding on the right side.

#### topPadding - Measurement

Top Padding: The size of the padding on the top.

## **bottomPadding** - Measurement

Bottom Padding: The size of the padding on the bottom.

#### row - Integer

Row: The row of the strand label

#### col - Integer

Column: The column of the strand label.

#### format - String

Format: The format string for the label.

#### dR - Float

Radial Shift: The radial shift of the label.

#### Content

#### TextNode

Text: The label text of the strand.

#### **Examples**

(Extracted from file *tag-spiderChart.rml*, line 61) [PDF]

#### label

The label of a slice within a bar chart.

#### Attributes

#### dx - Measurement

Horizontal Extension: The width of the label.

## dy - Measurement

Vertical Extension: The height of the label.

#### angle - Float

*Angle*: The angle to rotate the label.

#### **boxAnchor** - Choice of ('c', 'e', 'sw', 'ne', 'n', 's', 'w', 'autox', 'autoy', 'se', 'nw')

Box Anchor: The position relative to the label.

#### boxStrokeColor - Color

Box Stroke Color: The color of the box border line.

#### boxStrokeWidth - Measurement

Box Stroke Width: The width of the box border line.

#### **boxFillColor** - Color

Box Fill Color: The color in which the box is filled.

### boxTarget - Text

Box Target: The box target.

#### fillColor - Color

Fill Color: The color in which the label is filled.

#### strokeColor - Color

Stroke Color: The color of the label.

#### strokeWidth - Measurement

Stroke Width: The width of the label line.

### fontName - String

Font Name: The font used to print the value.

#### **fontSize** - Measurement

Font Size: The size of the value text.

#### **leading** - Measurement

Leading: The height of a single text line. It includes character height.

#### width - Measurement

Width: The width the label.

#### maxWidth - Measurement

Maximum Width: The maximum width the label.

### **height** - Measurement

*Height*: The height the label.

### **textAnchor** - Choice of ('start', 'boxauto', 'end', 'middle')

*Text Anchor*: The position in the text to which the coordinates refer.

#### visible - Boolean

Visible: A flag making the label text visible.

### leftPadding - Measurement

Left Padding: The size of the padding on the left side.

# rightPadding - Measurement

Right Padding: The size of the padding on the right side.

### topPadding - Measurement

Top Padding: The size of the padding on the top.

#### **bottomPadding** - Measurement

Bottom Padding: The size of the padding on the bottom.

### **Content**

TextNode (required)

*Text*: The label text to be displayed.

## **Examples**

```
<label xmlns:doc="http://namespaces.zope.org/rml/doc" dx="10" dy="10"
    visible="true">Age 1-10</label>
```

(Extracted from file tag-pieChart.rml, line 51) [PDF]

### label

A label for a spoke.

#### Attributes

#### dx - Measurement

Horizontal Extension: The width of the label.

### dy - Measurement

Vertical Extension: The height of the label.

### angle - Float

Angle: The angle to rotate the label.

# boxAnchor - Choice of ('c', 'e', 'sw', 'ne', 'n', 's', 'w', 'autox', 'autoy', 'se', 'nw')

*Box Anchor*: The position relative to the label.

#### boxStrokeColor - Color

Box Stroke Color: The color of the box border line.

#### boxStrokeWidth - Measurement

Box Stroke Width: The width of the box border line.

#### boxFillColor - Color

Box Fill Color: The color in which the box is filled.

### boxTarget - Text

Box Target: The box target.

#### **fillColor** - Color

Fill Color: The color in which the label is filled.

#### strokeColor - Color

Stroke Color: The color of the label.

#### strokeWidth - Measurement

Stroke Width: The width of the label line.

#### **fontName** - String

Font Name: The font used to print the value.

#### fontSize - Measurement

Font Size: The size of the value text.

#### **leading** - Measurement

Leading: The height of a single text line. It includes character height.

# width - Measurement

Width: The width the label.

### maxWidth - Measurement

Maximum Width: The maximum width the label.

### height - Measurement

*Height*: The height the label.

### textAnchor - Choice of ('start', 'boxauto', 'end', 'middle')

*Text Anchor*: The position in the text to which the coordinates refer.

#### visible - Boolean

Visible: A flag making the label text visible.

### **leftPadding** - Measurement

Left Padding: The size of the padding on the left side.

#### **rightPadding** - Measurement

Right Padding: The size of the padding on the right side.

### **topPadding** - Measurement

*Top Padding*: The size of the padding on the top.

### **bottomPadding** - Measurement

Bottom Padding: The size of the padding on the bottom.

# Content

#### **TextNode**

*Text*: The text of the spoke (label).

```
<label xmlns:doc="http://namespaces.zope.org/rml/doc">U</label>
(Extracted from file tag-spiderChart.rml, line 45)
[PDF]
```

### label

A simple label

#### Content

TextNode (required)

*Text*: The text value that is the name.

# **Examples**

```
<label xmlns:doc="http://namespaces.zope.org/rml/doc">Age 1-10</label>
(Extracted from file tag-pieChart3d.rml, line 49)
[PDF]
```

### label

A label for the chart on an axis.

#### Attributes

#### dx - Measurement

Horizontal Extension: The width of the label.

#### dy - Measurement

Vertical Extension: The height of the label.

#### angle - Float

*Angle*: The angle to rotate the label.

**boxAnchor** - Choice of ('c', 'e', 'sw', 'ne', 'n', 's', 'w', 'autox', 'autoy', 'se', 'nw') *Box Anchor*: The position relative to the label.

# boxStrokeColor - Color

Box Stroke Color: The color of the box border line.

#### boxStrokeWidth - Measurement

Box Stroke Width: The width of the box border line.

### boxFillColor - Color

Box Fill Color: The color in which the box is filled.

#### boxTarget - Text

Box Target: The box target.

### fillColor - Color

Fill Color: The color in which the label is filled.

### strokeColor - Color

Stroke Color: The color of the label.

### strokeWidth - Measurement

Stroke Width: The width of the label line.

### fontName - String

Font Name: The font used to print the value.

### fontSize - Measurement

Font Size: The size of the value text.

#### **leading** - Measurement

Leading: The height of a single text line. It includes character height.

#### width - Measurement

Width: The width the label.

### maxWidth - Measurement

Maximum Width: The maximum width the label.

#### height - Measurement

Height: The height the label.

### textAnchor - Choice of ('start', 'boxauto', 'end', 'middle')

*Text Anchor*: The position in the text to which the coordinates refer.

#### visible - Boolean

Visible: A flag making the label text visible.

#### leftPadding - Measurement

Left Padding: The size of the padding on the left side.

### rightPadding - Measurement

Right Padding: The size of the padding on the right side.

#### topPadding - Measurement

Top Padding: The size of the padding on the top.

#### **bottomPadding** - Measurement

Bottom Padding: The size of the padding on the bottom.

#### **x** - Measurement

*X-Coordinate*: The X-coordinate of the lower-left position of the label.

#### y - Measurement

*Y-Coordinate*: The Y-coordinate of the lower-left position of the label.

#### Content

#### TextNode (required)

*Text*: The label text to be displayed.

#### labels

A set of labels of an axis.

### Attributes

### dx - Measurement

Horizontal Extension: The width of the label.

### dy - Measurement

Vertical Extension: The height of the label.

### angle - Float

Angle: The angle to rotate the label.

### **boxAnchor** - Choice of ('c', 'e', 'sw', 'ne', 'n', 's', 'w', 'autox', 'autoy', 'se', 'nw')

*Box Anchor*: The position relative to the label.

#### boxStrokeColor - Color

Box Stroke Color: The color of the box border line.

#### boxStrokeWidth - Measurement

Box Stroke Width: The width of the box border line.

### **boxFillColor** - Color

Box Fill Color: The color in which the box is filled.

### boxTarget - Text

Box Target: The box target.

### fillColor - Color

Fill Color: The color in which the label is filled.

#### strokeColor - Color

Stroke Color: The color of the label.

### strokeWidth - Measurement

Stroke Width: The width of the label line.

#### **fontName** - String

Font Name: The font used to print the value.

```
fontSize - Measurement
```

Font Size: The size of the value text.

### **leading** - Measurement

Leading: The height of a single text line. It includes character height.

#### width - Measurement

Width: The width the label.

#### maxWidth - Measurement

Maximum Width: The maximum width the label.

### **height** - Measurement

Height: The height the label.

### **textAnchor** - Choice of ('start', 'boxauto', 'end', 'middle')

*Text Anchor*: The position in the text to which the coordinates refer.

#### visible - Boolean

Visible: A flag making the label text visible.

### **leftPadding** - Measurement

Left Padding: The size of the padding on the left side.

#### rightPadding - Measurement

Right Padding: The size of the padding on the right side.

#### topPadding - Measurement

Top Padding: The size of the padding on the top.

### **bottomPadding** - Measurement

Bottom Padding: The size of the padding on the bottom.

#### **x** - Measurement

*X-Coordinate*: The X-coordinate of the lower-left position of the label.

#### y - Measurement

*Y-Coordinate*: The Y-coordinate of the lower-left position of the label.

### Sub-Directives

label (ZeroOrMore)

### **Examples**

### labels

A set of simple labels for a chart.

# Sub-Directives

label (OneOrMore)

# **Examples**

```
<labels xmlns:doc="http://namespaces.zope.org/rml/doc">
   <label>Age 1-10</label>
   <label>Age 11-20</label>
   <label>Age 21-30</label>
   <label>Age 31-40</label>
   <label>Age 41-50</label>
   <label>Age 51-60</label>
   <label>Age 51-60</label></labels>
(Extracted from file tag-pieChart3d.rml, line 48) [PDF]
```

### line

A line description of a series of a line plot.

#### Attributes

strokeWidth - Measurement

Stroke Width: The width of the plot line.

strokeColor - Color

Stroke Color: The color of the plot line.

strokeDashArray - Sequence of Float

Stroke Dash Array: The dash array of the plot line.

symbol - Symbol

Symbol: The symbol to be used for every data point in the plot.

name - Text

Name: The name of the line.

### **Examples**

```
<line xmlns:doc="http://namespaces.zope.org/rml/doc" strokeColor="red"
    symbol="FilledCircle"/>
```

(Extracted from file *tag-linePlot.rml*, line 22)

[PDF]

# lineLabels

A set of labels of an axis.

#### Attributes

dx - Measurement

Horizontal Extension: The width of the label.

dy - Measurement

Vertical Extension: The height of the label.

angle - Float

Angle: The angle to rotate the label.

boxAnchor - Choice of ('c', 'e', 'sw', 'ne', 'n', 's', 'w', 'autox', 'autoy', 'se', 'nw')

*Box Anchor*: The position relative to the label.

boxStrokeColor - Color

Box Stroke Color: The color of the box border line.

boxStrokeWidth - Measurement

Box Stroke Width: The width of the box border line.

**boxFillColor** - Color

Box Fill Color: The color in which the box is filled.

boxTarget - Text

Box Target: The box target.

fillColor - Color

Fill Color: The color in which the label is filled.

strokeColor - Color

Stroke Color: The color of the label.

strokeWidth - Measurement

Stroke Width: The width of the label line.

**fontName** - String

Font Name: The font used to print the value.

fontSize - Measurement

Font Size: The size of the value text.

**leading** - Measurement

Leading: The height of a single text line. It includes character height.

```
width - Measurement
```

Width: The width the label.

#### maxWidth - Measurement

Maximum Width: The maximum width the label.

### **height** - Measurement

Height: The height the label.

### **textAnchor** - Choice of ('start', 'boxauto', 'end', 'middle')

*Text Anchor*: The position in the text to which the coordinates refer.

### visible - Boolean

Visible: A flag making the label text visible.

### **leftPadding** - Measurement

Left Padding: The size of the padding on the left side.

#### rightPadding - Measurement

Right Padding: The size of the padding on the right side.

### topPadding - Measurement

Top Padding: The size of the padding on the top.

#### **bottomPadding** - Measurement

Bottom Padding: The size of the padding on the bottom.

#### x - Measurement

*X-Coordinate*: The X-coordinate of the lower-left position of the label.

#### y - Measurement

Y-Coordinate: The Y-coordinate of the lower-left position of the label.

### Sub-Directives

label (ZeroOrMore)

### **Examples**

### lineMode

Set the line mode for the following graphics elements.

#### Attributes

### width - Measurement

Width: The line width.

# dash - Sequence of Measurement

Dash-Pattern: The dash-pattern of a line.

# miterLimit - Measurement

Miter Limit: The ???.

### **join** - Choice of ('bevelled', 'mitered', 'round')

Join: The way lines are joined together.

### cap - Choice of ('default', 'square', 'round', 'butt')

*Cap*: The cap is the description of how the line-endings look.

# **Examples**

### linePlot

A line plot.

#### Attributes

#### dx - Measurement

*Drawing X-Position*: The x-position of the entire drawing on the canvas.

#### **dy** - Measurement

*Drawing Y-Position*: The y-position of the entire drawing on the canvas.

#### dwidth - Measurement

Drawing Width: The width of the entire drawing

#### **dheight** - Measurement

Drawing Height: The height of the entire drawing

### angle - Float

Angle: The orientation of the drawing as an angle in degrees.

#### **x** - Measurement

Chart X-Position: The x-position of the chart within the drawing.

### y - Measurement

*Chart Y-Position*: The y-position of the chart within the drawing.

#### width - Measurement

Chart Width: The width of the chart.

### **height** - Measurement

Chart Height: The height of the chart.

#### strokeColor - Color

Stroke Color: Color of the chart border.

#### strokeWidth - Measurement

Stroke Width: Width of the chart border.

### fillColor - Color

Fill Color: Color of the chart interior.

### debug - Boolean

Debugging: A flag that when set to True turns on debug messages.

#### reversePlotOrder - Boolean

Reverse Plot Order: When true, the coordinate system is reversed.

#### lineLabelNudge - Measurement

Line Label Nudge: The distance between the data point and its label.

#### **lineLabelFormat** - String

Line Label Format: Formatting string for data point labels.

### joinedLines - Boolean

Joined Lines: When true, connect all data points with lines.

#### Sub-Directives

```
data (One)
lines (ZeroOrOne)
xValueAxis (ZeroOrOne)
yValueAxis (ZeroOrOne)
lineLabels (ZeroOrOne)
texts (ZeroOrOne)
```

# **Examples**

```
<labels fontName="Helvetica"/>
  </xValueAxis>
  <yValueAxis valueMin="0" valueMax="7" valueStep="1">
    <labels fontName="Helvetica"/>
  </yValueAxis>
  <lineLabels font="Roman-Bold" fontSize="10"/>
  <data>
    <series>
      1 1
      2 2
      2.5 1
      3
          5
    </series>
    <series>
      1 2
      2
          3
      2.5 2
      3.5 5
    </series>
  </data>
</linePlot>
(Extracted from file tag-linePlot.rml, line 19)
                                        [PDF]
```

# linePlot3D

Creates a three-dimensional line plot.

### Attributes

dx - Measurement

*Drawing X-Position*: The x-position of the entire drawing on the canvas.

dy - Measurement

Drawing Y-Position: The y-position of the entire drawing on the canvas.

dwidth - Measurement

Drawing Width: The width of the entire drawing

**dheight** - Measurement

Drawing Height: The height of the entire drawing

angle - Float

Angle: The orientation of the drawing as an angle in degrees.

**x** - Measurement

*Chart X-Position*: The x-position of the chart within the drawing.

y - Measurement

*Chart Y-Position*: The y-position of the chart within the drawing.

width - Measurement

Chart Width: The width of the chart.

**height** - Measurement

Chart Height: The height of the chart.

strokeColor - Color

Stroke Color: Color of the chart border.

strokeWidth - Measurement

Stroke Width: Width of the chart border.

**fillColor** - Color

Fill Color: Color of the chart interior.

debug - Boolean

```
Debugging: A flag that when set to True turns on debug messages.
```

#### reversePlotOrder - Boolean

Reverse Plot Order: When true, the coordinate system is reversed.

### **lineLabelNudge** - Measurement

Line Label Nudge: The distance between the data point and its label.

### lineLabelFormat - String

Line Label Format: Formatting string for data point labels.

#### joinedLines - Boolean

Joined Lines: When true, connect all data points with lines.

#### thetaX - Float

Theta-X: Fraction of dx/dz.

### thetaY - Float

*Theta-Y*: Fraction of dy/dz.

#### **zDepth** - Measurement

*Z-Depth*: Depth of an individual series/bar.

### **zSpace** - Measurement

Z-Space: Z-Gap around a series/bar.

#### Sub-Directives

```
data (One)
lines (ZeroOrOne)
xValueAxis (ZeroOrOne)
yValueAxis (ZeroOrOne)
lineLabels (ZeroOrOne)
texts (ZeroOrOne)
```

#### **Examples**

```
<linePlot3D xmlns:doc="http://namespaces.zope.org/rml/doc" dx="2in" dy="7in"</pre>
            dwidth="6in" dheight="4in" x="0" y="0" width="5in" height="3in"
            joinedLines="true" lineLabelFormat="%2.0f" zDepth="0.3in"
            zSpace="0.3in">
 lines>
    <line strokeColor="red" symbol="FilledCircle"/>
    <line strokeColor="blue" symbol="FilledDiamond"/>
 </lines>
  <xValueAxis valueMin="0" valueMax="5" valueStep="1">
    <labels fontName="Helvetica"/>
  </xValueAxis>
  <yValueAxis valueMin="0" valueMax="7" valueStep="1">
    <labels fontName="Helvetica"/>
  </yValueAxis>
  <lineLabels font="Roman-Bold" fontSize="10"/>
  <data>
    <series>
     1 1
      2
          2
      2.5 1
          3
      4
          5
    </series>
    <series>
     1
          2
      2
          3
      2.5 2
      3.5 5
          6
```

```
</data>
</linePlot3D>
(Extracted from file tag-linePlot3D.rml, line 20)
[PDF]
```

# lineStyle

Define the border line style of each cell.

```
Attributes
```

```
start (required) - Sequence of Combination of Integer, Choice of ('splitfirst', 'splitlast')
  Start Coordinates: The start table coordinates for the style instruction
stop (required) - Sequence of Combination of Integer, Choice of ('splitfirst', 'splitlast')
  End Coordinates: The end table coordinates for the style instruction
kind (required) - Choice of ('box', 'outline', 'innergrid', 'linebefore', 'lineabove', 'linebelow', 'lineafter',
'grid')
  Kind: The kind of line actions to be taken.
thickness (required) - Measurement
   Thickness: Line Thickness
colorName (required) - Color
  Color: The color of the border line.
cap (required) - Choice of ('default', 'square', 'round', 'butt')
  Cap: The cap at the end of a border line.
dash - Sequence of Measurement
  Dash-Pattern: The dash-pattern of a line.
join - Choice of ('bevelled', 'mitered', 'round')
  Join: The way lines are joined together.
count - Integer
  Count: Describes whether the line is a single (1) or double (2) line.
```

### **Examples**

#### linos

A path of connected lines drawn on the canvas.

### Content

TextNodeGrid with 4 cols of Measurement (required) Line List: A list of lines coordinates to draw.

# **Examples**

```
<lines xmlns:doc="http://namespaces.zope.org/rml/doc">
  lin 7in 6in 7in
  lin 5in 6in 4in
  lin 3in lin lin
</lines>
(Extracted from file tag-lines.rml, line 9)
[PDF]
```

### lines

The set of all line descriptions in the line plot.

### Attributes

```
strokeWidth - Measurement
     Stroke Width: The width of the plot line.
  strokeColor - Color
     Stroke Color: The color of the plot line.
  strokeDashArray - Sequence of Float
     Stroke Dash Array: The dash array of the plot line.
  symbol - Symbol
     Symbol: The symbol to be used for every data point in the plot.
Sub-Directives
  line (OneOrMore)
Examples
   <lines xmlns:doc="http://namespaces.zope.org/rml/doc">
     <line strokeColor="red" symbol="FilledCircle"/>
     <line strokeColor="blue" symbol="FilledDiamond"/>
   </lines>
  (Extracted from file tag-linePlot.rml, line 20)
                                                  [PDF]
link
Place an internal link around a set of flowables.
Attributes
   destination - Text
     Destination: The name of the destination to link to.
  url - Text
     URL: The URL to link to.
  boxStrokeWidth - Measurement
     Box Stroke Width: The width of the box border line.
  boxStrokeDashArray - Sequence of Float
     Box Stroke Dash Array: The dash array of the box border line.
  boxStrokeColor - Color
     Box Stroke Color: The color in which the box border is drawn.
Examples
   <link xmlns:doc="http://namespaces.zope.org/rml/doc" destination="PAGE_1"</pre>
          boxStrokeColor="red" boxStrokeWidth="1" boxStrokeDashArray="1 2">
     <para>Go to page 1 now!</para>
   </link>
                                                  [PDF]
  (Extracted from file tag-bookmark.rml, line 23)
   <link xmlns:doc="http://namespaces.zope.org/rml/doc"</pre>
          url="http://www.reportlab.org">
     <para>Link to ReporLab Web Site.</para>
   </link>
   (Extracted from file tag-bookmark.rml, line 45)
                                                  [PDF]
```

#### moveto

Move the path cursor to the specified location.

#### Content

TextNodeSequence of Measurement (*required*) *Position*: Position to which the path pointer is moved to.

#### **Examples**

```
<moveto xmlns:doc="http://namespaces.zope.org/rml/doc">
    2cm 15cm
</moveto>
(Extracted from file tag-path.rml, line 44)
[PDF]
```

#### name

A category name

#### Content

TextNode (required)

*Text*: The text value that is the name.

### **Examples**

```
<name xmlns:doc="http://namespaces.zope.org/rml/doc">Category 1</name>
(Extracted from file tag-barChart.rml, line 30)
[PDF]
```

#### name

Defines a name for a string.

#### Attributes

```
id (required) - StringId: The id under which the value will be known.value (required) - TextValue: The text that is displayed if the id is called.
```

# **Examples**

### nextFrame

Switch to the next frame.

### Attributes

```
name - StringOrInt
```

Name: The name or index of the next frame.

# **Examples**

# nextPage

Switch to the next page.

### **Examples**

### option

An option in the select field.

### Content

```
TextNode (required) Value: The value of the option.
```

```
<option xmlns:doc="http://namespaces.zope.org/rml/doc">Option 1</option>
(Extracted from file tag-selectField.rml, line 20)
[PDF]
```

### outlineAdd

Add a new entry to the outline of the PDF.

#### Attributes

#### Content

```
TextNode (required)

Title: The text displayed for this item.
```

### **Examples**

# pageDrawing

Draws directly on the content of one page's canvas. Every call of this directive creates a new page.

#### Sub-Directives

```
drawString (ZeroOrMore)
drawRightString (ZeroOrMore)
drawCenteredString (ZeroOrMore)
drawCentredString (ZeroOrMore)
drawAlignedString (ZeroOrMore)
ellipse (ZeroOrMore)
circle (ZeroOrMore)
rect (ZeroOrMore)
grid (ZeroOrMore)
lines (ZeroOrMore)
curves (ZeroOrMore)
image (ZeroOrMore)
place (ZeroOrMore)
textAnnotation (ZeroOrMore)
path (ZeroOrMore)
fill (ZeroOrMore)
stroke (ZeroOrMore)
setFont (ZeroOrMore)
scale (ZeroOrMore)
translate (ZeroOrMore)
rotate (ZeroOrMore)
skew (ZeroOrMore)
transform (ZeroOrMore)
lineMode (ZeroOrMore)
barCode (ZeroOrMore)
```

```
textField (ZeroOrMore)
buttonField (ZeroOrMore)
selectField (ZeroOrMore)
barChart (ZeroOrMore)
barChart3D (ZeroOrMore)
linePlot (ZeroOrMore)
linePlot3D (ZeroOrMore)
pieChart (ZeroOrMore)
pieChart3D (ZeroOrMore)
spiderChart (ZeroOrMore)
```

# pageGraphics

Define the page graphics for the page template.

### **Examples**

# pageInfo

Set's up page-global settings.

### Attributes

```
pageSize (required) - PageSize

Page Size: The page size of all pages within this document.
```

### **Examples**

# pageTemplate

Define a page template.

### Attributes

```
id (required) - Text
Id: The id of the template.
pagesize - PageSize
Page Size: The Page Size.
rotation - Integer
Rotation: The rotation of the page in multiples of 90 degrees.
```

### Sub-Directives

```
frame (OneOrMore)
pageGraphics (ZeroOrOne)
```

(Extracted from file tag-document-story.rml, line 9) [PDF]

### para

Lays out an entire paragraph.

#### Attributes

fontName - String

Font Name: The name of the font for the paragraph.

**fontSize** - Measurement

Font Size: The font size for the text of the paragraph.

**leading** - Measurement

Leading: The height of a single paragraph line. It includes character height.

**leftIndent** - Measurement

Left Indentation: General indentation on the left side.

rightIndent - Measurement

Right Indentation: General indentation on the right side.

firstLineIndent - Measurement

First Line Indentation: The indentation of the first line in the paragraph.

**spaceBefore** - Measurement

*Space Before*: The vertical space before the paragraph.

**spaceAfter** - Measurement

Space After: The vertical space after the paragraph.

alignment - Choice of ('right', 'justify', 'center', 'centre', 'left')

*Alignment*: The text alignment.

**bulletFontName** - String

Bullet Font Name: The font in which the bullet character will be rendered.

bulletFontSize - Measurement

Bullet Font Size: The font size of the bullet character.

bulletIndent - Measurement

Bullet Indentation: The indentation that is kept for a bullet point.

textColor - Color

*Text Color*: The color in which the text will appear.

backColor - Color

Background Color: The background color of the paragraph.

keepWithNext - Boolean

Keep with Next: When set, this paragraph will always be in the same frame as the following flowable.

wordWrap - String

Word Wrap Method: When set to "CJK", invoke CJK word wrapping

borderColor - Color

Border Color: The color in which the paragraph border will appear.

borderWidth - Measurement

Paragraph Border Width: The width of the paragraph border.

borderPadding - Sequence of Integer

Paragraph Border Padding: Padding of the paragraph.

borderRadius - Measurement

Paragraph Border Radius: The radius of the paragraph border.

### **style** (required) - Style

Style: The paragraph style that is applied to the paragraph. See the ``paraStyle`` tag for creating a paragraph style.

### **bulletText** - String

Bullet Character: The bullet character is the ASCII representation of the symbol making up the bullet in a listing.

#### **dedent** - Integer

Dedent: Number of characters to be removed in front of every line of the text.

#### **Content**

### XMLContent (required)

Text: The text that will be layed out.

### **Examples**

```
<para xmlns:doc="http://namespaces.zope.org/rml/doc">Paragraph</para>
(Extracted from file tag-para.rml, line 24)
[PDF]
```

# paraStyle

Defines a paragraph style and gives it a name.

### Attributes

#### **fontName** - String

Font Name: The name of the font for the paragraph.

#### fontSize - Measurement

Font Size: The font size for the text of the paragraph.

#### **leading** - Measurement

Leading: The height of a single paragraph line. It includes character height.

#### **leftIndent** - Measurement

Left Indentation: General indentation on the left side.

### rightIndent - Measurement

Right Indentation: General indentation on the right side.

### firstLineIndent - Measurement

First Line Indentation: The indentation of the first line in the paragraph.

### **spaceBefore** - Measurement

Space Before: The vertical space before the paragraph.

#### spaceAfter - Measurement

Space After: The vertical space after the paragraph.

### alignment - Choice of ('right', 'justify', 'center', 'centre', 'left')

Alignment: The text alignment.

### **bulletFontName** - String

Bullet Font Name: The font in which the bullet character will be rendered.

### bulletFontSize - Measurement

Bullet Font Size: The font size of the bullet character.

### **bulletIndent** - Measurement

Bullet Indentation: The indentation that is kept for a bullet point.

#### textColor - Color

*Text Color*: The color in which the text will appear.

#### backColor - Color

Background Color: The background color of the paragraph.

### keepWithNext - Boolean

Keep with Next: When set, this paragraph will always be in the same frame as the following flowable.

### wordWrap - String

Word Wrap Method: When set to "CJK", invoke CJK word wrapping

### borderColor - Color

Border Color: The color in which the paragraph border will appear.

#### borderWidth - Measurement

Paragraph Border Width: The width of the paragraph border.

### **borderPadding** - Sequence of Integer

Paragraph Border Padding: Padding of the paragraph.

#### borderRadius - Measurement

Paragraph Border Radius: The radius of the paragraph border.

# **name** (required) - String Name: The name of the style.

alias - String

Alias: An alias under which the style will also be known as.

#### parent - Style

Parent: The apragraph style that will be used as a base for this one.

### **Examples**

### param

Sets one paramter for the text annotation.

#### Attributes

```
name (required) - String Name: The name of the paramter.
```

### Content

TextNode (required)
Value: The parameter value.

# **Examples**

### path

Create a line path.

### Attributes

**x** (required) - Measurement

*X-Coordinate*: The X-coordinate of the lower-left position of the shape.

y (required) - Measurement

*Y-Coordinate*: The Y-coordinate of the lower-left position of the shape.

fill - Boolean

Fill: A flag to specify whether the shape should be filled.

stroke - Boolean

Stroke: A flag to specify whether the shape's outline should be drawn.

**close** - Boolean

Close Path: A flag specifying whether the path should be closed.

#### Content

TextNodeGrid with 2 cols of Measurement (required)

Points: A list of coordinate points that define th path.

```
Sub-Directives
```

```
moveto (ZeroOrMore)
curveto (ZeroOrMore)
curvesto (ZeroOrMore) (Deprecated)
```

### **Examples**

```
<path xmlns:doc="http://namespaces.zope.org/rml/doc" x="2cm" y="15cm"</pre>
      fill="true">
  8cm 15cm
  <curvesto>
    10cm 15cm 10cm 12cm 8cm 12cm
  </curvesto>
  2cm 12cm
  <moveto>
    2cm 15cm
  </moveto>
</path>
(Extracted from file tag-path.rml, line 38)
                                           [PDF]
<path xmlns:doc="http://namespaces.zope.org/rml/doc" x="8cm" y="12cm"</pre>
      fill="true">
  <curveto>
    10cm 12cm 10cm 9cm 8cm 9cm
  </curveto>
</path>
(Extracted from file tag-path.rml, line 50)
                                           [PDF]
```

# pdfInclude

Inserts a PDF

#### Attributes

**filename** (required) - File Path to file: The pdf file to include.

### **Examples**

# pieChart

A pie chart.

#### Attributes

## dx - Measurement

*Drawing X-Position*: The x-position of the entire drawing on the canvas.

### dy - Measurement

*Drawing Y-Position*: The y-position of the entire drawing on the canvas.

### **dwidth** - Measurement

Drawing Width: The width of the entire drawing

# **dheight** - Measurement

Drawing Height: The height of the entire drawing

# angle - Float

Angle: The orientation of the drawing as an angle in degrees.

x - Measurement

```
Chart X-Position: The x-position of the chart within the drawing.
   y - Measurement
     Chart Y-Position: The y-position of the chart within the drawing.
   width - Measurement
     Chart Width: The width of the chart.
   height - Measurement
     Chart Height: The height of the chart.
   strokeColor - Color
     Stroke Color: Color of the chart border.
   strokeWidth - Measurement
     Stroke Width: Width of the chart border.
   fillColor - Color
     Fill Color: Color of the chart interior.
   debug - Boolean
     Debugging: A flag that when set to True turns on debug messages.
   startAngle - Integer
     Start Angle: The start angle in the chart of the first slice in degrees.
   direction - Choice of ('clockwise', 'anticlockwise')
     Direction: The direction in which the pie chart will be built.
   checkLabelOverlap - Boolean
     Check Label Overlap: When true, check and attempt to fix standard label overlaps
   pointerLabelMode - Choice of ('none', 'leftandright', 'leftright')
     Pointer Label Mode: The location relative to the slace the label should be placed.
   sameRadii - Boolean
     Same Radii: When true, make x/y radii the same.
   orderMode - Choice of ('alternate', 'fixed')
     Order Mode:
   xradius - Measurement
     X-Radius: The radius of the X-directions
   yradius - Measurement
     Y-Radius: The radius of the Y-directions
Sub-Directives
   data (One)
   slices (ZeroOrOne)
   labels (ZeroOrOne)
   texts (ZeroOrOne)
Examples
   <pieChart xmlns:doc="http://namespaces.zope.org/rml/doc" dx="2in" dy="7in"</pre>
                dwidth="6in" dheight="4in" x="0" y="0" width="3in" height="3in">
      <labels>
        <label>a</label>
        <label>b</label>
        <label>c</label>
        <label>d</label>
        <label>e</label>
        <label>f</label>
      </labels>
      <slices strokeWidth="0.5">
        <slice fillColor="darkcyan"/>
```

<slice fillColor="blueviolet"/>

<slice fillColor="blue"/>

```
<slice fillColor="cyan" popout="10" strokeWidth="2" strokeDashArray="2 2"/>
        <slice fillColor="aquamarine"/>
        <slice fillColor="cadetblue"/>
        <slice fillColor="lightcoral"/>
      </slices>
      <data>
        <series>10 20 30 40 50 60
      </data>
   </pieChart>
   (Extracted from file tag-pieChart.rml, line 18)
                                                      [PDF]
pieChart3D
A 3-D pie chart.
Attributes
   dx - Measurement
     Drawing X-Position: The x-position of the entire drawing on the canvas.
   dy - Measurement
     Drawing Y-Position: The y-position of the entire drawing on the canvas.
   dwidth - Measurement
     Drawing Width: The width of the entire drawing
   dheight - Measurement
     Drawing Height: The height of the entire drawing
   angle - Float
     Angle: The orientation of the drawing as an angle in degrees.
   x - Measurement
     Chart X-Position: The x-position of the chart within the drawing.
   y - Measurement
     Chart Y-Position: The y-position of the chart within the drawing.
   width - Measurement
     Chart Width: The width of the chart.
   height - Measurement
     Chart Height: The height of the chart.
   strokeColor - Color
     Stroke Color: Color of the chart border.
   strokeWidth - Measurement
     Stroke Width: Width of the chart border.
   fillColor - Color
     Fill Color: Color of the chart interior.
   debug - Boolean
     Debugging: A flag that when set to True turns on debug messages.
   startAngle - Integer
     Start Angle: The start angle in the chart of the first slice in degrees.
   direction - Choice of ('clockwise', 'anticlockwise')
     Direction: The direction in which the pie chart will be built.
   checkLabelOverlap - Boolean
     Check Label Overlap: When true, check and attempt to fix standard label overlaps
   pointerLabelMode - Choice of ('none', 'leftandright', 'leftright')
     Pointer Label Mode: The location relative to the slace the label should be placed.
   sameRadii - Boolean
     Same Radii: When true, make x/y radii the same.
```

orderMode - Choice of ('alternate', 'fixed')

```
Order Mode:
  xradius - Measurement
     X-Radius: The radius of the X-directions
  yradius - Measurement
     Y-Radius: The radius of the Y-directions
  perspective - Float
     Perspsective: The flattening parameter.
  depth 3d - Measurement
     3-D Depth: The depth of the pie.
  angle_3d - Float
     3-D Angle: The view angle in the Z-coordinate.
Sub-Directives
  slices (One)
  texts (ZeroOrOne)
Examples
   <pieChart3D xmlns:doc="http://namespaces.zope.org/rml/doc" dx="2in" dy="7in"</pre>
                 dwidth="6in" dheight="4in" x="0" y="0" width="3in" height="3in">
     <labels>
       <label>a</label>
       <label>b</label>
       <label>c</label>
       <label>d</label>
       <label>e</label>
       <label>f</label>
     </labels>
     <slices strokeWidth="0.5">
       <slice fillColor="darkcyan"/>
       <slice fillColor="blueviolet"/>
       <slice fillColor="blue"/>
       <slice fillColor="cyan" popout="10" strokeWidth="2" strokeDashArray="2 2"/>
       <slice fillColor="aquamarine"/>
       <slice fillColor="cadetblue"/>
       <slice fillColor="lightcoral"/>
     </slices>
     <data>
       <series>10 20 30 40 50 60
     </data>
   </pieChart3D>
  (Extracted from file tag-pieChart3d.rml, line 18)
                                                [PDF]
place
Draws a set of flowables on the canvas within a given region.
Attributes
  x (required) - Measurement
     X-Coordinate: The X-coordinate of the lower-left position of the place.
  y (required) - Measurement
     Y-Coordinate: The Y-coordinate of the lower-left position of the place.
  width - Measurement
     Width: The width of the place.
```

**height** - Measurement

*Height*: The height of the place.

# plugInFlowable

Inserts a custom flowable developed in Python.

#### Attributes

```
module (required) - String
```

Module: The Python module in which the flowable is located.

### **function** (required) - String

Function: The name of the factory function within the module that returns the custom flowable.

#### **Content**

TextNode

Parameters: A list of parameters encoded as a long string.

# **Examples**

# pointer

A pointer to a slice in a pie chart.

### Attributes

```
strokeColor - Color
```

Stroke Color: The color of the pointer line.

#### strokeWidth - Measurement

Stroke Width: The wodth of the pointer line.

#### elbowLength - Measurement

*Elbow Length*: The length of the final segment of the pointer.

#### edgePad - Measurement

Edge Padding: The padding between between the pointer label and box.

### piePad - Measurement

Pie Padding: The padding between between the pointer label and chart.

# **Examples**

#### pre

A preformatted text, similar to the tag in HTML.

### Attributes

```
style (required) - Style
```

Style: The paragraph style that is applied to the paragraph. See the ``paraStyle`` tag for creating a paragraph style.

### bulletText - String

Bullet Character: The bullet character is the ASCII representation of the symbol making up the bullet in a listing.

```
dedent - Integer
```

Dedent: Number of characters to be removed in front of every line of the text.

#### Content

```
RawXMLContent (required)
Text: The text that will be layed out.
```

### **Examples**

```
Preformatted <b>text</b>
    only.
(Extracted from file tag-para.rml, line 25)
[PDF]
```

# pto

A container for flowables decorated with trailer & header lists. If the split operation would be called then the trailer and header lists are injected before and after the split. This allows specialist "please turn over" and "continued from previous" like behaviours.

# **Examples**

```
<pto xmlns:doc="http://namespaces.zope.org/rml/doc">
  <pto header>
    <spacer length="1cm"/>
    <para><b>... let's go on</b></para>
  </pto_header>
  <pto trailer>
    <spacer length="1cm"/>
    <para><b>... please continue on the next page.</b></para>
  </pto trailer>
  <para>
    Main text. Main text. Main text. Main text. Main text. Main text. Main
    text. Main text. Main text. Main text. Main text. Main text. Main
    text. Main text. Main text. Main text.
  </para>
</pto>
(Extracted from file tag-pto.rml, line 70)
                                        [PDF]
```

### rect

Draws an ellipse on the canvas.

#### Attributes

### **Examples**

# registerCidFont

Register a new CID font given the face name.

#### Attributes

```
faceName (required) - String
```

Face Name: The name of the face the font uses. The face has to be previously registered.

### **Examples**

# registerFont

Register a new font based on a face and encoding.

#### Attributes

```
name (required) - String
```

*Name*: The name under which the font can be used in style declarations or other parameters that lookup a font.

### faceName (required) - String

Face Name: The name of the face the font uses. The face has to be previously registered.

#### **encName** (required) - String

Encoding Name: The name of the encoding to be used.

### **Examples**

# registerTTFont

Register a new TrueType font given the TT file and face name.

### Attributes

```
faceName (required) - String
```

Face Name: The name of the face the font uses. The face has to be previously registered.

```
fileName (required) - String
```

File Name: File path of the of the TrueType font.

### **Examples**

# registerType1Face

Register a new Type 1 font face.

#### Attributes

```
afmFile (required) - String
```

AFM File: Path to AFM file used to register the Type 1 face.

```
pfbFile (required) - String
```

PFB File: Path to PFB file used to register the Type 1 face.

### **Examples**

#### rotate

Rotate the drawing counterclockwise.

### Attributes

```
degrees (required) - Measurement Angle: The angle in degrees.
```

# **Examples**

#### scale

Scale the drawing using x and y scaling factors.

#### Attributes

```
    sx (required) - Float
        X-Scaling-Factor: The scaling factor applied on x-coordinates.

    sy (required) - Float
        Y-Scaling-Factor: The scaling factor applied on y-coordinates.
```

### **Examples**

```
<scale xmlns:doc="http://namespaces.zope.org/rml/doc" sx="1" sy="1.5"/>
(Extracted from file tag-scale.rml, line 13)
[PDF]
```

### selectField

A selection field within the PDF

### Attributes

### Sub-Directives

```
option (ZeroOrMore)
```

### **Examples**

### series

A one-dimensional series.

#### Content

TextNodeSequence of Float (required) Values: Numerical values representing the series' data.

### **Examples**

#### series

A two-dimensional series.

#### Content

TextNodeGrid with 2 cols of Float (required) Values: Numerical values representing the series' data.

### **Examples**

# setFont

Set the font name and/or size.

#### Attributes

```
name (required) - String
Font Name: The name of the font as it was registered.
size (required) - Measurement
Size: The font size.
leading - Measurement
Leading: The font leading.
```

# **Examples**

# setNextFrame

Define the next frame to switch to.

#### Attributes

```
name (required) - StringOrInt
```

Name: The name or index of the next frame.

# **Examples**

# setNextTemplate

Define the next page template to use.

#### Attributes

```
name (required) - StringOrInt
```

*Name*: The name or index of the next page template.

### **Examples**

```
<setNextTemplate xmlns:doc="http://namespaces.zope.org/rml/doc" name="first"/>
(Extracted from file tag-setNextTemplate.rml, line 25) [PDF]
```

### skew

Skew the drawing.

#### Attributes

```
alpha (required) - Measurement
```

Alpha: The amount to skew the drawing in the horizontal.

beta (required) - Measurement

Beta: The amount to skew the drawing in the vertical.

### **Examples**

### slice

A slice in a pie chart.

### Attributes

```
strokeWidth - Measurement
```

Stroke Width: The wodth of the slice line.

fillColor - Color

Fill Color: The fill color of the slice.

strokeColor - Color

Stroke Color: The color of the pointer line.

strokeDashArray - Sequence of Float

Stroke Dash Array: Teh dash array of the slice borderline.

**popout** - Measurement

*Popout*: The distance of how much the slice should be popped out.

fontName - String

Font Name: The font name of the label.

fontSize - Measurement

Font Size: The font size of the label.

labelRadius - Measurement

Label Radius: The radius at which the label should be placed around the pie.

```
swatchMarker - Symbol
```

#### Sub-Directives

```
label (ZeroOrOne)
pointer (ZeroOrOne)
```

### **Examples**

#### slice

A 3-D slice of a 3-D pie chart.

#### Attributes

strokeWidth - Measurement

Stroke Width: The wodth of the slice line.

**fillColor** - Color

Fill Color: The fill color of the slice.

strokeColor - Color

Stroke Color: The color of the pointer line.

strokeDashArray - Sequence of Float

Stroke Dash Array: Teh dash array of the slice borderline.

**popout** - Measurement

Popout: The distance of how much the slice should be popped out.

fontName - String

Font Name: The font name of the label.

fontSize - Measurement

Font Size: The font size of the label.

labelRadius - Measurement

Label Radius: The radius at which the label should be placed around the pie.

swatchMarker - Symbol

fillColorShaded - Color

Fill Color Shade: The shade used for the fill color.

### **Examples**

### slices

The collection of all 3-D slice descriptions.

### Attributes

```
strokeWidth - Measurement
```

Stroke Width: The wodth of the slice line.

fillColor - Color

Fill Color: The fill color of the slice.

strokeColor - Color

Stroke Color: The color of the pointer line.

strokeDashArray - Sequence of Float

Stroke Dash Array: Teh dash array of the slice borderline.

```
popout - Measurement
```

*Popout*: The distance of how much the slice should be popped out.

### fontName - String

Font Name: The font name of the label.

#### fontSize - Measurement

Font Size: The font size of the label.

#### labelRadius - Measurement

Label Radius: The radius at which the label should be placed around the pie.

fillColorShaded - Color

### Sub-Directives

slice (OneOrMore)

### **Examples**

(Extracted from file tag-pieChart3d.rml, line 27) [PDF]

### slices

The collection of all 2-D slice descriptions.

# Attributes

# strokeWidth - Measurement

Stroke Width: The wodth of the slice line.

### fillColor - Color

Fill Color: The fill color of the slice.

### strokeColor - Color

Stroke Color: The color of the pointer line.

### strokeDashArray - Sequence of Float

Stroke Dash Array: Teh dash array of the slice borderline.

#### popout - Measurement

*Popout*: The distance of how much the slice should be popped out.

#### **fontName** - String

Font Name: The font name of the label.

### fontSize - Measurement

Font Size: The font size of the label.

### labelRadius - Measurement

Label Radius: The radius at which the label should be placed around the pie.

#### Sub-Directives

slice (OneOrMore)

# **Examples**

```
<slices xmlns:doc="http://namespaces.zope.org/rml/doc" strokeWidth="0.5">
    <slice fillColor="darkcyan"/>
    <slice fillColor="blueviolet"/>
    <slice fillColor="blue"/>
```

### spacer

Creates a vertical space in the flow.

### Attributes

width - Measurement

Width: The width of the spacer. Currently not implemented.

**length** (*required*) - Measurement *Length*: The height of the spacer.

### **Examples**

# **spiderChart**

A spider chart.

### Attributes

dx - Measurement

*Drawing X-Position*: The x-position of the entire drawing on the canvas.

dy - Measurement

*Drawing Y-Position*: The y-position of the entire drawing on the canvas.

dwidth - Measurement

Drawing Width: The width of the entire drawing

**dheight** - Measurement

Drawing Height: The height of the entire drawing

**angle** - Float

Angle: The orientation of the drawing as an angle in degrees.

x - Measurement

Chart X-Position: The x-position of the chart within the drawing.

y - Measurement

*Chart Y-Position*: The y-position of the chart within the drawing.

width - Measurement

Chart Width: The width of the chart.

**height** - Measurement

Chart Height: The height of the chart.

strokeColor - Color

Stroke Color: Color of the chart border.

strokeWidth - Measurement

Stroke Width: Width of the chart border.

fillColor - Color

Fill Color: Color of the chart interior.

debug - Boolean

Debugging: A flag that when set to True turns on debug messages.

startAngle - Integer

```
Start Angle: The start angle in the chart of the first strand in degrees.
```

direction - Choice of ('clockwise', 'anticlockwise')

Direction: The direction in which the spider chart will be built.

### Sub-Directives

```
data (One)
strands (ZeroOrOne)
strandLabels (ZeroOrOne)
spokes (ZeroOrOne)
spokeLabels (ZeroOrOne)
labels (ZeroOrOne)
texts (ZeroOrOne)
```

### **Examples**

```
<spiderChart xmlns:doc="http://namespaces.zope.org/rml/doc" dx="2in" dy="7in"</pre>
             dwidth="6in" dheight="4in" x="0" y="0" width="3in" height="3in">
  <labels>
    <label>a</label>
    <label>b</label>
    <label>c</label>
    <label>d</label>
    <label>e</label>
    <label>f</label>
  </labels>
  <strands>
    <strand strokeColor="cornsilk" fillColor="cornsilk"/>
    <strand strokeColor="cyan" fillColor="cyan"/>
   <strand strokeColor="palegreen" fillColor="palegreen"/>
  </strands>
  <spokes strokeDashArray="2 2"/>
  <data>
    <series>12 14 16 14 12
    <series>6 8 10 12 9 15
    <series>7 8 17 4 12 8
  </data>
</spiderChart>
(Extracted from file tag-spiderChart.rml, line 18)
                                      [PDF]
```

# **spoke**

A spoke in the spider diagram.

### Attributes

```
strokeWidth - Measurement
Stroke Width: The width of the spoke's line.
fillColor - Color
Fill Color: The fill color of the spoke's area.
strokeColor - Color
Stroke Color: The color of the spoke line.
strokeDashArray - Sequence of Float
Stroke Dash Array: The dash array of the spoke line.
labelRadius - Measurement
Label Radius: The radius of the label arouns the spoke.
visible - Boolean
Visible: When true, the spoke line is drawn.
```

# spokeLabels

# A set of spoke labels.

### Attributes

### dx - Measurement

Horizontal Extension: The width of the label.

#### dy - Measurement

Vertical Extension: The height of the label.

### angle - Float

Angle: The angle to rotate the label.

boxAnchor - Choice of ('c', 'e', 'sw', 'ne', 'n', 's', 'w', 'autox', 'autoy', 'se', 'nw')

Box Anchor: The position relative to the label.

#### boxStrokeColor - Color

Box Stroke Color: The color of the box border line.

### boxStrokeWidth - Measurement

Box Stroke Width: The width of the box border line.

### boxFillColor - Color

Box Fill Color: The color in which the box is filled.

#### boxTarget - Text

Box Target: The box target.

#### fillColor - Color

Fill Color: The color in which the label is filled.

#### strokeColor - Color

Stroke Color: The color of the label.

#### strokeWidth - Measurement

Stroke Width: The width of the label line.

### fontName - String

Font Name: The font used to print the value.

#### fontSize - Measurement

Font Size: The size of the value text.

### **leading** - Measurement

Leading: The height of a single text line. It includes character height.

### width - Measurement

Width: The width the label.

### maxWidth - Measurement

Maximum Width: The maximum width the label.

### height - Measurement

*Height*: The height the label.

# textAnchor - Choice of ('start', 'boxauto', 'end', 'middle')

*Text Anchor*: The position in the text to which the coordinates refer.

#### visible - Boolean

Visible: A flag making the label text visible.

#### **leftPadding** - Measurement

Left Padding: The size of the padding on the left side.

### rightPadding - Measurement

Right Padding: The size of the padding on the right side.

### topPadding - Measurement

Top Padding: The size of the padding on the top.

### bottomPadding - Measurement

Bottom Padding: The size of the padding on the bottom.

### Sub-Directives

```
label (OneOrMore)
```

```
Examples
```

# spokes

A collection of spokes.

#### Attributes

#### Sub-Directives

```
spoke (OneOrMore)
```

# **Examples**

### story

The story of the PDF file.

### Attributes

# firstPageTemplate - Text

First Page Template: The first page template to be used.

### Sub-Directives

```
spacer (ZeroOrMore)
illustration (ZeroOrMore)
pre (ZeroOrMore)
xpre (ZeroOrMore)
plugInFlowable (ZeroOrMore)
barCodeFlowable (ZeroOrMore)
outlineAdd (ZeroOrMore)
title (ZeroOrMore)
h1 (ZeroOrMore)
```

```
h2 (ZeroOrMore)
  h3 (ZeroOrMore)
   para (ZeroOrMore)
   blockTable (ZeroOrMore)
   nextFrame (ZeroOrMore)
   setNextFrame (ZeroOrMore)
   nextPage (ZeroOrMore)
  setNextTemplate (ZeroOrMore)
   condPageBreak (ZeroOrMore)
  keepInFrame (ZeroOrMore)
  keepTogether (ZeroOrMore)
  imageAndFlowables (ZeroOrMore)
   pto (ZeroOrMore)
   indent (ZeroOrMore)
  fixedSize (ZeroOrMore)
  bookmark (ZeroOrMore)
  link (ZeroOrMore)
  hr (ZeroOrMore)
  name (ZeroOrMore)
   pdfInclude (ZeroOrMore)
Examples
   <story xmlns:doc="http://namespaces.zope.org/rml/doc">
     <para style="large">Hello <b>World</b>!</para>
   </story>
   (Extracted from file simple-layout.rml, line 35)
                                                   [PDF]
strand
A strand in the spider diagram
Attributes
   strokeWidth - Measurement
     Stroke Width: The line width of the strand.
   fillColor - Color
     Fill Color: The fill color of the strand area.
  strokeColor - Color
     Stroke Color: The color of the strand line.
   strokeDashArray - Sequence of Float
     Stroke Dash Array: The dash array of the strand line.
  symbol - Symbol
     Symbol: The symbol to use to mark the strand.
   symbolSize - Measurement
     Symbol Size: The size of the strand symbol.
   name - Text
     Name: The name of the strand.
Examples
   <strand xmlns:doc="http://namespaces.zope.org/rml/doc" strokeColor="cornsilk"</pre>
             fillColor="cornsilk"/>
   (Extracted from file tag-spiderChart.rml, line 28)
                                                   [PDF]
```

# strandLabels

A set of strand labels.

### Attributes

#### dx - Measurement

Horizontal Extension: The width of the label.

### dy - Measurement

Vertical Extension: The height of the label.

### angle - Float

Angle: The angle to rotate the label.

# boxAnchor - Choice of ('c', 'e', 'sw', 'ne', 'n', 's', 'w', 'autox', 'autoy', 'se', 'nw')

*Box Anchor*: The position relative to the label.

#### boxStrokeColor - Color

Box Stroke Color: The color of the box border line.

#### boxStrokeWidth - Measurement

Box Stroke Width: The width of the box border line.

#### boxFillColor - Color

Box Fill Color: The color in which the box is filled.

### boxTarget - Text

Box Target: The box target.

#### **fillColor** - Color

Fill Color: The color in which the label is filled.

#### strokeColor - Color

Stroke Color: The color of the label.

#### strokeWidth - Measurement

Stroke Width: The width of the label line.

#### **fontName** - String

Font Name: The font used to print the value.

#### fontSize - Measurement

Font Size: The size of the value text.

#### **leading** - Measurement

Leading: The height of a single text line. It includes character height.

#### width - Measurement

Width: The width the label.

### maxWidth - Measurement

Maximum Width: The maximum width the label.

### height - Measurement

*Height*: The height the label.

### textAnchor - Choice of ('start', 'boxauto', 'end', 'middle')

*Text Anchor*: The position in the text to which the coordinates refer.

#### visible - Boolean

Visible: A flag making the label text visible.

### **leftPadding** - Measurement

Left Padding: The size of the padding on the left side.

#### **rightPadding** - Measurement

Right Padding: The size of the padding on the right side.

### **topPadding** - Measurement

*Top Padding*: The size of the padding on the top.

### **bottomPadding** - Measurement

Bottom Padding: The size of the padding on the bottom.

#### row - Integer

Row: The row of the strand label

#### col - Integer

Column: The column of the strand label.

```
format - String
```

Format: The format string for the label.

#### Content

TextNode

Text: The label text of the strand.

#### Sub-Directives

```
label (OneOrMore)
```

# **Examples**

## strands

A collection of strands.

#### Attributes

```
stroke Width - Measurement Stroke Width: The line width of the strand.
```

fillColor - Color

Fill Color: The fill color of the strand area.

strokeColor - Color

Stroke Color: The color of the strand line.

strokeDashArray - Sequence of Float

Stroke Dash Array: The dash array of the strand line.

symbol - Symbol

*Symbol*: The symbol to use to mark the strand.

symbolSize - Measurement

Symbol Size: The size of the strand symbol.

name - Text

Name: The name of the strand.

## Sub-Directives

```
strand (OneOrMore)
```

# **Examples**

## stroke

Set the stroke/line color.

#### Attributes

```
color (required) - Color
```

Color: The color value to be set.

## **Examples**

# stylesheet

A styleheet defines the styles that can be used in the document.

#### Sub-Directives

```
initialize (ZeroOrOne)
paraStyle (ZeroOrMore)
blockTableStyle (ZeroOrMore)
```

## **Examples**

```
<stylesheet xmlns:doc="http://namespaces.zope.org/rml/doc">
   <paraStyle name="large" fontSize="3cm" textColor="red"/>
   </stylesheet>
(Extracted from file simple-layout.rml, line 8)
[PDF]
```

## td

A table cell within a table.

## Attributes

fontName - String

Font Name: The name of the font for the cell.

fontSize - Measurement

Font Size: The font size for the text of the cell.

leading - Measurement

Leading: The height of a single text line. It includes character height.

fontColor - Color

Font Color: The color in which the text will appear.

leftPadding - Measurement

Left Padding: The size of the padding on the left side.

**rightPadding** - Measurement

Right Padding: The size of the padding on the right side.

topPadding - Measurement

*Top Padding*: The size of the padding on the top.

**bottomPadding** - Measurement

Bottom Padding: The size of the padding on the bottom.

background - Color

Background Color: The color to use as the background for the cell.

align - Choice of ('decimal', 'right', 'center', 'centre', 'left')

Text Alignment: The text alignment within the cell.

vAlign - Choice of ('middle', 'top', 'bottom')

Vertical Alignment: The vertical alignment of the text within the cell.

**lineBelowThickness** - Measurement

Line Below Thickness: The thickness of the line below the cell.

lineBelowColor - Color

Line Below Color: The color of the line below the cell.

**lineBelowCap** - Choice of ('default', 'square', 'round', 'butt')

Line Below Cap: The cap at the end of the line below the cell.

## lineBelowCount - Integer

Line Below Count: Describes whether the line below is a single (1) or double (2) line.

## lineBelowSpace - Measurement

Line Below Space: The space of the line below the cell.

#### lineAboveThickness - Measurement

Line Above Thickness: The thickness of the line above the cell.

#### lineAboveColor - Color

Line Above Color: The color of the line above the cell.

## **lineAboveCap** - Choice of ('default', 'square', 'round', 'butt')

Line Above Cap: The cap at the end of the line above the cell.

## lineAboveCount - Integer

Line Above Count: Describes whether the line above is a single (1) or double (2) line.

#### **lineAboveSpace** - Measurement

*Line Above Space*: The space of the line above the cell.

## lineLeftThickness - Measurement

Left Line Thickness: The thickness of the line left of the cell.

#### lineLeftColor - Color

Left Line Color: The color of the line left of the cell.

# **lineLeftCap** - Choice of ('default', 'square', 'round', 'butt')

Line Left Cap: The cap at the end of the line left of the cell.

## lineLeftCount - Integer

Line Left Count: Describes whether the left line is a single (1) or double (2) line.

#### lineLeftSpace - Measurement

Line Left Space: The space of the line left of the cell.

## lineRightThickness - Measurement

Right Line Thickness: The thickness of the line right of the cell.

## lineRightColor - Color

Right Line Color: The color of the line right of the cell.

## lineRightCap - Choice of ('default', 'square', 'round', 'butt')

Line Right Cap: The cap at the end of the line right of the cell.

#### lineRightCount - Integer

Line Right Count: Describes whether the right line is a single (1) or double (2) line.

## lineRightSpace - Measurement

Line Right Space: The space of the line right of the cell.

#### Content

## RawXMLContent (required)

Content: The content of the cell; can be text or any flowable.

# **Examples**

```
This
(Extracted from file tag-blockTable-1.rml, line 19) [PDF]
```

# template

Define a page template.

# Attributes

## **pagesize** - PageSize *Page Size*: The Page Size.

rotation - Integer

Rotation: The rotation of the page in multiples of 90 degrees.

## leftMargin - Measurement

Left Margin: The left margin of the template.

## rightMargin - Measurement

Right Margin: The right margin of the template.

## topMargin - Measurement

Top Margin: The top margin of the template.

## bottomMargin - Measurement

Bottom Margin: The bottom margin of the template.

#### showBoundary - Boolean

Show Boundary: A flag to show the boundary of the template.

## allowSplitting - Boolean

Allow Splitting: A flag to allow splitting over multiple templates.

## title - Text

Title: The title of the PDF document.

#### author - Text

Author: The author of the PDF document.

## Sub-Directives

```
pageTemplate (OneOrMore)
```

# **Examples**

```
<template xmlns:doc="http://namespaces.zope.org/rml/doc">
   <pageTemplate id="main">
        <frame id="first" x1="lcm" y1="lcm" width="19cm" height="26cm"/>
        </pageTemplate>
</template>
```

(Extracted from file *tag-document-story.rml*, line 8) [PDF]

# text

Draw a text on the chart.

## Attributes

**x** (required) - Measurement

*X-Coordinate*: The X-coordinate of the lower-left position of the text.

v (required) - Measurement

*Y-Coordinate*: The Y-coordinate of the lower-left position of the text.

angle - Float

Rotation Angle: The angle about which the text will be rotated.

**fontName** - String

Font Name: The name of the font.

fontSize - Measurement

Font Size: The font size for the text.

fillColor - Color

Fill Color: The color in which the text will appear.

textAnchor - Choice of ('start', 'boxauto', 'end', 'middle')

*Text Anchor*: The position in the text to which the coordinates refer.

# Content

TextNode (required)

*Text*: The text to be printed.

## textAnnotation

Writes a low-level text annotation into the PDF.

#### Attributes

```
contents (required) - FirstLevelTextNode Contents: The PDF commands that are inserted as annotation.
```

#### Sub-Directives

```
param (ZeroOrMore)
```

# **Examples**

```
<textAnnotation xmlns:doc="http://namespaces.zope.org/rml/doc">
    <param name="Rect">0,0,1,1</param>
    <param name="F">3</param>
    <param name="escape">6</param>
X::PDF
PX(S)
MT(PINK)
    </textAnnotation>
(Extracted from file tag-textAnnotation.rml, line 8) [PDF]
```

# textField

A text field within the PDF

#### Attributes

Multiline: A flag when set allows multiple lines within the field.

#### texts

A set of texts drawn on the chart.

#### Sub-Directives

```
text (ZeroOrMore)
```

## **Examples**

## title

The title is a simple paragraph with a special title style.

#### Attributes

## **fontName** - String

Font Name: The name of the font for the paragraph.

## fontSize - Measurement

Font Size: The font size for the text of the paragraph.

# leading - Measurement

Leading: The height of a single paragraph line. It includes character height.

#### leftIndent - Measurement

Left Indentation: General indentation on the left side.

#### rightIndent - Measurement

Right Indentation: General indentation on the right side.

#### firstLineIndent - Measurement

First Line Indentation: The indentation of the first line in the paragraph.

## **spaceBefore** - Measurement

Space Before: The vertical space before the paragraph.

# spaceAfter - Measurement

*Space After*: The vertical space after the paragraph.

# **alignment** - Choice of ('right', 'justify', 'center', 'centre', 'left') *Alignment*: The text alignment.

## bulletFontName - String

Bullet Font Name: The font in which the bullet character will be rendered.

## bulletFontSize - Measurement

Bullet Font Size: The font size of the bullet character.

#### **bulletIndent** - Measurement

Bullet Indentation: The indentation that is kept for a bullet point.

textColor - Color

Text Color: The color in which the text will appear.

## backColor - Color

Background Color: The background color of the paragraph.

## keepWithNext - Boolean

Keep with Next: When set, this paragraph will always be in the same frame as the following flowable.

## wordWrap - String

Word Wrap Method: When set to "CJK", invoke CJK word wrapping

#### borderColor - Color

Border Color: The color in which the paragraph border will appear.

#### borderWidth - Measurement

Paragraph Border Width: The width of the paragraph border.

## **borderPadding** - Sequence of Integer

Paragraph Border Padding: Padding of the paragraph.

## borderRadius - Measurement

Paragraph Border Radius: The radius of the paragraph border.

#### **bulletText** - String

Bullet Character: The bullet character is the ASCII representation of the symbol making up the bullet in a listing.

#### dedent - Integer

*Dedent*: Number of characters to be removed in front of every line of the text.

#### **style** (required) - Style

Style: The paragraph style that is applied to the paragraph. See the ``paraStyle`` tag for creating a paragraph style.

## **Content**

## XMLContent (required)

Text: The text that will be layed out.

## **Examples**

```
<title xmlns:doc="http://namespaces.zope.org/rml/doc">Title</title> (Extracted from file tag-para.rml, line 20) [PDF]
```

# tr

A table row in the block table.

#### Sub-Directives

td (OneOrMore)

## **Examples**

# transform

A full 2-D matrix transformation

## **Content**

TextNodeSequence of Float (required)

Matrix: The transformation matrix.

```
<transform xmlns:doc="http://namespaces.zope.org/rml/doc">
   1.0   0.3
```

```
-0.2 1.1
10.1 15.0
</transform>
```

(Extracted from file *tag-transform.rml*, line 13)

[PDF]

# translate

Translate the drawing coordinates by the specified x and y offset.

## Attributes

dx (required) - Measurement

*X-Offset*: The amount to move the drawing to the right.

dy (required) - Measurement

*Y-Offset*: The amount to move the drawing upward.

# **Examples**

# valueAxis

## Attributes

visible - Boolean

Visible: When true, draw the entire axis with all details.

visibleAxis - Boolean

Visible Axis: When true, draw the axis line.

visibleTicks - Boolean

Visible Ticks: When true, draw the axis ticks on the line.

visibleLabels - Boolean

Visible Labels: When true, draw the axis labels.

visibleGrid - Boolean

Visible Grid: When true, draw the grid lines for the axis.

strokeWidth - Measurement

Stroke Width: The width of axis line and ticks.

strokeColor - Color

Stroke Color: The color in which the axis line and ticks are drawn.

strokeDashArray - Sequence of Float

Stroke Dash Array: The dash array that is used for the axis line and ticks.

gridStrokeWidth - Measurement

*Grid Stroke Width*: The width of the grid lines.

gridStrokeColor - Color

Grid Stroke Color: The color in which the grid lines are drawn.

gridStrokeDashArray - Sequence of Float

Grid Stroke Dash Array: The dash array that is used for the grid lines.

**gridStart** - Measurement

Grid Start: The start of the grid lines with respect to the axis origin.

**gridEnd** - Measurement

Grid End: The end of the grid lines with respect to the axis origin.

**style** - Choice of ('stacked', 'parallel', 'parallel\_3d')

Style: The plot style of the common categories.

forceZero - Boolean

Force Zero: When set, the range will contain the origin.

```
minimumTickSpacing - Measurement
```

Minimum Tick Spacing: The minimum distance between ticks.

## maximumTicks - Integer

Maximum Ticks: The maximum number of ticks to be shown.

## labelTextFormat - String

Label Text Format: Formatting string for axis labels.

#### labelTextPostFormat - Text

Label Text Post Format: An additional formatting string.

#### labelTextScale - Float

Label Text Scale: The sclaing factor for the label tick values.

#### valueMin - Float

Minimum Value: The smallest value on the axis.

#### valueMax - Float

Maximum Value: The largest value on the axis.

## valueStep - Float

Value Step: The step size between ticks

## valueSteps - Sequence of Float

Step Sizes: List of step sizes between ticks.

## rangeRound - Choice of ('both', 'none', 'ceiling', 'floor')

Range Round: Method to be used to round the range values.

## zrangePref - Float

Zero Range Preference: Zero range axis limit preference.

# **Examples**

# **xValueAxis**

X-Value Axis

## Attributes

## visible - Boolean

Visible: When true, draw the entire axis with all details.

## visibleAxis - Boolean

Visible Axis: When true, draw the axis line.

# visibleTicks - Boolean

Visible Ticks: When true, draw the axis ticks on the line.

## visibleLabels - Boolean

Visible Labels: When true, draw the axis labels.

#### visibleGrid - Boolean

Visible Grid: When true, draw the grid lines for the axis.

## strokeWidth - Measurement

Stroke Width: The width of axis line and ticks.

#### **strokeColor** - Color

Stroke Color: The color in which the axis line and ticks are drawn.

## strokeDashArray - Sequence of Float

Stroke Dash Array: The dash array that is used for the axis line and ticks.

```
gridStrokeWidth - Measurement
```

Grid Stroke Width: The width of the grid lines.

## gridStrokeColor - Color

Grid Stroke Color: The color in which the grid lines are drawn.

## gridStrokeDashArray - Sequence of Float

Grid Stroke Dash Array: The dash array that is used for the grid lines.

#### gridStart - Measurement

*Grid Start*: The start of the grid lines with respect to the axis origin.

# gridEnd - Measurement

Grid End: The end of the grid lines with respect to the axis origin.

## style - Choice of ('stacked', 'parallel', 'parallel\_3d')

Style: The plot style of the common categories.

#### forceZero - Boolean

Force Zero: When set, the range will contain the origin.

# minimumTickSpacing - Measurement

Minimum Tick Spacing: The minimum distance between ticks.

## maximumTicks - Integer

Maximum Ticks: The maximum number of ticks to be shown.

#### labelTextFormat - String

Label Text Format: Formatting string for axis labels.

## labelTextPostFormat - Text

Label Text Post Format: An additional formatting string.

#### labelTextScale - Float

Label Text Scale: The sclaing factor for the label tick values.

#### valueMin - Float

Minimum Value: The smallest value on the axis.

#### valueMax - Float

Maximum Value: The largest value on the axis.

#### valueStep - Float

Value Step: The step size between ticks

## valueSteps - Sequence of Float

Step Sizes: List of step sizes between ticks.

## rangeRound - Choice of ('both', 'none', 'ceiling', 'floor')

Range Round: Method to be used to round the range values.

# **zrangePref** - Float

Zero Range Preference: Zero range axis limit preference.

# tickUp - Measurement

Tick Up: Length of tick above the axis line.

#### tickDown - Measurement

Tick Down: Length of tick below the axis line.

#### **joinAxis** - Boolean

Join Axis: Whether to join the axes.

## joinAxisMode - Choice of ('top', 'points', 'none', 'value', 'bottom')

Join Axis Mode: Mode for connecting axes.

## **joinAxisPos** - Measurement

Join Axis Position: The position in the plot at which to join the axes.

```
</xValueAxis>
```

(Extracted from file *tag-linePlot.rml*, line 25)

[PDF]

## **xpre**

A preformatted text that allows paragraph markup.

#### Attributes

```
style (required) - Style
```

Style: The paragraph style that is applied to the paragraph. See the ``paraStyle`` tag for creating a paragraph style.

## **bulletText** - String

Bullet Character: The bullet character is the ASCII representation of the symbol making up the bullet in a listing.

#### dedent - Integer

Dedent: Number of characters to be removed in front of every line of the text.

#### Content

## RawXMLContent (required)

*Text*: The text that will be layed out.

# **Examples**

(Extracted from file *tag-para.rml*, line 26)

[PDF]

# yValueAxis

Y-Value Axis

#### Attributes

#### visible - Boolean

Visible: When true, draw the entire axis with all details.

#### visibleAxis - Boolean

Visible Axis: When true, draw the axis line.

## visibleTicks - Boolean

Visible Ticks: When true, draw the axis ticks on the line.

## visibleLabels - Boolean

Visible Labels: When true, draw the axis labels.

## visibleGrid - Boolean

Visible Grid: When true, draw the grid lines for the axis.

#### strokeWidth - Measurement

Stroke Width: The width of axis line and ticks.

#### strokeColor - Color

Stroke Color: The color in which the axis line and ticks are drawn.

## strokeDashArray - Sequence of Float

Stroke Dash Array: The dash array that is used for the axis line and ticks.

## gridStrokeWidth - Measurement

Grid Stroke Width: The width of the grid lines.

## gridStrokeColor - Color

Grid Stroke Color: The color in which the grid lines are drawn.

## gridStrokeDashArray - Sequence of Float

Grid Stroke Dash Array: The dash array that is used for the grid lines.

## gridStart - Measurement

Grid Start: The start of the grid lines with respect to the axis origin.

#### gridEnd - Measurement

```
Grid End: The end of the grid lines with respect to the axis origin.
```

style - Choice of ('stacked', 'parallel', 'parallel\_3d')

*Style*: The plot style of the common categories.

## forceZero - Boolean

Force Zero: When set, the range will contain the origin.

## minimumTickSpacing - Measurement

Minimum Tick Spacing: The minimum distance between ticks.

## maximumTicks - Integer

Maximum Ticks: The maximum number of ticks to be shown.

#### labelTextFormat - String

Label Text Format: Formatting string for axis labels.

#### labelTextPostFormat - Text

Label Text Post Format: An additional formatting string.

#### labelTextScale - Float

Label Text Scale: The sclaing factor for the label tick values.

#### valueMin - Float

Minimum Value: The smallest value on the axis.

#### valueMax - Float

Maximum Value: The largest value on the axis.

## valueStep - Float

Value Step: The step size between ticks

## valueSteps - Sequence of Float

Step Sizes: List of step sizes between ticks.

## rangeRound - Choice of ('both', 'none', 'ceiling', 'floor')

Range Round: Method to be used to round the range values.

## zrangePref - Float

Zero Range Preference: Zero range axis limit preference.

## tickLeft - Measurement

Tick Left: Length of tick left to the axis line.

#### tickRight - Measurement

Tick Right: Length of tick right to the axis line.

#### **joinAxis** - Boolean

Join Axis: Whether to join the axes.

## joinAxisMode - Choice of ('top', 'points', 'none', 'value', 'bottom')

Join Axis Mode: Mode for connecting axes.

## joinAxisPos - Measurement

Join Axis Position: The position in the plot at which to join the axes.