**Graph Component**

**Test Cases**

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# Axis

# Bar

### Test Case 1

**Test Case ID –** RBC.graph.bar.1

**Test Item –** The *bar* function of the *graph* BLT component.

**Input Specification –** The bar data to show in the graph

**Output Specification –** A bar graph element is added to the graph

**Special Procedural Requirements –** The operations on this data are tested in Barchart test cases

**Inter-case Dependencies –** None

# Configure

### Test Case 1

**Test Case ID –** RBC.graph.configure.1

**Test Item –** The *configure* function of the *graph* BLT component.

**Input Specification –** A name value pair for the configuration options

**Output Specification –** The configuration options being changed on the graph

**Special Procedural Requirements –** None

**Inter-case Dependencies –** None

# Graph Crosshairs Cget

### Test Case 1

**Test Case ID –** RBC.graph.crosshairs.cget.1

**Test Item –** The *crosshairs cget* function of the *graph* BLT component.

**Input Specification –** The name of a crosshairs configure option.

**Output Specification –** The value of the given crosshairs configure option name.

**Special Procedural Requirements –** A graph widget can be created.

**Inter-case Dependencies –**

# Graph Crosshairs Configure

### Test Case 1

**Test Case ID –** RBC.graph.crosshairs.configure.1

**Test Item –** The *crosshairs configure -color* function of the *graph* BLT component.

**Input Specification –** A string representation of a color name.

**Output Specification –** The color of the crosshairs component is set to the input value.

**Special Procedural Requirements –** A graph widget can be created.

**Inter-case Dependencies –** RBC.graph.crosshairs.cget.1

### Test Case 2

**Test Case ID –** RBC.graph.crosshairs.configure.2

**Test Item –** The *crosshairs configure -dashes* function of the *graph* BLT component.

**Input Specification –** A list of up to 11 numbers that alternately represent the lengths of the dashes and gaps on the cross hair lines.

**Output Specification –** The dash style of the crosshairs component is set to the input value.

**Special Procedural Requirements –** A graph widget can be created.

**Inter-case Dependencies –** RBC.graph.crosshairs.cget.1

### Test Case 3

**Test Case ID –** RBC.graph.crosshairs.configure.3

**Test Item –** The *crosshairs configure -hide* function of the *graph* BLT component.

**Input Specification –** Any of the following: 1, 0, true, false, yes, no

**Output Specification –** The hide property of the crosshairs component is set according to the input value (either 1 or 0).

**Special Procedural Requirements –** A graph widget can be created.

**Inter-case Dependencies –** RBC.graph.crosshairs.cget.1

### Test Case 4

**Test Case ID –** RBC.graph.crosshairs.configure.4

**Test Item –** The *crosshairs configure -linewidth* function of the *graph* BLT component.

**Input Specification –** A positive numerical value.

**Output Specification –** The linewidth of the crosshairs component is set according to the input value.

**Special Procedural Requirements –** A graph widget can be created.

**Inter-case Dependencies –** RBC.graph.crosshairs.cget.1

### Test Case 5

**Test Case ID –** RBC.graph.crosshairs.configure.6

**Test Item –** The *crosshairs configure -position* function of the *graph* BLT component.

**Input Specification –** Window coordinates in the form “@x,y”.

**Output Specification –** The coordinates of the crosshair intersection is set to the given coordinates.

**Special Procedural Requirements –** A graph widget can be created.

**Inter-case Dependencies –** RBC.graph.crosshairs.cget.1

# Graph Crosshairs Off

### Test Case 1

**Test Case ID –** RBC.graph.crosshairs.off.1

**Test Item –** The *crosshairs off* command of the *graph* BLT component.

**Input Specification –** None

**Output Specification –** The crosshairs on the graph component should be hidden.

**Special Procedural Requirements –** A graph widget can be created.

**Inter-case Dependencies –** None

# Graph Crosshairs On

### Test Case 1

**Test Case ID –** RBC.graph.crosshairs.on.1

**Test Item –** The *crosshairs on* command of the *graph* BLT component.

**Input Specification –** None

**Output Specification –** The crosshairs on the graph component should be visible.

**Special Procedural Requirements –** A graph widget can be created.

**Inter-case Dependencies –** None

# Graph Crosshairs Toggle

### Test Case 1

**Test Case ID –** RBC.graph.crosshairs.toggle.1

**Test Item –** The *crosshairs toggle* command of the *graph* BLT component.

**Input Specification –** None

**Output Specification –** The visibility of the crosshairs on the graph component should be the opposite of what it was to start.

**Special Procedural Requirements –** None

**Inter-case Dependencies –** RBC.graph.crosshairs.off.1, RBC.graph.crosshairs.on.1

# Element

## Cget

### Test Case 1

**Test Case ID –** RBC.graph.element.cget.1

**Test Item –** The *element cget* function of the *graph* BLT component.

**Input Specification –** The name of a element configure option.

**Output Specification –** The value of the given element configure option name.

**Special Procedural Requirements –** A graph widget can be created.

**Inter-case Dependencies –** RBC.graph.element.create.1

## Activate

### Test Case 1

**Test Case ID –** RBC.graph.element.activate.1

**Test Item –** The *element activate* function of the *graph* BLT component.

**Input Specification –** An element name.

**Output Specification –** The element name is on the activate list.

**Special Procedural Requirements –** A graph widget can be created.

**Inter-case Dependencies –** RBC.graph.element.create.1

## Bind

### Test Case 1

**Test Case ID –** RBC.graph.element.bind.1

**Test Item –** The *element bind* function of the *graph* BLT component.

**Input Specification –** A tag name and a command.

**Output Specification –** The bindtags contain the name of the tag.

**Special Procedural Requirements –** A graph widget can be created.

**Inter-case Dependencies –** RBC.graph.element.create.1

## Closest

### Test Case 1

**Test Case ID –** RBC.graph.element.closest.1

**Test Item –** The *element closest* function of the *graph* BLT component.

**Input Specification –** An x and y screen coordinate and a variable name in which the results will be stored.

**Output Specification –** The variable contains the name of the closest element, the index of the closest data points, and the graph coordinates of the point. The function returns 0 if no data point within the threshold is found, otherwise it returns 1.

**Special Procedural Requirements –** A graph widget can be created.

**Inter-case Dependencies –** RBC.graph.element.create.1

### Test Case 2

**Test Case ID –** RBC.graph.element.closest.2

**Test Item –** The *element closest* function of the *graph* BLT component with the *-along* flag.

**Input Specification –** An x and y screen coordinate, a variable name in which the results will be stored, and a direction to the *-along* flag (x, y, both).

**Output Specification –** The variable contains the name of the closest element, the index of the closest data points, and the graph coordinates of the point. The function returns 0 if no data point within the threshold is found, otherwise it returns 1.

**Special Procedural Requirements –** A graph widget can be created.

**Inter-case Dependencies –** RBC.graph.element.create.1

### Test Case 3

**Test Case ID –** RBC.graph.element.closest.3

**Test Item –** The *element closest* function of the *graph* BLT component with the *-halo* flag.

**Input Specification –** An x and y screen coordinate, a variable name in which the results will be stored, and a pixel value for the *-halo* flag.

**Output Specification –** The variable contains the name of the closest element, the index of the closest data points, and the graph coordinates of the point. The function returns 0 if no data point within the threshold is found, otherwise it returns 1.

**Special Procedural Requirements –** A graph widget can be created.

**Inter-case Dependencies –** RBC.graph.element.create.1

### Test Case 4

**Test Case ID –** RBC.graph.element.closest.4

**Test Item –** The *element closest* function of the *graph* BLT component with the *-interpolate* flag.

**Input Specification –** An x and y screen coordinate, a variable name in which the results will be stored, and any of the following to the *-along* flag: 1, 0, true, false, yes, no

**Output Specification –** The variable contains the name of the closest element, the index of the closest data points, and the graph coordinates of the point. The function returns 0 if no data point within the threshold is found, otherwise it returns 1.

**Special Procedural Requirements –** A graph widget can be created.

**Inter-case Dependencies –** RBC.graph.element.create.1

## Configure

### Test Case 1

**Test Case ID –** RBC.graph.element.configure.1

**Test Item –** The *element configure -activepen* function of the *graph* BLT component.

**Input Specification –** The name of a pen or “” to not draw the element when it is active.

**Output Specification –** The activepen property of the element component is set to the input value, which will be used to draw the element when it is active.

**Special Procedural Requirements –** A graph widget can be created.

**Inter-case Dependencies –** RBC.graph.element.cget.1,RBC.graph.element.create.1, RBC.graph.pen.1

### Test Case 2

**Test Case ID –** RBC.graph.element.configure.2

**Test Item –** The *element configure -bindtags* function of the *graph* BLT component.

**Input Specification –** A list of binding tag names.

**Output Specification –** The bindtag list has the given list of tag names.

**Special Procedural Requirements –** A graph widget can be created.

**Inter-case Dependencies –** RBC.graph.element.cget.1, RBC.graph.element.create.1, RBC.graph.element.bind.1

### Test Case 3

**Test Case ID –** RBC.graph.element.configure.3

**Test Item –** The *element configure -color* function of the *graph* BLT component.

**Input Specification –** A string representation of a color name.

**Output Specification –** The color of the element component is set to the input value.

**Special Procedural Requirements –** A graph widget can be created.

**Inter-case Dependencies –** RBC.graph.element.cget.1, RBC.graph.element.create.1

### Test Case 4

**Test Case ID –** RBC.graph.element.configure.4

**Test Item –** The *element configure -dashes* function of the *graph* BLT component.

**Input Specification –** A list of up to 11 numbers that alternately represent the lengths of the dashes and gaps between the elements.

**Output Specification –** The dash style of the element component is set to the input value.

**Special Procedural Requirements –** A graph widget can be created.

**Inter-case Dependencies –** RBC.graph.element.cget.1, RBC.graph.element.create.1

### Test Case 5

**Test Case ID –** RBC.graph.element.configure.5

**Test Item –** The *element configure -data* function of the *graph* BLT component.

**Input Specification –** A list of numeric expressions representing the X-Y coordinate pairs of each data point.

**Output Specification –** The data property of the element is set to the list of input.

**Special Procedural Requirements –** A graph widget can be created.

**Inter-case Dependencies –** RBC.graph.element.cget.1,RBC.graph.element.create.1

**Test Case 6**

**Test Case ID –** RBC.graph.element.configure.6

**Test Item –** The *element configure -fill* function of the *graph* BLT component.

**Input Specification –** A string representation of a color name, defcolor, or “”.

**Output Specification –** The fill of the element component is set to the input color name, the fill color will use the -color option if given defcolor, or the fill color will be transparent if given “”.

**Special Procedural Requirements –** A graph widget can be created.

**Inter-case Dependencies –** RBC.graph.element.cget.1, RBC.graph.element.create.1

**Test Case 7**

**Test Case ID –** RBC.graph.element.configure.7

**Test Item –** The *element configure -hide* function of the *graph* BLT component.

**Input Specification –** Any of the following: 1, 0, true, false, yes, no

**Output Specification –** The hide property of the element component is set according to the input value (either 1 or 0).

**Special Procedural Requirements –** A graph widget can be created.

**Inter-case Dependencies –** RBC.graph.element.create.1

**Test Case 8**

**Test Case ID –** RBC.graph.element.configure.8

**Test Item –** The *element configure -label* function of the *graph* BLT component.

**Input Specification –** Text label for the element or “” for no legend entry.

**Output Specification –** The label of the element is set to the input value and is displayed in the legend or no entry is displayed in the legend and the value of the label is empty.

**Special Procedural Requirements –** A graph widget can be created.

**Inter-case Dependencies –** RBC.graph.element.cget.1, RBC.graph.element.create.1

**Test Case 9**

**Test Case ID –** RBC.graph.element.configure.9

**Test Item –** The *element configure -linewidth* function of the *graph* BLT component.

**Input Specification –** A positive numerical value.

**Output Specification –** The linewidth of the element component is set according to the input value.

**Special Procedural Requirements –** A graph widget can be created.

**Inter-case Dependencies –** RBC.graph.element.create.1

**Test Case 10**

**Test Case ID –** RBC.graph.element.configure.10

**Test Item –** The *element configure -mapx* function of the *graph* BLT component.

**Input Specification –** The name of a graph axis instance.

**Output Specification –** The element’s x-coordinates are mapped onto the given axis.

**Special Procedural Requirements –** A graph widget can be created, an axis component can be created.

**Inter-case Dependencies –** RBC.graph.element.create.1, RBC.graph.axis.[create]

**Test Case 11**

**Test Case ID –** RBC.graph.element.configure.11

**Test Item –** The *element configure -mapy* function of the *graph* BLT component.

**Input Specification –** The name of a graph axis instance.

**Output Specification –** The element’s y-coordinates are mapped onto the given axis.

**Special Procedural Requirements –** A graph widget can be created, an axis component can be created.

**Inter-case Dependencies –** RBC.graph.element.create.1, RBC.graph.axis.[create]

**Test Case 12**

**Test Case ID –** RBC.graph.element.configure.12

**Test Item –** The *element configure -offdash* function of the *graph* BLT component.

**Input Specification –** A string representation of a color name, defcolor, or “”.

**Output Specification –** The offdash of the element component is set to the input color name, the offdash color will use the -color option if given defcolor, or the offdash pixels will represent gaps instead of stripes if given “”.

**Special Procedural Requirements –** A graph widget can be created.

**Inter-case Dependencies –** RBC.graph.element.cget.1, RBC.graph.element.create.1

**Test Case 13**

**Test Case ID –** RBC.graph.element.configure.13

**Test Item –** The *element configure -outline* function of the *graph* BLT component.

**Input Specification –** A string representation of a color name, defcolor, or “”.

**Output Specification –** The outline of the element component is set to the input color name, the outline color will use the -color option if given defcolor, or the outline will not be drawn if given “”.

**Special Procedural Requirements –** A graph widget can be created.

**Inter-case Dependencies –** RBC.graph.element.cget.1, RBC.graph.element.create.1

**Test Case 14**

**Test Case ID –** RBC.graph.element.configure.14

**Test Item –** The *element configure -pen* function of the *graph* BLT component.

**Input Specification –** The name of a pen.

**Output Specification –** The pen property of the element component is set to the input value, which will be used to draw the element when it is active.

**Special Procedural Requirements –** A graph widget can be created.

**Inter-case Dependencies –** RBC.graph.element.cget.1,RBC.graph.element.create.1, RBC.graph.pen.1

**Test Case 15**

**Test Case ID –** RBC.graph.element.configure.15

**Test Item –** The *element configure -outlinewidth* function of the *graph* BLT component.

**Input Specification –** A positive numerical value.

**Output Specification –** The outlinewidth of the element component is set according to the input value.

**Special Procedural Requirements –** A graph widget can be created.

**Inter-case Dependencies –** RBC.graph.element.create.1

**Test Case 16**

**Test Case ID –** RBC.graph.element.configure.16

**Test Item –** The *element configure -scalesymbols* function of the *graph* BLT component.

**Input Specification –** Any of the following: 1, 0, true, false, yes, no

**Output Specification –** The scalessymbols property of the element component is set according to the input value (either 1 or 0).

**Special Procedural Requirements –** A graph widget can be created.

**Inter-case Dependencies –** RBC.graph.element.create.1

**Test Case 17**

**Test Case ID –** RBC.graph.element.configure.17

**Test Item –** The *element configure -smooth* function of the *graph* BLT component.

**Input Specification –** Any of the following: linear, step, natural, quadratic

**Output Specification –** The smooth property of the element component is set to the input value.

**Special Procedural Requirements –** A graph widget can be created.

**Inter-case Dependencies –** RBC.graph.element.create.1

**Test Case 18**

**Test Case ID –** RBC.graph.element.configure.18

**Test Item –** The *element configure -styles* function of the *graph* BLT component.

**Input Specification –** A list containing a pen name and optionally a minimum and maximum element weight range.

**Output Specification –** The styles property of the element component is set to the input value.

**Special Procedural Requirements –** A graph widget can be created.

**Inter-case Dependencies –** RBC.graph.element.create.1

**Test Case 19**

**Test Case ID –** RBC.graph.element.configure.19

**Test Item –** The *element configure -symbol* function of the *graph* BLT component.

**Input Specification –** Any of the following: square, circle, diamond, plus, cross, splus, scross, triangle, “”, bitmap.

**Output Specification –** The symbol property of the element component is set to the input value.

**Special Procedural Requirements –** A graph widget can be created.

**Inter-case Dependencies –** RBC.graph.element.create.1

**Test Case 20**

**Test Case ID –** RBC.graph.element.configure.20

**Test Item –** The *element configure -trace* function of the *graph* BLT component.

**Input Specification –** Any of the following: increasing, decreasing, both

**Output Specification –** The trace property of the element component is set to the input value.

**Special Procedural Requirements –** A graph widget can be created.

**Inter-case Dependencies –** RBC.graph.element.create.1

**Test Case 21**

**Test Case ID –** RBC.graph.element.configure.21

**Test Item –** The *element configure -weights* function of the *graph* BLT component.

**Input Specification –** A vector name or a list of numeric expressions representing the weights for each data point.

**Output Specification –** The weights property of the element component is set to the input value.

**Special Procedural Requirements –** A graph widget can be created.

**Inter-case Dependencies –** RBC.graph.element.create.1

**Test Case 22**

**Test Case ID –** RBC.graph.element.configure.22

**Test Item –** The *element configure -xdata* function of the *graph* BLT component.

**Input Specification –** A vector name or a list of numeric expressions.

**Output Specification –** The xdata property of the element component is set to the input value.

**Special Procedural Requirements –** A graph widget can be created.

**Inter-case Dependencies –** RBC.graph.element.create.1

**Test Case 23**

**Test Case ID –** RBC.graph.element.configure.23

**Test Item –** The *element configure -ydata* function of the *graph* BLT component.

**Input Specification –** A vector name or a list of numeric expressions.

**Output Specification –** The ydata property of the element component is set to the input value.

**Special Procedural Requirements –** A graph widget can be created.

**Inter-case Dependencies –** RBC.graph.element.create.1

**Test Case 24**

**Test Case ID –** RBC.graph.element.configure.24

**Test Item –** The *element configure -pixels* function of the *graph* BLT component.

**Input Specification –** A positive number.

**Output Specification –** The pixels property of the element component is set to the input value.

**Special Procedural Requirements –** A graph widget can be created.

**Inter-case Dependencies –** RBC.graph.element.create.1

## Create

### Test Case 1

**Test Case ID –** RBC.graph.element.create.1

**Test Item –** The *element create* function of the *graph* BLT component.

**Input Specification –** A unique name for the element.

**Output Specification –** A new element that can be referred to by the input name.

**Special Procedural Requirements –** A graph widget can be created.

**Inter-case Dependencies –** RBC.graph.element.names.1

## Deactivate

### Test Case 1

**Test Case ID –** RBC.graph.element.deactivate.1

**Test Item –** The *element deactivate* function of the *graph* BLT component.

**Input Specification –** An element name.

**Output Specification –** The element name is not on the activate list.

**Special Procedural Requirements –** A graph widget can be created.

**Inter-case Dependencies –** RBC.graph.element.create.1, RBC.graph.element.activate.1

## Delete

### Test Case 1

**Test Case ID –** RBC.graph.element.delete.1

**Test Item –** The *element delete* function of the *graph* BLT component.

**Input Specification –** One or more element name.

**Output Specification –** The element name is deleted.

**Special Procedural Requirements –** A graph widget can be created.

**Inter-case Dependencies –** RBC.graph.element.create.1

## Exists

### Test Case 1

**Test Case ID –** RBC.graph.element.exists.1

**Test Item –** The *element exists* function of the *graph* BLT component.

**Input Specification –** An element name.

**Output Specification –** 1 if the element is found, 0 otherwise.

**Special Procedural Requirements –** A graph widget can be created.

**Inter-case Dependencies –** RBC.graph.element.create.1, RBC.graph.element.activate.1

## Names

### Test Case 1

**Test Case ID –** RBC.graph.element.names.1

**Test Item –** The *element names* function of the *graph* BLT component.

**Input Specification –** A pattern.

**Output Specification –** The names of element objects that match the pattern.

**Special Procedural Requirements –** A graph widget can be created

**Inter-case dependencies –** RBC.graph.element.create.1

## Show

### Test Case 1

**Test Case ID –** RBC.graph.element.show.1

**Test Item –** The *element show* function of the *graph* BLT component.

**Input Specification –** One or more element names.

**Output Specification –** The given element names are part of the show list.

**Special Procedural Requirements –** A graph widget can be created

**Inter-case dependencies –** RBC.graph.element.create.1

## Type

### Test Case 1

**Test Case ID –** RBC.graph.element.type.1

**Test Item –** The *element type* function of the *graph* BLT component.

**Input Specification –** An element name.

**Output Specification –** One of the following: BarElement, LineElement.

**Special Procedural Requirements –** A graph widget can be created

**Inter-case dependencies –** RBC.graph.element.create.1

# Extents

### Test Case 1

**Test Case ID –** RBC.graph.extents.1

**Test Item –** The *extents* function of the *graph* BLT component.

**Input Specification –** The margin to show extents for

**Output Specification –** The size of the margin or plot dimension

**Special Procedural Requirements -** None

**Inter-case Dependencies –** None

# Grid

## Cget

### Test Case 1

**Test Case ID –** RBC.graph.grid.cget.1

**Test Item –** The *grid cget* function of the *graph* BLT component.

**Input Specification –** The name of a grid configure option.

**Output Specification –** The value of the given grid configure option name.

**Special Procedural Requirements –** A graph widget can be created.

**Inter-case Dependencies –**

## Configure

### Test Case 1

**Test Case ID –** RBC.graph.grid.configure.1

**Test Item –** The *grid configure -color* function of the *graph* BLT component.

**Input Specification –** A string representation of a color name.

**Output Specification –** The color of the grid component is set to the input value.

**Special Procedural Requirements –** A graph widget can be created.

**Inter-case Dependencies –** RBC.graph.grid.1

### Test Case 2

**Test Case ID –** RBC.graph.grid.configure.2

**Test Item –** The *grid configure -dashes* function of the *graph* BLT component.

**Input Specification –** A list of up to 11 numbers that alternately represent the lengths of the dashes and gaps on the cross hair lines.

**Output Specification –** The dash style of the grid component is set to the input value.

**Special Procedural Requirements –** A graph widget can be created.

**Inter-case Dependencies –** RBC.graph.grid.1

### Test Case 3

**Test Case ID –** RBC.graph.grid.configure.3

**Test Item –** The *grid configure -hide* function of the *graph* BLT component.

**Input Specification –** Any of the following: 1, 0, true, false, yes, no

**Output Specification –** The hide property of the grid component is set according to the input value (either 1 or 0).

**Special Procedural Requirements –** A graph widget can be created.

**Inter-case Dependencies –** RBC.graph.grid.cget.1

### Test Case 4

**Test Case ID –** RBC.graph.grid.configure.4

**Test Item –** The *grid configure -linewidth* function of the *graph* BLT component.

**Input Specification –** A positive numerical value.

**Output Specification –** The linewidth of the grid component is set according to the input value.

**Special Procedural Requirements –** A graph widget can be created.

**Inter-case Dependencies –** RBC.graph.grid.1

### Test Case 5

**Test Case ID –** RBC.graph.grid.configure.5

**Test Item –** The *grid configure -mapx* function of the *graph* BLT component.

**Input Specification –** The name of a graph axis instance or “” for no grid lines.

**Output Specification –** The x-axis of the grid is set to the given axis or no grid lines are displayed.

**Special Procedural Requirements –** A graph widget can be created, an axis component can be created.

**Inter-case Dependencies –** RBC.graph.grid.1, RBC.graph.axis.[create]

### Test Case 6

**Test Case ID –** RBC.graph.grid.configure.6

**Test Item –** The *grid configure -mapy* function of the *graph* BLT component.

**Input Specification –** The name of a graph axis instance or “” for no grid lines.

**Output Specification –** The y-axis of the grid is set to the given axis or no grid lines are displayed.

**Special Procedural Requirements –** A graph widget can be created, an axis component can be created.

**Inter-case Dependencies –** RBC.graph.grid.1, RBC.graph.axis.[create]

### Test Case 7

**Test Case ID –** RBC.graph.grid.configure.7

**Test Item –** The *grid configure -minor* function of the *graph* BLT component.

**Input Specification –** Any of the following: 1, 0, true, false, yes, no

**Output Specification –** The minor property of the grid component is set according to the input value (either 1 or 0).

**Special Procedural Requirements –** A graph widget can be created.

## Off

### Test Case 1

**Test Case ID –** RBC.graph.grid.off.1

**Test Item –** The *grid off* command of the *graph* BLT component.

**Input Specification –** None

**Output Specification –** The grid on the graph component should be hidden.

**Special Procedural Requirements –** A graph widget can be created.

**Inter-case Dependencies –** None

## On

### Test Case 1

**Test Case ID –** RBC.graph.grid.on.1

**Test Item –** The *grid on* command of the *graph* BLT component.

**Input Specification –** None

**Output Specification –** The grid on the graph component should be visible.

**Special Procedural Requirements –** A graph widget can be created.

**Inter-case Dependencies –** None

## Toggle

### Test Case 1

**Test Case ID –** RBC.graph.grid.toggle.1

**Test Item –** The *grid toggle* command of the *graph* BLT component.

**Input Specification –** None

**Output Specification –** The visibility of the grid on the graph component should be the opposite of what it was to start.

**Special Procedural Requirements –** A graph widget can be created.

**Inter-case Dependencies –** RBC.graph.grid.off.1, RBC.graph.grid.on.1

# Inside

### Test Case 1

**Test Case ID –** RBC.graph.inside.1

**Test Item –** The *inside* function of the *graph* BLT component.

**Input Specification –** A screen coordinate (X and Y)

**Output Specification –** Whether the screen coordinate is in the plot area

**Special Procedural Requirements –** None

**Inter-case Dependencies –** None

# Invtransform

### Test Case 1

**Test Case ID –** RBC.graph.invtransform.1

**Test Item –** The *invtransform* function of the *graph* BLT component.

**Input Specification –** A window coordinate (X and Y)

**Output Specification –** The graph coordinates translated from the inputs

**Special Procedural Requirements –** None

**Inter-case Dependencies –** None

# Legend

## Activate

### Test Case 1

**Test Case ID –** RBC.graph.legend.1

**Test Item –** The *legend activate* command of the *graph* BLT component.

**Input Specification –** A legend element.

**Output Specification –** The legend element should appear on the list of activated elements.

**Special Procedural Requirements –** None

**Inter-case Dependencies –** RBC.graph.element.create.1

### Test Case 6

**Test Case ID –** RBC.graph.legend.6

**Test Item –** The *legend activate* command of the *graph* BLT component.

**Input Specification –** A legend element.

**Output Specification –** The legend element should appear activated in the legend.

**Special Procedural Requirements –** None

**Inter-case Dependencies –** RBC.graph.element.create.1

## Deactivate

### Test Case 2

**Test Case ID –** RBC.graph.legend.2

**Test Item –** The *legend deactivate* command of the *graph* BLT component.

**Input Specification –** A legend element.

**Output Specification –** The legend element should not appear on the list of activated elements.

**Special Procedural Requirements –** None

**Inter-case Dependencies –** RBC.graph.element.create.1, RBC.graph.legend.1

### Test Case 7

**Test Case ID –** RBC.graph.legend.7

**Test Item –** The *legend deactivate* command of the *graph* BLT component.

**Input Specification –** A legend element.

**Output Specification –** The legend element should appear activated in the legend.

**Special Procedural Requirements –** None

**Inter-case Dependencies –** RBC.graph.element.create.1, RBC.graph.legend.1

## Configure

### Test Case 3

**Test Case ID –** RBC.graph.legend.3

**Test Item –** The *legend configure* command of the *graph* BLT component.

**Input Specification –** A valid configuration *option* flag and *value* pair

**Output Specification –** *legend cget* *-option* should return *value*

**Special Procedural Requirements –** None

**Inter-case Dependencies -** RBC.graph.legend.5

### Test Case 8

**Test Case ID –** RBC.graph.legend.8

**Test Item –** The *legend configure* command of the *graph* BLT component.

**Input Specification –** A valid configuration *option* flag and *value* pair

**Output Specification –** The legend and its elements should reflect the new option values.

**Special Procedural Requirements –** None

**Inter-case Dependencies -** RBC.graph.element.1, RBC.graph.legend.6

## Bind

### Test Case 4

**Test Case ID –** RBC.graph.legend.4

**Test Item –** The *legend bind* command of the *graph* BLT component.

**Input Specification –** A legend element or arbitrary tag name, an action sequence, and a command

**Output Specification –** *legend bind* should return the bound actions and commands

**Special Procedural Requirements –** None

**Inter-case Dependencies -** RBC.graph.element.create.1

### Test Case 9

**Test Case ID –** RBC.graph.legend.9

**Test Item –** The *legend bind* command of the *graph* BLT component.

**Input Specification –** A legend element, a sequence, and a command

**Output Specification –** Command is executed when sequence actions are taken on the legend element.

**Special Procedural Requirements –** None

**Inter-case Dependencies -** RBC.graph.element.create.1

## Cget

### Test Case 5

**Test Case ID –** RBC.graph.legend.5

**Test Item –** The *legend cget* command of the *graph* BLT component.

**Input Specification –** A configuration *option* flag

**Output Specification –** The current value for the *option* flag

**Special Procedural Requirements –** None

**Inter-case Dependencies -** RBC.graph.legend.3

# Line

## Test Cases

**Test Case ID –** RBC.graph.element.\*

**Test Item –** The *line* function of the *graph* BLT component.

**Input Specification –** See element input specification

**Output Specification –** See element output specification

**Special Procedural Requirements –** Replace element component keyword with line

**Inter-case Dependencies –** See element inter-case dependencies

# Marker

## Create

### Test Case 1

**Test Case ID –** RBC.graph.marker.1

**Test Item –** The *marker create* command of the *graph* BLT component.

**Input Specification –** The name of the marker and its type

**Output Specification –** The marker element should now exist for the graph

**Special Procedural Requirements –** None

**Inter-case Dependencies –** RBC.graph.create.1

## Destroy

### Test Case 2

**Test Case ID –** RBC.graph.marker.2

**Test Item –** The *marker destroy* command of the *graph* BLT component.

**Input Specification –** The name of the marker

**Output Specification –** The marker element should be removed from the graph

**Special Procedural Requirements –** None

**Inter-case Dependencies –** RBC.graph.marker.2

## Exists

### Test Case 3

**Test Case ID –** RBC.graph.marker.3

**Test Item –** The *marker exists* command of the *graph* BLT component.

**Input Specification –** The name of the marker

**Output Specification –** The state of existence of the marker

**Special Procedural Requirements –** None

**Inter-case Dependencies –** RBC.graph.marker.1

## Type

### Test Case 4

**Test Case ID –** RBC.graph.marker.4

**Test Item –** The *marker type* command of the *graph* BLT component.

**Input Specification –** The name of the marker

**Output Specification –** The type of the marker

**Special Procedural Requirements –** None

**Inter-case Dependencies –** RBC.graph.marker.4

## Names

### Test Case 5

**Test Case ID –** RBC.graph.marker.5

**Test Item –** The *marker names* command of the *graph* BLT component.

**Input Specification –** A pattern for matching marker names

**Output Specification –** The matching marker names

**Special Procedural Requirements –** None

**Inter-case Dependencies –** RBC.graph.marker.5

## Configure

### Test Case 6

**Test Case ID –** RBC.graph.marker.6

**Test Item –** The *marker configure* command of the *graph* BLT component.

**Input Specification –** A configuration option value pair

**Output Specification –** An updated marker based on configuration

**Special Procedural Requirements –** None

**Inter-case Dependencies –** RBC.graph.marker.6

### Test Case 7

**Test Case ID –** RBC.graph.marker.7

**Test Item –** The *marker configure* command for text markers of the *graph* BLT component.

**Input Specification –** A configuration option value pair

**Output Specification –** An updated text marker based on configuration

**Special Procedural Requirements –** None

**Inter-case Dependencies –** None

### Test Case 8

**Test Case ID –** RBC.graph.marker.8

**Test Item –** The *marker configure* command for line markers of the *graph* BLT component.

**Input Specification –** A configuration option value pair

**Output Specification –** An updated line marker based on configuration

**Special Procedural Requirements –** None

**Inter-case Dependencies –** None

### Test Case 9

**Test Case ID –** RBC.graph.marker.9

**Test Item –** The *marker configure* command for bitmap markers of the *graph* BLT component.

**Input Specification –** A configuration option value pair

**Output Specification –** An updated bitmap marker based on configuration

**Special Procedural Requirements –** The greenback.xbm file needs to be in the executing directory

**Inter-case Dependencies –** None

### Test Case 10

**Test Case ID –** RBC.graph.marker.10

**Test Item –** The *marker configure* command for image markers of the *graph* BLT component.

**Input Specification –** A configuration option value pair

**Output Specification –** An updated image marker based on configuration

**Special Procedural Requirements –** None

**Inter-case Dependencies –** None

### Test Case 11

**Test Case ID –** RBC.graph.marker.11

**Test Item –** The *marker configure* command for polygon markers of the *graph* BLT component.

**Input Specification –** A configuration option value pair

**Output Specification –** An updated polygon marker based on configuration

**Special Procedural Requirements –** None

**Inter-case Dependencies –** None

### Test Case 12

**Test Case ID –** RBC.graph.marker.12

**Test Item –** The *marker configure* command for window markers of the *graph* BLT component.

**Input Specification –** A configuration option value pair

**Output Specification –** An updated window marker based on configuration

**Special Procedural Requirements –** None

**Inter-case Dependencies –** None

## Bind

### Test Case 13

**Test Case ID –** RBC.graph.marker.13

**Test Item –** The *marker bind* command of the *graph* BLT component.

**Input Specification –** A marker or arbitrary tag name, an action sequence, and a command

**Output Specification –** *marker bind* should return the bound actions and commands

**Special Procedural Requirements –** None

**Inter-case Dependencies -** RBC.graph.marker.create.1

# Pen

## Create

### Test Case 1

**Test Case ID –** RBC.graph.pen.1

**Test Item –** The *pen create* command of the *graph* BLT component.

**Input Specification –** A *name* and any *option*-*value* pairs

**Output Specification –** A pen with *name* and configuration that reflects the *option*-*value* pairs exists

**Special Procedural Requirements –** None

**Inter-case Dependencies –** RBC.graph.pen.4, RBC.graph.pen.5

## Delete

### Test Case 2

**Test Case ID –** RBC.graph.pen.2

**Test Item –** The *pen delete* command of the *graph* BLT component.

**Input Specification –** An existing pen

**Output Specification –** The pen should no longer exist

**Special Procedural Requirements –** None

**Inter-case Dependencies –** RBC.graph.pen.1, RBC.graph.pen.4

## Cget

### Test Case 5

**Test Case ID –** RBC.graph.pen.5

**Test Item –** The *pen cget* command of the *graph* BLT component.

**Input Specification –** A configuration *option* flag

**Output Specification –** The current value for the *option* flag

**Special Procedural Requirements –** None

**Inter-case Dependencies –** RBC.graph.pen.1, RBC.graph.pen.3

## Configure

### Test Case 3

**Test Case ID –** RBC.graph.pen.3

**Test Item –** The *pen configure* command of the *graph* BLT component.

**Input Specification –** A valid configuration *option* flag and *value* pair

**Output Specification –** *pen cget* *-option* should return *value*

**Special Procedural Requirements –** None

**Inter-case Dependencies –** RBC.graph.pen.1, RBC.graph.pen.5

### Test Case 6

**Test Case ID –** RBC.graph.pen.6

**Test Item –** The *pen configure* command of the *graph* BLT component.

**Input Specification –** A configuration *option* flag

**Output Specification –** Elements on the graph using the pen update to reflect the new configuration values

**Special Procedural Requirements –** None

**Inter-case Dependencies –** RBC.graph.pen.1, RBC.graph.element.2, RBC.graph.element.3

## Delete

### Test Case 7

**Test Case ID –** RBC.graph.pen.7

**Test Item –** The *pen delete* command of the *graph* BLT component.

**Input Specification –** A pen

**Output Specification –** The pen is deleted and all elements using the pen still reflect the pen’s configuration (i.e. deleting a pen does not affect any elements using the pen)

**Special Procedural Requirements –** None

**Inter-case Dependencies –** RBC.graph.pen.1, RBC.graph.element.2, RBC.graph.element.3

## Names

### Test Case 4

**Test Case ID –** RBC.graph.pen.4

**Test Item –** The *pen names* command of the *graph* BLT component.

**Input Specification –** An optional *pattern*

**Output Specification –** A list of all the names of the current pens that match *pattern*

**Special Procedural Requirements –** None

**Inter-case Dependencies –** RBC.graph.pen.1

# Postscript

## Cget

### Test Case 1

**Test Case ID –** RBC.graph.postscript.1

**Test Item –** The *postscript cget* command of the *graph* BLT component.

**Input Specification –** A configuration *option* flag

**Output Specification –** The current value for the *option* flag

**Special Procedural Requirements –** None

**Inter-case Dependencies –** RBC.graph.postscript.2

## Configure

### Test Case 2

**Test Case ID –** RBC.graph.postscript.2

**Test Item –** The *postscript configure* command of the *graph* BLT component.

**Input Specification –** A valid configuration *option* flag and *value* pair

**Output Specification –** *postscript cget -option* should return *value*

**Special Procedural Requirements –** None

**Inter-case Dependencies –** RBC.graph.postscript.1

## Output

### Test Case 3

**Test Case ID –** RBC.graph.postscript.3

**Test Item –** The *postscript output* command of the *graph* BLT component.

**Input Specification –** An existing graph, optional *filename*, and optional *option*-*value* pairs

**Output Specification –** Postscript representing the graph will be generated according to the configuration as dictated by the *option-value* pairs. If *filename* is present, the Postscript will be saved to the file, otherwise it will be returned to the console

**Special Procedural Requirements –** None

**Inter-case Dependencies –** None

### Test Case 4

**Test Case ID –** RBC.graph.postscript.4

**Test Item –** The *postscript output* command of the *graph* BLT component.

**Input Specification –** An existing graph, optional *filename*, and optional *option*-*value* pairs

**Output Specification –** Postscript representing the graph will be generated according to the configuration as dictated by the *option-value* pairs. If *filename* is present, the Postscript will be saved to the file, otherwise it will be returned to the console

**Special Procedural Requirements –** None

**Inter-case Dependencies –** None

# Snap

### Test Case 1

**Test Case ID –** RBC.graph.snap.1

**Test Item –** The *snap* function of the *graph* BLT component.

**Input Specification –** A image to put BLT graph image in

**Output Specification –** The image contains the image of the graph

**Special Procedural Requirements –** None

**Inter-case Dependencies –** None

# Transform

### Test Case 1

**Test Case ID –** RBC.graph.transform.1

**Test Item –** The *invtransform* function of the *graph* BLT component.

**Input Specification –** A graph coordinate (X and Y)

**Output Specification –** The Window coordinates translated from the inputs

**Special Procedural Requirements –** None

**Inter-case Dependencies –** None

# Graph Xaxis

### Test Cases

**Test Case ID –** RBC.graph.axis.\*

**Test Item –** The *xaxis* function of the *graph* BLT component.

**Input Specification –** See axis input specification

**Output Specification –** See axis output specification

**Special Procedural Requirements –** Use pathname xaxis operation instead of pathname axis operation xaxis

**Inter-case Dependencies –** See axis inter-case dependencies

# Graph X2axis

### Test Cases

**Test Case ID –** RBC.graph.axis.\*

**Test Item –** The *x2axis* function of the *graph* BLT component.

**Input Specification –** See axis input specification

**Output Specification –** See axis output specification

**Special Procedural Requirements –** Use pathname x2axis operation instead of pathname axis operation x2axis

**Inter-case Dependencies –** See axis inter-case dependencies

# Graph Yaxis

### Test Cases

**Test Case ID –** RBC.graph.axis.\*

**Test Item –** The *yaxis* function of the *graph* BLT component.

**Input Specification –** See axis input specification

**Output Specification –** See axis output specification

**Special Procedural Requirements –** Use pathname yaxis operation instead of pathname axis operation yaxis

**Inter-case Dependencies –** See axis inter-case dependencies

# Graph Y2axis

### Test Cases

**Test Case ID –** RBC.graph.axis.\*

**Test Item –** The *y2axis* function of the *graph* BLT component.

**Input Specification –** See axis input specification

**Output Specification –** See axis output specification

**Special Procedural Requirements –** Use pathname y2axis operation instead of pathname axis operation yaxis

**Inter-case Dependencies –** See axis inter-case dependencies