Package 'interacCircos'

January 13, 2021

Type Package

Title A R package for visualization of interactive Circos plot

Description The interacCircos package is inspired by circosJS, BioCircos.js and NG-Circos. We integrate the modules of circosJS, BioCircos.js and NG-Circos into this R package, based on htmlwidgets framework.

Version 1.0.0

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License GPL-3

Encoding UTF-8

LazyData true

Depends R (>= 3.5.0)

Imports RColorBrewer, htmlwidgets, jsonlite, plyr, grDevices

RoxygenNote 7.1.0

Suggests knitr, rmarkdown

VignetteBuilder knitr

R topics documented:

`arcExample` *Arc plot example data*

Description

The data is in matrix with column names

Usage

```
arcExample
```

Format

A data frame with 7 columns:

chr chromosome

start start position

end end position

color color

des description

link hyperlink

html The external html language

bubbleExample *Bubble plot example data*

Description

The data is in matrix with column names

Usage

```
bubbleExample
```

Format

A data frame with 8 columns:

chr chromosome

start start position

end end position

name name for description

value value

color specified color for bubble

layer layer number

html The external html language

chord.pExample *Example data of chord plot of circosJS*

Description

The data is in matrix with column names

Usage

```
chord.pExample
```

Format

A data frame in which each row represents the relationship from one genome position(source) to another one(target):

source_chr chromosome name of source

source_start start position of source

source_end end position of source

target_chr chromosome name of target

target_start start position of target

target_end end position of target

chordExample *Example data of chord plot of NG-Circos*

Description

The data is in matrix with column names

Usage

```
chordExample
```

Format

A data frame in which each value represents the relationship from a column to a row:

column name the name for each arc

row the order and number is same as column, representing the same items

Circos *interacCircos*

Description

A R packages for visualization of interactive Circos plot

Usage

```
Circos(
  moduleList = CircosModuleList(),
  genome = "hg19",
  genome2 = "hg19",
  genomeFillColor = "Spectral",
  chrPad = 0.02,
  width = NULL,
  height = NULL,
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  outerRadius = 240,
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  genomeBorderColor = "#000",
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  genomeTicksLen = 5,
  genomeTicksColor = "#000",
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SCATTERMouseUpCircleOpacity = 1,
SCATTERMouseUpCircleStrokeColor = "none",
SCATTERMouseUpCircleStrokeWidth = "none",
SCATTERMouseOverDisplay = FALSE,
SCATTERMouseOverColor = "red",
SCATTERMouseOverCircleSize = 2,
SCATTERMouseOverCircleOpacity = 1,
SCATTERMouseOverCircleStrokeColor = "none",
SCATTERMouseOverCircleStrokeWidth = "none",
SCATTERMouseOverTooltipsSetting = "style1",
```

```
SCATTERMouseOverTooltipsHtml = " ",
SCATTERMouseOverTooltipsPosition = "absolute",
SCATTERMouseOverTooltipsBackgroundColor = "white",
SCATTERMouseOverTooltipsBorderStyle = "solid",
SCATTERMouseOverTooltipsBorderWidth = 0,
SCATTERMouseOverTooltipsPadding = "3px",
SCATTERMouseOverTooltipsBorderRadius = "3px",
SCATTERMouseOverTooltipsOpacity = 1,
ARCxlink = FALSE,
ARCMouseEvent = TRUE,
ARCMouseClickDisplay = FALSE,
ARCMouseClickColor = "red",
ARCMouseClickArcOpacity = 1,
ARCMouseClickArcStrokeColor = "none",
ARCMouseClickArcStrokeWidth = "none",
ARCMouseClickTextFromData = "fourth",
ARCMouseClickTextOpacity = 1,
ARCMouseClickTextColor = "red",
ARCMouseClickTextSize = 8,
ARCMouseClickTextPostionX = 1,
ARCMouseClickTextPostionY = 10,
ARCMouseClickTextDrag = TRUE,
ARCMouseDownDisplay = FALSE,
ARCMouseDownColor = "red",
ARCMouseDownArcOpacity = 1,
ARCMouseDownArcStrokeColor = "none",
ARCMouseDownArcStrokeWidth = "none",
ARCMouseEnterDisplay = FALSE,
ARCMouseEnterColor = "red",
ARCMouseEnterArcOpacity = 1,
ARCMouseEnterArcStrokeColor = "none",
ARCMouseEnterArcStrokeWidth = "none",
ARCMouseLeaveDisplay = FALSE,
ARCMouseLeaveColor = "red",
ARCMouseLeaveArcOpacity = 1,
ARCMouseLeaveArcStrokeColor = "none",
ARCMouseLeaveArcStrokeWidth = "none",
ARCMouseMoveDisplay = FALSE,
ARCMouseMoveColor = "red",
ARCMouseMoveArcOpacity = 1,
ARCMouseMoveArcStrokeColor = "none",
ARCMouseMoveArcStrokeWidth = "none",
ARCMouseOutDisplay = FALSE,
ARCMouseOutAnimationTime = 500,
ARCMouseOutColor = "red",
ARCMouseOutArcOpacity = 1,
ARCMouseOutArcStrokeColor = "none",
ARCMouseOutArcStrokeWidth = "none",
ARCMouseUpDisplay = FALSE,
ARCMouseUpColor = "red",
ARCMouseUpArcOpacity = 1,
ARCMouseUpArcStrokeColor = "none",
```

```
ARCMouseUpArcStrokeWidth = "none",
ARCMouseOverDisplay = FALSE,
ARCMouseOverColor = "red",
ARCMouseOverArcOpacity = 1,
ARCMouseOverArcStrokeColor = "none",
ARCMouseOverArcStrokeWidth = "none",
ARCMouseOverTooltipsSetting = "style1",
ARCMouseOverTooltipsHtml = " ",
ARCMouseOverTooltipsPosition = "absolute",
ARCMouseOverTooltipsBackgroundColor = "white",
ARCMouseOverTooltipsBorderStyle = "solid",
ARCMouseOverTooltipsBorderWidth = 0,
ARCMouseOverTooltipsPadding = "3px",
ARCMouseOverTooltipsBorderRadius = "3px",
ARCMouseOverTooltipsOpacity = 1,
GENExlink = FALSE,
GENEMouseEvent = TRUE,
GENEMouseClickDisplay = FALSE,
GENEMouseClickColor = "red",
GENEMouseClickArcOpacity = 1,
GENEMouseClickArcStrokeColor = "none",
GENEMouseClickArcStrokeWidth = "none",
GENEMouseClickTextFromData = "fourth",
GENEMouseClickTextOpacity = 1,
GENEMouseClickTextColor = "red",
GENEMouseClickTextSize = 8,
GENEMouseClickTextPostionX = 1,
GENEMouseClickTextPostionY = 10,
GENEMouseClickTextDrag = TRUE,
GENEMouseDownDisplay = FALSE,
GENEMouseDownColor = "red",
GENEMouseDownArcOpacity = 1,
GENEMouseDownArcStrokeColor = "none",
GENEMouseDownArcStrokeWidth = "none",
GENEMouseEnterDisplay = FALSE,
GENEMouseEnterColor = "red",
GENEMouseEnterArcOpacity = 1,
GENEMouseEnterArcStrokeColor = "none",
GENEMouseEnterArcStrokeWidth = "none",
GENEMouseLeaveDisplay = FALSE,
GENEMouseLeaveColor = "red",
GENEMouseLeaveArcOpacity = 1,
GENEMouseLeaveArcStrokeColor = "none",
GENEMouseLeaveArcStrokeWidth = "none",
GENEMouseMoveDisplay = FALSE,
GENEMouseMoveColor = "red",
GENEMouseMoveArcOpacity = 1,
GENEMouseMoveArcStrokeColor = "none",
GENEMouseMoveArcStrokeWidth = "none",
GENEMouseOutDisplay = FALSE,
GENEMouseOutAnimationTime = 500,
GENEMouseOutColor = "red",
```

```
GENEMouseOutArcOpacity = 1,
GENEMouseOutArcStrokeColor = "none",
GENEMouseOutArcStrokeWidth = "none",
GENEMouseUpDisplay = FALSE,
GENEMouseUpColor = "red",
GENEMouseUpArcOpacity = 1,
GENEMouseUpArcStrokeColor = "none",
GENEMouseUpArcStrokeWidth = "none",
GENEMouseOverDisplay = FALSE,
GENEMouseOverColor = "red",
GENEMouseOverArcOpacity = 1,
GENEMouseOverArcStrokeColor = "none",
GENEMouseOverArcStrokeWidth = "none",
GENEMouseOverTooltipsSetting = "style1",
GENEMouseOverTooltipsHtml = " ",
GENEMouseOverTooltipsPosition = "absolute",
GENEMouseOverTooltipsBackgroundColor = "white",
GENEMouseOverTooltipsBorderStyle = "solid",
GENEMouseOverTooltipsBorderWidth = 0,
GENEMouseOverTooltipsPadding = "3px",
GENEMouseOverTooltipsBorderRadius = "3px",
GENEMouseOverTooltipsOpacity = 1,
LOLLIPOPxlink = FALSE,
LOLLIPOPMouseEvent = TRUE,
LOLLIPOPMouseClickDisplay = FALSE,
LOLLIPOPMouseClickColor = "red",
LOLLIPOPMouseClickCircleSize = 2,
LOLLIPOPMouseClickCircleOpacity = 1,
LOLLIPOPMouseClickCircleStrokeColor = "none",
LOLLIPOPMouseClickCircleStrokeWidth = "none",
LOLLIPOPMouseClickTextFromData = "fourth",
LOLLIPOPMouseClickTextOpacity = 1,
LOLLIPOPMouseClickTextColor = "red",
LOLLIPOPMouseClickTextSize = 8,
LOLLIPOPMouseClickTextPostionX = 1,
LOLLIPOPMouseClickTextPostionY = 10,
LOLLIPOPMouseClickTextDrag = TRUE,
LOLLIPOPMouseDownDisplay = FALSE,
LOLLIPOPMouseDownColor = "red",
LOLLIPOPMouseDownCircleSize = 2,
LOLLIPOPMouseDownCircleOpacity = 1,
LOLLIPOPMouseDownCircleStrokeColor = "none",
LOLLIPOPMouseDownCircleStrokeWidth = "none",
LOLLIPOPMouseEnterDisplay = FALSE,
LOLLIPOPMouseEnterColor = "red",
LOLLIPOPMouseEnterCircleSize = 2,
LOLLIPOPMouseEnterCircleOpacity = 1,
LOLLIPOPMouseEnterCircleStrokeColor = "none",
LOLLIPOPMouseEnterCircleStrokeWidth = "none",
LOLLIPOPMouseLeaveDisplay = FALSE,
LOLLIPOPMouseLeaveColor = "red",
LOLLIPOPMouseLeaveCircleSize = 2,
```

```
  LOLLIPOPMouseLeaveCircleOpacity = 1,
  LOLLIPOPMouseLeaveCircleStrokeColor = "none",
  LOLLIPOPMouseLeaveCircleStrokeWidth = "none",
  LOLLIPOPMouseMoveDisplay = FALSE,
  LOLLIPOPMouseMoveColor = "red",
  LOLLIPOPMouseMoveCircleSize = 2,
  LOLLIPOPMouseMoveCircleOpacity = 1,
  LOLLIPOPMouseMoveCircleStrokeColor = "none",
  LOLLIPOPMouseMoveCircleStrokeWidth = "none",
  LOLLIPOPMouseOutDisplay = FALSE,
  LOLLIPOPMouseOutAnimationTime = 500,
  LOLLIPOPMouseOutColor = "red",
  LOLLIPOPMouseOutCircleSize = 2,
  LOLLIPOPMouseOutCircleOpacity = 1,
  LOLLIPOPMouseOutCircleStrokeColor = "none",
  LOLLIPOPMouseOutCircleStrokeWidth = "none",
  LOLLIPOPMouseUpDisplay = FALSE,
  LOLLIPOPMouseUpColor = "red",
  LOLLIPOPMouseUpCircleSize = 2,
  LOLLIPOPMouseUpCircleOpacity = 1,
  LOLLIPOPMouseUpCircleStrokeColor = "none",
  LOLLIPOPMouseUpCircleStrokeWidth = "none",
  LOLLIPOPMouseOverDisplay = FALSE,
  LOLLIPOPMouseOverColor = "red",
  LOLLIPOPMouseOverCircleSize = 2,
  LOLLIPOPMouseOverCircleOpacity = 1,
  LOLLIPOPMouseOverCircleStrokeColor = "none",
  LOLLIPOPMouseOverCircleStrokeWidth = "none",
  LOLLIPOPMouseOverTooltipsSetting = "style1",
  LOLLIPOPMouseOverTooltipsHtml = " ",
  LOLLIPOPMouseOverTooltipsPosition = "absolute",
  LOLLIPOPMouseOverTooltipsBackgroundColor = "white",
  LOLLIPOPMouseOverTooltipsBorderStyle = "solid",
  LOLLIPOPMouseOverTooltipsBorderWidth = 0,
  LOLLIPOPMouseOverTooltipsPadding = "3px",
  LOLLIPOPMouseOverTooltipsBorderRadius = "3px",
  LOLLIPOPMouseOverTooltipsOpacity = 1,
  elementId = NULL,
  ...
)
```

Arguments

moduleList	Module list displayed in plot.
genome	Could be either 'hg19', which is defaultly set to use chromosomes of hg19, or a list of chromosomes with length, for example, list("chr1"=100,"chr2"=200).
genome2	Second genome when compare module is applied, format is same as genome
genomeFillColor	Could be either a color palette from RColorBrewer, or a list of color name, for example, list("yellow","rgb(1,255,255)")
chrPad	Distance between each chromosome, default is 0.04
width, height	The width and height for svg element, could be px or percent or auto.

`innerRadius` Default 216, Inner radius of chromosome

`outerRadius` Default 240, Outer radius of chromosome

`svgClassName` The svg class name

`displayGenomeBorder, genomeBorderColor, genomeBorderSize`
Should the reference genome have borders?

`genomeTicksDisplay, genomeTicksLen, genomeTicksColor, genomeTicksTextSize, genomeTicksTextColor, g`
Whether display the ticks for chromosome panel. Other parameters only works when genomeTicksDisplay is TRUE and their details are available on document.

`genomeLabelDisplay, genomeLabelTextSize, genomeLabelTextColor, genomeLabelDx, genomeLabelDy`
Whether display the label for chromosome panel. Other parameters only works when genomeTicksDisplay is TRUE and their details are available on document.

`compareEvent` Default False, open/not COMPARE module

`compareEventGroupGapRate`
Default 0.1, control the two-side gap rate on each group of genome

`compareEventGroupDistance`
Default 0, distance between two groups of genome

`zoom` Whether or not the plot is zoomable?

`TEXTModuleDragEvent`
Are text annotations draggable?

`CNVxlink` Default False, add/not xlink for CNV module

`CNVMouseEvent` Default True, open/not open mouse event of CNV module

`CNVMouseClickDisplay`
Default False, show/not the tooltip when mouse click on a CNV point.

`CNVMouseClickColor`
Color when mouse clicking

`CNVMouseClickArcOpacity`
Arc opacity when mouse clicking the element

`CNVMouseClickArcStrokeColor`
Arc stroke color when mouse clicking the element

`CNVMouseClickArcStrokeWidth`
Arc stroke width when mouse clicking the element

`CNVMouseClickTextFromData`
Text column when mouse clicking the element

`CNVMouseClickTextOpacity`
Text opacity when mouse clicking the element

`CNVMouseClickTextColor`
Text color when mouse clicking the element

`CNVMouseClickTextSize`
Text size when mouse clicking the element

`CNVMouseClickTextPostionX, CNVMouseClickTextPostionY`
Text coordinates when mouse clicking the element

`CNVMouseClickTextDrag`
Whether text is draggable when mouse clicking the element

`CNVMouseDownDisplay`
Default False, show/not the tooltip when mouse click down a CNV point.

`CNVMouseDownColor`
Color when mouse moving down the element

CNVMouseDownArcOpacity
: Arc opacity when mouse moving down the element

CNVMouseDownArcStrokeColor
: Arc stroke color when mouse moving down the element

CNVMouseDownArcStrokeWidth
: Arc stroke width when mouse moving down the element

CNVMouseEnterDisplay
: Default False, show/not the tooltip when mouse mover over a CNV point.

CNVMouseEnterColor
: Color when mouse entering the element

CNVMouseEnterArcOpacity
: Arc opacity when mouse entering the element

CNVMouseEnterArcStrokeColor
: Arc stroke color when mouse entering the element

CNVMouseEnterArcStrokeWidth
: Arc stroke width when mouse entering the element

CNVMouseLeaveDisplay
: Default False, show/not the tooltip when mouse mover leave a CNV point.

CNVMouseLeaveColor
: Color when mouse leaving the element

CNVMouseLeaveArcOpacity
: Arc opacity when mouse leaving the element

CNVMouseLeaveArcStrokeColor
: Arc stroke color when mouse leaving the element

CNVMouseLeaveArcStrokeWidth
: Arc stroke width when mouse leaving the element

CNVMouseMoveDisplay
: Default False, show/not the tooltip when mouse move into a CNV point.

CNVMouseMoveColor
: Color when mouse moving in the element

CNVMouseMoveArcOpacity
: Arc opacity when mouse moving in the element

CNVMouseMoveArcStrokeColor
: Arc stroke color when mouse moving in the element

CNVMouseMoveArcStrokeWidth
: Arc stroke width when mouse moving in the element

CNVMouseOutDisplay
: Defalut False, hide/not tooltip when mouse is not hovering a CNV point anymore.

CNVMouseOutAnimationTime
: Animation time when mouse moving out the element

CNVMouseOutColor
: Color when mouse moving out the element

CNVMouseOutArcOpacity
: Arc opacity when mouse moving out the element

CNVMouseOutArcStrokeColor
: Arc stroke color when mouse moving out the element

CNVMouseOutArcStrokeWidth
: Arc stroke width when mouse moving out the element

`CNVMouseUpDisplay`
: Default False, show/not the tooltip when mouse click up a CNV point.

`CNVMouseUpColor`
: Color when mouse moving up the element

`CNVMouseUpArcOpacity`
: Arc opacity when mouse clicking the element

`CNVMouseUpArcStrokeColor`
: Arc stroke color when mouse clicking the element

`CNVMouseUpArcStrokeWidth`
: Arc stroke width when mouse clicking the element

`CNVMouseOverDisplay`
: Default False, show/not the tooltip when mouse hover on a CNV point.

`CNVMouseOverColor`
: Color when mouse moving over the element

`CNVMouseOverArcOpacity`
: Arc opacity when mouse moving over the element

`CNVMouseOverArcStrokeColor`
: Arc stroke color when mouse moving over the element

`CNVMouseOverArcStrokeWidth`
: Arc stroke width when mouse moving over the element

`CNVMouseOverTooltipsSetting`
: Default "style1"

`CNVMouseOverTooltipsHtml`
: Default " "

`CNVMouseOverTooltipsPosition`
: Default "absolute"

`CNVMouseOverTooltipsBackgroundColor`
: Default "white"

`CNVMouseOverTooltipsBorderStyle`
: Default "solid"

`CNVMouseOverTooltipsBorderWidth`
: Default 0

`CNVMouseOverTooltipsPadding`
: Default "3px"

`CNVMouseOverTooltipsBorderRadius`
: Default "3px"

`CNVMouseOverTooltipsOpacity`
: Default 0.8

`HEATMAPMouseEvent`
: Default True, open/not open mouse event of HEATMAP module

`HEATMAPMouseClickDisplay`
: Default False, show/not the tooltip when mouse click on a HEATMAP point.

`HEATMAPMouseClickColor`
: Color when mouse clicking

`HEATMAPMouseClickOpacity`
: Opacity when mouse clicking

`HEATMAPMouseClickStrokeColor`
: Stroke color when mouse clicking

HEATMAPMouseClickStrokeWidth
: Stroke width when mouse clicking

HEATMAPMouseDownDisplay
: Default False, show/not the tooltip when mouse click down a HEATMAP point.

HEATMAPMouseDownColor
: Color when mouse moving down the element

HEATMAPMouseDownOpacity
: Opacity when mouse moving down the element

HEATMAPMouseDownStrokeColor
: Stroke color when mouse moving down the element

HEATMAPMouseDownStrokeWidth
: Stroke width when mouse moving down the element

HEATMAPMouseEnterDisplay
: Default False, show/not the tooltip when mouse mover over a HEATMAP point.

HEATMAPMouseEnterColor
: Color when mouse entering the element

HEATMAPMouseEnterOpacity
: Opacity when mouse entering the element

HEATMAPMouseEnterStrokeColor
: Stroke color when mouse entering the element

HEATMAPMouseEnterStrokeWidth
: Stroke width when mouse entering the element

HEATMAPMouseLeaveDisplay
: Default False, show/not the tooltip when mouse mover leave a HEATMAP point.

HEATMAPMouseLeaveColor
: Color when mouse leaving the element

HEATMAPMouseLeaveOpacity
: Opacity when mouse leaving the element

HEATMAPMouseLeaveStrokeColor
: Stroke color when mouse leaving the element

HEATMAPMouseLeaveStrokeWidth
: Stroke width when mouse leaving the element

HEATMAPMouseMoveDisplay
: Default False, show/not the tooltip when mouse move into a HEATMAP point.

HEATMAPMouseMoveColor
: Color when mouse moving in the element

HEATMAPMouseMoveOpacity
: Opacity when mouse moving in the element

HEATMAPMouseMoveStrokeColor
: Stroke color when mouse moving in the element

HEATMAPMouseMoveStrokeWidth
: Stroke width when mouse moving in the element

HEATMAPMouseOutDisplay
: Defalut False, hide/not tooltip when mouse is not hovering a HEATMAP point anymore.

HEATMAPMouseOutAnimationTime
: Animation time when mouse moving out the element

HEATMAPMouseOutColor
: Color when mouse moving out the element

HEATMAPMouseOutOpacity
: Opacity when mouse moving out the element

HEATMAPMouseOutStrokeColor
: Stroke color when mouse moving out the element

HEATMAPMouseOutStrokeWidth
: Stroke width when mouse moving out the element

HEATMAPMouseUpDisplay
: Default False, show/not the tooltip when mouse click up a HEATMAP point.

HEATMAPMouseUpColor
: Color when mouse moving up the element

HEATMAPMouseUpOpacity
: Opacity when mouse moving up the element

HEATMAPMouseUpStrokeColor
: Stroke color when mouse moving up the element

HEATMAPMouseUpStrokeWidth
: Stroke width when mouse moving up the element

HEATMAPMouseOverDisplay
: Default False, show/not the tooltip when mouse hover on a HEATMAP point.

HEATMAPMouseOverColor
: Color when mouse moving over the element

HEATMAPMouseOverOpacity
: Opacity when mouse moving over the element

HEATMAPMouseOverStrokeColor
: Stroke color when mouse moving over the element

HEATMAPMouseOverStrokeWidth
: Stroke width when mouse moving over the element

HEATMAPMouseOverTooltipsSetting
: Default "style1"

HEATMAPMouseOverTooltipsHtml
: Default " "

HEATMAPMouseOverTooltipsPosition
: Default "absolute"

HEATMAPMouseOverTooltipsBackgroundColor
: Default "white"

HEATMAPMouseOverTooltipsBorderStyle
: Default "solid"

HEATMAPMouseOverTooltipsBorderWidth
: Default 0

HEATMAPMouseOverTooltipsPadding
: Default "3px"

HEATMAPMouseOverTooltipsBorderRadius
: Default "3px"

HEATMAPMouseOverTooltipsOpacity
: Default 0.8

BUBBLExlink
: Default False, add/not xlink for BUBBLE module

BUBBLEMouseEvent
: Default True, open/not open mouse event of BUBBLE module

BUBBLEMouseClickDisplay
: Default False, show/not the tooltip when mouse click on a BUBBLE point.

BUBBLEMouseClickColor
: Color when mouse clicking

BUBBLEMouseClickOpacity
: Opacity when mouse clicking

BUBBLEMouseClickStrokeColor
: Stroke color when mouse clicking

BUBBLEMouseClickStrokeWidth
: Stroke width when mouse clicking

BUBBLEMouseDownDisplay
: Default False, show/not the tooltip when mouse click down a BUBBLE point.

BUBBLEMouseDownColor
: Color when mouse moving down the element

BUBBLEMouseDownOpacity
: Opacity when mouse moving down the element

BUBBLEMouseDownStrokeColor
: Stroke color when mouse moving down the element

BUBBLEMouseDownStrokeWidth
: Stroke width when mouse moving down the element

BUBBLEMouseEnterDisplay
: Default False, show/not the tooltip when mouse mover over a BUBBLE point.

BUBBLEMouseEnterColor
: Color when mouse entering the element

BUBBLEMouseEnterOpacity
: Opacity when mouse entering the element

BUBBLEMouseEnterStrokeColor
: Stroke color when mouse entering the element

BUBBLEMouseEnterStrokeWidth
: Stroke width when mouse entering the element

BUBBLEMouseLeaveDisplay
: Default False, show/not the tooltip when mouse mover leave a BUBBLE point.

BUBBLEMouseLeaveColor
: Color when mouse leaving the element

BUBBLEMouseLeaveOpacity
: Opacity when mouse leaving the element

BUBBLEMouseLeaveStrokeColor
: Stroke color when mouse leaving the element

BUBBLEMouseLeaveStrokeWidth
: Stroke width when mouse leaving the element

BUBBLEMouseMoveDisplay
: Default False, show/not the tooltip when mouse move into a BUBBLE point.

BUBBLEMouseMoveColor
: Color when mouse moving in the element

BUBBLEMouseMoveOpacity
: Opacity when mouse moving in the element

BUBBLEMouseMoveStrokeColor
: Stroke color when mouse moving in the element

BUBBLEMouseMoveStrokeWidth
: Stroke width when mouse moving in the element

BUBBLEMouseOutDisplay
: Defalut False, hide/not tooltip when mouse is not hovering a BUBBLE point anymore.

BUBBLEMouseOutAnimationTime
: Animation time when mouse moving out the element

BUBBLEMouseOutColor
: Color when mouse moving out the element

BUBBLEMouseOutOpacity
: Opacity when mouse moving out the element

BUBBLEMouseOutStrokeColor
: Stroke color when mouse moving out the element

BUBBLEMouseOutStrokeWidth
: Stroke width when mouse moving out the element

BUBBLEMouseUpDisplay
: Default False, show/not the tooltip when mouse click up a BUBBLE point.

BUBBLEMouseUpColor
: Color when mouse moving up the element

BUBBLEMouseUpOpacity
: Opacity when mouse moving up the element

BUBBLEMouseUpStrokeColor
: Stroke color when mouse moving up the element

BUBBLEMouseUpStrokeWidth
: Stroke width when mouse moving up the element

BUBBLEMouseOverDisplay
: Default False, show/not the tooltip when mouse hover on a BUBBLE point.

BUBBLEMouseOverColor
: Color when mouse moving over the element

BUBBLEMouseOverOpacity
: Opacity when mouse moving over the element

BUBBLEMouseOverStrokeColor
: Stroke color when mouse moving over the element

BUBBLEMouseOverStrokeWidth
: Stroke width when mouse moving over the element

BUBBLEMouseOverTooltipsSetting
: Default "style1"

BUBBLEMouseOverTooltipsHtml
: Default " "

BUBBLEMouseOverTooltipsPosition
: Default "absolute"

BUBBLEMouseOverTooltipsBackgroundColor
: Default "white"

BUBBLEMouseOverTooltipsBorderStyle
: Default "solid"

BUBBLEMouseOverTooltipsBorderWidth
: Default 0

BUBBLEMouseOverTooltipsPadding
: Default "3px"

BUBBLEMouseOverTooltipsBorderRadius
: Default "3px"

BUBBLEMouseOverTooltipsOpacity
: Default 0.8

SNPxlink
: Default False, add/not xlink for SNP module

SNPMouseEvent
: Default True, open/not open mouse event of SNP module

SNPMouseCombinationEvent
: Default False, open/not COMBINATION module for SNP module

SNPMouseCombinationImageDisplay
: Defalut False, open/not image display in COMBINATION module for SNP module

SNPMouseCombinationImageTitle
: Title of the image

SNPMouseCombinationImageTitleSize, SNPMouseCombinationImageTitleWeight, SNPMouseCombinationImageT
: Size, weight and color of the title

SNPMouseCombinationImagePositionX, SNPMouseCombinationImagePositionY
: Coordinates for image

SNPMouseCombinationImageHeight, SNPMouseCombinationImageWidth
: Height and width of image

SNPMouseCombinationGraphDisplay
: Defalut False, open/not graph display in COMBINATION module for SNP module

SNPMouseCombinationGraphTitle
: Title of the graph

SNPMouseCombinationGraphTitleSize, SNPMouseCombinationGraphTitleWeight, SNPMouseCombinationGraphT
: Size, weight and color of the title

SNPMouseCombinationGraphType
: Type of graph

SNPMouseCombinationGraphPositionX, SNPMouseCombinationGraphPositionY
: Coordinates for graph

SNPMouseCombinationGraphHeight, SNPMouseCombinationGraphWidth
: Height and width for graph

SNPMouseCombinationGraphHistogramBarColor
: Bar color of histogram graph

SNPMouseCombinationGraphHistogramPadding
: Padding between bar of histogram graph

SNPMouseCombinationGraphHistogramPositionCorrectX
: Correction distance of X axis in histogram

SNPMouseCombinationGraphPieAutoColor
: Whether use auto color for pie graph or not

SNPMouseCombinationGraphPieColor
: Color for pie graph if auto color is false

SNPMouseCombinationGraphPieSize
: Size of pie graph

SNPMouseCombinationGraphPieStroke
: Whether each pie has a stroke or not

SNPMouseCombinationGraphPieStrokeColor, SNPMouseCombinationGraphPieStrokeWidth
: The stroke color and width for pie graph

SNPMouseCombinationGraphPieOpacity
: Opacity for pie graph

SNPMouseCombinationGraphLineType, SNPMouseCombinationGraphLineColor, SNPMouseCombinationGraphLine
: Line type, color and width for line graph

SNPMouseCombinationGraphLinePoint
: Whether display the broken point in line graph

SNPMouseCombinationGraphLinePointSize
: Size of broken point

SNPMouseCombinationGraphLinePointAutoColor
: Whether display the broken point in auto color

SNPMouseCombinationGraphLinePointColor
: Color for broken point if auto color is false

SNPMouseCombinationGraphLinePointStroke
: Whether display the broken point stroke

SNPMouseCombinationGraphLinePointStrokeColor, SNPMouseCombinationGraphLinePointStrokeWidth
: The stroke color and width for broken point

SNPMouseCombinationGraphLinePointOpacity
: Opacity for broken line

SNPMouseCombinationGraphLinePositionCorrectX
: Correction distance of X axis for line

SNPMouseCombinationTextDisplay
: Defalut False, open/not text display in COMBINATION module for SNP module

SNPMouseCombinationTextColor, SNPMouseCombinationTextSize, SNPMouseCombinationTextWeight
: The color, size and weight for text

SNPMouseCombinationTextPositionCorrectX, SNPMouseCombinationTextPositionCorrectY
: The coordinates for text

SNPMouseClickDisplay
: Default False, show/not the tooltip when mouse click on a SNP point.

SNPMouseClickColor
: Color after clicking the element

SNPMouseClickCircleSize
: Circle size after clicking the element

SNPMouseClickCircleOpacity
: Opacity after clicking the element

SNPMouseClickCircleStrokeColor
: Stroke color after clicking the element

SNPMouseClickCircleStrokeWidth
: Stroke width after clicking the element

SNPMouseClickTextFromData
: First,second,third,fourth column data click to show

SNPMouseClickTextOpacity
: Text opacity after clicking the element

SNPMouseClickTextColor
: Text color after clicking the element

SNPMouseClickTextSize
: Text size after clicking the element

SNPMouseClickTextPostionX, SNPMouseClickTextPostionY
: Text coordinate after clicking the element

SNPMouseClickTextDrag
: Whether text is draggable for element

SNPMouseDownDisplay
: Default False, show/not the tooltip when mouse click down a SNP point.

SNPMouseDownColor
: Color after mouse moving down the element

SNPMouseDownCircleSize
: Circle size after mouse moving down the element

SNPMouseDownCircleOpacity
: Circle opacity after mouse moving down the element

SNPMouseDownCircleStrokeColor
: Circle stroke color after mouse moving down the element

SNPMouseDownCircleStrokeWidth
: Circle stroke width after mouse moving down the element

SNPMouseEnterDisplay
: Default False, show/not the tooltip when mouse mover over a SNP point.

SNPMouseEnterColor
: Color after mouse entering enter the element

SNPMouseEnterCircleSize
: Circle size after mouse entering the element

SNPMouseEnterCircleOpacity
: Circle opacity after mouse entering the element

SNPMouseEnterCircleStrokeColor
: Circle stroke color after mouse entering the element

SNPMouseEnterCircleStrokeWidth
: Circle stroke width after mouse entering the element

SNPMouseLeaveDisplay
: Default False, show/not the tooltip when mouse mover leave a SNP point.

SNPMouseLeaveColor
: Color after mouse leaving the element

SNPMouseLeaveCircleSize
: Circle size after mouse leaving the element

SNPMouseLeaveCircleOpacity
: Circle opacity after mouse leaving the element

SNPMouseLeaveCircleStrokeColor
: Circle stroke color after mouse leaving the element

SNPMouseLeaveCircleStrokeWidth
: Circle stroke width after mouse leaving the element

SNPMouseMoveDisplay
: Default False, show/not the tooltip when mouse move into a SNP point.

SNPMouseMoveColor
: Color after mouse moving in the element

SNPMouseMoveCircleSize
: Circle size after mouse moving in the element

SNPMouseMoveCircleOpacity
: Circle opacity after mouse moving in the element

SNPMouseMoveCircleStrokeColor
: Circle stroke color after mouse moving in the element

SNPMouseMoveCircleStrokeWidth
: Circle stroke width after mouse moving in the element

SNPMouseOutDisplay
: Defalut False, hide/not tooltip when mouse is not hovering a SNP point anymore.

SNPMouseOutAnimationTime
: Animation time when mouse moving over the element

SNPMouseOutColor
: Color when mouse moving over the element

SNPMouseOutCircleSize
: Circle size when mouse moving over the element

SNPMouseOutCircleOpacity
: Opacity when mouse moving over the element

SNPMouseOutCircleStrokeColor
: Stroke color when mouse moving over the element

SNPMouseOutCircleStrokeWidth
: Stroke width when mouse moving over the element

SNPMouseUpDisplay
: Default False, show/not the tooltip when mouse click up a SNP point.

SNPMouseUpColor
: Color after mouse moving up the element

SNPMouseUpCircleSize
: Circle size after mouse moving up the element

SNPMouseUpCircleOpacity
: Circle opacity after mouse moving up the element

SNPMouseUpCircleStrokeColor
: Circle stroke color after mouse moving up the element

SNPMouseUpCircleStrokeWidth
: Circle stroke width after mouse moving up the element

SNPMouseOverDisplay
: Default False, show/not the tooltip when mouse hover on a SNP point.

SNPMouseOverColor
: Color after mouse moving over the element

SNPMouseOverCircleSize
: Circle size after mouse moving over the element

SNPMouseOverCircleOpacity
: Circle opacity after mouse moving over the element

SNPMouseOverCircleStrokeColor
: Circle stroke color after mouse moving over the element

SNPMouseOverCircleStrokeWidth
: Circle stroke width after mouse moving over the element

SNPMouseOverTooltipsSetting
: Default "chr : "

SNPMouseOverTooltipsHtml
: Default " "

SNPMouseOverTooltipsPosition
: Position for tooltips when mouse moving over

SNPMouseOverTooltipsBackgroundColor
: Background color for tooltips when mouse moving over

`SNPMouseOverTooltipsBorderStyle`
: Border style for tooltips when mouse moving over

`SNPMouseOverTooltipsBorderWidth`
: Border width for tooltips when mouse moving over

`SNPMouseOverTooltipsPadding`
: Padding for tooltips when mouse moving over

`SNPMouseOverTooltipsBorderRadius`
: Border radius for tooltips when mouse moving over

`SNPMouseOverTooltipsOpacity`
: Opacity for tooltips when mouse moving over

`LINKxlink` Default False, add/not xlink for LINK module

`LINKMouseEvent` Default True, open/not open mouse event of LINK module

`LINKMouseClickDisplay`
: Default False, show/not the tooltip when mouse click on a LINK point.

`LINKMouseClickOpacity`
: Opacity when mouse clicking

`LINKMouseClickStrokeColor`
: Stroke color when mouse clicking

`LINKMouseClickStrokeWidth`
: Stroke width when mouse clicking

`LINKMouseDownDisplay`
: Default False, show/not the tooltip when mouse click down a LINK point.

`LINKMouseDownOpacity`
: Opacity when mouse moving down the element

`LINKMouseDownStrokeColor`
: Stroke color when mouse moving down the element

`LINKMouseDownStrokeWidth`
: Stroke width when mouse moving down the element

`LINKMouseEnterDisplay`
: Default False, show/not the tooltip when mouse mover over a LINK point.

`LINKMouseEnterOpacity`
: Opacity when mouse entering the element

`LINKMouseEnterStrokeColor`
: Stroke color when mouse entering the element

`LINKMouseEnterStrokeWidth`
: Stroke width when mouse entering the element

`LINKMouseLeaveDisplay`
: Default False, show/not the tooltip when mouse mover leave a LINK point.

`LINKMouseLeaveOpacity`
: Opacity when mouse leaving the element

`LINKMouseLeaveStrokeColor`
: Stroke color when mouse leaving the element

`LINKMouseLeaveStrokeWidth`
: Stroke width when mouse leaving the element

`LINKMouseMoveDisplay`
: Default False, show/not the tooltip when mouse move into a LINK point.

`LINKMouseMoveOpacity`
: Opacity when mouse moving in the element

`LINKMouseMoveStrokeColor`
: Stroke color when mouse moving in the element

`LINKMouseMoveStrokeWidth`
: Stroke width when mouse moving in the element

`LINKMouseOutDisplay`
: Defalut False, hide/not tooltip when mouse is not hovering a LINK point anymore.

`LINKMouseOutAnimationTime`
: Animation time when mouse moving out the element

`LINKMouseOutOpacity`
: Opacity when mouse moving out the element

`LINKMouseOutStrokeColor`
: Stroke color when mouse moving out the element

`LINKMouseOutStrokeWidth`
: Stroke width when mouse moving out the element

`LINKMouseUpDisplay`
: Default False, show/not the tooltip when mouse click up a LINK point.

`LINKMouseUpOpacity`
: Opacity when mouse moving up the element

`LINKMouseUpStrokeColor`
: Stroke color when mouse moving up the element

`LINKMouseUpStrokeWidth`
: Stroke width when mouse moving up the element

`LINKMouseOverDisplay`
: Default False, show/not the tooltip when mouse hover on a LINK point.

`LINKMouseOverOpacity`
: Opacity when mouse moving over the element

`LINKMouseOverStrokeColor`
: Stroke color when mouse moving over the element

`LINKMouseOverStrokeWidth`
: Stroke width when mouse moving over the element

`LINKMouseOverTooltipsSetting`
: Default "style1"

`LINKMouseOverTooltipsHtml`
: Default " "

`LINKMouseOverTooltipsPosition`
: Default "absolute"

`LINKMouseOverTooltipsBackgroundColor`
: Default "white"

`LINKMouseOverTooltipsBorderStyle`
: Default "solid"

`LINKMouseOverTooltipsBorderWidth`
: Default 0

`LINKMouseOverTooltipsPadding`
: Default "3px"

`LINKMouseOverTooltipsBorderRadius`
: Default "3px"

`LINKMouseOverTooltipsOpacity`
: Default 0.8

`LINKLabelDragEvent`
: Defalut False, draggable for the label of LINK module

`CHORDMouseEvent`
: Default True, open/not open mouse event of CHORD module from NG-Circos.

`CHORDMouseFillColorExcluded`
: A type of color in character, chord in this color will be hided

`CHORDMouseClickDisplay`
: Default False, show/not the tooltip when mouse click on a CHORD point.

`CHORDMouseClickOpacity`
: Opacity when mouse clicking

`CHORDMouseClickStrokeColor`
: Stroke color when mouse clicking

`CHORDMouseClickStrokeWidth`
: Stroke width when mouse clicking

`CHORDMouseDownDisplay`
: Default False, show/not the tooltip when mouse click down a CHORD point.

`CHORDMouseDownOpacity`
: Opacity when mouse moving down the element

`CHORDMouseDownStrokeColor`
: Stroke color when mouse moving down the element

`CHORDMouseDownStrokeWidth`
: Stroke width when mouse moving down the element

`CHORDMouseEnterDisplay`
: Default False, show/not the tooltip when mouse mover over a CHORD point.

`CHORDMouseEnterOpacity`
: Opacity when mouse entering the element

`CHORDMouseEnterStrokeColor`
: Stroke color when mouse entering the element

`CHORDMouseEnterStrokeWidth`
: Stroke width when mouse entering the element

`CHORDMouseLeaveDisplay`
: Default False, show/not the tooltip when mouse mover leave a CHORD point.

`CHORDMouseLeaveOpacity`
: Opacity when mouse leaving the element

`CHORDMouseLeaveStrokeColor`
: Stroke color when mouse leaving the element

`CHORDMouseLeaveStrokeWidth`
: Stroke width when mouse leaving the element

`CHORDMouseMoveDisplay`
: Default False, show/not the tooltip when mouse move into a CHORD point.

`CHORDMouseMoveOpacity`
: Opacity when mouse moving in the element

`CHORDMouseMoveStrokeColor`
: Stroke color when mouse moving in the element

`CHORDMouseMoveStrokeWidth`
: Stroke width when mouse moving in the element

`CHORDMouseOutDisplay`
: Defalut False, hide/not tooltip when mouse is not hovering a CHORD point anymore.

`CHORDMouseOutAnimationTime`
: Animation time when mouse moving out the element

`CHORDMouseOutOpacity`
: Opacity when mouse moving out the element

`CHORDMouseOutStrokeColor`
: Stroke color when mouse moving out the element

`CHORDMouseOutStrokeWidth`
: Stroke width when mouse moving out the element

`CHORDMouseUpDisplay`
: Default False, show/not the tooltip when mouse click up a CHORD point.

`CHORDMouseUpOpacity`
: Opacity when mouse moving up the element

`CHORDMouseUpStrokeColor`
: Stroke color when mouse moving up the element

`CHORDMouseUpStrokeWidth`
: Stroke width when mouse moving up the element

`CHORDMouseOverDisplay`
: Default False, show/not the tooltip when mouse hover on a CHORD point.

`CHORDMouseOverOpacity`
: Opacity when mouse moving over the element

`CHORDMouseOverStrokeColor`
: Stroke color when mouse moving over the element

`CHORDMouseOverStrokeWidth`
: Stroke width when mouse moving over the element

`HISTOGRAMxlink` Default False, add/not xlink for HISTOGRAM module

`HISTOGRAMMouseEvent`
: Default True, open/not open mouse event of HISTOGRAM module

`HISTOGRAMMouseClickDisplay`
: Default False, show/not the tooltip when mouse click on a HISTOGRAM point.

`HISTOGRAMMouseClickColor`
: Color when mouse clicking

`HISTOGRAMMouseClickOpacity`
: Opacity when mouse clicking

`HISTOGRAMMouseClickStrokeColor`
: Stroke color when mouse clicking

`HISTOGRAMMouseClickStrokeWidth`
: Stroke width when mouse clicking

`HISTOGRAMMouseDownDisplay`
: Default False, show/not the tooltip when mouse click down a HISTOGRAM point.

`HISTOGRAMMouseDownColor`
: Color when mouse moving down the element

`HISTOGRAMMouseDownOpacity`
: Opacity when mouse moving up the element

`HISTOGRAMMouseDownStrokeColor`
: Stroke color when mouse moving up the element

`HISTOGRAMMouseDownStrokeWidth`
: Stroke width when mouse moving up the element

HISTOGRAMMouseEnterDisplay
: Default False, show/not the tooltip when mouse mover over a HISTOGRAM point.

HISTOGRAMMouseEnterColor
: Color when mouse entering the element

HISTOGRAMMouseEnterOpacity
: Opacity when mouse entering the element

HISTOGRAMMouseEnterStrokeColor
: Stroke color when mouse entering the element

HISTOGRAMMouseEnterStrokeWidth
: Stroke width when mouse entering the element

HISTOGRAMMouseLeaveDisplay
: Default False, show/not the tooltip when mouse mover leave a HISTOGRAM point.

HISTOGRAMMouseLeaveColor
: Color when mouse leaving the element

HISTOGRAMMouseLeaveOpacity
: Opacity when mouse leaving the element

HISTOGRAMMouseLeaveStrokeColor
: Stroke color when mouse leaving the element

HISTOGRAMMouseLeaveStrokeWidth
: Stroke width when mouse leaving the element

HISTOGRAMMouseMoveDisplay
: Default False, show/not the tooltip when mouse move into a HISTOGRAM point.

HISTOGRAMMouseMoveColor
: Color when mouse moving in the element

HISTOGRAMMouseMoveOpacity
: Opacity when mouse moving in the element

HISTOGRAMMouseMoveStrokeColor
: Stroke color when mouse moving in the element

HISTOGRAMMouseMoveStrokeWidth
: Stroke width when mouse moving in the element

HISTOGRAMMouseOutDisplay
: Defalut False, hide/not tooltip when mouse is not hovering a HISTOGRAM point anymore.

HISTOGRAMMouseOutAnimationTime
: Animation time when mouse moving out the element

HISTOGRAMMouseOutColor
: Color when mouse moving out the element

HISTOGRAMMouseOutOpacity
: Opacity when mouse moving out the element

HISTOGRAMMouseOutStrokeColor
: Stroke color when mouse moving out the element

HISTOGRAMMouseOutStrokeWidth
: Stroke width when mouse moving out the element

HISTOGRAMMouseUpDisplay
: Default False, show/not the tooltip when mouse click up a HISTOGRAM point.

HISTOGRAMMouseUpColor
: Color when mouse moving up the element

HISTOGRAMMouseUpOpacity
: Opacity when mouse moving up the element

HISTOGRAMMouseUpStrokeColor
: Stroke color when mouse moving up the element

HISTOGRAMMouseUpStrokeWidth
: Stroke width when mouse moving up the element

HISTOGRAMMouseOverDisplay
: Default False, show/not the tooltip when mouse hover on a HISTOGRAM point.

HISTOGRAMMouseOverColor
: Color when mouse moving over the element

HISTOGRAMMouseOverOpacity
: Opacity when mouse moving over the element

HISTOGRAMMouseOverStrokeColor
: Stroke color when mouse moving over the element

HISTOGRAMMouseOverStrokeWidth
: Stroke width when mouse moving over the element

HISTOGRAMMouseOverTooltipsSetting
: Default "style1"

HISTOGRAMMouseOverTooltipsHtml
: Default " "

HISTOGRAMMouseOverTooltipsPosition
: Default "absolute"

HISTOGRAMMouseOverTooltipsBackgroundColor
: Default "white"

HISTOGRAMMouseOverTooltipsBorderStyle
: Default "solid"

HISTOGRAMMouseOverTooltipsBorderWidth
: Default 0

HISTOGRAMMouseOverTooltipsPadding
: Default "3px"

HISTOGRAMMouseOverTooltipsBorderRadius
: Default "3px"

HISTOGRAMMouseOverTooltipsOpacity
: Default 0.8

LINEMouseEvent
: Default True, open/not open mouse event of LINE module

LINEMouseClickDisplay
: Default False, show/not the tooltip when mouse click on a LINE point.

LINEMouseClickLineOpacity
: Line opacity when mouse clicking the element

LINEMouseClickLineStrokeColor
: Stroke color when mouse clicking the element

LINEMouseClickLineStrokeWidth
: Stroke width when mouse clicking the element

LINEMouseDownDisplay
: Default False, show/not the tooltip when mouse click down a LINE point.

LINEMouseDownLineOpacity
: Line opacity when mouse moving down the element

LINEMouseDownLineStrokeColor
: Stroke color when mouse moving down the element

LINEMouseDownLineStrokeWidth
: Stroke width when mouse moving down the element

LINEMouseEnterDisplay
: Default False, show/not the tooltip when mouse mover over a LINE point.

LINEMouseEnterLineOpacity
: Line opacity when mouse entering the element

LINEMouseEnterLineStrokeColor
: Stroke color when mouse entering the element

LINEMouseEnterLineStrokeWidth
: Stroke width when mouse entering the element

LINEMouseLeaveDisplay
: Default False, show/not the tooltip when mouse mover leave a LINE point.

LINEMouseLeaveLineOpacity
: Line opacity when mouse leaving the element

LINEMouseLeaveLineStrokeColor
: Stroke color when mouse leaving the element

LINEMouseLeaveLineStrokeWidth
: Stroke width when mouse leaving the element

LINEMouseMoveDisplay
: Default False, show/not the tooltip when mouse move into a LINE point.

LINEMouseMoveLineOpacity
: Line opacity when mouse moving in the element

LINEMouseMoveLineStrokeColor
: Stroke color when mouse moving in the element

LINEMouseMoveLineStrokeWidth
: Stroke width when mouse moving in the element

LINEMouseOutDisplay
: Defalut False, hide/not tooltip when mouse is not hovering a LINE point anymore.

LINEMouseOutAnimationTime
: Animation time when mouse moving out the element

LINEMouseOutLineOpacity
: Line opacity when mouse moving out the element

LINEMouseOutLineStrokeColor
: Stroke color when mouse moving out the element

LINEMouseOutLineStrokeWidth
: Stroke width when mouse moving out the element

LINEMouseUpDisplay
: Default False, show/not the tooltip when mouse click up a LINE point.

LINEMouseUpLineOpacity
: Line opacity when mouse moving up the element

LINEMouseUpLineStrokeColor
: Stroke color when mouse moving up the element

LINEMouseUpLineStrokeWidth
: Stroke width when mouse moving up the element

LINEMouseOverDisplay
: Default False, show/not the tooltip when mouse hover on a LINE point.

`LINEMouseOverLineOpacity`
: Line opacity when mouse moving over the element

`LINEMouseOverLineStrokeColor`
: Stroke color when mouse moving over the element

`LINEMouseOverLineStrokeWidth`
: Stroke width when mouse moving over the element

`LINEMouseOverTooltipsSetting`
: Default "style1"

`LINEMouseOverTooltipsHtml`
: Default " "

`LINEMouseOverTooltipsPosition`
: Default "absolute"

`LINEMouseOverTooltipsBackgroundColor`
: Default "white"

`LINEMouseOverTooltipsBorderStyle`
: Default "solid"

`LINEMouseOverTooltipsBorderWidth`
: Default 0

`LINEMouseOverTooltipsPadding`
: Default "3px"

`LINEMouseOverTooltipsBorderRadius`
: Default "3px"

`LINEMouseOverTooltipsOpacity`
: Default 0.8

`WIGMouseEvent` Default True, open/not open mouse event of WIG module

`WIGMouseClickDisplay`
: Default False, show/not the tooltip when mouse click on a WIG point.

`WIGMouseClickLineOpacity`
: Line opacity when mouse clicking the element

`WIGMouseClickLineStrokeColor`
: Stroke color when mouse clicking the element

`WIGMouseClickLineStrokeWidth`
: Stroke width when mouse clicking the element

`WIGMouseClickFillColor`
: Filling color when mouse clicking the element

`WIGMouseDownDisplay`
: Default False, show/not the tooltip when mouse click down a WIG point.

`WIGMouseDownLineOpacity`
: Line opacity when mouse moving down the element

`WIGMouseDownLineStrokeColor`
: Stroke color when mouse moving down the element

`WIGMouseDownLineStrokeWidth`
: Stroke width when mouse moving down the element

`WIGMouseDownFillColor`
: Filling color when mouse moving down the element

`WIGMouseEnterDisplay`
: Default False, show/not the tooltip when mouse mover over a WIG point.

`WIGMouseEnterLineOpacity`
: Line opacity when mouse entering the element

`WIGMouseEnterLineStrokeColor`
: Stroke color when mouse entering the element

`WIGMouseEnterLineStrokeWidth`
: Stroke width when mouse entering the element

`WIGMouseEnterFillColor`
: Filling color when mouse entering the element

`WIGMouseLeaveDisplay`
: Default False, show/not the tooltip when mouse mover leave a WIG point.

`WIGMouseLeaveLineOpacity`
: Line opacity when mouse leaving the element

`WIGMouseLeaveLineStrokeColor`
: Stroke color when mouse leaving the element

`WIGMouseLeaveLineStrokeWidth`
: Stroke width when mouse leaving the element

`WIGMouseLeaveFillColor`
: Filling color when mouse leaving the element

`WIGMouseMoveDisplay`
: Default False, show/not the tooltip when mouse move into a WIG point.

`WIGMouseMoveLineOpacity`
: Line opacity when mouse moving in the element

`WIGMouseMoveLineStrokeColor`
: Stroke color when mouse moving in the element

`WIGMouseMoveLineStrokeWidth`
: Stroke width when mouse moving in the element

`WIGMouseMoveFillColor`
: Filling color when mouse leaving the element

`WIGMouseOutDisplay`
: Defalut False, hide/not tooltip when mouse is not hovering a WIG point anymore.

`WIGMouseOutAnimationTime`
: Animation time when mouse moving out the element

`WIGMouseOutLineOpacity`
: Line opacity when mouse moving out the element

`WIGMouseOutLineStrokeColor`
: Stroke color when mouse moving out the element

`WIGMouseOutLineStrokeWidth`
: Stroke width when mouse moving out the element

`WIGMouseOutFillColor`
: Filling color when mouse moving out the element

`WIGMouseUpDisplay`
: Default False, show/not the tooltip when mouse click up a WIG point.

`WIGMouseUpLineOpacity`
: Line opacity when mouse moving up the element

`WIGMouseUpLineStrokeColor`
: Stroke color when mouse moving up the element

`WIGMouseUpLineStrokeWidth`
: Stroke width when mouse moving up the element

`WIGMouseUpFillColor`
: Filling color when mouse moving up the element

`WIGMouseOverDisplay`
: Default False, show/not the tooltip when mouse hover on a WIG point.

`WIGMouseOverLineOpacity`
: Line opacity when mouse moving over the element

`WIGMouseOverLineStrokeColor`
: Stroke color when mouse moving over the element

`WIGMouseOverLineStrokeWidth`
: Stroke width when mouse moving over the element

`WIGMouseOverFillColor`
: Filling color when mouse moving over the element

`WIGMouseOverTooltipsSetting`
: Default "style1"

`WIGMouseOverTooltipsHtml`
: Default " "

`WIGMouseOverTooltipsPosition`
: Default "absolute"

`WIGMouseOverTooltipsBackgroundColor`
: Default "white"

`WIGMouseOverTooltipsBorderStyle`
: Default "solid"

`WIGMouseOverTooltipsBorderWidth`
: Default 0

`WIGMouseOverTooltipsPadding`
: Default "3px"

`WIGMouseOverTooltipsBorderRadius`
: Default "3px"

`WIGMouseOverTooltipsOpacity`
: Default 0.8

`SCATTERxlink` Default False, add/not xlink for SCATTER module

`SCATTERMouseEvent`
: Default True, open/not open mouse event of SCATTER module

`SCATTERMouseClickDisplay`
: Default False, show/not the tooltip when mouse click on a SCATTER point.

`SCATTERMouseClickColor`
: Color when mouse clicking the element

`SCATTERMouseClickCircleSize`
: Circle size when mouse clicking the element

`SCATTERMouseClickCircleOpacity`
: Circle opacity when mouse clicking the element

`SCATTERMouseClickCircleStrokeColor`
: Circle stroke color when mouse clicking the element

`SCATTERMouseClickCircleStrokeWidth`
: Circle stroke width when mouse clicking the element

`SCATTERMouseClickTextFromData`
: Text column when mouse clicking the element

`SCATTERMouseClickTextOpacity`
: Text opacity when mouse clicking the element

`SCATTERMouseClickTextColor`
: Text color when mouse clicking the element

SCATTERMouseClickTextSize
: Text size when mouse clicking the element

SCATTERMouseClickTextPostionX, SCATTERMouseClickTextPostionY
: Text coordinates when mouse clicking the element

SCATTERMouseClickTextDrag
: Whether text is draggable when clicing element

SCATTERMouseDownDisplay
: Default False, show/not the tooltip when mouse click down a SCATTER point.

SCATTERMouseDownColor
: Color when mouse moving down the element

SCATTERMouseDownCircleSize
: Circle size when mouse moving down the element

SCATTERMouseDownCircleOpacity
: Circle opacity when mouse moving down the element

SCATTERMouseDownCircleStrokeColor
: Circle stroke color when mouse moving down the element

SCATTERMouseDownCircleStrokeWidth
: Circle stroke width when mouse moving down the element

SCATTERMouseEnterDisplay
: Default False, show/not the tooltip when mouse mover over a SCATTER point.

SCATTERMouseEnterColor
: Color when mouse entering the element

SCATTERMouseEnterCircleSize
: Circle size when mouse entering the element

SCATTERMouseEnterCircleOpacity
: Circle opacity when mouse entering the element

SCATTERMouseEnterCircleStrokeColor
: Circle stroke color when mouse entering the element

SCATTERMouseEnterCircleStrokeWidth
: Circle stroke width when mouse entering the element

SCATTERMouseLeaveDisplay
: Default False, show/not the tooltip when mouse mover leave a SCATTER point.

SCATTERMouseLeaveColor
: Color when mouse leaving the element

SCATTERMouseLeaveCircleSize
: Circle size when mouse leaving the element

SCATTERMouseLeaveCircleOpacity
: Circle opacity when mouse leaving the element

SCATTERMouseLeaveCircleStrokeColor
: Circle stroke color when mouse leaving the element

SCATTERMouseLeaveCircleStrokeWidth
: Circle stroke width when mouse leaving the element

SCATTERMouseMoveDisplay
: Default False, show/not the tooltip when mouse move into a SCATTER point.

SCATTERMouseMoveColor
: Color when mouse moving in the element

SCATTERMouseMoveCircleSize
: Circle size when mouse moving in the element

SCATTERMouseMoveCircleOpacity
: Circle opacity when mouse moving in the element

SCATTERMouseMoveCircleStrokeColor
: Circle stroke color when mouse moving in the element

SCATTERMouseMoveCircleStrokeWidth
: Circle stroke width when mouse moving in the element

SCATTERMouseOutDisplay
: Defalut False, hide/not tooltip when mouse is not hovering a SCATTER point anymore.

SCATTERMouseOutAnimationTime
: Animation time when mouse moving out the element

SCATTERMouseOutColor
: Color when mouse moving out the element

SCATTERMouseOutCircleSize
: Circle size when mouse moving out the element

SCATTERMouseOutCircleOpacity
: Circle opacity when mouse moving out the element

SCATTERMouseOutCircleStrokeColor
: Circle stroke color when mouse moving out the element

SCATTERMouseOutCircleStrokeWidth
: Circle stroke width when mouse moving out the element

SCATTERMouseUpDisplay
: Default False, show/not the tooltip when mouse click up a SCATTER point.

SCATTERMouseUpColor
: Color when mouse moving up the element

SCATTERMouseUpCircleSize
: Circle size when mouse moving up the element

SCATTERMouseUpCircleOpacity
: Circle opacity when mouse moving up the element

SCATTERMouseUpCircleStrokeColor
: Circle stroke color when mouse moving up the element

SCATTERMouseUpCircleStrokeWidth
: Circle stroke width when mouse moving up the element

SCATTERMouseOverDisplay
: Default False, show/not the tooltip when mouse hover on a SCATTER point.

SCATTERMouseOverColor
: Color when mouse moving over the element

SCATTERMouseOverCircleSize
: Circle size when mouse moving over the element

SCATTERMouseOverCircleOpacity
: Circle opacity when mouse moving over the element

SCATTERMouseOverCircleStrokeColor
: Circle stroke color when mouse moving over the element

SCATTERMouseOverCircleStrokeWidth
: Circle stroke width when mouse moving over the element

SCATTERMouseOverTooltipsSetting
: Default "style1"

`SCATTERMouseOverTooltipsHtml`
: Default " "

`SCATTERMouseOverTooltipsPosition`
: Default "absolute"

`SCATTERMouseOverTooltipsBackgroundColor`
: Default "white"

`SCATTERMouseOverTooltipsBorderStyle`
: Default "solid"

`SCATTERMouseOverTooltipsBorderWidth`
: Default 0

`SCATTERMouseOverTooltipsPadding`
: Default "3px"

`SCATTERMouseOverTooltipsBorderRadius`
: Default "3px"

`SCATTERMouseOverTooltipsOpacity`
: Default 0.8

`ARCxlink` Default False, add/not xlink for ARC module

`ARCMouseEvent` Default True, open/not open mouse event of ARC module

`ARCMouseClickDisplay`
: Default False, show/not the tooltip when mouse click on a ARC point.

`ARCMouseClickColor`
: Color when mouse clicking the element

`ARCMouseClickArcOpacity`
: Arc opacity when mouse clicking the element

`ARCMouseClickArcStrokeColor`
: Arc stroke color when mouse clicking the element

`ARCMouseClickArcStrokeWidth`
: Arc stroke width when mouse clicking the element

`ARCMouseClickTextFromData`
: Text column when mouse clicking the element

`ARCMouseClickTextOpacity`
: Text opacity when mouse clicking the element

`ARCMouseClickTextColor`
: Text color when mouse clicking the element

`ARCMouseClickTextSize`
: Text size when mouse clicking the element

`ARCMouseClickTextPostionX, ARCMouseClickTextPostionY`
: Text coordinates when mouse clicking the element

`ARCMouseClickTextDrag`
: Whether text is draggable when mouse clicking the element

`ARCMouseDownDisplay`
: Default False, show/not the tooltip when mouse click down a ARC point.

`ARCMouseDownColor`
: Color when mouse moving down the element

`ARCMouseDownArcOpacity`
: Arc opacity when mouse moving down the element

`ARCMouseDownArcStrokeColor`
: Arc stroke color when mouse moving down the element

ARCMouseDownArcStrokeWidth
: Arc stroke width when mouse moving down the element

ARCMouseEnterDisplay
: Default False, show/not the tooltip when mouse mover over a ARC point.

ARCMouseEnterColor
: Color when mouse entering the element

ARCMouseEnterArcOpacity
: Arc opacity when mouse entering the element

ARCMouseEnterArcStrokeColor
: Arc stroke color when mouse entering the element

ARCMouseEnterArcStrokeWidth
: Arc stroke width when mouse entering the element

ARCMouseLeaveDisplay
: Default False, show/not the tooltip when mouse mover leave a ARC point.

ARCMouseLeaveColor
: Color when mouse leaving the element

ARCMouseLeaveArcOpacity
: Arc opacity when mouse leaving the element

ARCMouseLeaveArcStrokeColor
: Arc stroke color when mouse leaving the element

ARCMouseLeaveArcStrokeWidth
: Arc stroke width when mouse leaving the element

ARCMouseMoveDisplay
: Default False, show/not the tooltip when mouse move into a ARC point.

ARCMouseMoveColor
: Color when mouse moving in the element

ARCMouseMoveArcOpacity
: Arc opacity when mouse moving in the element

ARCMouseMoveArcStrokeColor
: Arc stroke color when mouse moving in the element

ARCMouseMoveArcStrokeWidth
: Arc stroke width when mouse moving in the element

ARCMouseOutDisplay
: Defalut False, hide/not tooltip when mouse is not hovering a ARC point anymore.

ARCMouseOutAnimationTime
: Animation time when mouse moving out the element

ARCMouseOutColor
: Color when mouse moving out the element

ARCMouseOutArcOpacity
: Arc opacity when mouse moving out the element

ARCMouseOutArcStrokeColor
: Arc stroke color when mouse moving out the element

ARCMouseOutArcStrokeWidth
: Arc stroke width when mouse moving out the element

ARCMouseUpDisplay
: Default False, show/not the tooltip when mouse click up a ARC point.

ARCMouseUpColor
: Color when mouse moving up the element

ARCMouseUpArcOpacity
: Arc opacity when mouse moving up the element

ARCMouseUpArcStrokeColor
: Arc stroke color when mouse moving up the element

ARCMouseUpArcStrokeWidth
: Arc stroke width when mouse moving up the element

ARCMouseOverDisplay
: Default False, show/not the tooltip when mouse hover on a ARC point.

ARCMouseOverColor
: Color when mouse moving over the element

ARCMouseOverArcOpacity
: Arc opacity when mouse moving over the element

ARCMouseOverArcStrokeColor
: Arc stroke color when mouse moving over the element

ARCMouseOverArcStrokeWidth
: Arc stroke width when mouse moving over the element

ARCMouseOverTooltipsSetting
: Default "style1"

ARCMouseOverTooltipsHtml
: Default " "

ARCMouseOverTooltipsPosition
: Default "absolute"

ARCMouseOverTooltipsBackgroundColor
: Default "white"

ARCMouseOverTooltipsBorderStyle
: Default "solid"

ARCMouseOverTooltipsBorderWidth
: Default 0

ARCMouseOverTooltipsPadding
: Default "3px"

ARCMouseOverTooltipsBorderRadius
: Default "3px"

ARCMouseOverTooltipsOpacity
: Default 0.8

GENExlink
: Default False, add/not xlink for GENE module

GENEMouseEvent
: Default True, open/not open mouse event of GENE module

GENEMouseClickDisplay
: Default False, show/not the tooltip when mouse click on a GENE point.

GENEMouseClickColor
: Color when mouse clicking the element

GENEMouseClickArcOpacity
: Arc opacity when mouse clicking the element

GENEMouseClickArcStrokeColor
: Arc stroke color when mouse clicking the element

GENEMouseClickArcStrokeWidth
: Arc stroke width when mouse clicking the element

GENEMouseClickTextFromData
: Text column when mouse clicking the element

`GENEMouseClickTextOpacity`
: Text opacity when mouse clicking the element

`GENEMouseClickTextColor`
: Text color when mouse clicking the element

`GENEMouseClickTextSize`
: Text size when mouse clicking the element

`GENEMouseClickTextPostionX, GENEMouseClickTextPostionY`
: Text coordinates when mouse clicking the element

`GENEMouseClickTextDrag`
: Whether text is draggable when mouse clicking the element

`GENEMouseDownDisplay`
: Default False, show/not the tooltip when mouse click down a GENE point.

`GENEMouseDownColor`
: Color when mouse moving down the element

`GENEMouseDownArcOpacity`
: Arc opacity when mouse moving down the element

`GENEMouseDownArcStrokeColor`
: Arc stroke color when mouse moving down the element

`GENEMouseDownArcStrokeWidth`
: Arc stroke width when mouse moving down the element

`GENEMouseEnterDisplay`
: Default False, show/not the tooltip when mouse mover over a GENE point.

`GENEMouseEnterColor`
: Color when mouse entering the element

`GENEMouseEnterArcOpacity`
: Arc opacity when mouse entering the element

`GENEMouseEnterArcStrokeColor`
: Arc stroke color when mouse entering the element

`GENEMouseEnterArcStrokeWidth`
: Arc stroke width when mouse entering the element

`GENEMouseLeaveDisplay`
: Default False, show/not the tooltip when mouse mover leave a GENE point.

`GENEMouseLeaveColor`
: Color when mouse leaving the element

`GENEMouseLeaveArcOpacity`
: Arc opacity when mouse leaving the element

`GENEMouseLeaveArcStrokeColor`
: Arc stroke color when mouse leaving the element

`GENEMouseLeaveArcStrokeWidth`
: Arc stroke width when mouse leaving the element

`GENEMouseMoveDisplay`
: Default False, show/not the tooltip when mouse move into a GENE point.

`GENEMouseMoveColor`
: Color when mouse moving in the element

`GENEMouseMoveArcOpacity`
: Arc opacity when mouse moving in the element

`GENEMouseMoveArcStrokeColor`
: Arc stroke color when mouse moving in the element

GENEMouseMoveArcStrokeWidth
: Arc stroke width when mouse moving in the element

GENEMouseOutDisplay
: Defalut False, hide/not tooltip when mouse is not hovering a GENE point anymore.

GENEMouseOutAnimationTime
: Animation time when mouse moving out the element

GENEMouseOutColor
: Color when mouse moving out the element

GENEMouseOutArcOpacity
: Arc opacity when mouse moving out the element

GENEMouseOutArcStrokeColor
: Arc stroke color when mouse moving out the element

GENEMouseOutArcStrokeWidth
: Arc stroke width when mouse moving out the element

GENEMouseUpDisplay
: Default False, show/not the tooltip when mouse click up a GENE point.

GENEMouseUpColor
: Color when mouse moving up the element

GENEMouseUpArcOpacity
: Arc opacity when mouse moving up the element

GENEMouseUpArcStrokeColor
: Arc stroke color when mouse moving up the element

GENEMouseUpArcStrokeWidth
: Arc stroke width when mouse moving up the element

GENEMouseOverDisplay
: Default False, show/not the tooltip when mouse hover on a GENE point.

GENEMouseOverColor
: Color when mouse moving over the element

GENEMouseOverArcOpacity
: Arc opacity when mouse moving over the element

GENEMouseOverArcStrokeColor
: Arc stroke color when mouse moving over the element

GENEMouseOverArcStrokeWidth
: Arc stroke width when mouse moving over the element

GENEMouseOverTooltipsSetting
: Default "style1"

GENEMouseOverTooltipsHtml
: Default " "

GENEMouseOverTooltipsPosition
: Default "absolute"

GENEMouseOverTooltipsBackgroundColor
: Default "white"

GENEMouseOverTooltipsBorderStyle
: Default "solid"

GENEMouseOverTooltipsBorderWidth
: Default 0

GENEMouseOverTooltipsPadding
: Default "3px"

GENEMouseOverTooltipsBorderRadius
: Default "3px"

GENEMouseOverTooltipsOpacity
: Default 0.8

LOLLIPOPxlink
: Default False, add/not xlink for LOLLIPOP module

LOLLIPOPMouseEvent
: Default True, open/not open mouse event of LOLLIPOP module

LOLLIPOPMouseClickDisplay
: Default False, show/not the tooltip when mouse click on a LOLLIPOP point.

LOLLIPOPMouseClickColor
: Color when mouse clicking

LOLLIPOPMouseClickCircleSize
: Circle size when mouse clicking the element

LOLLIPOPMouseClickCircleOpacity
: Circle opacity when mouse clicking the element

LOLLIPOPMouseClickCircleStrokeColor
: Circle stroke color when mouse clicking the element

LOLLIPOPMouseClickCircleStrokeWidth
: Circle stroke width when mouse clicking the element

LOLLIPOPMouseClickTextFromData
: Text column when mouse clicking the element

LOLLIPOPMouseClickTextOpacity
: Text opacity when mouse clicking the element

LOLLIPOPMouseClickTextColor
: Text color when mouse clicking the element

LOLLIPOPMouseClickTextSize
: Text size when mouse clicking the element

LOLLIPOPMouseClickTextPostionX, LOLLIPOPMouseClickTextPostionY
: Text coordinates when mouse clicking the element

LOLLIPOPMouseClickTextDrag
: Whether text is draggable when mouse clicking the element

LOLLIPOPMouseDownDisplay
: Default False, show/not the tooltip when mouse click down a LOLLIPOP point.

LOLLIPOPMouseDownColor
: Color when mouse moving down the element

LOLLIPOPMouseDownCircleSize
: Circle size when mouse moving down the element

LOLLIPOPMouseDownCircleOpacity
: Circle opacity when mouse moving down the element

LOLLIPOPMouseDownCircleStrokeColor
: Circle stroke color when mouse moving down the element

LOLLIPOPMouseDownCircleStrokeWidth
: Circle stroke width when mouse moving down the element

LOLLIPOPMouseEnterDisplay
: Default False, show/not the tooltip when mouse mover over a LOLLIPOP point.

LOLLIPOPMouseEnterColor
: Color when mouse entering the element

LOLLIPOPMouseEnterCircleSize
: Circle size when mouse entering the element

LOLLIPOPMouseEnterCircleOpacity
: Circle opacity when mouse entering the element

LOLLIPOPMouseEnterCircleStrokeColor
: Circle stroke color when mouse entering the element

LOLLIPOPMouseEnterCircleStrokeWidth
: Circle stroke width when mouse entering the element

LOLLIPOPMouseLeaveDisplay
: Default False, show/not the tooltip when mouse mover leave a LOLLIPOP point.

LOLLIPOPMouseLeaveColor
: Color when mouse leaving the element

LOLLIPOPMouseLeaveCircleSize
: Circle size when mouse leaving the element

LOLLIPOPMouseLeaveCircleOpacity
: Circle opacity when mouse leaving the element

LOLLIPOPMouseLeaveCircleStrokeColor
: Circle stroke color when mouse leaving the element

LOLLIPOPMouseLeaveCircleStrokeWidth
: Circle stroke width when mouse leaving the element

LOLLIPOPMouseMoveDisplay
: Default False, show/not the tooltip when mouse move into a LOLLIPOP point.

LOLLIPOPMouseMoveColor
: Color when mouse moving in the element

LOLLIPOPMouseMoveCircleSize
: Circle size when mouse moving in the element

LOLLIPOPMouseMoveCircleOpacity
: Circle opacity when mouse moving in the element

LOLLIPOPMouseMoveCircleStrokeColor
: Circle stroke color when mouse moving in the element

LOLLIPOPMouseMoveCircleStrokeWidth
: Circle stroke width when mouse moving in the element

LOLLIPOPMouseOutDisplay
: Defalut False, hide/not tooltip when mouse is not hovering a LOLLIPOP point anymore.

LOLLIPOPMouseOutAnimationTime
: Animation time when mouse moving out the element

LOLLIPOPMouseOutColor
: Color when mouse moving out the element

LOLLIPOPMouseOutCircleSize
: Circle size when mouse moving out the element

LOLLIPOPMouseOutCircleOpacity
: Circle opacity when mouse moving out the element

LOLLIPOPMouseOutCircleStrokeColor
: Circle stroke color when mouse moving out the element

LOLLIPOPMouseOutCircleStrokeWidth
: Circle stroke width when mouse moving out the element

LOLLIPOPMouseUpDisplay
: Default False, show/not the tooltip when mouse click up a LOLLIPOP point.

LOLLIPOPMouseUpColor
: Color when mouse moving up the element

LOLLIPOPMouseUpCircleSize
: Circle size when mouse moving up the element

LOLLIPOPMouseUpCircleOpacity
: Circle opacity when mouse moving up the element

LOLLIPOPMouseUpCircleStrokeColor
: Circle stroke color when mouse moving up the element

LOLLIPOPMouseUpCircleStrokeWidth
: Circle stroke width when mouse moving up the element

LOLLIPOPMouseOverDisplay
: Default False, show/not the tooltip when mouse hover on a LOLLIPOP point.

LOLLIPOPMouseOverColor
: Color when mouse moving over the element

LOLLIPOPMouseOverCircleSize
: Circle size when mouse moving over the element

LOLLIPOPMouseOverCircleOpacity
: Circle opacity when mouse moving over the element

LOLLIPOPMouseOverCircleStrokeColor
: Circle stroke color when mouse moving over the element

LOLLIPOPMouseOverCircleStrokeWidth
: Circle stroke width when mouse moving over the element

LOLLIPOPMouseOverTooltipsSetting
: Default "style1"

LOLLIPOPMouseOverTooltipsHtml
: Default " "

LOLLIPOPMouseOverTooltipsPosition
: Default "absolute"

LOLLIPOPMouseOverTooltipsBackgroundColor
: Default "white"

LOLLIPOPMouseOverTooltipsBorderStyle
: Default "solid"

LOLLIPOPMouseOverTooltipsBorderWidth
: Default 0

LOLLIPOPMouseOverTooltipsPadding
: Default "3px"

LOLLIPOPMouseOverTooltipsBorderRadius
: Default "3px"

LOLLIPOPMouseOverTooltipsOpacity
: Default 0.8

elementId
: the name of the HTML id to be used to contain the visualization.

...
: Ignored

Examples

```
Circos(genome = "hg19")
```

Circos-shiny *Shiny bindings for interacCircos*

Description

Output and render functions for using interacCircos within Shiny applications and interactive Rmd documents.

Usage

```
CircosOutput(outputId, width = "100%", height = "100%")

renderCircos(expr, env = parent.frame(), quoted = FALSE)
```

Arguments

outputId	output variable to read from
width, height	Must be a valid CSS unit (like '100%', '400px', 'auto') or a number, which will be coerced to a string and have 'px' appended.
expr	An expression that generates a interacCircos
env	The environment in which to evaluate expr.
quoted	Is expr a quoted expression (with quote())? This is useful if you want to save an expression in a variable.

CircosArc *Create a ARC module to a moduleList*

Description

Display the CNV without value, Gene domain, Chromosome band in the visualization

Usage

```
CircosArc(
  modulename,
  compareGroup = 1,
  outerRadius = 150,
  innerRadius = 130,
  opacity = 1,
  animationDisplay = FALSE,
  animationTime = 2000,
  animationDelay = 20,
  animationType = "bounce",
  data,
  ...
)
```

Arguments

modulename	The name of the new module.
compareGroup	The group number of this module in compare module
innerRadius, outerRadius	Where the module should begin and end
opacity	The opacity for arc
animationDisplay	Whether display animation
animationTime, animationDelay, animationType	The time, delay and display type for animation
data	A list of arc with details including chr, start, end, color, des, link and html. Details can be found on document.
...	Ignored

Examples

```
arcData<-arcExample
Circos(CircosArc('Arc01', outerRadius = 212, innerRadius = 224, data=arcData),
 genome=list("EGFR"=1211),outerRadius = 220,genomeFillColor = c("grey"))
```

CircosAuxLine *Create a AUXILIAYLINE module to a moduleList*

Description

A auxiliary line displayed in the visualization

Usage

```
CircosAuxLine(
  modulename,
  startX = 20,
  startY = 20,
  endX = 120,
  endY = 120,
  color = "red",
  width = 0.5,
  type = "straight",
  controlPointX = 0,
  controlPointY = 0,
  lineType = "solid",
  dashArray = 3,
  marker = TRUE,
  markerType = "circle",
  markerColor = "blue",
  markerHeight = 5,
  markerWidth = 5,
  markerPosition = 2,
```

```
  animationDisplay = FALSE,
  animationTime = 50,
  animationDelay = 1000,
  animationType = "linear",
  ...
)
```

Arguments

`modulename`	The name of the new module.
`startX, startY`	Start coordinates for auxiliary line.
`endX, endY`	End coordinates for auxiliary line.
`color`	Color for auxiliary line
`width`	Width for auxiliary line
`type`	Type for auxiliary line, could be straight/curve/broken
`controlPointX, controlPointY`	The middle point coordinates for curve and broken
`lineType`	Line type, could be solid/dot
`dashArray`	The dash gap width
`marker`	Whether display a marker on the end of line
`markerType`	Type of marker, could be circle/square/arrow/stub
`markerColor, markerHeight, markerWidth`	Color, Height and Width for marker
`markerPosition`	1 means start, 2 means end, 3 means both
`animationDisplay`	whether display animation
`animationTime, animationDelay, animationType`	The time, delay and display type for animation
`...`	Ignored

Examples

```
Circos(CircosAuxLine('AuxLine01'))
```

`CircosBackground` *Create a BACKGROUND module to be added to a moduleList*

Description

Simple background to display behind another module

Usage

```
CircosBackground(
  modulename,
  compareGroup = 1,
  fillColors = "#EEEEFF",
  borderColors = "#000000",
  axisShow = FALSE,
  axisColor = "#000",
  axisOpacity = 0.5,
  axisNum = 4,
  axisWidth = 0.3,
  maxRadius = 190,
  minRadius = 105,
  borderSize = 0.3,
  animationDisplay = FALSE,
  animationTime = 2000,
  animationDelay = 20,
  animationType = "bounce",
  ...
)
```

Arguments

`modulename`	The name of the new module.
`compareGroup`	The group number of this module in compare module
`fillColors`	The color of the background element, in hexadecimal RGB format.
`borderColors`	The color of the background borders, in hexadecimal RGB format.
`axisShow`	Whether show a axis or not
`axisWidth, axisColor, axisOpacity, axisNum`	The color, opacity value and number of line for axis
`minRadius, maxRadius`	Where the module should begin and end
`borderSize`	The thickness of the background borders.
`animationDisplay`	Whether display a animation or not
`animationTime, animationDelay, animationType`	The time, delay and display type for animation
`...`	Ignored

Examples

```
Circos(CircosBackground('bg01', fillColors="#FFEEEE", borderSize = 1))
```

`CircosBubble` *Create a BUBBLE module to a moduleList*

Description

A bubble plot displayed in the visualization

Usage

```
CircosBubble(
  modulename,
  compareGroup = 1,
  maxRadius = 200,
  minRadius = 50,
  blockStroke = TRUE,
  blockStrokeColor = "black",
  blockStrokeWidth = 1,
  blockFill = FALSE,
  blockFillColor = "white",
  bubbleMaxSize = 5,
  bubbleMinSize = 2,
  minColor = "red",
  maxColor = "green",
  ValueAxisManualScale = FALSE,
  ValueAxisMaxScale = 10,
  ValueAxisMinScale = 0,
  totalLayer = 1,
  animationDisplay = FALSE,
  animationTime = 2000,
  animationDelay = 20,
  animationType = "bounce",
  data,
  ...
)
```

Arguments

`modulename`	The name of the new module.
`compareGroup`	The group number of this module in compare module
`maxRadius, minRadius`	Where the module should begin and end.
`blockStroke`	Whether display the stroke between each bubble block
`blockStrokeColor`	Stroke color for block
`blockStrokeWidth`	Stroke width for block
`blockFill`	Whether fill a block or not
`blockFillColor`	The color for filling the block
`bubbleMaxSize`	The max size for bubble

bubbleMinSize	The min size for bubble
minColor	The color the bubble with min value
maxColor	The color the bubble with max value
ValueAxisManualScale	Whether manually control the scale of value
ValueAxisMaxScale, ValueAxisMinScale	The max and min scale value for manually control
totalLayer	The color and width for stroke
animationDisplay	Whether display animation
animationTime, animationDelay, animationType	The time, delay and display type for animation
data	A list of value in bubble plot with details including chr, start, end, value, name, layer, color and html. Details can be found on document.
...	Ignored

Examples

```
bubbleData<-bubbleExample
Circos(CircosBubble('Bubble01', maxRadius = 230, minRadius = 170, data=bubbleData,
blockStroke = TRUE, bubbleMaxSize =10, bubbleMinSize = 2, maxColor = "red", minColor = "yellow",
totalLayer =3, animationDisplay = TRUE, animationType="linear"),
genome = list("2L"=23011544,"2R"=21146708,"3L"=24543557,"3R"= 27905053,"X"=22422827,"4"=1351857),
BUBBLEMouseOverDisplay =TRUE,innerRadius = 236)
```

CircosChord *Create a CHORD module of NG-Circos to a moduleList*

Description

Display a chord module using a data matrix.

Usage

```
CircosChord(
  modulename,
  innerRadius = 237,
  outerRadius = 238,
  fillOpacity = 0.67,
  fillStrokeWidth = 1,
  padding = 0.06,
  autoFillColor = TRUE,
  fillColor = c("#B8B8B8"),
  fillStrokeColor = c("black"),
  outerARC = TRUE,
  outerARCAutoColor = TRUE,
  outerARCColor = c("red"),
  outerARCStrokeColor = c("black"),
  outerARCText = TRUE,
```

```
  data,
  ...
)
```

Arguments

modulename	The name of the new module.
innerRadius	The inner radius for chord circle
outerRadius	The outer radius for chord circle
fillOpacity	The opacity for filling color.
fillStrokeWidth	The stroke width for chord.
padding	The pad of chord
autoFillColor	Whether auto assign color for chord
fillColor	If not, manually assign color for chord
fillStrokeColor	The color for stroke
outerARC	Whether display outer arc
outerARCAutoColor	If true, whether auto assign color for arc
outerARCColor	The manullay assigned color for arc
outerARCStrokeColor	The stroke color for arc
outerARCText	Whether display text for arc or not
data	A matrix-list of chord value with relationship details.
...	Ignored

Examples

```
chordData<-chordExample
Circos(CircosChord('CHORD', data = chordData,innerRadius= 210,outerRadius= 211,fillOpacity=0.67,
strokeColor="black",strokeWidth= "1px",outerARCText=FALSE),genome=list("C.CK" = 189.51,"C.NPK"=188,
"GC.CK"=186.11, "GC.NPK"=191.51,"Alphaproteobacteria"=70.16,"Betaproteobacteria"=23.51,
"Gammaproteobacteria"=25.51, "Deltaproteobacteria"=23.28,"Acidobacteria"=53.62,
"Actinobacteria"=72.33, "Bacteroidetes"=22.41, "Chloroflexi"=15.08,"Firmicutes"=10.72,
"Gemmatimonadetes"=26.37, "Planctomycetes"=19.26,"Thaumarchaeota"=6.15, "Verrucomicrobia"=8.3,
"Ascomycota"=159.41, "Basidiomycota"=79.73,"Zygomycota"=139.29 ),outerRadius = 217,
genomeLabelDisplay = FALSE)
```

CircosChord.p *Create a CHORD module of circosJS to a moduleList*

Description

Display a chord module using a data path. chord.p meaens chord plot based on path.

Usage

```
CircosChord.p(
  modulename,
  radius = 216,
  opacity = 0.67,
  color = "#B8B8B8",
  data,
  ...
)
```

Arguments

modulename	The name of the new module.
radius	The radius for chord circle.
opacity	The opacity for chord.
color	The color for chord
data	A list of chord value with relationship details, details could be found on chord.pExample.
...	Ignored

Examples

```
chord.pData<-chord.pExample
Circos()
```

CircosCnv *Create a CNV module to a moduleList*

Description

A copy number variance module displayed in the visualization

Usage

```
CircosCnv(
  modulename,
  compareGroup = 1,
  maxRadius = 200,
  minRadius = 190,
  width = 10,
  color = "#CAE1FF",
  ValueAxisManualScale = FALSE,
  ValueAxisMaxScale = 10,
  ValueAxisMinScale = 0,
  strokeColor = "black",
  strokeWidth = 1,
  opacity = 1,
  animationDisplay = FALSE,
  animationTime = 2000,
  animationDelay = 50,
  animationType = "bounce",
  data,
  ...
)
```

Arguments

`modulename`	The name of the new module.
`compareGroup`	The group number of this module in compare module
`maxRadius, minRadius`	Where the module should begin and end.
`width`	Width for CNV module
`color`	Color for CNV module
`ValueAxisManualScale`	Whether manually control the scale of value
`ValueAxisMaxScale, ValueAxisMinScale`	The max and min scale value for manually control
`strokeColor, strokeWidth`	The color and width for stroke
`opacity`	The opacity for module
`animationDisplay`	Whether display animation
`animationTime, animationDelay, animationType`	The time, delay and display type for animation
`data`	A list of CNV with details including start, end, value, link, color and html. Details can be found on document.
`...`	Ignored

Examples

```
cnvData<-cnvExample
Circos(CircosCnv('Cnv01',maxRadius =175, minRadius =116, data =cnvData,width=2,color = "#4876FF")+
CircosBackground("bg01",minRadius = 116,maxRadius = 175,fillColors = "#F2F2F2",axisShow = TRUE),
```

```
CNVMouseOverDisplay = TRUE)
```

`CircosGene` *Create a GENE module to a moduleList*

Description

A number of genes with different functional region displayed in the visualization

Usage

```
CircosGene(
  modulename,
  compareGroup = 1,
  outerRadius = 180,
  innerRadius = 150,
  pathColor = "black",
  pathWidth = 1,
  arrow = TRUE,
  arrowGap = 2,
  arrowColor = "blue",
  arrowSize = 5,
  cdsColor = "#1e77b3",
  cdsStrokeColor = "black",
  cdsStrokeWidth = 1,
  utrWidth = -5,
  utrColor = "blue",
  utrStrokeColor = "blue",
  utrStrokeWidth = 1,
  animationDisplay = FALSE,
  animationTime = 2000,
  animationDelay = 20,
  animationType = "bounce",
  data,
  ...
)
```

Arguments

`modulename`	The name of the new module.
`compareGroup`	The group number of this module in compare module
`outerRadius, innerRadius`	Where the module should begin and end.
`pathColor`	The color for path between gene elements
`pathWidth`	The width for path between gene elements
`arrow`	Whether display arrows on path
`arrowGap, arrowColor, arrowSize`	The gap, color and size for arrow

`cdsColor, cdsStrokeColor, cdsStrokeWidth`
: The color, stroke color and stroke width for coding

`utrWidth, utrColor, utrStrokeColor, utrStrokeWidth`
: The max size for bubble

`animationDisplay`
: Whether display animation

`animationTime, animationDelay, animationType`
: The time, delay and display type for animation

`data`
: A list of gene with details including chr, strand, start, end, type, name, link and html. Details can be found on document.

`...`
: Ignored

Examples

```
geneData<-geneExample
Circos(CircosGene('Gene01', outerRadius = 195, innerRadius = 180, data=geneData,arrowGap = 10,
 arrowColor = "black",arrowSize = "12px",cdsColor = "#1e77b3",cdsStrokeColor = "#1e77b3",
 cdsStrokeWidth= 5, utrWidth= -2,utrColor= "#fe7f0e",utrStrokeColor= "#fe7f0e",
 animationDisplay = TRUE),genome =list("EGFR"=1000), outerRadius = 220)
```

CircosHeatmap *Create a HEATMAP module to a moduleList*

Description

A heatmap plot displayed in the visualization

Usage

```
CircosHeatmap(
  modulename,
  compareGroup = 1,
  maxRadius = 180,
  minRadius = 100,
  minColor = "red",
  maxColor = "green",
  ValueAxisManualScale = FALSE,
  ValueAxisMaxScale = 10,
  ValueAxisMinScale = 0,
  totalLayer = 1,
  animationDisplay = FALSE,
  animationDirection = "O2I",
  animationColorDirection = "L2C",
  animationTime = 2000,
  animationDelay = 20,
  animationType = "bounce",
  data,
  ...
)
```

Arguments

modulename	The name of the new module.
compareGroup	The group number of this module in compare module
maxRadius, minRadius	Where the module should begin and end.
minColor	The color for heatmap with min value
maxColor	The color for heatmap with max value
ValueAxisManualScale	Whether manually control the scale of value
ValueAxisMaxScale, ValueAxisMinScale	The max and min scale value for manually control
totalLayer	The color and width for stroke
animationDisplay	Whether display animation
animationDirection	The direction for animation. O2I: from outside to inside, I2O: from inside to outside
animationColorDirection	The color changing in animation. L2C: lowest to customized, H2C: highest to customized, the customized color should be defined in data
animationTime, animationDelay, animationType	The time, delay and display type for animation
data	A list of value in heatmap plot with details including chr, start, end, value, name, layer and html. Details can be found on document.
...	Ignored

Examples

```
heatmapData<-heatmapExample
Circos(CircosHeatmap('Heatmap01', maxRadius= 180, minRadius = 100, data=heatmapData,totalLayer = 3),
genome = list("2L"=23011544,"2R"=21146708,"3L"=24543557,"3R"=27905053,"4"=1351857,"X"=22422827),
HEATMAPMouseEvent = TRUE,HEATMAPMouseOverDisplay = TRUE)
```

CircosHistogram *Create a HISTOGRAM module to a moduleList*

Description

Display a multi-layer histogram in circos

Usage

```
CircosHistogram(
  modulename,
  compareGroup = 1,
  maxRadius = 108,
  minRadius = 95,
```

```
  ValueAxisManualScale = FALSE,
  ValueAxisMaxScale = 10,
  ValueAxisMinScale = 0,
  fillColor = "red",
  animationDisplay = FALSE,
  animationTime = 2000,
  animationDelay = 20,
  data,
  ...
)
```

Arguments

`modulename`	The name of the new module.
`compareGroup`	The group number of this module in compare module
`maxRadius, minRadius`	Where the module should begin and end
`ValueAxisManualScale`	Whether manually control the scale of value
`ValueAxisMaxScale, ValueAxisMinScale`	The max and min scale value for manually control
`fillColor`	The color for histgram.
`animationDisplay`	Whether display animation
`animationTime, animationDelay`	The time and delay for animation
`data`	A list of value with details including chr, start, end, name, link, value and html. Details can be found on document.
`...`	Ignored

Examples

```
histogramData<-histogramExample
Circos(CircosHistogram('HISTOGRAM01', data = histogramData,fillColor= "#ff7f0e",maxRadius = 210,
minRadius = 175),genome=list("2L"=23011544,"2R"=21146708,"3L"=24543557,"3R"= 27905053,
"X"=22422827,"4"=1351857),
outerRadius = 220)
```

`CircosLegend` *Create a LEGEND module to a moduleList*

Description

Simple legend annotation displayed in the visualization.

Usage

```
CircosLegend(
  modulename,
  x = 20,
  y = 20,
  title = "legend",
  size = 6,
  weight = "normal",
  GapBetweenGraphicText = 5,
  GapBetweenLines = 20,
  data,
  ...
)
```

Arguments

modulename	The name of the new module.
x, y	Coordinates of the lower left corner of the annotation
title	The title for legend
size	Font size for title, with units specified (such as em or px).
weight	Font weight for title. Can be "normal", "bold", "bolder" or "lighter".
GapBetweenGraphicText	Gap between icon and text in legend.
GapBetweenLines	Gap between each two lines in legend
data	A list of legend with details including type, color, opacity, circleSize, rectSize, lineWidth, lineHeight, text, textSize and textWeight. Details can be found on document.
...	Ignored

Examples

```
legend1 <- list(type= "circle", color="#1E77B4",opacity="1.0",circleSize="8",text= "C.CK",
textSize= "14",textWeight="normal")
legend2 <- list(type= "circle", color="#AEC7E8",opacity="1.0",circleSize="8",text= "C.NPK",
textSize= "14",textWeight="normal")
Circos(CircosLegend('legend01', title = "legend",data=list(legend1,legend2),size = 20))
```

CircosLine *Create a LINE module to a moduleList*

Description

Display a multi-layer line plot in circos

Usage

```
CircosLine(
  modulename,
  compareGroup = 1,
  maxRadius = 108,
  minRadius = 95,
  ValueAxisManualScale = FALSE,
  ValueAxisMaxScale = 10,
  ValueAxisMinScale = 0,
  color = "red",
  width = 2,
  type = "cardinal",
  animationDisplay = FALSE,
  animationDirection = "S2E",
  animationTime = 2000,
  animationDelay = 20,
  animationType = "bounce",
  data,
  ...
)
```

Arguments

`modulename`	The name of the new module.
`compareGroup`	The group number of this module in compare module
`maxRadius, minRadius`	Where the module should begin and end
`ValueAxisManualScale`	Whether manually control the scale of value
`ValueAxisMaxScale, ValueAxisMinScale`	The max and min scale value for manually control
`color`	Color for line
`width`	Width for line
`type`	Type for line, could be linear, cardinal, basis and monotone
`animationDisplay`	Whether display animation
`animationDirection`	The direction of animation, could be S2E(start to end) or E2S(end to start)
`animationTime, animationDelay, animationType`	The time, delay and display type for animation
`data`	A list of value with details including chr, pos, des, value and html. Details can be found on document.
`...`	Ignored

Examples

```
lineData<-lineExample
Circos(CircosLine('LINE01', data = lineData,maxRadius=200,minRadius=150,color= "#ff0031")+
CircosBackground('BG01',minRadius = 205,maxRadius = 150))
```

CircosLink *Create a LINK module to a moduleList*

Description

Link two specific region in genome.

Usage

```
CircosLink(
  modulename,
  compareGroup = 1,
  radius = 108,
  fillColor = "red",
  width = 3,
  type = "Q",
  displayLinkAxis = TRUE,
  axisColor = "#B8B8B8",
  axisWidth = 0.5,
  axisPad = 3,
  displayLinkLabel = TRUE,
  labelColor = "red",
  labelSize = 13,
  labelPad = 8,
  animationDisplay = FALSE,
  animationDirection = "1to2",
  animationTime = 2000,
  animationDelay = 20,
  animationType = "bounce",
  data,
  ...
)
```

Arguments

modulename	The name of the new module.
compareGroup	The group number of thic module in compare module
radius	Radius of link circle.
fillColor	Color for link.
width	Width for link.
type	Type of link, could be Q/S/T
displayLinkAxis	Whether display axis for link or not
axisColor	The color for axis
axisWidth	The width for axis
axisPad	The pad for axis
displayLinkLabel	Whether display label for link or not

labelColor	The color for label
labelSize	The size for label
labelPad	The pad for label
animationDisplay	Whether display animation
animationDirection	The direction of link animation, could be 1to2 or 2to1
animationTime, animationDelay, animationType	The time, delay and display type for animation
data	A list of link with details including g1chr, g1start, g1end, g2chr, g2start, g2end, g1name, g2name, fusion, link and html. Details can be found on document.
...	Ignored

Examples

```
linkData<-linkExample
Circos(CircosLink('LINK', data = linkData,LinkRadius= 140,fillColor= "#9e9ac6",width= 2,
axisPad= 3,labelPad=8,animationDisplay=TRUE,animationDirection="1to2", animationType= "linear" ))
```

CircosLollipop *Create a LOLLIPOP module to a moduleList*

Description

Display a lollipop plot in the visualization

Usage

```
CircosLollipop(
  modulename,
  compareGroup = 1,
  fillColor = "#9400D3",
  secondColor = "#FFFFFF",
  pointType = "circle",
  circleSize = 2,
  diamondWidth = 10,
  diamondHeight = 5,
  rectWidth = 2,
  rectHeight = 2,
  stroke = TRUE,
  strokeColor = "#000000",
  strokeWidth = 0.5,
  lineAutoHeight = TRUE,
  lineAutoMaximumHeightZoomRate = 1,
  lineHeightRate = 0.75,
  lineWidth = 2,
  lineColor = "#000000",
  realStart = 0,
  ValueAxisManualScale = FALSE,
```

```
  ValueAxisMaxScale = 10,
  ValueAxisMinScale = 0,
  animationDisplay = FALSE,
  animationTime = 2000,
  animationDelay = 20,
  animationType = "bounce",
  data,
  ...
)
```

Arguments

modulename	The name of the new module.
compareGroup	The group number of this module in compare module
fillColor	Filling color for lollipop
secondColor	Second filling color for heterogeneous lollipop
pointType	The type for lollipop, could be circle, rect and diamond
circleSize	If circle, the size for lollipop
diamondWidth, diamondHeight	If diamond, the width and height for lollipop
rectWidth, rectHeight	If rect, the width and height for lollipop
stroke	Whether display the stroke for lollipop
strokeColor, strokeWidth	The color and width for stroke
lineAutoHeight	Whether auto assign the height for each lollipop
lineAutoMaximumHeightZoomRate	If auto assign, the zoom rate for each lollipop
lineHeightRate	If manually assign, the rate of lollipop compared to real value
lineWidth, lineColor	The width and color for the line of lollipop
realStart	The real start position for data in genome.
ValueAxisManualScale	Whether manually control the scale of value
ValueAxisMaxScale, ValueAxisMinScale	The max and min scale value for manually control
animationDisplay	Whether display animation
animationTime, animationDelay, animationType	The time, delay and display type for animation
data	A list of lollipop value with details including protein, chr, pos, strand, CancerTypeNumber, color, link, Consequence, AA_pos, AA_change, type, link and html. Details can be found on document.
...	Ignored

Examples

```
lollipopData<-lollipopExample
arcData<-arcExample
Circos(CircosLollipop('Lollipop01', data=lollipopData, fillColor="#9400D3",
circleSize= 6, strokeColor= "#999999", strokeWidth= "1px", animationDisplay=TRUE, lineWidth= 2,
realStart= 101219350)+CircosArc('Arc01', outerRadius = 212, innerRadius = 224, data=arcData),
 genome=list("EGFR"=1211),outerRadius = 220,genomeFillColor = c("grey"))
```

CircosModuleList *Create a list of modules*

Description

This allows the use of the '+' and '-' operator on these lists

Usage

```
CircosModuleList()

## S3 method for class 'CircosModuleList'
x + ...

## S3 method for class 'CircosModuleList'
x - ...
```

Arguments

x	The moduleList on which other modules should be added or removed.
...	The modules to add (as moduleLists) or to remove (as module names).

CircosScatter *Create a SCATTER module to a moduleList*

Description

Display a point plot in circos

Usage

```
CircosScatter(
  modulename,
  compareGroup = 1,
  radius = 140,
  innerCircleSize = 1,
  outerCircleSize = 5,
  innerCircleColor = "#F26223",
  outerCircleColor = "#F26223",
  innerPointType = "circle",
```

```
  outerPointType = "circle",
  innerrectWidth = 2,
  innerrectHeight = 2,
  outerrectWidth = 2,
  outerrectHeight = 2,
  outerCircleOpacity = 1,
  random_data = 0,
  animationDisplay = FALSE,
  animationInitialPositionX = 0,
  animationInitialPositionY = 0,
  animationTime = 2000,
  animationDelay = 20,
  animationType = "bounce",
  data,
  ...
)
```

Arguments

`modulename`	The name of the new module.
`compareGroup`	The group number of this module in compare module
`radius`	Radius of scatter circle
`innerCircleSize, outerCircleSize`	If circle, inner and outer circle size
`innerCircleColor, outerCircleColor`	If circle, inner and outer circle color
`innerPointType, outerPointType`	The type for inner and outer point, could be circle or rect
`innerrectWidth, innerrectHeight`	If rect, inner width and height
`outerrectWidth, outerrectHeight`	If rect, inner width and height
`outerCircleOpacity`	If circle, the opacity for outer circle
`random_data`	Scatter position fluctuation
`animationDisplay`	Whether display animation
`animationInitialPositionX, animationInitialPositionY`	The initial coordinates for animation
`animationTime, animationDelay, animationType`	The time, delay and display type for animation
`data`	A list of value with details including chr, start, end, name, des, link and html. Details can be found on document.
`...`	Ignored

Examples

```
scatterData<-scatterExample
Circos(CircosScatter('SCATTER01', data = scatterData,radius=180,innerCircleColor= "#3d6390",
outerCircleColor= "#99cafe",random_data= 40))
```

CircosSnp *Create a module with SNPs to be added to a moduleList*

Description

SNPs are defined by genomic coordinates and associated with a numerical value

Usage

```
CircosSnp(
  modulename,
  compareGroup = 1,
  minRadius = 153,
  maxRadius = 205,
  fillColorType = "specific",
  fillColor = "#9400D3",
  fillr2Color = c("13#ff0031", "#ff0031", "#ff0031", "#ff0031", "#ff0031"),
  ValueAxisManualScale = FALSE,
  ValueAxisMaxScale = 10,
  ValueAxisMinScale = 0,
  pointType = "circle",
  circleSize = 2,
  rectWidth = 2,
  rectHeight = 2,
  animationDisplay = FALSE,
  animationInitialPositionX = 0,
  animationInitialPositionY = 0,
  animationTime = 2000,
  animationDelay = 20,
  animationType = "bounce",
  data,
  ...
)
```

Arguments

modulename	The name of the new module.
compareGroup	The group number of this module in compare module
maxRadius, minRadius	Where the module should begin and end
fillColorType	The type of filling color, could be either specific or r2(means based on r2)
fillColor	If specific, the color for SNP filling
fillr2Color	If r2, the color for SNP filling
ValueAxisManualScale	Whether manually control the scale of value
ValueAxisMaxScale, ValueAxisMinScale	The max and min scale value for manually control
pointType	The type of SNP point, could be circle or rect
circleSize	If circle, the size for SNP circle

rectWidth	If rect, the width for SNP rect
rectHeight	If rect, the height for SNP rect
animationDisplay	Whether display animation
animationInitialPositionX, animationInitialPositionY	The initial position coordinates for animation
animationTime, animationDelay, animationType	The time, delay and display type for animation
data	A list of SNP value with details including chr, pos, value, des, color, r2value, link, index, image and html. Details can be found on document.
...	Ignored

Examples

```
snpData<-snpExample
Circos(CircosSnp('SNP01', minRadius =150, maxRadius = 190, data = snpExample,fillColor= "#9ACD32",
   circleSize= 2, SNPAnimationDisplay=TRUE,SNPAnimationTime= 2000,SNPAnimationDelay= 0,
   SNPAnimationType= "linear") + CircosBackground('BG01',minRadius = 145, maxRadius = 200))
```

CircosText *Create Text module to be added to a moduleList*

Description

Simple text annotation displayed in the visualization

Usage

```
CircosText(
  modulename,
  text,
  x = 0,
  y = 0,
  size = "1.2em",
  weight = "bold",
  opacity = 1,
  color = "#000000",
  rotateRate = 0,
  animationDisplay = FALSE,
  animationInitialSize = 20,
  animationInitialWeight = "bold",
  animationInitialColor = "black",
  animationInitialOpacity = 1,
  animationInitialPositionX = 0,
  animationInitialPositionY = 0,
  animationInitialRotate = 0,
  animationDelay = 50,
  animationTime = 1000,
  animationType = "linear",
  ...
)
```

Arguments

modulename	The name of the new module.
text	The text to be displayed.
x, y	Coordinates of the lower left corner of the annotation
size	Font size, with units specified (such as em or px).
weight	Font weight. Can be "normal", "bold", "bolder" or "lighter".
opacity	Font opacity.
color	Font color, in hexadecimal RGB format.
rotateRate	ratate rate for text
animationDisplay	Whether display a animation or not
animationInitialSize	Initial text size in animation
animationInitialWeight	Initial text weight in animation
animationInitialColor	Initial text color in animation
animationInitialOpacity	Initial text opacity in animation
animationInitialPositionX, animationInitialPositionY	Initial text coordinates in animation(The parameter x,y will become the final position for text if animation displayed)
animationInitialRotate	Initial rotate rate in animation
animationTime, animationDelay, animationType	The time, delay and display type for animation
...	Ignored

Examples

```
Circos(CircosText('text01', 'Annotation', color = '#DD2222', x = -40))
```

CircosWig *Create a WIG module to a moduleList*

Description

Display a multi-layer line plot in circos

Usage

```
CircosWig(
  modulename,
  compareGroup = 1,
  maxRadius = 108,
  minRadius = 95,
  direction = "out",
  ValueAxisManualScale = FALSE,
  ValueAxisMaxScale = 10,
  ValueAxisMinScale = 0,
  color = "red",
  opacity = 1,
  strokeColor = "black",
  strokeWidth = 1,
  strokeType = "cardinal",
  animationDisplay = FALSE,
  animationTime = 2000,
  animationDelay = 20,
  animationType = "bounce",
  data,
  ...
)
```

Arguments

`modulename`	The name of the new module.
`compareGroup`	The group number of this module in compare module
`maxRadius, minRadius`	Where the module should begin and end
`direction`	The direction of plot, either inside or outside
`ValueAxisManualScale`	Whether manually control the scale of value
`ValueAxisMaxScale, ValueAxisMinScale`	The max and min scale value for manually control
`color`	Color for plot
`opacity`	Opacity for plot
`strokeColor`	The color for stroke
`strokeWidth`	The width for stroke
`strokeType`	Line type for stroke, could be linear, cardinal, basis and monotone
`animationDisplay`	Whether display animation
`animationTime, animationDelay, animationType`	The time, delay and display type for animation
`data`	A list of value with details including chr, pos, des, value and html. Details can be found on document.
`...`	Ignored

Examples

```
wigData<-wigExample
Circos(CircosWig('WIG01', data = wigData, maxRadius= 200,minRadius= 150,strokeColor= "darkblue",
color= "lightblue",strokeType= "cardinal")+CircosBackground('BG01',minRadius = 205,maxRadius = 150)
,genome=list("chr8"=1000),outerRadius = 220)
```

---

cnvExample *Cnv module example data*

Description

The data is in matrix with column names

Usage

```
cnvExample
```

Format

A data frame with 7 columns:

chr chromosome

start start position

end end position

value value

link hyperlink for cnv

color color

html The external html language

---

geneExample *Gene plot example data*

Description

The data is in matrix with column names

Usage

```
geneExample
```

Format

A data frame with 8 columns:

chr chromosome

strand strand, - or +

start start position

end end position

type region type, gene or utr or cds

name name for description

link hyperlink for this region

html The external html language

`heatmapExample` *Heatmap plot example data*

Description

The data is in matrix with column names

Usage

```
heatmapExample
```

Format

A data frame with 7 columns:

chr chromosome

start start position

end end position

name name for description

value value

layer layer number

html The external html language

histogramExample *Histogram plot example data*

Description

The data is in matrix with column names

Usage

```
histogramExample
```

Format

A data frame with 7 columns:

chr chromosome

start start position

end end position

name name for description

link hyperlink

value value

html The external html language

lineExample *Line plot example data*

Description

The data is in matrix with column names

Usage

```
lineExample
```

Format

A data frame with 5 columns:

chr chromosome

pos position

des description

value value

html The external html language

linkExample *Link plot example data*

Description

The data is in matrix with column names

Usage

```
linkExample
```

Format

A data frame with 11 columns:

g1chr first chromosome

g1start first start position

g1end first end position

g2chr second chromosome

g2start second start position

g2end second end position

g1name first name

g2name second name

fusion fusion name

link hyperlink for link line

html The external html language

lollipopExample *Lollipop plot example data*

Description

The data is in matrix with column names

Usage

```
lollipopExample
```

Format

A data frame with 12 columns:

protein protein name

chr chromosome

pos position

strand strand, - or +

CancerTypeNumber Cancer type number

color color

link hyperlink

Consequence consequence

AA_pos AA_pos

AA_change AA_change

type type for mutation,Hetero or Homo

html The external html language

---

scatterExample *Scatter plot example data*

Description

The data is in matrix with column names

Usage

```
scatterExample
```

Format

A data frame with 7 columns:

chr chromosome

start start position

end end position

name name for scatter

des description

link hyperlink

html The external html language

snpExample *Snp plot example data*

Description

The data is in matrix with column names

Usage

```
snpExample
```

Format

A data frame with 10 columns:

chr chromosome

pos position

value value,such as p-value

des description

color color

r2value r2 value

link hyperlink for snp

index index for combination

image image for combination

html The external html language

wigExample *Wig plot example data*

Description

The data is in matrix with column names

Usage

```
wigExample
```

Format

A data frame with 5 columns:

chr chromosome

pos position

des description

value value

html The external html language

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