Package 'interacCircos'

February 9, 2021

Type Package

Title The Visualization of Interactive Circos Plot

Description Implement in an efficient approach to display the genomic data, relationship, informa-
tion in an interactive circular genome(Circos) plot. 'interacCircos' are inspired by 'circosJS', 'Bio-
Circos.js' and 'NG-Circos' and we integrate the modules of 'circosJS', 'BioCircos.js' and 'NG-
Circos' into this R package, based on 'htmlwidgets' framework.

Version 0.99.1

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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:

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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

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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. The order and number is same as column, representing the same items

Usage

```
chordExample
```

Format

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

C.CK Genome 1, the name for each arc

C.NPK Genome 2, the name for each arc

GC.CK Genome 2, the name for each arc

GC.NPK Genome 2, the name for each arc

Alphaproteobacteria Genome 2, the name for each arc

Betaproteobacteria Genome 2, the name for each arc

Gammaproteobacteria Genome 2, the name for each arc

Deltaproteobacteria Genome 8, the name for each arc

Acidobacteria Genome 9, the name for each arc

Actinobacteria Genome 10, the name for each arc

Bacteroidetes Genome 11, the name for each arc

Chloroflexi Genome 12, the name for each arc

Firmicutes Genome 13, the name for each arc

Gemmatimonadetes Genome 14, the name for each arc

Planctomycetes Genome 15, the name for each arc

Thaumarchaeota Genome 16, the name for each arc

Verrucomicrobia Genome 17, the name for each arc

Ascomycota Genome 18, the name for each arc

Basidiomycota Genome 19, the name for each arc

Zygomycota Genome 20, the name for each arc

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,
  innerRadius = 216,
  outerRadius = 240,
  svgClassName = "interacCircos",
  displayGenomeBorder = TRUE,
  genomeBorderColor = "#000",
  genomeBorderSize = 0.5,
  genomeTicksDisplay = FALSE,
  genomeTicksLen = 5,
  genomeTicksColor = "#000",
  genomeTicksTextSize = "0.6em",
  genomeTicksRealLength = TRUE,
  genomeTicksTextColor = "#000",
  genomeTicksScale = 3e+07,
  genomeTicksOffset = 0,
  genomeLabelDisplay = TRUE,
  genomeLabelTextSize = "10pt",
  genomeLabelTextColor = "#000",
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  genomeLabelDy = 0,
  compareEvent = FALSE,
  compareEventGroupGapRate = 0.1,
  compareEventGroupDistance = 0,
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  TEXTModuleDragEvent = FALSE,
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  CNVMouseEvent = TRUE,
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SCATTERMouseDownCircleOpacity = 1,
SCATTERMouseDownCircleStrokeColor = "none",
SCATTERMouseDownCircleStrokeWidth = "none",
SCATTERMouseEnterDisplay = FALSE,
SCATTERMouseEnterColor = "red",
SCATTERMouseEnterCircleSize = 2,
SCATTERMouseEnterCircleOpacity = 1,
SCATTERMouseEnterCircleStrokeColor = "none",
SCATTERMouseEnterCircleStrokeWidth = "none",
```

```
SCATTERMouseLeaveDisplay = FALSE,
SCATTERMouseLeaveColor = "red",
SCATTERMouseLeaveCircleSize = 2,
SCATTERMouseLeaveCircleOpacity = 1,
SCATTERMouseLeaveCircleStrokeColor = "none",
SCATTERMouseLeaveCircleStrokeWidth = "none",
SCATTERMouseMoveDisplay = FALSE,
SCATTERMouseMoveColor = "red",
SCATTERMouseMoveCircleSize = 2,
SCATTERMouseMoveCircleOpacity = 1,
SCATTERMouseMoveCircleStrokeColor = "none",
SCATTERMouseMoveCircleStrokeWidth = "none",
SCATTERMouseOutDisplay = FALSE,
SCATTERMouseOutAnimationTime = 500,
SCATTERMouseOutColor = "red",
SCATTERMouseOutCircleSize = 2,
SCATTERMouseOutCircleOpacity = 1,
SCATTERMouseOutCircleStrokeColor = "none",
SCATTERMouseOutCircleStrokeWidth = "none",
SCATTERMouseUpDisplay = FALSE,
SCATTERMouseUpColor = "red",
SCATTERMouseUpCircleSize = 2,
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 any-
                    more.
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 any-
                    more.
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, Cancer-TypeNumber, 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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