

Package ‘interacCircos’

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Type Package

Title The Visualization of Interactive Circos Plot

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

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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

NeedsCompilation no

Repository CRAN

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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

 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

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",
genomeLabelDx = 0,
genomeLabelDy = 0,
compareEvent = FALSE,
compareEventGroupGapRate = 0.1,
compareEventGroupDistance = 0,
zoom = TRUE,
TEXTModuleDragEvent = FALSE,
CNVxlink = FALSE,
CNVMouseEvent = TRUE,
CNVMouseClickedDisplay = FALSE,
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CNVMouseClickedArcStrokeWidth = 0,
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CNVMouseClickedTextSize = 8,
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CNVMouseEnterColor = "yellow",
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CNVMouseEnterArcStrokeWidth = 0,
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CNVMouseLeaveArcStrokeWidth = 0,
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HEATMAPMouseLeaveStrokeWidth = "none",
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HEATMAPMouseOutOpacity = 1,
HEATMAPMouseOutStrokeColor = "none",
HEATMAPMouseOutStrokeWidth = "none",
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HEATMAPMouseOverTooltipsBorderWidth = 0,
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BUBBLEMouseClickedStrokeWidth = "none",
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BUBBLEMouseDownOpacity = 1,
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BUBBLEMouseEnterOpacity = 1,
BUBBLEMouseEnterStrokeColor = "none",
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BUBBLEMouseUpStrokeColor = "none",
BUBBLEMouseUpStrokeWidth = "none",
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BUBBLEMouseOverStrokeWidth = "none",
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BUBBLEMouseOverTooltipsPosition = "absolute",
BUBBLEMouseOverTooltipsBackgroundColor = "white",
BUBBLEMouseOverTooltipsBorderStyle = "solid",
BUBBLEMouseOverTooltipsBorderWidth = 0,
BUBBLEMouseOverTooltipsPadding = "3px",
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BUBBLEMouseOverTooltipsOpacity = 0.8,
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SNPMouseEventCombinationImageTitleSize = 5,
SNPMouseEventCombinationImageTitleWeight = "bold",
SNPMouseEventCombinationImageTitleColor = "black",
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SNPMouseEventCombinationGraphTitle = "This is graph",
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```
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SNPMouseCombinationGraphHistogramPadding = 30,  
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SNPMouseClickTextOpacity = 1,  
SNPMouseClickTextColor = "red",  
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SNPMouseClickTextPostionY = 10,
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```
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SNPMouseDownCircleOpacity = 1,  
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SNPMouseDownCircleStrokeWidth = 0,  
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SNPMouseEnterColor = "yellow",  
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WIGMouseOverTooltipsPosition = "absolute",
WIGMouseOverTooltipsBackgroundColor = "white",
WIGMouseOverTooltipsBorderStyle = "solid",
WIGMouseOverTooltipsBorderWidth = 0,
WIGMouseOverTooltipsPadding = "3px",
WIGMouseOverTooltipsBorderRadius = "3px",
WIGMouseOverTooltipsOpacity = 1,
SCATTERxlink = FALSE,
SCATTERMouseEvent = TRUE,
SCATTERMouseClickDisplay = FALSE,
SCATTERMouseClickColor = "red",
SCATTERMouseClickCircleSize = 2,
SCATTERMouseClickCircleOpacity = 1,
SCATTERMouseClickCircleStrokeColor = "none",
SCATTERMouseClickCircleStrokeWidth = "none",
SCATTERMouseClickTextFromData = "fourth",
```



```
SCATTERMouseClickTextOpacity = 1,  
SCATTERMouseClickTextColor = "red",  
SCATTERMouseClickTextSize = 8,  
SCATTERMouseClickTextPostionX = 1,  
SCATTERMouseClickTextPostionY = 10,  
SCATTERMouseClickTextDrag = TRUE,  
SCATTERMouseDownDisplay = FALSE,  
SCATTERMouseDownColor = "red",  
SCATTERMouseDownCircleSize = 2,  
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,
ARCMouseClickedDisplay = FALSE,
ARCMouseClickedColor = "red",
ARCMouseClickedArcOpacity = 1,
ARCMouseClickedArcStrokeColor = "none",
ARCMouseClickedArcStrokeWidth = "none",
ARCMouseClickedTextFromData = "fourth",
ARCMouseClickedTextOpacity = 1,
ARCMouseClickedTextColor = "red",
ARCMouseClickedTextSize = 8,
ARCMouseClickedTextPostionX = 1,
ARCMouseClickedTextPostionY = 10,
ARCMouseClickedTextDrag = 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,
LOLLIPOPMouseClickedDisplay = FALSE,
LOLLIPOPMouseClickedColor = "red",
LOLLIPOPMouseClickedCircleSize = 2,
LOLLIPOPMouseClickedCircleOpacity = 1,
LOLLIPOPMouseClickedCircleStrokeColor = "none",
LOLLIPOPMouseClickedCircleStrokeWidth = "none",
LOLLIPOPMouseClickedTextFromData = "fourth",
LOLLIPOPMouseClickedTextOpacity = 1,
LOLLIPOPMouseClickedTextColor = "red",
LOLLIPOPMouseClickedTextSize = 8,
LOLLIPOPMouseClickedTextPostionX = 1,
LOLLIPOPMouseClickedTextPostionY = 10,
LOLLIPOPMouseClickedTextDrag = 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

<code>moduleList</code>	Module list displayed in plot.
<code>genome</code>	Could be either 'hg19', which is defaultly set to use chromosomes of hg19, or a list of chromosomes with length, for example, <code>list("chr1"=100,"chr2"=200)</code> .
<code>genome2</code>	Second genome when compare module is applied, format is same as <code>genome</code>
<code>genomeFillColor</code>	Could be either a color palette from <code>RColorBrewer</code> , or a list of color name, for example, <code>list("yellow","rgb(1,255,255)")</code>
<code>chrPad</code>	Distance between each chromosome, default is 0.04
<code>width, height</code>	The width and height for svg element, could be px or percent or auto.
<code>innerRadius</code>	Default 216, Inner radius of chromosome
<code>outerRadius</code>	Default 240, Outer radius of chromosome
<code>svgClassName</code>	The svg class name
<code>displayGenomeBorder, genomeBorderColor, genomeBorderSize</code>	Should the reference genome have borders?
<code>genomeTicksDisplay, genomeTicksLen, genomeTicksColor, genomeTicksTextSize, genomeTicksTextColor, genomeTicksTextColor</code>	Whether display the ticks for chromosome panel. Other parameters only works when <code>genomeTicksDisplay</code> is TRUE and their details are available on document.
<code>genomeLabelDisplay, genomeLabelTextSize, genomeLabelTextColor, genomeLabelDx, genomeLabelDy</code>	Whether display the label for chromosome panel. Other parameters only works when <code>genomeTicksDisplay</code> is TRUE and their details are available on document.
<code>compareEvent</code>	Default False, open/not COMPARE module
<code>compareEventGroupGapRate</code>	Default 0.1, control the two-side gap rate on each group of genome
<code>compareEventGroupDistance</code>	Default 0, distance between two groups of genome
<code>zoom</code>	Whether or not the plot is zoomable?
<code>TEXTModuleDragEvent</code>	Are text annotations draggable?
<code>CNVxlink</code>	Default False, add/not xlink for CNV module
<code>CNVMouseEvent</code>	Default True, open/not open mouse event of CNV module
<code>CNVMouseClickedDisplay</code>	Default False, show/not the tooltip when mouse click on a CNV point.
<code>CNVMouseClickedColor</code>	Color when mouse clicking

CNVMouseClickedArcOpacity
Arc opacity when mouse clicking the element

CNVMouseClickedArcStrokeColor
Arc stroke color when mouse clicking the element

CNVMouseClickedArcStrokeWidth
Arc stroke width when mouse clicking the element

CNVMouseClickedTextFromData
Text column when mouse clicking the element

CNVMouseClickedTextOpacity
Text opacity when mouse clicking the element

CNVMouseClickedTextColor
Text color when mouse clicking the element

CNVMouseClickedTextSize
Text size when mouse clicking the element

CNVMouseClickedTextPostionX, CNVMouseClickedTextPostionY
Text coordinates when mouse clicking the element

CNVMouseClickedTextDrag
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
Default 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

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

HEATMAPMouseClickedColor
Color when mouse clicking

HEATMAPMouseClickedOpacity
Opacity when mouse clicking

HEATMAPMouseClickedStrokeColor
Stroke color when mouse clicking

HEATMAPMouseClickedStrokeWidth
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

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

BUBBLEMouseClickedColor
Color when mouse clicking

BUBBLEMouseClickedOpacity
Opacity when mouse clicking

BUBBLEMouseClickedStrokeColor
Stroke color when mouse clicking

BUBBLEMouseClickedStrokeWidth
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	Default False, open/not image display in COMBINATION module for SNP module
SNPMouseCombinationImageTitle	Title of the image
SNPMouseCombinationImageTitleSize, SNPMouseCombinationImageTitleWeight, SNPMouseCombinationImageTitleColor	Size, weight and color of the title
SNPMouseCombinationImagePositionX, SNPMouseCombinationImagePositionY	Coordinates for image
SNPMouseCombinationImageHeight, SNPMouseCombinationImageWidth	Height and width of image
SNPMouseCombinationGraphDisplay	Default False, open/not graph display in COMBINATION module for SNP module
SNPMouseCombinationGraphTitle	Title of the graph
SNPMouseCombinationGraphTitleSize, SNPMouseCombinationGraphTitleWeight, SNPMouseCombinationGraphTitleColor	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, SNPMouseCombinationGraphLineWidth
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
Default 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	Default False, hide/not tooltip when mouse is not hovering a SNP point anymore.
SNPMouseOutAnimationTime	Animation time when mouse moving over the element
SNPMouseOutColor	Color when mouse moving over the element
SNPMouseOutCircleSize	Circle size when mouse moving over the element
SNPMouseOutCircleOpacity	Opacity when mouse moving over the element
SNPMouseOutCircleStrokeColor	Stroke color when mouse moving over the element
SNPMouseOutCircleStrokeWidth	Stroke width when mouse moving over the element
SNPMouseUpDisplay	Default False, show/not the tooltip when mouse click up a SNP point.
SNPMouseUpColor	Color after mouse moving up the element
SNPMouseUpCircleSize	Circle size after mouse moving up the element
SNPMouseUpCircleOpacity	Circle opacity after mouse moving up the element
SNPMouseUpCircleStrokeColor	Circle stroke color after mouse moving up the element
SNPMouseUpCircleStrokeWidth	Circle stroke width after mouse moving up the element
SNPMouseOverDisplay	Default False, show/not the tooltip when mouse hover on a SNP point.
SNPMouseOverColor	Color after mouse moving over the element
SNPMouseOverCircleSize	Circle size after mouse moving over the element
SNPMouseOverCircleOpacity	Circle opacity after mouse moving over the element

SNPMouseOverCircleStrokeColor	Circle stroke color after mouse moving over the element
SNPMouseOverCircleStrokeWidth	Circle stroke width after mouse moving over the element
SNPMouseOverTooltipsSetting	Default "chr : "
SNPMouseOverTooltipsHtml	Default " "
SNPMouseOverTooltipsPosition	Position for tooltips when mouse moving over
SNPMouseOverTooltipsBackgroundColor	Background color for tooltips when mouse moving over
SNPMouseOverTooltipsBorderStyle	Border style for tooltips when mouse moving over
SNPMouseOverTooltipsBorderWidth	Border width for tooltips when mouse moving over
SNPMouseOverTooltipsPadding	Padding for tooltips when mouse moving over
SNPMouseOverTooltipsBorderRadius	Border radius for tooltips when mouse moving over
SNPMouseOverTooltipsOpacity	Opacity for tooltips when mouse moving over
LINKxlink	Default False, add/not xlink for LINK module
LINKMouseEvent	Default True, open/not open mouse event of LINK module
LINKMouseClickedDisplay	Default False, show/not the tooltip when mouse click on a LINK point.
LINKMouseClickedOpacity	Opacity when mouse clicking
LINKMouseClickedStrokeColor	Stroke color when mouse clicking
LINKMouseClickedStrokeWidth	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
Default 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

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

CHORDMouseClickedOpacity
Opacity when mouse clicking

CHORDMouseClickedStrokeColor
Stroke color when mouse clicking

CHORDMouseClickedStrokeWidth
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

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

HISTOGRAMMouseClickedColor
Color when mouse clicking

HISTOGRAMMouseClickedOpacity
Opacity when mouse clicking

HISTOGRAMMouseClickedStrokeColor
Stroke color when mouse clicking

HISTOGRAMMouseClickedStrokeWidth
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
Default 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

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

LINEMouseClickedLineOpacity
Line opacity when mouse clicking the element

LINEMouseClickedLineStrokeColor
Stroke color when mouse clicking the element

LINEMouseClickedLineStrokeWidth
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 any-more.
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

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

WIGMouseClickedLineOpacity
Line opacity when mouse clicking the element

WIGMouseClickedLineStyleColor
Stroke color when mouse clicking the element

WIGMouseClickedLineStyleWidth
Stroke width when mouse clicking the element

WIGMouseClickedFillColor
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

WIGMouseDownLineStyleColor
Stroke color when mouse moving down the element

WIGMouseDownLineStyleWidth
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

WIGMouseEnterLineStyleColor
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

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

SCATTERMouseClickedColor
Color when mouse clicking the element

SCATTERMouseClickedCircleSize
Circle size when mouse clicking the element

SCATTERMouseClickedCircleOpacity
Circle opacity when mouse clicking the element

SCATTERMouseClickedCircleStrokeColor
Circle stroke color when mouse clicking the element

SCATTERMouseClickedCircleStrokeWidth
Circle stroke width when mouse clicking the element

SCATTERMouseClickedTextFromData
Text column when mouse clicking the element

SCATTERMouseClickedTextOpacity
Text opacity when mouse clicking the element

SCATTERMouseClickedTextColor
Text color when mouse clicking the element

SCATTERMouseClickedTextSize
Text size when mouse clicking the element

SCATTERMouseClickedTextPostionX, SCATTERMouseClickedTextPostionY
Text coordinates when mouse clicking the element

SCATTERMouseClickedTextDrag
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
Default 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
ARCMouseClickedDisplay	Default False, show/not the tooltip when mouse click on a ARC point.
ARCMouseClickedColor	Color when mouse clicking the element
ARCMouseClickedArcOpacity	Arc opacity when mouse clicking the element
ARCMouseClickedArcStrokeColor	Arc stroke color when mouse clicking the element
ARCMouseClickedArcStrokeWidth	Arc stroke width when mouse clicking the element
ARCMouseClickedTextFromData	Text column when mouse clicking the element
ARCMouseClickedTextOpacity	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
Default False, hide/not tooltip when mouse is not hovering a ARC point any-
more.

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

GENMouseEvent 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 any-
more.

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

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

LOLLIPOPMouseClickedColor
Color when mouse clicking

LOLLIPOPMouseClickedCircleSize
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
Default 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

Value

The main figure for interacCircos with all tracks.

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

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

Value

The output and render functions for shiny

 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

Value

The module tracks for arc modules.

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

```

Value

The module tracks for auxiliary line modules.

Examples

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

CircosBackground	<i>Create a BACKGROUND module to be added to a moduleList</i>
------------------	---

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

Value

The module tracks for background modules.

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

Value

The module tracks for bubble modules.

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 manually 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

Value

The module tracks for chord modules of NG-Circos.

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 means 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

Value

The module tracks for chord modules of circosJS.

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

Value

The module tracks for cnv modules.

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

Value

The module tracks for gene modules.

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

Value

The module tracks for heatmap modules.

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 histogram.
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

Value

The module tracks for histogram modules.

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

Value

The module tracks for legend modules.

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

Value

The module tracks for line modules.

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

Value

The module tracks for link modules.

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

Value

The module tracks for lollipop modules.

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	<i>Create a list of modules</i>
------------------	---------------------------------

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).

Value

The list of all tracks of modules.

`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

<code>modulename</code>	The name of the new module.
<code>compareGroup</code>	The group number of this module in compare module
<code>radius</code>	Radius of scatter circle
<code>innerCircleSize, outerCircleSize</code>	If circle, inner and outer circle size
<code>innerCircleColor, outerCircleColor</code>	If circle, inner and outer circle color
<code>innerPointType, outerPointType</code>	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

Value

The module tracks for scatter modules.

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

Value

The module tracks for snp modules.

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	rotate 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

Value

The module tracks for text modules.

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

Value

The module tracks for wig modules.

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	<i>Histogram plot example data</i>
------------------	------------------------------------

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	<i>Line plot example data</i>
-------------	-------------------------------

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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