

Package ‘interacCircos’

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Type Package

Title Visualization of Interactive Circos Plot

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

Version 1.0.0

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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

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arcExample	<i>Arc plot example data</i>
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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	<i>Bubble plot example data</i>
---------------	---------------------------------

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	<i>Example data of chord plot of circosJS</i>
----------------	---

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",
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  genomeLabelDy = 0,
  compareEvent = FALSE,
  compareEventGroupGapRate = 0.1,
  compareEventGroupDistance = 0,
  zoom = TRUE,
  TEXTModuleDragEvent = FALSE,
  CNVxlink = FALSE,
  CNVMouseEvent = TRUE,
  CNVMouseClickedDisplay = FALSE,
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  CNVMouseClickedArcOpacity = 1,
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  CNVMouseClickedArcStrokeWidth = 0,
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  CNVMouseClickedTextOpacity = 1,
  CNVMouseClickedTextColor = "red",

```

```
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BUBBLEMouseOutOpacity = 1,  
BUBBLEMouseOutStrokeColor = "none",  
BUBBLEMouseOutStrokeWidth = "none",  
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BUBBLEMouseUpOpacity = 1,  
BUBBLEMouseUpStrokeColor = "none",  
BUBBLEMouseUpStrokeWidth = "none",  
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BUBBLEMouseOverOpacity = 1,  
BUBBLEMouseOverStrokeColor = "none",  
BUBBLEMouseOverStrokeWidth = "none",  
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BUBBLEMouseOverTooltipsPosition = "absolute",  
BUBBLEMouseOverTooltipsBackgroundColor = "white",  
BUBBLEMouseOverTooltipsBorderStyle = "solid",  
BUBBLEMouseOverTooltipsBorderWidth = 0,  
BUBBLEMouseOverTooltipsPadding = "3px",  
BUBBLEMouseOverTooltipsBorderRadius = "3px",  
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SNPMouseCombinationEvent = FALSE,  
SNPMouseCombinationImageDisplay = FALSE,
```



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SNPMouseCombinationImageTitle = "This is image",
SNPMouseCombinationImageTitleSize = 5,
SNPMouseCombinationImageTitleWeight = "bold",
SNPMouseCombinationImageTitleColor = "black",
SNPMouseCombinationImagePositionX = 0,
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SNPMouseCombinationImageHeight = 200,
SNPMouseCombinationImageWidth = 300,
SNPMouseCombinationGraphDisplay = FALSE,
SNPMouseCombinationGraphTitle = "This is graph",
SNPMouseCombinationGraphTitleSize = 5,
SNPMouseCombinationGraphTitleWeight = "bold",
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SNPMouseCombinationGraphType = "histogram",
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SNPMouseCombinationGraphPositionY = 0,
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SNPMouseClickCircleSize = 4,
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SNPMouseClickCircleStrokeColor = "#F26223",
SNPMouseClickCircleStrokeWidth = 0,
```

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SNPMouseClickTextPostionY = 10,
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```

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```

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WIGMouseOverTooltipsPadding = "3px",
WIGMouseOverTooltipsBorderRadius = "3px",
WIGMouseOverTooltipsOpacity = 1,
SCATTERxlink = FALSE,
SCATTERMouseEvent = TRUE,
SCATTERMouseClickedDisplay = FALSE,
SCATTERMouseClickedColor = "red",
SCATTERMouseClickedCircleSize = 2,
SCATTERMouseClickedCircleOpacity = 1,
SCATTERMouseClickedCircleStrokeColor = "none",
SCATTERMouseClickedCircleStrokeWidth = "none",
SCATTERMouseClickedTextFromData = "fourth",
SCATTERMouseClickedTextOpacity = 1,
SCATTERMouseClickedTextColor = "red",
SCATTERMouseClickedTextSize = 8,
SCATTERMouseClickedTextPostionX = 1,
SCATTERMouseClickedTextPostionY = 10,
SCATTERMouseClickedTextDrag = 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",
```

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SCATTERMouseLeaveDisplay = FALSE,
SCATTERMouseLeaveColor = "red",
SCATTERMouseLeaveCircleSize = 2,
SCATTERMouseLeaveCircleOpacity = 1,
SCATTERMouseLeaveCircleStrokeColor = "none",
SCATTERMouseLeaveCircleStrokeWidth = "none",
SCATTERMouseMoveDisplay = FALSE,
SCATTERMouseMoveColor = "red",
SCATTERMouseMoveCircleSize = 2,
SCATTERMouseMoveCircleOpacity = 1,
SCATTERMouseMoveCircleStrokeColor = "none",
SCATTERMouseMoveCircleStrokeWidth = "none",
SCATTERMouseOutDisplay = FALSE,
SCATTERMouseOutAnimationTime = 500,
SCATTERMouseOutColor = "red",
SCATTERMouseOutCircleSize = 2,
SCATTERMouseOutCircleOpacity = 1,
SCATTERMouseOutCircleStrokeColor = "none",
SCATTERMouseOutCircleStrokeWidth = "none",
SCATTERMouseUpDisplay = FALSE,
SCATTERMouseUpColor = "red",
SCATTERMouseUpCircleSize = 2,
SCATTERMouseUpCircleOpacity = 1,
SCATTERMouseUpCircleStrokeColor = "none",
SCATTERMouseUpCircleStrokeWidth = "none",
SCATTERMouseOverDisplay = FALSE,
SCATTERMouseOverColor = "red",
SCATTERMouseOverCircleSize = 2,
SCATTERMouseOverCircleOpacity = 1,
SCATTERMouseOverCircleStrokeColor = "none",
SCATTERMouseOverCircleStrokeWidth = "none",
SCATTERMouseOverTooltipsSetting = "style1",
SCATTERMouseOverTooltipsHtml = " ",
SCATTERMouseOverTooltipsPosition = "absolute",
SCATTERMouseOverTooltipsBackgroundColor = "white",
SCATTERMouseOverTooltipsBorderStyle = "solid",
SCATTERMouseOverTooltipsBorderWidth = 0,
SCATTERMouseOverTooltipsPadding = "3px",
SCATTERMouseOverTooltipsBorderRadius = "3px",
SCATTERMouseOverTooltipsOpacity = 1,
ARCxlink = FALSE,
ARCMouseEvent = TRUE,
ARCMouseClickDisplay = FALSE,
ARCMouseClickColor = "red",
ARCMouseClickArcOpacity = 1,
ARCMouseClickArcStrokeColor = "none",
ARCMouseClickArcStrokeWidth = "none",
ARCMouseClickTextFromData = "fourth",
ARCMouseClickTextOpacity = 1,
ARCMouseClickTextColor = "red",
ARCMouseClickTextSize = 8,
ARCMouseClickTextPostionX = 1,

```



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ARCMouseClickTextPostionY = 10,  
ARCMouseClickTextDrag = TRUE,  
ARCMouseDownDisplay = FALSE,  
ARCMouseDownColor = "red",  
ARCMouseDownArcOpacity = 1,  
ARCMouseDownArcStrokeColor = "none",  
ARCMouseDownArcStrokeWidth = "none",  
ARCMouseEnterDisplay = FALSE,  
ARCMouseEnterColor = "red",  
ARCMouseEnterArcOpacity = 1,  
ARCMouseEnterArcStrokeColor = "none",  
ARCMouseEnterArcStrokeWidth = "none",  
ARCMouseLeaveDisplay = FALSE,  
ARCMouseLeaveColor = "red",  
ARCMouseLeaveArcOpacity = 1,  
ARCMouseLeaveArcStrokeColor = "none",  
ARCMouseLeaveArcStrokeWidth = "none",  
ARCMouseMoveDisplay = FALSE,  
ARCMouseMoveColor = "red",  
ARCMouseMoveArcOpacity = 1,  
ARCMouseMoveArcStrokeColor = "none",  
ARCMouseMoveArcStrokeWidth = "none",  
ARCMouseOutDisplay = FALSE,  
ARCMouseOutAnimationTime = 500,  
ARCMouseOutColor = "red",  
ARCMouseOutArcOpacity = 1,  
ARCMouseOutArcStrokeColor = "none",  
ARCMouseOutArcStrokeWidth = "none",  
ARCMouseUpDisplay = FALSE,  
ARCMouseUpColor = "red",  
ARCMouseUpArcOpacity = 1,  
ARCMouseUpArcStrokeColor = "none",  
ARCMouseUpArcStrokeWidth = "none",  
ARCMouseOverDisplay = FALSE,  
ARCMouseOverColor = "red",  
ARCMouseOverArcOpacity = 1,  
ARCMouseOverArcStrokeColor = "none",  
ARCMouseOverArcStrokeWidth = "none",  
ARCMouseOverTooltipsSetting = "style1",  
ARCMouseOverTooltipsHtml = " ",  
ARCMouseOverTooltipsPosition = "absolute",  
ARCMouseOverTooltipsBackgroundColor = "white",  
ARCMouseOverTooltipsBorderStyle = "solid",  
ARCMouseOverTooltipsBorderWidth = 0,  
ARCMouseOverTooltipsPadding = "3px",  
ARCMouseOverTooltipsBorderRadius = "3px",  
ARCMouseOverTooltipsOpacity = 1,  
GENExlink = FALSE,  
GENEMouseEvent = TRUE,  
GENEMouseClickDisplay = FALSE,  
GENEMouseClickColor = "red",  
GENEMouseClickArcOpacity = 1,
```

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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",

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```
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, genomeTicksTextAlign</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?

TEXTModuleDragEvent	Are text annotations draggable?
CNVxlink	Default False, add/not xlink for CNV module
CNVMouseEvent	Default True, open/not open mouse event of CNV module
CNVMouseClickedDisplay	Default False, show/not the tooltip when mouse click on a CNV point.
CNVMouseClickedColor	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
Defalut False, hide/not tooltip when mouse is not hovering a SNP point any-
more.

SNPMouseOutAnimationTime
Animation time when mouse moving over the element

SNPMouseOutColor
Color when mouse moving over the element

SNPMouseOutCircleSize
Circle size when mouse moving over the element

SNPMouseOutCircleOpacity
Opacity when mouse moving over the element

SNPMouseOutCircleStrokeColor
Stroke color when mouse moving over the element

SNPMouseOutCircleStrokeWidth
Stroke width when mouse moving over the element

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

SNPMouseUpColor	Color after mouse moving up the element
SNPMouseUpCircleSize	Circle size after mouse moving up the element
SNPMouseUpCircleOpacity	Circle opacity after mouse moving up the element
SNPMouseUpCircleStrokeColor	Circle stroke color after mouse moving up the element
SNPMouseUpCircleStrokeWidth	Circle stroke width after mouse moving up the element
SNPMouseOverDisplay	Default False, show/not the tooltip when mouse hover on a SNP point.
SNPMouseOverColor	Color after mouse moving over the element
SNPMouseOverCircleSize	Circle size after mouse moving over the element
SNPMouseOverCircleOpacity	Circle opacity after mouse moving over the element
SNPMouseOverCircleStrokeColor	Circle stroke color after mouse moving over the element
SNPMouseOverCircleStrokeWidth	Circle stroke width after mouse moving over the element
SNPMouseOverTooltipsSetting	Default "chr : "
SNPMouseOverTooltipsHtml	Default " "
SNPMouseOverTooltipsPosition	Position for tooltips when mouse moving over
SNPMouseOverTooltipsBackgroundColor	Background color for tooltips when mouse moving over
SNPMouseOverTooltipsBorderStyle	Border style for tooltips when mouse moving over
SNPMouseOverTooltipsBorderWidth	Border width for tooltips when mouse moving over
SNPMouseOverTooltipsPadding	Padding for tooltips when mouse moving over
SNPMouseOverTooltipsBorderRadius	Border radius for tooltips when mouse moving over
SNPMouseOverTooltipsOpacity	Opacity for tooltips when mouse moving over
LINKxlink	Default False, add/not xlink for LINK module
LINKMouseEvent	Default True, open/not open mouse event of LINK module
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
Default False, hide/not tooltip when mouse is not hovering a LINE point anymore.

LINEMouseOutAnimationTime
Animation time when mouse moving out the element

LINEMouseOutLineOpacity
Line opacity when mouse moving out the element

LINEMouseOutLineStrokeColor
Stroke color when mouse moving out the element

LINEMouseOutLineStrokeWidth
Stroke width when mouse moving out the element

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

LINEMouseUpLineOpacity
Line opacity when mouse moving up the element

LINEMouseUpLineStrokeColor
Stroke color when mouse moving up the element

LINEMouseUpLineStrokeWidth
Stroke width when mouse moving up the element

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

LINEMouseOverLineOpacity
Line opacity when mouse moving over the element

LINEMouseOverLineStrokeColor
Stroke color when mouse moving over the element

LINEMouseOverLineStrokeWidth
Stroke width when mouse moving over the element

LINEMouseOverTooltipsSetting
Default "style1"

LINEMouseOverTooltipsHtml
Default " "

LINEMouseOverTooltipsPosition
Default "absolute"

LINEMouseOverTooltipsBackgroundColor
Default "white"

LINEMouseOverTooltipsBorderStyle
Default "solid"

LINEMouseOverTooltipsBorderWidth
Default 0

LINEMouseOverTooltipsPadding
Default "3px"

LINEMouseOverTooltipsBorderRadius
Default "3px"

LINEMouseOverTooltipsOpacity
Default 0.8

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

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

WIGMouseClickedLineOpacity
Line opacity when mouse clicking the element

WIGMouseClickedLineStrokeColor
Stroke color when mouse clicking the element

WIGMouseClickedLineStrokeWidth
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

WIGMouseDownLineStrokeColor
Stroke color when mouse moving down the element

WIGMouseDownLineStrokeWidth
Stroke width when mouse moving down the element

WIGMouseDownFillColor
Filling color when mouse moving down the element

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

WIGMouseEnterLineOpacity
Line opacity when mouse entering the element

WIGMouseEnterLineStrokeColor
Stroke color when mouse entering the element

WIGMouseEnterLineStrokeWidth
Stroke width when mouse entering the element

WIGMouseEnterFillColor
Filling color when mouse entering the element

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

WIGMouseLeaveLineOpacity
Line opacity when mouse leaving the element

WIGMouseLeaveLineStrokeColor
Stroke color when mouse leaving the element

WIGMouseLeaveLineStrokeWidth
Stroke width when mouse leaving the element

WIGMouseLeaveFillColor
 Filling color when mouse leaving the element
 WIGMouseMoveDisplay
 Default False, show/not the tooltip when mouse move into a WIG point.
 WIGMouseMoveLineOpacity
 Line opacity when mouse moving in the element
 WIGMouseMoveLineStrokeColor
 Stroke color when mouse moving in the element
 WIGMouseMoveLineStrokeWidth
 Stroke width when mouse moving in the element
 WIGMouseMoveFillColor
 Filling color when mouse leaving the element
 WIGMouseOutDisplay
 Default False, hide/not tooltip when mouse is not hovering a WIG point any-
 more.
 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
Defalut False, hide/not tooltip when mouse is not hovering a SCATTER point anymore.

SCATTERMouseOutAnimationTime
Animation time when mouse moving out the element

SCATTERMouseOutColor
Color when mouse moving out the element

SCATTERMouseOutCircleSize
Circle size when mouse moving out the element

SCATTERMouseOutCircleOpacity
Circle opacity when mouse moving out the element

SCATTERMouseOutCircleStrokeColor
Circle stroke color when mouse moving out the element

SCATTERMouseOutCircleStrokeWidth
Circle stroke width when mouse moving out the element

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

SCATTERMouseUpColor
Color when mouse moving up the element

SCATTERMouseUpCircleSize
Circle size when mouse moving up the element

SCATTERMouseUpCircleOpacity
Circle opacity when mouse moving up the element

SCATTERMouseUpCircleStrokeColor
Circle stroke color when mouse moving up the element

SCATTERMouseUpCircleStrokeWidth
Circle stroke width when mouse moving up the element

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

SCATTERMouseOverColor
Color when mouse moving over the element

SCATTERMouseOverCircleSize
Circle size when mouse moving over the element

SCATTERMouseOverCircleOpacity
Circle opacity when mouse moving over the element

SCATTERMouseOverCircleStrokeColor
Circle stroke color when mouse moving over the element

SCATTERMouseOverCircleStrokeWidth
Circle stroke width when mouse moving over the element

SCATTERMouseOverTooltipsSetting
Default "style1"

SCATTERMouseOverTooltipsHtml
Default " "

SCATTERMouseOverTooltipsPosition
Default "absolute"

SCATTERMouseOverTooltipsBackgroundColor
Default "white"

SCATTERMouseOverTooltipsBorderStyle
Default "solid"

SCATTERMouseOverTooltipsBorderWidth
Default 0

SCATTERMouseOverTooltipsPadding
Default "3px"

SCATTERMouseOverTooltipsBorderRadius
Default "3px"

SCATTERMouseOverTooltipsOpacity
 Default 0.8

ARCxlink Default False, add/not xlink for ARC module

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

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

ARCMouseClickColor
 Color when mouse clicking the element

ARCMouseClickArcOpacity
 Arc opacity when mouse clicking the element

ARCMouseClickArcStrokeColor
 Arc stroke color when mouse clicking the element

ARCMouseClickArcStrokeWidth
 Arc stroke width when mouse clicking the element

ARCMouseClickTextFromData
 Text column when mouse clicking the element

ARCMouseClickTextOpacity
 Text opacity when mouse clicking the element

ARCMouseClickTextColor
 Text color when mouse clicking the element

ARCMouseClickTextSize
 Text size when mouse clicking the element

ARCMouseClickTextPostionX, ARCMouseClickTextPostionY
 Text coordinates when mouse clicking the element

ARCMouseClickTextDrag
 Whether text is draggable when mouse clicking the element

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

ARCMouseDownColor
 Color when mouse moving down the element

ARCMouseDownArcOpacity
 Arc opacity when mouse moving down the element

ARCMouseDownArcStrokeColor
 Arc stroke color when mouse moving down the element

ARCMouseDownArcStrokeWidth
 Arc stroke width when mouse moving down the element

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

ARCMouseEnterColor
 Color when mouse entering the element

ARCMouseEnterArcOpacity
 Arc opacity when mouse entering the element

ARCMouseEnterArcStrokeColor
 Arc stroke color when mouse entering the element

ARCMouseEnterArcStrokeWidth
 Arc stroke width when mouse entering the element

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

ARCMouseLeaveColor
Color when mouse leaving the element

ARCMouseLeaveArcOpacity
Arc opacity when mouse leaving the element

ARCMouseLeaveArcStrokeColor
Arc stroke color when mouse leaving the element

ARCMouseLeaveArcStrokeWidth
Arc stroke width when mouse leaving the element

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

ARCMouseMoveColor
Color when mouse moving in the element

ARCMouseMoveArcOpacity
Arc opacity when mouse moving in the element

ARCMouseMoveArcStrokeColor
Arc stroke color when mouse moving in the element

ARCMouseMoveArcStrokeWidth
Arc stroke width when mouse moving in the element

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

ARCMouseOutAnimationTime
Animation time when mouse moving out the element

ARCMouseOutColor
Color when mouse moving out the element

ARCMouseOutArcOpacity
Arc opacity when mouse moving out the element

ARCMouseOutArcStrokeColor
Arc stroke color when mouse moving out the element

ARCMouseOutArcStrokeWidth
Arc stroke width when mouse moving out the element

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

ARCMouseUpColor
Color when mouse moving up the element

ARCMouseUpArcOpacity
Arc opacity when mouse moving up the element

ARCMouseUpArcStrokeColor
Arc stroke color when mouse moving up the element

ARCMouseUpArcStrokeWidth
Arc stroke width when mouse moving up the element

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

ARCMouseOverColor
Color when mouse moving over the element

ARCMouseOverArcOpacity
Arc opacity when mouse moving over the element

ARCMouseOverArcStrokeColor
Arc stroke color when mouse moving over the element

ARCMouseOverArcStrokeWidth
 Arc stroke width when mouse moving over the element
 ARCMouseOverTooltipsSetting
 Default "style1"
 ARCMouseOverTooltipsHtml
 Default " "
 ARCMouseOverTooltipsPosition
 Default "absolute"
 ARCMouseOverTooltipsBackgroundColor
 Default "white"
 ARCMouseOverTooltipsBorderStyle
 Default "solid"
 ARCMouseOverTooltipsBorderWidth
 Default 0
 ARCMouseOverTooltipsPadding
 Default "3px"
 ARCMouseOverTooltipsBorderRadius
 Default "3px"
 ARCMouseOverTooltipsOpacity
 Default 0.8
 GENExlink Default False, add/not xlink for GENE module
 GENEMouseEvent Default True, open/not open mouse event of GENE module
 GENEMouseClickedDisplay
 Default False, show/not the tooltip when mouse click on a GENE point.
 GENEMouseClickedColor
 Color when mouse clicking the element
 GENEMouseClickedArcOpacity
 Arc opacity when mouse clicking the element
 GENEMouseClickedArcStrokeColor
 Arc stroke color when mouse clicking the element
 GENEMouseClickedArcStrokeWidth
 Arc stroke width when mouse clicking the element
 GENEMouseClickedTextFromData
 Text column when mouse clicking the element
 GENEMouseClickedTextOpacity
 Text opacity when mouse clicking the element
 GENEMouseClickedTextColor
 Text color when mouse clicking the element
 GENEMouseClickedTextSize
 Text size when mouse clicking the element
 GENEMouseClickedTextPostionX, GENEMouseClickedTextPostionY
 Text coordinates when mouse clicking the element
 GENEMouseClickedTextDrag
 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

LOLLIPOPMouseClickedCircleOpacity
 Circle opacity when mouse clicking the element

LOLLIPOPMouseClickedCircleStrokeColor
Circle stroke color when mouse clicking the element

LOLLIPOPMouseClickedCircleStrokeWidth
Circle stroke width when mouse clicking the element

LOLLIPOPMouseClickedTextFromData
Text column when mouse clicking the element

LOLLIPOPMouseClickedTextOpacity
Text opacity when mouse clicking the element

LOLLIPOPMouseClickedTextColor
Text color when mouse clicking the element

LOLLIPOPMouseClickedTextSize
Text size when mouse clicking the element

LOLLIPOPMouseClickedTextPostionX, LOLLIPOPMouseClickedTextPostionY
Text coordinates when mouse clicking the element

LOLLIPOPMouseClickedTextDrag
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

outputId	output variable to read from
width, height	Must be a valid CSS unit (like '100%', '400px', 'auto') or a number, which will be coerced to a string and have 'px' appended.
expr	An expression that generates a <code>interacCircos</code>
env	The environment in which to evaluate <code>expr</code> .
quoted	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	<i>Create a ARC module to a moduleList</i>
-----------	--

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

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

Description

Simple background to display behind another module

Usage

```
CircosBackground(
  modulename,
  compareGroup = 1,
  fillColors = "#EEEEFF",
  borderColors = "#000000",
  axisShow = FALSE,
  axisColor = "#000",
  axisOpacity = 0.5,
  axisNum = 4,
  axisWidth = 0.3,
  maxRadius = 190,
  minRadius = 105,
```

```
borderSize = 0.3,
animationDisplay = FALSE,
animationTime = 2000,
animationDelay = 20,
animationType = "bounce",
...
)
```

Arguments

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

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

<code>modulename</code>	The name of the new module.
<code>compareGroup</code>	The group number of this module in compare module
<code>maxRadius, minRadius</code>	Where the module should begin and end.
<code>blockStroke</code>	Whether display the stroke between each bubble block
<code>blockStrokeColor</code>	Stroke color for block
<code>blockStrokeWidth</code>	Stroke width for block
<code>blockFill</code>	Whether fill a block or not
<code>blockFillColor</code>	The color for filling the block
<code>bubbleMaxSize</code>	The max size for bubble
<code>bubbleMinSize</code>	The min size for bubble
<code>minColor</code>	The color the bubble with min value
<code>maxColor</code>	The color the bubble with max value
<code>ValueAxisManualScale</code>	Whether manually control the scale of value
<code>ValueAxisMaxScale, ValueAxisMinScale</code>	The max and min scale value for manually control
<code>totalLayer</code>	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

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

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

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

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

<code>modulename</code>	The name of the new module.
<code>x, y</code>	Coordinates of the lower left corner of the annotation
<code>title</code>	The title for legend
<code>size</code>	Font size for title, with units specified (such as em or px).
<code>weight</code>	Font weight for title. Can be "normal", "bold", "bolder" or "lighter".
<code>GapBetweenGraphicText</code>	Gap between icon and text in legend.
<code>GapBetweenLines</code>	Gap between each two lines in legend
<code>data</code>	A list of legend with details including type, color, opacity, circleSize, rectSize, lineWidth, lineHeight, text, textSize and textWeight. Details can be found on document.
<code>...</code>	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",fontWeight="normal")
legend2 <- list(type= "circle", color="#AEC7E8",opacity="1.0",circleSize="8",text= "C.NPK",
  textSize= "14",fontWeight="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

<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 link circle.
<code>fillColor</code>	Color for link.
<code>width</code>	Width for link.
<code>type</code>	Type of link, could be Q/S/T
<code>displayLinkAxis</code>	Whether display axis for link or not
<code>axisColor</code>	The color for axis
<code>axisWidth</code>	The width for axis
<code>axisPad</code>	The pad for axis
<code>displayLinkLabel</code>	Whether display label for link or not
<code>labelColor</code>	The color for label
<code>labelSize</code>	The size for label
<code>labelPad</code>	The pad for label
<code>animationDisplay</code>	Whether display animation
<code>animationDirection</code>	The direction of link animation, could be 1to2 or 2to1
<code>animationTime, animationDelay, animationType</code>	The time, delay and display type for animation
<code>data</code>	A list of link with details including <code>g1chr</code> , <code>g1start</code> , <code>g1end</code> , <code>g2chr</code> , <code>g2start</code> , <code>g2end</code> , <code>g1name</code> , <code>g2name</code> , <code>fusion</code> , <code>link</code> and <code>html</code> . Details can be found on document.
<code>...</code>	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

<code>modulename</code>	The name of the new module.
<code>compareGroup</code>	The group number of this module in compare module
<code>fillColor</code>	Filling color for lollipop
<code>secondColor</code>	Second filling color for heterogeneous lollipop
<code>pointType</code>	The type for lollipop, could be circle, rect and diamond
<code>circleSize</code>	If circle, the size for lollipop
<code>diamondWidth, diamondHeight</code>	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

Create a list of modules

Description

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

Usage

```

CircosModuleList()

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

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

```

Arguments

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

Value

The list of all tracks of modules.

CircosScatter	<i>Create a SCATTER module to a moduleList</i>
---------------	--

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
<code>innerrectWidth, innerrectHeight</code>	If rect, inner width and height
<code>outerrectWidth, outerrectHeight</code>	If rect, inner width and height
<code>outerCircleOpacity</code>	If circle, the opacity for outer circle
<code>random_data</code>	Scatter position fluctuation
<code>animationDisplay</code>	Whether display animation
<code>animationInitialPositionX, animationInitialPositionY</code>	The initial coordinates for animation
<code>animationTime, animationDelay, animationType</code>	The time, delay and display type for animation
<code>data</code>	A list of value with details including chr, start, end, name, des, link and html. Details can be found on document.
<code>...</code>	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

<code>modulename</code>	The name of the new module.
<code>compareGroup</code>	The group number of this module in compare module
<code>maxRadius, minRadius</code>	Where the module should begin and end
<code>fillColorType</code>	The type of filling color, could be either specific or r2(means based on r2)
<code>fillColor</code>	If specific, the color for SNP filling
<code>fillr2Color</code>	If r2, the color for SNP filling
<code>ValueAxisManualScale</code>	Whether manually control the scale of value
<code>ValueAxisMaxScale, ValueAxisMinScale</code>	The max and min scale value for manually control
<code>pointType</code>	The type of SNP point, could be circle or rect
<code>circleSize</code>	If circle, the size for SNP circle
<code>rectWidth</code>	If rect, the width for SNP rect
<code>rectHeight</code>	If rect, the height for SNP rect
<code>animationDisplay</code>	Whether display animation
<code>animationInitialPositionX, animationInitialPositionY</code>	The initial position coordinates for animation
<code>animationTime, animationDelay, animationType</code>	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, SNPAanimationDisplay=TRUE,SNPAanimationTime= 2000,SNPAanimationDelay= 0,
  SNPAanimationType= "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

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

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

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

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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