

Package ‘interacCircos’

September 30, 2024

Type Package

Title The Generation of Interactive Circos Plot

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

Version 1.15.0

License GPL-3

Encoding UTF-8

LazyData true

Depends R (>= 4.1)

Imports RColorBrewer, htmlwidgets, plyr, methods

RoxygenNote 7.1.1

Suggests knitr, rmarkdown

VignetteBuilder knitr

biocViews Visualization

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Contents

| | |
|--------------------------|----|
| arcExample | 2 |
| bubbleExample | 3 |
| chord.pExample | 3 |
| chordExample | 4 |
| Circos | 5 |
| CircosArc | 52 |

| | |
|----------------------------|----|
| CircosAuxLine | 53 |
| CircosBackground | 54 |
| CircosBubble | 55 |
| CircosChord | 57 |
| CircosChord.p | 58 |
| CircosCnv | 59 |
| CircosGene | 60 |
| CircosHeatmap | 62 |
| CircosHistogram | 63 |
| CircosLegend | 64 |
| CircosLine | 66 |
| CircosLink | 67 |
| CircosLollipop | 69 |
| CircosModuleList | 70 |
| CircosScatter | 71 |
| CircosSnp | 72 |
| CircosText | 74 |
| CircosWig | 75 |
| cnvExample | 77 |
| geneExample | 77 |
| heatmapExample | 78 |
| hg19_ideogram | 79 |
| histogramExample | 79 |
| lineExample | 80 |
| linkExample | 80 |
| lollipopExample | 81 |
| scatterExample | 81 |
| snpExample | 82 |
| wigExample | 83 |

| | |
|--------------|-----------|
| Index | 84 |
|--------------|-----------|

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

Description

The data is in matrix with column names

Usage

```
arcExample
```

Format

A data frame with 7 columns:

chr chromosome

start start position

end end position

color color

des description
link hyperlink
html The external html language

bubbleExample *Bubble plot example data*

Description

The data is in matrix with column names

Usage

bubbleExample

Format

A data frame with 8 columns:

chr chromosome
start start position
end end position
name name for description
value value
color specified color for bubble
layer layer number
html The external html language

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

Description

The data is in matrix with column names

Usage

chord.pExample

Format

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

source_chr chromosome name of source
source_start start position of source
source_end end position of source
target_chr chromosome name of target
target_start start position of target
target_end end position of target

chordExample

Example data of chord plot of NG-Circos

Description

The data is in matrix with column names. The order and number is same as column, representing the same items

Usage

chordExample

Format

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

C.CK Genome 1, the name for each arc

C.NPK Genome 2, the name for each arc

GC.CK Genome 2, the name for each arc

GC.NPK Genome 2, the name for each arc

Alphaproteobacteria Genome 2, the name for each arc

Betaproteobacteria Genome 2, the name for each arc

Gammaproteobacteria Genome 2, the name for each arc

Deltaproteobacteria Genome 8, the name for each arc

Acidobacteria Genome 9, the name for each arc

Actinobacteria Genome 10, the name for each arc

Bacteroidetes Genome 11, the name for each arc

Chloroflexi Genome 12, the name for each arc

Firmicutes Genome 13, the name for each arc

Gemmatimonadetes Genome 14, the name for each arc

Planctomycetes Genome 15, the name for each arc

Thaumarchaeota Genome 16, the name for each arc

Verrucomicrobia Genome 17, the name for each arc

Ascomycota Genome 18, the name for each arc

Basidiomycota Genome 19, the name for each arc

Zygomycota Genome 20, the name for each arc

| | |
|--------|----------------------|
| Circos | <i>interacCircos</i> |
|--------|----------------------|

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,  
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  compareEventGroupDistance = 0,  
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HEATMAPMouseOverTooltipsBorderStyle = "solid",  
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BUBBLEMouseUpOpacity = 1,  
BUBBLEMouseUpStrokeColor = "none",  
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BUBBLEMouseOverTooltipsPosition = "absolute",  
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BUBBLEMouseOverTooltipsBorderWidth = 0,  
BUBBLEMouseOverTooltipsPadding = "3px",  
BUBBLEMouseOverTooltipsBorderRadius = "3px",  
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SNPMouseClickCircleStrokeColor = "#F26223",
SNPMouseClickCircleStrokeWidth = 0,
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WIGMouseLeaveLineStrokeWidth = "none",  
WIGMouseLeaveFillColor = "none",  
WIGMouseMoveDisplay = FALSE,  
WIGMouseMoveLineOpacity = 1,  
WIGMouseMoveLineStrokeColor = "none",  
WIGMouseMoveLineStrokeWidth = "none",  
WIGMouseMoveFillColor = "none",
```

```
WIGMouseOutDisplay = FALSE,
WIGMouseOutAnimationTime = 500,
WIGMouseOutLineOpacity = 1,
WIGMouseOutLineStrokeColor = "none",
WIGMouseOutLineStrokeWidth = "none",
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WIGMouseUpLineOpacity = 1,
WIGMouseUpLineStrokeColor = "none",
WIGMouseUpLineStrokeWidth = "none",
WIGMouseUpFillColor = "none",
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WIGMouseOverLineOpacity = 1,
WIGMouseOverLineStrokeColor = "none",
WIGMouseOverLineStrokeWidth = "none",
WIGMouseOverFillColor = "none",
WIGMouseOverTooltipsSetting = "style1",
WIGMouseOverTooltipsHtml = " ",
WIGMouseOverTooltipsPosition = "absolute",
WIGMouseOverTooltipsBackgroundColor = "white",
WIGMouseOverTooltipsBorderStyle = "solid",
WIGMouseOverTooltipsBorderWidth = 0,
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",  
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SCATTERMouseUpCircleOpacity = 1,  
SCATTERMouseUpCircleStrokeColor = "none",  
SCATTERMouseUpCircleStrokeWidth = "none",  
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SCATTERMouseOverColor = "red",  
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SCATTERMouseOverCircleOpacity = 1,  
SCATTERMouseOverCircleStrokeColor = "none",  
SCATTERMouseOverCircleStrokeWidth = "none",  
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SCATTERMouseOverTooltipsPosition = "absolute",  
SCATTERMouseOverTooltipsBackgroundColor = "white",  
SCATTERMouseOverTooltipsBorderStyle = "solid",  
SCATTERMouseOverTooltipsBorderWidth = 0,  
SCATTERMouseOverTooltipsPadding = "3px",  
SCATTERMouseOverTooltipsBorderRadius = "3px",  
SCATTERMouseOverTooltipsOpacity = 1,  
ARCxlink = FALSE,  
ARCMouseEvent = TRUE,  
ARCMouseClickedDisplay = FALSE,  
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ARCMouseClickedArcOpacity = 1,  
ARCMouseClickedArcStrokeColor = "none",  
ARCMouseClickedArcStrokeWidth = "none",  
ARCMouseClickedTextFromData = "fourth",  
ARCMouseClickedTextOpacity = 1,  
ARCMouseClickedTextColor = "red",  
ARCMouseClickedTextSize = 8,  
ARCMouseClickedTextPostionX = 1,
```

```
ARCMouseClickTextPostionY = 10,  
ARCMouseClickTextDrag = TRUE,  
ARCMouseDownDisplay = FALSE,  
ARCMouseDownColor = "red",  
ARCMouseDownArcOpacity = 1,  
ARCMouseDownArcStrokeColor = "none",  
ARCMouseDownArcStrokeWidth = "none",  
ARCMouseEnterDisplay = FALSE,  
ARCMouseEnterColor = "red",  
ARCMouseEnterArcOpacity = 1,  
ARCMouseEnterArcStrokeColor = "none",  
ARCMouseEnterArcStrokeWidth = "none",  
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ARCMouseLeaveArcStrokeColor = "none",  
ARCMouseLeaveArcStrokeWidth = "none",  
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ARCMouseOutArcOpacity = 1,  
ARCMouseOutArcStrokeColor = "none",  
ARCMouseOutArcStrokeWidth = "none",  
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ARCMouseUpColor = "red",  
ARCMouseUpArcOpacity = 1,  
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ARCMouseUpArcStrokeWidth = "none",  
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ARCMouseOverColor = "red",  
ARCMouseOverArcOpacity = 1,  
ARCMouseOverArcStrokeColor = "none",  
ARCMouseOverArcStrokeWidth = "none",  
ARCMouseOverTooltipsSetting = "style1",  
ARCMouseOverTooltipsHtml = " ",  
ARCMouseOverTooltipsPosition = "absolute",  
ARCMouseOverTooltipsBackgroundColor = "white",  
ARCMouseOverTooltipsBorderStyle = "solid",  
ARCMouseOverTooltipsBorderWidth = 0,  
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ARCMouseOverTooltipsOpacity = 1,  
GENExlink = FALSE,  
GENEMouseEvent = TRUE,  
GENEMouseClickDisplay = FALSE,  
GENEMouseClickColor = "red",  
GENEMouseClickArcOpacity = 1,
```

```
GENEMouseClickArcStrokeColor = "none",
GENEMouseClickArcStrokeWidth = "none",
GENEMouseClickTextFromData = "fourth",
GENEMouseClickTextOpacity = 1,
GENEMouseClickTextColor = "red",
GENEMouseClickTextSize = 8,
GENEMouseClickTextPostionX = 1,
GENEMouseClickTextPostionY = 10,
GENEMouseClickTextDrag = TRUE,
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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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```
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GENEMouseOverTooltipsOpacity = 1,
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LOLLIPOPMouseEvent = TRUE,
LOLLIPOPMouseClickedDisplay = FALSE,
LOLLIPOPMouseClickedColor = "red",
LOLLIPOPMouseClickedCircleSize = 2,
LOLLIPOPMouseClickedCircleOpacity = 1,
LOLLIPOPMouseClickedCircleStrokeColor = "none",
LOLLIPOPMouseClickedCircleStrokeWidth = "none",
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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, list("chr1"=100,"chr2"=200) |
| <code>genome2</code> | Second genome when compare module is applied, format is same as genome |
| <code>genomeFillColor</code> | Could be either a color palette from RColorBrewer, or a list of color name, for example, list("yellow", "rgb(1,255,255)") |
| <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</code> | Whether display a border for genome track or not |
| <code>genomeBorderColor, genomeBorderSize</code> | The color and size for border of genome |
| <code>genomeTicksDisplay</code> | Whether display the ticks for genome track |
| <code>genomeTicksLen, genomeTicksColor, genomeTicksTextSize, genomeTicksTextColor, genomeTicksScale, genomeTicksRealLength, genomeTicksOffset</code> | arameters only works when genomeTicksDisplay 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 genomeTicksDisplay is TRUE and their details are available on document |

compareEvent Default False, open/not COMPARE module
 compareEventGroupGapRate
 Default 0.1, control the two-side gap rate on each group of genome
 compareEventGroupDistance
 Default 0, distance between two groups of genome
 zoom Whether or not the plot is zoomable?
 TEXTModuleDragEvent
 Are text annotations draggable?
 CNVxlink Default False, add/not xlink for CNV module
 CNVMouseEvent Default True, open/not open mouse event of CNV module
 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 | Defalut False, hide/not tooltip when mouse is not hovering a CNV point anymore |
| CNVMouseOutAnimationTime | Animation time when mouse moving out the element |
| CNVMouseOutColor | Color when mouse moving out the element |
| CNVMouseOutArcOpacity | Arc opacity when mouse moving out the element |
| CNVMouseOutArcStrokeColor | Arc stroke color when mouse moving out the element |
| CNVMouseOutArcStrokeWidth | Arc stroke width when mouse moving out the element |
| CNVMouseUpDisplay | Default False, show/not the tooltip when mouse click up a CNV point |
| CNVMouseUpColor | Color when mouse moving up the element |
| CNVMouseUpArcOpacity | Arc opacity when mouse clicking the element |
| CNVMouseUpArcStrokeColor | Arc stroke color when mouse clicking the element |
| CNVMouseUpArcStrokeWidth | Arc stroke width when mouse clicking the element |
| CNVMouseOverDisplay | Default False, show/not the tooltip when mouse hover on a CNV point |

| | |
|-------------------------------------|---|
| CNVMouseOverColor | Color when mouse moving over the element |
| CNVMouseOverArcOpacity | Arc opacity when mouse moving over the element |
| CNVMouseOverArcStrokeColor | Arc stroke color when mouse moving over the element |
| CNVMouseOverArcStrokeWidth | Arc stroke width when mouse moving over the element |
| CNVMouseOverTooltipsSetting | Default "style1" |
| CNVMouseOverTooltipsHtml | Default " " |
| CNVMouseOverTooltipsPosition | Default "absolute" |
| CNVMouseOverTooltipsBackgroundColor | Default "white" |
| CNVMouseOverTooltipsBorderStyle | Default "solid" |
| CNVMouseOverTooltipsBorderWidth | Default 0 |
| CNVMouseOverTooltipsPadding | Default "3px" |
| CNVMouseOverTooltipsBorderRadius | Default "3px" |
| CNVMouseOverTooltipsOpacity | Default 0.8 |
| HEATMAPMouseEvent | Default True, open/not open mouse event of HEATMAP module |
| 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 anymore

SNPMouseOutAnimationTime
Animation time when mouse moving over the element

SNPMouseOutColor
Color when mouse moving over the element

SNPMouseOutCircleSize
Circle size when mouse moving over the element

SNPMouseOutCircleOpacity
Opacity when mouse moving over the element

SNPMouseOutCircleStrokeColor
Stroke color when mouse moving over the element

SNPMouseOutCircleStrokeWidth
Stroke width when mouse moving over the element

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

SNPMouseUpColor
Color after mouse moving up the element

SNPMouseUpCircleSize
Circle size after mouse moving up the element

SNPMouseUpCircleOpacity
Circle opacity after mouse moving up the element

SNPMouseUpCircleStrokeColor
Circle stroke color after mouse moving up the element

SNPMouseUpCircleStrokeWidth
Circle stroke width after mouse moving up the element

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

SNPMouseOverColor
Color after mouse moving over the element

SNPMouseOverCircleSize
Circle size after mouse moving over the element

SNPMouseOverCircleOpacity
Circle opacity after mouse moving over the element

SNPMouseOverCircleStrokeColor
Circle stroke color after mouse moving over the element

SNPMouseOverCircleStrokeWidth
Circle stroke width after mouse moving over the element

SNPMouseOverTooltipsSetting
Default "chr : "

SNPMouseOverTooltipsHtml
Default " "

SNPMouseOverTooltipsPosition
Position for tooltips when mouse moving over

SNPMouseOverTooltipsBackgroundColor
Background color for tooltips when mouse moving over

SNPMouseOverTooltipsBorderStyle
Border style for tooltips when mouse moving over

SNPMouseOverTooltipsBorderWidth
Border width for tooltips when mouse moving over

SNPMouseOverTooltipsPadding
Padding for tooltips when mouse moving over

SNPMouseOverTooltipsBorderRadius
Border radius for tooltips when mouse moving over

SNPMouseOverTooltipsOpacity
Opacity for tooltips when mouse moving over

LINKxlink
Default False, add/not xlink for LINK module

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

LINKMouseClickedDisplay
Default False, show/not the tooltip when mouse click on a LINK point

LINKMouseClickedOpacity
Opacity when mouse clicking

LINKMouseClickedStrokeColor
Stroke color when mouse clicking

LINKMouseClickedStrokeWidth
Stroke width when mouse clicking

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

LINKMouseDownOpacity
Opacity when mouse moving down the element

LINKMouseDownStrokeColor
Stroke color when mouse moving down the element

LINKMouseDownStrokeWidth
Stroke width when mouse moving down the element

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

LINKMouseEnterOpacity
Opacity when mouse entering the element

LINKMouseEnterStrokeColor
Stroke color when mouse entering the element

LINKMouseEnterStrokeWidth
Stroke width when mouse entering the element

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

LINKMouseLeaveOpacity
Opacity when mouse leaving the element

LINKMouseLeaveStrokeColor
Stroke color when mouse leaving the element

LINKMouseLeaveStrokeWidth
Stroke width when mouse leaving the element

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

LINKMouseMoveOpacity
Opacity when mouse moving in the element

LINKMouseMoveStrokeColor
Stroke color when mouse moving in the element

LINKMouseMoveStrokeWidth
Stroke width when mouse moving in the element

LINKMouseOutDisplay
Defalut False, hide/not tooltip when mouse is not hovering a LINK point any-
more

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| 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 |

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

CHORDMouseClickOpacity
Opacity when mouse clicking

CHORDMouseClickStrokeColor
Stroke color when mouse clicking

CHORDMouseClickStrokeWidth
Stroke width when mouse clicking

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

CHORDMouseDownOpacity
Opacity when mouse moving down the element

CHORDMouseDownStrokeColor
Stroke color when mouse moving down the element

CHORDMouseDownStrokeWidth
Stroke width when mouse moving down the element

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

CHORDMouseEnterOpacity
Opacity when mouse entering the element

CHORDMouseEnterStrokeColor
Stroke color when mouse entering the element

CHORDMouseEnterStrokeWidth
Stroke width when mouse entering the element

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

CHORDMouseLeaveOpacity
Opacity when mouse leaving the element

CHORDMouseLeaveStrokeColor
Stroke color when mouse leaving the element

CHORDMouseLeaveStrokeWidth
Stroke width when mouse leaving the element

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

CHORDMouseMoveOpacity
Opacity when mouse moving in the element

CHORDMouseMoveStrokeColor
Stroke color when mouse moving in the element

CHORDMouseMoveStrokeWidth
Stroke width when mouse moving in the element

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

CHORDMouseOutAnimationTime
Animation time when mouse moving out the element

CHORDMouseOutOpacity
Opacity when mouse moving out the element

CHORDMouseOutStrokeColor
 Stroke color when mouse moving out the element
 CHORDMouseOutStrokeWidth
 Stroke width when mouse moving out the element
 CHORDMouseUpDisplay
 Default False, show/not the tooltip when mouse click up a CHORD point
 CHORDMouseUpOpacity
 Opacity when mouse moving up the element
 CHORDMouseUpStrokeColor
 Stroke color when mouse moving up the element
 CHORDMouseUpStrokeWidth
 Stroke width when mouse moving up the element
 CHORDMouseOverDisplay
 Default False, show/not the tooltip when mouse hover on a CHORD point
 CHORDMouseOverOpacity
 Opacity when mouse moving over the element
 CHORDMouseOverStrokeColor
 Stroke color when mouse moving over the element
 CHORDMouseOverStrokeWidth
 Stroke width when mouse moving over the element
 HISTOGRAMxlink Default False, add/not xlink for HISTOGRAM module
 HISTOGRAMMouseEvent
 Default True, open/not open mouse event of HISTOGRAM module
 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
Defalut False, hide/not tooltip when mouse is not hovering a HISTOGRAM point anymore

HISTOGRAMMouseOutAnimationTime
Animation time when mouse moving out the element

HISTOGRAMMouseOutColor
Color when mouse moving out the element

HISTOGRAMMouseOutOpacity
Opacity when mouse moving out the element

HISTOGRAMMouseOutStrokeColor
Stroke color when mouse moving out the element

HISTOGRAMMouseOutStrokeWidth
Stroke width when mouse moving out the element

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

HISTOGRAMMouseUpColor
Color when mouse moving up the element

HISTOGRAMMouseUpOpacity
Opacity when mouse moving up the element

HISTOGRAMMouseUpStrokeColor
Stroke color when mouse moving up the element

HISTOGRAMMouseUpStrokeWidth
Stroke width when mouse moving up the element

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

HISTOGRAMMouseOverColor
Color when mouse moving over the element

HISTOGRAMMouseOverOpacity
Opacity when mouse moving over the element

HISTOGRAMMouseOverStrokeColor
Stroke color when mouse moving over the element

HISTOGRAMMouseOverStrokeWidth
Stroke width when mouse moving over the element

HISTOGRAMMouseOverTooltipsSetting
Default "style1"

HISTOGRAMMouseOverTooltipsHtml
Default " "

HISTOGRAMMouseOverTooltipsPosition
Default "absolute"

HISTOGRAMMouseOverTooltipsBackgroundColor
Default "white"

HISTOGRAMMouseOverTooltipsBorderStyle
Default "solid"

HISTOGRAMMouseOverTooltipsBorderWidth
Default 0

HISTOGRAMMouseOverTooltipsPadding
Default "3px"

HISTOGRAMMouseOverTooltipsBorderRadius
Default "3px"

HISTOGRAMMouseOverTooltipsOpacity
Default 0.8

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

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

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

WIGMouseClickLineOpacity
Line opacity when mouse clicking the element

WIGMouseClickLineStrokeColor
Stroke color when mouse clicking the element

WIGMouseClickLineStrokeWidth
Stroke width when mouse clicking the element

WIGMouseClickFillColor
Filling color when mouse clicking the element

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

WIGMouseDownLineOpacity
Line opacity when mouse moving down the element

WIGMouseDownLineStrokeColor
Stroke color when mouse moving down the element

WIGMouseDownLineStrokeWidth
Stroke width when mouse moving down the element

WIGMouseDownFillColor
Filling color when mouse moving down the element

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

WIGMouseEnterLineOpacity
Line opacity when mouse entering the element

WIGMouseEnterLineStrokeColor
Stroke color when mouse entering the element

WIGMouseEnterLineStrokeWidth
Stroke width when mouse entering the element

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| WIGMouseEnterFillColor | Filling color when mouse entering the element |
| WIGMouseLeaveDisplay | Default False, show/not the tooltip when mouse mover leave a WIG point |
| WIGMouseLeaveLineOpacity | Line opacity when mouse leaving the element |
| WIGMouseLeaveLineStrokeColor | Stroke color when mouse leaving the element |
| WIGMouseLeaveLineStrokeWidth | Stroke width when mouse leaving the element |
| WIGMouseLeaveFillColor | Filling color when mouse leaving the element |
| WIGMouseMoveDisplay | Default False, show/not the tooltip when mouse move into a WIG point |
| WIGMouseMoveLineOpacity | Line opacity when mouse moving in the element |
| WIGMouseMoveLineStrokeColor | Stroke color when mouse moving in the element |
| WIGMouseMoveLineStrokeWidth | Stroke width when mouse moving in the element |
| WIGMouseMoveFillColor | Filling color when mouse leaving the element |
| WIGMouseOutDisplay | Defalut False, hide/not tooltip when mouse is not hovering a WIG point anymore |
| WIGMouseOutAnimationTime | Animation time when mouse moving out the element |
| WIGMouseOutLineOpacity | Line opacity when mouse moving out the element |
| WIGMouseOutLineStrokeColor | Stroke color when mouse moving out the element |
| WIGMouseOutLineStrokeWidth | Stroke width when mouse moving out the element |
| WIGMouseOutFillColor | Filling color when mouse moving out the element |
| WIGMouseUpDisplay | Default False, show/not the tooltip when mouse click up a WIG point |
| WIGMouseUpLineOpacity | Line opacity when mouse moving up the element |
| WIGMouseUpLineStrokeColor | Stroke color when mouse moving up the element |
| WIGMouseUpLineStrokeWidth | Stroke width when mouse moving up the element |
| WIGMouseUpFillColor | Filling color when mouse moving up the element |
| WIGMouseOverDisplay | Default False, show/not the tooltip when mouse hover on a WIG point |
| WIGMouseOverLineOpacity | Line opacity when mouse moving over the element |

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| WIGMouseOverLineStyleColor | Stroke color when mouse moving over the element |
| WIGMouseOverLineStyleWidth | 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 clicking 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 moves 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 moves away from 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 moves into a SCATTER point

SCATTERMouseMoveColor
Color when mouse moving in the element

SCATTERMouseMoveCircleSize
Circle size when mouse moving in the element

SCATTERMouseMoveCircleOpacity
Circle opacity when mouse moving in the element

SCATTERMouseMoveCircleStrokeColor
Circle stroke color when mouse moving in the element

SCATTERMouseMoveCircleStrokeWidth
Circle stroke width when mouse moving in the element

SCATTERMouseOutDisplay
Default False, hide/not tooltip when mouse is not hovering a SCATTER point anymore

SCATTERMouseOutAnimationTime
Animation time when mouse moving out the element

SCATTERMouseOutColor
Color when mouse moving out the element

SCATTERMouseOutCircleSize
Circle size when mouse moving out the element

SCATTERMouseOutCircleOpacity
Circle opacity when mouse moving out the element

SCATTERMouseOutCircleStrokeColor
Circle stroke color when mouse moving out the element

SCATTERMouseOutCircleStrokeWidth
Circle stroke width when mouse moving out the element

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

SCATTERMouseUpColor
Color when mouse moving up the element

SCATTERMouseUpCircleSize
Circle size when mouse moving up the element

SCATTERMouseUpCircleOpacity
Circle opacity when mouse moving up the element

SCATTERMouseUpCircleStrokeColor
Circle stroke color when mouse moving up the element

SCATTERMouseUpCircleStrokeWidth
Circle stroke width when mouse moving up the element

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

SCATTERMouseOverColor
Color when mouse moving over the element

SCATTERMouseOverCircleSize
Circle size when mouse moving over the element

SCATTERMouseOverCircleOpacity
Circle opacity when mouse moving over the element

SCATTERMouseOverCircleStrokeColor
Circle stroke color when mouse moving over the element

SCATTERMouseOverCircleStrokeWidth
Circle stroke width when mouse moving over the element

SCATTERMouseOverTooltipsSetting
Default "style1"

SCATTERMouseOverTooltipsHtml
Default " "

SCATTERMouseOverTooltipsPosition
Default "absolute"

SCATTERMouseOverTooltipsBackgroundColor
Default "white"

SCATTERMouseOverTooltipsBorderStyle
 Default "solid"
 SCATTERMouseOverTooltipsBorderWidth
 Default 0
 SCATTERMouseOverTooltipsPadding
 Default "3px"
 SCATTERMouseOverTooltipsBorderRadius
 Default "3px"
 SCATTERMouseOverTooltipsOpacity
 Default 0.8
 ARCxlink Default False, add/not xlink for ARC module
 ARCMouseEvent Default True, open/not open mouse event of ARC module
 ARCMouseClickDisplay
 Default False, show/not the tooltip when mouse click on a ARC point
 ARCMouseClickColor
 Color when mouse clicking the element
 ARCMouseClickArcOpacity
 Arc opacity when mouse clicking the element
 ARCMouseClickArcStrokeColor
 Arc stroke color when mouse clicking the element
 ARCMouseClickArcStrokeWidth
 Arc stroke width when mouse clicking the element
 ARCMouseClickTextFromData
 Text column when mouse clicking the element
 ARCMouseClickTextOpacity
 Text opacity when mouse clicking the element
 ARCMouseClickTextColor
 Text color when mouse clicking the element
 ARCMouseClickTextSize
 Text size when mouse clicking the element
 ARCMouseClickTextPostionX, ARCMouseClickTextPostionY
 Text coordinates when mouse clicking the element
 ARCMouseClickTextDrag
 Whether text is draggable when mouse clicking the element
 ARCMouseDownDisplay
 Default False, show/not the tooltip when mouse click down a ARC point
 ARCMouseDownColor
 Color when mouse moving down the element
 ARCMouseDownArcOpacity
 Arc opacity when mouse moving down the element
 ARCMouseDownArcStrokeColor
 Arc stroke color when mouse moving down the element
 ARCMouseDownArcStrokeWidth
 Arc stroke width when mouse moving down the element
 ARCMouseEnterDisplay
 Default False, show/not the tooltip when mouse mover over a ARC point
 ARCMouseEnterColor
 Color when mouse entering the element

| | |
|-----------------------------|---|
| ARCMouseEnterArcOpacity | Arc opacity when mouse entering the element |
| ARCMouseEnterArcStrokeColor | Arc stroke color when mouse entering the element |
| ARCMouseEnterArcStrokeWidth | Arc stroke width when mouse entering the element |
| ARCMouseLeaveDisplay | Default False, show/not the tooltip when mouse mover leave a ARC point |
| ARCMouseLeaveColor | Color when mouse leaving the element |
| ARCMouseLeaveArcOpacity | Arc opacity when mouse leaving the element |
| ARCMouseLeaveArcStrokeColor | Arc stroke color when mouse leaving the element |
| ARCMouseLeaveArcStrokeWidth | Arc stroke width when mouse leaving the element |
| ARCMouseMoveDisplay | Default False, show/not the tooltip when mouse move into a ARC point |
| ARCMouseMoveColor | Color when mouse moving in the element |
| ARCMouseMoveArcOpacity | Arc opacity when mouse moving in the element |
| ARCMouseMoveArcStrokeColor | Arc stroke color when mouse moving in the element |
| ARCMouseMoveArcStrokeWidth | Arc stroke width when mouse moving in the element |
| ARCMouseOutDisplay | Defalut False, hide/not tooltip when mouse is not hovering a ARC point any- more |
| ARCMouseOutAnimationTime | Animation time when mouse moving out the element |
| ARCMouseOutColor | Color when mouse moving out the element |
| ARCMouseOutArcOpacity | Arc opacity when mouse moving out the element |
| ARCMouseOutArcStrokeColor | Arc stroke color when mouse moving out the element |
| ARCMouseOutArcStrokeWidth | Arc stroke width when mouse moving out the element |
| ARCMouseUpDisplay | Default False, show/not the tooltip when mouse click up a ARC point |
| ARCMouseUpColor | Color when mouse moving up the element |
| ARCMouseUpArcOpacity | Arc opacity when mouse moving up the element |
| ARCMouseUpArcStrokeColor | Arc stroke color when mouse moving up the element |
| ARCMouseUpArcStrokeWidth | Arc stroke width when mouse moving up the element |

ARCMouseOverDisplay
 Default False, show/not the tooltip when mouse hover on a ARC point
 ARCMouseOverColor
 Color when mouse moving over the element
 ARCMouseOverArcOpacity
 Arc opacity when mouse moving over the element
 ARCMouseOverArcStrokeColor
 Arc stroke color when mouse moving over the element
 ARCMouseOverArcStrokeWidth
 Arc stroke width when mouse moving over the element
 ARCMouseOverTooltipsSetting
 Default "style1"
 ARCMouseOverTooltipsHtml
 Default " "
 ARCMouseOverTooltipsPosition
 Default "absolute"
 ARCMouseOverTooltipsBackgroundColor
 Default "white"
 ARCMouseOverTooltipsBorderStyle
 Default "solid"
 ARCMouseOverTooltipsBorderWidth
 Default 0
 ARCMouseOverTooltipsPadding
 Default "3px"
 ARCMouseOverTooltipsBorderRadius
 Default "3px"
 ARCMouseOverTooltipsOpacity
 Default 0.8
 GENExlink Default False, add/not xlink for GENE module
 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

GENEMouseClickTextPostionX, GENEMouseClickTextPostionY
Text coordinates when mouse clicking the element

GENEMouseClickTextDrag
Whether text is draggable when mouse clicking the element

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

GENEMouseDownColor
Color when mouse moving down the element

GENEMouseDownArcOpacity
Arc opacity when mouse moving down the element

GENEMouseDownArcStrokeColor
Arc stroke color when mouse moving down the element

GENEMouseDownArcStrokeWidth
Arc stroke width when mouse moving down the element

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

GENEMouseEnterColor
Color when mouse entering the element

GENEMouseEnterArcOpacity
Arc opacity when mouse entering the element

GENEMouseEnterArcStrokeColor
Arc stroke color when mouse entering the element

GENEMouseEnterArcStrokeWidth
Arc stroke width when mouse entering the element

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

GENEMouseLeaveColor
Color when mouse leaving the element

GENEMouseLeaveArcOpacity
Arc opacity when mouse leaving the element

GENEMouseLeaveArcStrokeColor
Arc stroke color when mouse leaving the element

GENEMouseLeaveArcStrokeWidth
Arc stroke width when mouse leaving the element

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

GENEMouseMoveColor
Color when mouse moving in the element

GENEMouseMoveArcOpacity
Arc opacity when mouse moving in the element

GENEMouseMoveArcStrokeColor
Arc stroke color when mouse moving in the element

GENEMouseMoveArcStrokeWidth
Arc stroke width when mouse moving in the element

GENEMouseOutDisplay
Defalut False, hide/not tooltip when mouse is not hovering a GENE point any-
more

GENEMouseOutAnimationTime
Animation time when mouse moving out the element

GENEMouseOutColor
Color when mouse moving out the element

GENEMouseOutArcOpacity
Arc opacity when mouse moving out the element

GENEMouseOutArcStrokeColor
Arc stroke color when mouse moving out the element

GENEMouseOutArcStrokeWidth
Arc stroke width when mouse moving out the element

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

GENEMouseUpColor
Color when mouse moving up the element

GENEMouseUpArcOpacity
Arc opacity when mouse moving up the element

GENEMouseUpArcStrokeColor
Arc stroke color when mouse moving up the element

GENEMouseUpArcStrokeWidth
Arc stroke width when mouse moving up the element

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

GENEMouseOverColor
Color when mouse moving over the element

GENEMouseOverArcOpacity
Arc opacity when mouse moving over the element

GENEMouseOverArcStrokeColor
Arc stroke color when mouse moving over the element

GENEMouseOverArcStrokeWidth
Arc stroke width when mouse moving over the element

GENEMouseOverTooltipsSetting
Default "style1"

GENEMouseOverTooltipsHtml
Default " "

GENEMouseOverTooltipsPosition
Default "absolute"

GENEMouseOverTooltipsBackgroundColor
Default "white"

GENEMouseOverTooltipsBorderStyle
Default "solid"

GENEMouseOverTooltipsBorderWidth
Default 0

GENEMouseOverTooltipsPadding
Default "3px"

GENEMouseOverTooltipsBorderRadius
Default "3px"

GENEMouseOverTooltipsOpacity
Default 0.8

LOLLIPOPxlink Default False, add/not xlink for LOLLIPOP module

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

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

LOLLIPOPMouseClickedColor
Color when mouse clicking

LOLLIPOPMouseClickedCircleSize
Circle size when mouse clicking the element

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

LOLLIPOPMouseOutAnimationTime
Animation time when mouse moving out the element

LOLLIPOPMouseOutColor
Color when mouse moving out the element

LOLLIPOPMouseOutCircleSize
Circle size when mouse moving out the element

LOLLIPOPMouseOutCircleOpacity
Circle opacity when mouse moving out the element

LOLLIPOPMouseOutCircleStrokeColor
Circle stroke color when mouse moving out the element

LOLLIPOPMouseOutCircleStrokeWidth
Circle stroke width when mouse moving out the element

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

LOLLIPOPMouseUpColor
Color when mouse moving up the element

LOLLIPOPMouseUpCircleSize
Circle size when mouse moving up the element

LOLLIPOPMouseUpCircleOpacity
Circle opacity when mouse moving up the element

| | |
|--|--|
| LOLLIPOPMouseUpCircleStrokeColor | Circle stroke color when mouse moving up the element |
| LOLLIPOPMouseUpCircleStrokeWidth | Circle stroke width when mouse moving up the element |
| LOLLIPOPMouseOverDisplay | Default False, show/not the tooltip when mouse hover on a LOLLIPOP point |
| LOLLIPOPMouseOverColor | Color when mouse moving over the element |
| LOLLIPOPMouseOverCircleSize | Circle size when mouse moving over the element |
| LOLLIPOPMouseOverCircleOpacity | Circle opacity when mouse moving over the element |
| LOLLIPOPMouseOverCircleStrokeColor | Circle stroke color when mouse moving over the element |
| LOLLIPOPMouseOverCircleStrokeWidth | Circle stroke width when mouse moving over the element |
| LOLLIPOPMouseOverTooltipsSetting | Default "style1" |
| LOLLIPOPMouseOverTooltipsHtml | Default " " |
| LOLLIPOPMouseOverTooltipsPosition | Default "absolute" |
| LOLLIPOPMouseOverTooltipsBackgroundColor | Default "white" |
| LOLLIPOPMouseOverTooltipsBorderStyle | Default "solid" |
| LOLLIPOPMouseOverTooltipsBorderWidth | Default 0 |
| LOLLIPOPMouseOverTooltipsPadding | Default "3px" |
| LOLLIPOPMouseOverTooltipsBorderRadius | Default "3px" |
| LOLLIPOPMouseOverTooltipsOpacity | Default 0.8 |
| elementId | the name of the HTML id to be used to contain the visualization |
| ... | Ignored |

Value

The main figure for interacCircos with all tracks

Examples

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

CircosArc

*ARC module***Description**

Create the CNV plot without value, Gene domain, Chromosome band

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

*AUXILIARYLINE module***Description**

A auxiliary line for better explanation of 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 *BACKGROUND module*

Description

Background for better display of other modules

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 filling color of the module |
| borderColors | The border color of the module |
| axisShow | Whether show a axis or not |
| axisWidth, axisColor, axisOpacity, axisNum | The color, opacity value and number of line for axis |
| minRadius, maxRadius | The outer and inner ring range of module |
| borderSize | The thickness of the border |
| animationDisplay | Whether display 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

BUBBLE module

Description

Create a bubble plot

Usage

```
CircosBubble(
  modulename,
  compareGroup = 1,
  maxRadius = 200,
  minRadius = 50,
  blockStroke = TRUE,
  blockStrokeColor = "black",
  blockStrokeWidth = 1,
  blockFill = FALSE,
  blockFillColor = "white",
  bubbleMaxSize = 5,
  bubbleMinSize = 2,
  minColor = "red",
  maxColor = "green",
```

```

ValueAxisManualScale = FALSE,
ValueAxisMaxScale = 10,
ValueAxisMinScale = 0,
totalLayer = 1,
animationDisplay = FALSE,
animationTime = 2000,
animationDelay = 20,
animationType = "bounce",
data,
...
)

```

Arguments

| | |
|--|---|
| modulename | The name of the new module |
| compareGroup | The group number of this module in compare module |
| maxRadius, minRadius | The outer and inner ring range of module |
| blockStroke | Whether display the stroke between each bubble block |
| blockStrokeColor | Stroke color for block |
| blockStrokeWidth | Stroke width for block |
| blockFill | Whether fill a block or not |
| blockFillColor | The color for filling the block |
| bubbleMaxSize | The max size for bubble |
| bubbleMinSize | The min size for bubble |
| minColor | The color the bubble of min value |
| maxColor | The color the bubble of max value |
| ValueAxisManualScale | Whether manually control the scale of value |
| ValueAxisMaxScale, ValueAxisMinScale | The max and min scale value for manually control |
| totalLayer | The color and width for stroke |
| animationDisplay | Whether display animation |
| animationTime, animationDelay, animationType | The time, delay and display type for animation |
| data | A list of value in bubble plot with details including chr, start, end, value, name, layer, color and html. Details can be found on document |
| ... | Ignored |

Value

The module tracks for bubble modules

Examples

```

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

```

CircosChord

*CHORD module of NG-Circos***Description**

Create a chord module using a data matrix

Usage

```

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

```

Arguments

| | |
|-----------------|---|
| modulename | The name of the new module |
| innerRadius | The inner radius for chord circle |
| outerRadius | The outer radius for chord circle |
| fillOpacity | The opacity for filling color |
| fillStrokeWidth | The stroke width for chord |
| padding | The pad of chord |
| autoFillColor | Whether auto assign color for chord |
| fillColor | If not, manually assign color for chord |

| | |
|---------------------|--|
| fillStrokeColor | The color for stroke |
| outerARC | Whether display outer arc |
| outerARCAutoColor | If true, whether auto assign color for arc |
| outerARCColor | The manullay assigned color for arc |
| outerARCStrokeColor | The stroke color for arc |
| outerARCText | Whether display text for arc or not |
| data | A matrix-list of chord value with relationship details |
| ... | Ignored |

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

CHORD module of circosJS

Description

Create 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

CNV module

Description

Create a copy number variance module

Usage

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

Arguments

| | |
|--|--|
| modulename | The name of the new module |
| compareGroup | The group number of this module in compare module |
| maxRadius, minRadius | The outer and inner ring range of module |
| width | Width for CNV module |
| color | Color for CNV module |
| ValueAxisManualScale | Whether manually control the scale of value or not |
| ValueAxisMaxScale, ValueAxisMinScale | The max and min scale value for manually control |
| strokeColor, strokeWidth | The color and width for stroke |
| opacity | The opacity for module |
| animationDisplay | Whether display animationn |
| animationTime, animationDelay, animationType | The time, delay and display type for animationn |
| data | A list of CNV with details including start, end, value, link, color and html. Details can be found on document |
| ... | Ignored |

Value

The module tracks for cnv modules

Examples

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

CircosGene

GENE module

Description

Create a number of genes with different functional region

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

HEATMAP module

Description

Create a heatmap plot

Usage

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

Arguments

| | |
|----------------------|---|
| modulename | The name of the new module |
| compareGroup | The group number of this module in compare module |
| maxRadius, minRadius | Where the module should begin and end |
| minColor | The color for heatmap of min value |
| maxColor | The color for heatmap of max value |

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

Value

The module tracks for heatmap modules.

Examples

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

CircosHistogram

HISTOGRAM module

Description

Create a multi-layer histogram plot

Usage

```
CircosHistogram(
  modulename,
  compareGroup = 1,
  maxRadius = 108,
  minRadius = 95,
  ValueAxisManualScale = FALSE,
  ValueAxisMaxScale = 10,
  ValueAxisMinScale = 0,
  fillColor = "red",
  animationDisplay = FALSE,
```

```

    animationTime = 2000,
    animationDelay = 20,
    data,
    ...
)

```

Arguments

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

Value

The module tracks for histogram modules

Examples

```

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

```

CircosLegend

LEGEND module

Description

Simple legend annotation displayed in the visualization

Usage

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

Arguments

| | |
|-----------------------|--|
| modulename | The name of the new module |
| x, y | The coordinates of legend |
| title | The title for legend |
| size | Font size for title |
| weight | Font weight for title. Should be either "normal", "bold", "bolder" or "lighter" |
| GapBetweenGraphicText | Gap between icon and text in legend |
| GapBetweenLines | Gap between each two lines in legend |
| data | A list of legend with details including type, color, opacity, circleSize, rectSize, lineWidth, lineHeight, text, textSize and textWeight. Details can be found on document |
| ... | Ignored |

Value

The module tracks for legend modules.

Examples

```
legend1 <- list(type= "circle", color="#1E77B4",opacity="1.0",circleSize="8",text= "C.CK",
  textSize= "14",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

*LINE module***Description**

Create a multi-layer line plot

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

LINK module

Description

Create a link of two specific region in genome

Usage

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

Arguments

| | |
|--|---|
| modulename | The name of the new module |
| compareGroup | The group number of this module in compare module |
| radius | Radius of link circle |
| fillColor | Color for link |
| width | Width for link |
| type | Type of link, could be Q/S/T |
| displayLinkAxis | Whether display axis for link or not |
| axisColor | The color for axis |
| axisWidth | The width for axis |
| axisPad | The pad for axis |
| displayLinkLabel | Whether display label for link or not |
| labelColor | The color for label |
| labelSize | The size for label |
| labelPad | The pad for label |
| animationDisplay | Whether display animation |
| animationDirection | The direction of link animation, could be 1to2 or 2to1 |
| animationTime, animationDelay, animationType | The time, delay and display type for animation |
| data | A list of link with details including g1chr, g1start, g1end, g2chr, g2start, g2end, g1name, g2name, fusion, link and html. Details can be found on document |
| ... | Ignored |

Value

The module tracks for link modules

Examples

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

CircosLollipop *LOLLIPOP module*

Description

Create a lollipop plot

Usage

```
CircosLollipop(
  modulename,
  compareGroup = 1,
  fillColor = "#9400D3",
  secondColor = "#FFFFFF",
  pointType = "circle",
  circleSize = 2,
  diamondWidth = 10,
  diamondHeight = 5,
  rectWidth = 2,
  rectHeight = 2,
  stroke = TRUE,
  strokeColor = "#000000",
  strokeWidth = 0.5,
  lineAutoHeight = TRUE,
  lineAutoMaximumHeightZoomRate = 1,
  lineHeightRate = 0.75,
  lineWidth = 2,
  lineColor = "#000000",
  realStart = 0,
  ValueAxisManualScale = FALSE,
  ValueAxisMaxScale = 10,
  ValueAxisMinScale = 0,
  animationDisplay = FALSE,
  animationTime = 2000,
  animationDelay = 20,
  animationType = "bounce",
  data,
  ...
)
```

Arguments

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

| | |
|--|--|
| rectWidth, rectHeight | If rect, the width and height for lollipop |
| stroke | Whether display the stroke for lollipop |
| strokeColor, strokeWidth | The color and width for stroke |
| lineAutoHeight | Whether auto assign the height for each lollipop |
| lineAutoMaximumHeightZoomRate | If auto assign, the zoom rate for each lollipop |
| lineHeightRate | If manually assign, the rate of lollipop compared to real value |
| lineWidth, lineColor | The width and color for the line of lollipop |
| realStart | The real start position for data in genome |
| ValueAxisManualScale | Whether manually control the scale of value |
| ValueAxisMaxScale, ValueAxisMinScale | The max and min scale value for manually control |
| animationDisplay | Whether display animation |
| animationTime, animationDelay, animationType | The time, delay and display type for animation |
| data | A list of lollipop value with details including protein, chr, pos, strand, Cancer-TypeNumber, color, link, Consequence, AA_pos, AA_change, type, link and html. Details can be found on document |
| ... | Ignored |

Value

The module tracks for lollipop modules.

Examples

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

CircosModuleList *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>SCATTER module</i> |
|---------------|-----------------------|

Description

Create a point plot

Usage

```

CircosScatter(
  modulename,
  compareGroup = 1,
  radius = 140,
  innerCircleSize = 1,
  outerCircleSize = 5,
  innerCircleColor = "#F26223",
  outerCircleColor = "#F26223",
  innerPointType = "circle",
  outerPointType = "circle",
  innerrectWidth = 2,
  innerrectHeight = 2,
  outerrectWidth = 2,
  outerrectHeight = 2,
  outerCircleOpacity = 1,
  random_data = 0,
  animationDisplay = FALSE,
  animationInitialPositionX = 0,
  animationInitialPositionY = 0,
  animationTime = 2000,
  animationDelay = 20,
  animationType = "bounce",
  data,
  ...
)

```

Arguments

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

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

SNP module

Description

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

Usage

```

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

```

Arguments

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

| | |
|------|--|
| data | A list of SNP value with details including chr, pos, value, des, color, r2value, link, index, image and html. Details can be found on document |
| ... | Ignored |

Value

The module tracks for snp modules

Examples

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

CircosText

Text module

Description

Text for better explanation of other modules

Usage

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

Arguments

| | |
|--|---|
| modulename | The name of the new module |
| text | The details of text |
| x, y | The coordinates of the text |
| size | Font size |
| weight | Font weight. Should be either "normal", "bold", "bolder" or "lighter" |
| opacity | Font opacity |
| color | Font color |
| rotateRate | rotate rate for text |
| animationDisplay | Whether display animation or not |
| animationInitialSize | Initial text size in animation |
| animationInitialWeight | Initial text weight in animation |
| animationInitialColor | Initial text color in animation |
| animationInitialOpacity | Initial text opacity in animation |
| animationInitialPositionX, animationInitialPositionY | Initial text coordinates in animation(The parameter x,y will become the final position for text if animation displayed) |
| animationInitialRotate | Initial rotate rate in animation |
| animationTime, animationDelay, animationType | The time, delay and display type for animation |
| ... | Ignored |

Value

The module tracks for text modules.

Examples

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

CircosWig

WIG module

Description

Create a multi-layer line plot

Usage

```

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

```

Arguments

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

Value

The module tracks for wig modules

Examples

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

cnvExample

Cnv module example data

Description

The data is in matrix with column names

Usage

```
cnvExample
```

Format

A data frame with 7 columns:

chr chromosome

start start position

end end position

value value

link hyperlink for cnv

color color

html The external html language

geneExample

Gene plot example data

Description

The data is in matrix with column names

Usage

```
geneExample
```

Format

A data frame with 8 columns:

chr chromosome
strand strand, - or +
start start position
end end position
type region type, gene or utr or cds
name name for description
link hyperlink for this region
html The external html language

heatmapExample

Heatmap plot example data

Description

The data is in matrix with column names

Usage

heatmapExample

Format

A data frame with 7 columns:

chr chromosome
start start position
end end position
name name for description
value value
layer layer number
html The external html language

| | |
|---------------|--------------------------|
| hg19_ideogram | <i>Ideogram for hg19</i> |
|---------------|--------------------------|

Description

The ideogram for human hg19 reference including the color for each region

Usage

hg19_ideogram

Format

A data frame with 4 columns:

chr chromosome

start start position

end end position

color color

| | |
|------------------|------------------------------------|
| 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 | <i>Scatter plot example data</i> |
|----------------|----------------------------------|

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

Index

* datasets

- arcExample, 2
 - bubbleExample, 3
 - chord.pExample, 3
 - chordExample, 4
 - cnvExample, 77
 - geneExample, 77
 - heatmapExample, 78
 - hg19_ideogram, 79
 - histogramExample, 79
 - lineExample, 80
 - linkExample, 80
 - lollipopExample, 81
 - scatterExample, 81
 - snpExample, 82
 - wigExample, 83
 - + .CircosModuleList (CircosModuleList), 70
 - .CircosModuleList (CircosModuleList), 70
- arcExample, 2
- bubbleExample, 3
- chord.pExample, 3
- chordExample, 4
- Circos, 5
- CircosArc, 52
- CircosAuxLine, 53
- CircosBackground, 54
- CircosBubble, 55
- CircosChord, 57
- CircosChord.p, 58
- CircosCnv, 59
- CircosGene, 60
- CircosHeatmap, 62
- CircosHistogram, 63
- CircosLegend, 64
- CircosLine, 66
- CircosLink, 67
- CircosLollipop, 69
- CircosModuleList, 70
- CircosScatter, 71
- CircosSnp, 72
- CircosText, 74
- CircosWig, 75
- cnvExample, 77
- geneExample, 77
- heatmapExample, 78
- hg19_ideogram, 79
- histogramExample, 79
- lineExample, 80
- linkExample, 80
- lollipopExample, 81
- scatterExample, 81
- snpExample, 82
- wigExample, 83