Node images

Version 1.0.1, by Giorgio Bianchini

Description: Draws images at multiple nodes.

Module type: Plotting

Module ID: `86fab195-2863-43ed-bbf5-ed12a3cc3994`

This module can be used to draw images at multiple nodes, loading them from an archive loaded from an attachment.

Parameters

Attachment

Control type: Attachment

This parameter is used to specify the attachment containing the image files. This should be an archive in ZIP, TAR or TAR.GZ format that contains the images.

Image format

Control type: Drop-down list

Default value: SVG

Possible values:

- SVG
- PDF
- XPS
- CBZ
- PNG
- JPEG
- BMP
- GIF
- TIFF
- PNM
- PAM
- EPUB
- FB2

This parameter selects the format of the images. Choosing the wrong format will cause the

images not to be drawn on the plot. All images must be in the same format.

Scale factor

Control type: Number spin box

Default value: 1

Range: [0, +∞)

This parameter determines the scale factor to use when drawing a raster(ised) image. It has no effect if the image is in SVG format. For image formats such as PDF and XPS, this determines the rasterisation resolution; thus, increasing this value may lead to a sharper image being drawn.

Image name

Control type: Attribute selector

Default value: Name

This parameter specifies the attribute that contains the image names for each node. The image name should be the name of a file within the Attachment file; the file extension can be omitted, as long as it is exactly the same as the specified Image format (i.e., if the attribute value is `file` and the image format is `JPEG`, then `file.jpeg` will work, but `file.jpg` will not). Subfolders within the archive are supported, but the attribute values should include the full path to the file, with `/` as the directory separator (for example, if the archive contains a folder called `images`, which contains a file called `taxon.svg`, the attribute value should be `images/taxon.svg` or `images/taxon`).

Anchor

Control type: Drop-down list

Default value: Node

Possible values:

- Node
- Mid-branch
- Centre of leaves
- Origin

This parameter determines the anchor for the image. If the value is `Node`, the image is anchored to the corresponding node. If the value is `Mid-branch`, the image is aligned with the midpoint of the branch connecting the node to its parent. If the value is `Centre`

`of leaves` or `Origin`, the alignment depends on the current Coordinates module:

Coordinates module	Centre of leaves	Origin
Rectangular	The smallest rectangle containing all the leaves that descend from the current node is computed. The anchor corresponds to the centre of this rectangle.	A point corresponding to the projection of the node on a line perpedicular to the direction in which the tree expands and passing through the root node. Usually (i.e. if the tree is horizontal), this means a point with the same horizontal coordinate as the root node and the same vertical coordinate as the current node.
Radial	The smallest rectangle containing all the leaves that descend from the current node is computed. The anchor corresponds to the centre of this rectangle.	The root node.
Circular	The centre of leaves is computed using polar coordinates: the minimum and maximum distance of the leaves that descend from the current node are computed, as well as the minimum and maximum angle. The anchor has a distance corresponding to the average of the minimum and maximum distance, and an angle corresponding to the average of the maximum and minimum angle.	The root node.

Orientation reference

Control type: Drop-down list

Default value: Branch

Possible values:

- Horizontal
- Branch

This parameter determines the direction along which the offset of the image from the anchor is computed. If the value is `Horizontal`, the `X` coordinate of the offset corresponds to an horizontal displacement and the `Y` coordinate to a vertical displacement; if the value is `Branch`, the `X` coordinate corresponds to a shift in the direction of the branch, while the `Y` coordinate corresponds to a shift in a direction perpendicular to the branch.

Rotation

Control type: Slider

Default value: 0°

Range: [0°, 360°]

This parameter specifies how much the image should be rotated compared to the reference. The rotation always happens around the centre of each image.

Alignment

Control type: Drop-down list

Default value: Middle-center

Possible values:

- Top-left
- Top-center
- Top-right
- Middle-left
- Middle-center
- Middle-right
- Bottom-left
- Bottom-center
- Bottom-right

This parameter controls to which point on the image the selected Anchor corresponds.

X

Control type: Number spin box (by node)

Default value: 0

Range: (-∞, +∞)

Default attribute: `ImageX`

This parameter determines how much the image is shifted from the anchor point along the direction determined by the Orientation reference.

Y

Control type: Number spin box (by node)

Default value: 0

Range: (-∞, +∞)

Default attribute: `ImageY`

This parameter determines how much the image is shifted from the anchor point along the direction perpendicular to the one determined by the Orientation reference.

Width

Control type: Number spin box (by node)

Default value: 100

Range: [0, +∞)

Default attribute: `ImageWidth`

This parameter determines how much the image is stretched along the horizontal axis.

Height

Control type: Number spin box (by node)

Default value: 100

Range: [0, +∞)

Default attribute: `ImageHeight`

This parameter determines how much the image is stretched along the vertical axis.

Further information

All images within the attachment must be in the same format. If they are in SVG format, they are loaded as vector images (most features are supported, but there are some that are not), other formats are loaded as raster images.

Even though PDF and XPS are vector formats, images in these formats are rasterised before being drawn on the tree. The Scale factor parameter can be used to determine the resolution of the rasterisation.

The Attachment should be an archive in ZIP, TAR or TAR.GZ format (detected automatically). Files within the archive can be organised in subfolders, but the Image name attribute needs to include the full path to each file.