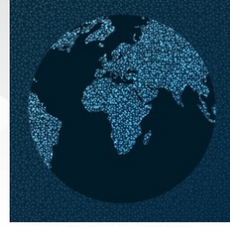
Cartography : :Thematic cartography package



Description:

The purpose of cartography is to visualize the thematic maps. It also offers several features that improve the graphic presentation of maps. It uses *sf* to produce base graphics.

```
install.packages("cartography")
library(cartography)
library(sf)
library(ggplot)
```

Transformation:

Polygons to Grid:

```
mtq_grid <- getGridLayer(x = mtq,
        cellsize = median,
        type = "hexagonal",
        var = "...")
```

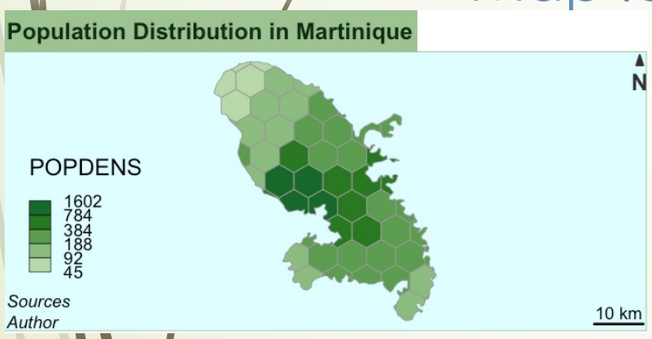
Polygons to Pencil Layer:

```
mtq_pencil <- getPencilLayer(x = mtq)
```

Polygons to Border:

```
mtq.borders <- getBorders(x = mtq)
```

Map layout:



Full layout:

```
layoutLayer(title = " " ,
        sources = " " ,
        author = " ",
        frame = TRUE, north = TRUE,
tabtitle= TRUE, scale = 5)
        theme =" " , )
```

North arrow:

```
north( pos = "topright" )
```

Scale Bar:

```
Barscale(size = 10)
```

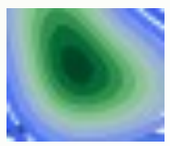
Symbology:

Typology:

```
typoLayer(x = mtq, var " ")
```

Choropleth:

```
choroLayer(x =mtq,
var = " ", method = " ", nclass= ,
col = carto.pal(pal1= " ", n1 = 5)
```



Isopleth:

```
library(GADMTools)
isopleth(mtq, data= " ",
palette = (RColorBrewer: :brewer.pal() )
```

Label map:

```
labelLayer(x=mtq,
txt =  "LIBGEO", col= "black", cex=
0.5,  font=1, halo= TRUE, bg=
"white",  overlap= FALSE)
```

Proportional symbols:

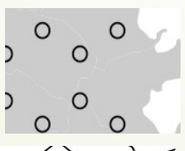
```
propSymbolsLayer(x=mtq, var=" ",
inches= 0.3, symbols="square")
```

Double proportional symbols:

```
propTrianglesLayer(x=mtq, var1 = " ",
var2= " " )
```

Link map:

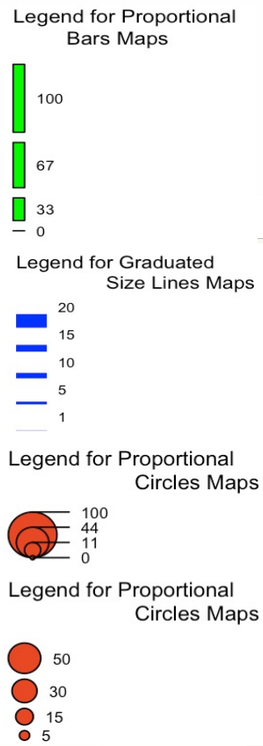
```
getLinkLayer(x=mtq,
xid= " ", df = , dfid= c("", "" )
```



Hatched Layer:

```
hatchedLayer(mtq, "dot" )
        (mtq, "diamond",
density =0.5)
```

Legends:



~Legend for Proportional Bars Maps~

legendBarsSymbols(pos="topleft", title.txt ="Legend for Proportional Bars Maps", title.cex =0.8, cex= 1, border= "grey", lwd= 1, values.cex= 0.6, var= c(), inches= 0.5, col= "green", values.rnd=0, style="e")

~Legend for Graduated Size Lines Maps~

legendGradLines(title.txt = "Legend for Graduated Size Lines Maps", pos = "topright", title.cex = 0.8, values.cex = 0.6, breaks = c(0,1,5,10,15,20), lwd = c(0.2,2,4,5,10), col ="blue", values.rnd =2)

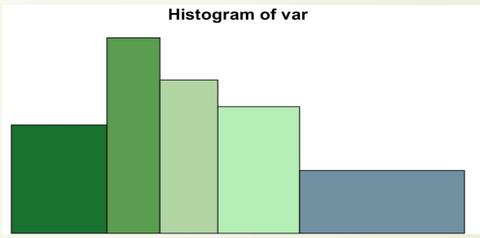
~Legend for Proportional Cicles Maps~

legendCirclesSymbols(pos = "topleft", inches = 0.1, var = c(min(0), max(100)), title.txt ="Legend for Proportional Circles Maps")

legendCirclesSymbols(pos = "left", var = c(min(5), max(50)), inches = 0.1, style = "e", title.txt = "Legend for Proportional Circles Maps")

See more of the legends: Legend Typo, Hatched, Waffle, Choro, and Prop triangles.

Classifications:



Quantile intervals

```
breaks <- getBreaks(v = var, nclass = 6, method = "quantile")
pal <- carto.pal("green.pal",3, "turquoise.pal", 3)
hist(var, probability = TRUE, breaks = breaks, col = "pal")
```

Options are: sd, equal, pretty, kmeans, fisher, jenks and so on..

Color pallets:

```
Carto.pal(pal1= "blue.pal", n1=10, pal2= "green.pal", n2=10,
middle =TRUE, transparency= TRUE)
```

Also, check out RcolorBrewer package.