

Package ‘rvg’

November 11, 2019

Type Package

Title R Graphics Devices for Vector Graphics Output

Version 0.2.2

Description Vector Graphics devices for Microsoft PowerPoint and Excel. Functions extending package 'officer' are provided to embed 'DrawingML' graphics into 'Microsoft PowerPoint' presentations and 'Microsoft Excel' workbooks.

License GPL-3

Encoding UTF-8

Depends R (>= 3.0)

Imports grDevices, Rcpp (>= 0.12.12), officer (>= 0.3.6), gdtools (>= 0.2.1), xml2 (>= 1.0.0), rlang

LinkingTo Rcpp, gdtools

Suggests htmltools, testthat, covr, grid, knitr

URL <https://github.com/davidgohel/rvg>

BugReports <https://github.com/davidgohel/rvg/issues>

RoxygenNote 6.1.1

VignetteBuilder knitr

NeedsCompilation yes

Author David Gohel [aut, cre],
Bob Rudis [ctb] (the javascript code used by function set_attr),
Francois Brunetti [ctb] (clipping algorithms)

Maintainer David Gohel <david.gohel@ardata.fr>

Repository CRAN

Date/Publication 2019-11-11 20:10:02 UTC

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body_add_vg	<i>add a plot output as vector graphics into a Word object</i>
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Description

produces a vector graphics output from R plot instructions and add the result in an Word document object produced by [read_docx](#).

Usage

```
body_add_vg(x, code, pos = "after", ...)
```

Arguments

x	an rdocx object produced by <code>officer::read_docx</code>
code	plot instructions
pos	where to add the new element relative to the cursor, one of "after", "before", "on".
...	arguments passed on to dml_docx .

Note

The function is maintained but using it should be avoided: Word text boxes, the elements used to put text in a graphic, are adding extra space on top and bottom of the shape. As there is no clear rule available to handle that, it makes impossible to compute what should be the exact position of a text. This can affect the whole rendering of the graphic.

The function should then be considered as a failed experience. An alternative is to use EMF format, this will not allow editing the graphic but the display is made as vector graphic.

Examples

```
library(officer)
x <- read_docx()
x <- body_add_vg(x, code = barplot(1:5, col = 2:6) )
print(x, target = "vg.docx")
```

dml

Wrap plot instructions for DrawingML plotting in Powerpoint

Description

A simple wrapper to mark the plot instructions as Vector Graphics instructions. It produces an object of class 'dml' with a corresponding method [ph_with](#).

The function enable usage of any R plot with argument code and with ggplot objects with argument ggobj.

Usage

```
dml(code, ggobj = NULL, bg = "white", fonts = list(),
     pointsize = 12, editable = TRUE, ...)
```

Arguments

code	plotting instructions
ggobj	ggplot object to print. argument code will be ignored if this argument is supplied.
bg, fonts, pointsize, editable	Parameters passed to dml_pptx
...	unused arguments

See Also

[ph_with.dml](#)

Examples

```
anyplot = dml(code = barplot(1:5, col = 2:6), bg = "wheat")

library(officer)
doc <- read_pptx()
doc <- add_slide(doc, "Title and Content", "Office Theme")
doc <- ph_with(doc, anyplot, location = ph_location_fullsize())
fileout <- tempfile(fileext = ".pptx")
# fileout <- "vg.pptx"
print(doc, target = fileout)
```

dml_docx

DrawingML graphic device for Microsoft Word

Description

Graphics devices for Microsoft Word DrawingML format.

Usage

```
dml_docx(file = "Rplots.dml", width = 6, height = 6, bg = "white",
  fonts = list(), pointsize = 12, editable = TRUE, id = 1L,
  last_rel_id = 1L, raster_prefix = "raster_", standalone = TRUE)
```

Arguments

file	DrawingML file.
height, width	Height and width in inches.
bg	Default background color for the plot (defaults to "white").
fonts	Named list of font names to be aliased with fonts installed on your system. If unspecified, the R default families sans, serif, mono and symbol are aliased to the family returned by <code>match_family()</code> .
pointsize	default point size.
editable	should vector graphics elements (points, text, etc.) be editable.
id	specifies a unique identifier (integer) within the document that will contain the DrawingML instructions.
last_rel_id	specifies the last unique identifier (integer) within relationship file that will be used to reference embedded raster images if any.
raster_prefix	string value used as prefix for png files produced when raster objects are printed on the graphical device.
standalone	produce a standalone drawingml file? If FALSE, omits xml header and namespaces.

Note

Text rendering is not optimal, this device should not be considered as a valid R graphical device.

The DrawingML implementation for 'Microsoft Word' is different from standard DrawingML particularly with text boxes. The major point is that the exact size and position of text boxes cannot be exactly defined regarding to text widths and heights.

Autofit option has been set as a workaround, this moves text slightly on the produced graphic when edited in 'Microsoft Word' but this makes sure the text can be read.

This function is deprecated and should not be used as it will be removed in version > 0.1.9.

See Also[Devices](#)**Examples**

```
dml_docx( file = tempfile() )
plot(1:11,(-5:5)^2, type='b', main="Simple Example")
dev.off()
```

dml_pptx

*DrawingML graphic device for Microsoft PowerPoint***Description**

Graphics devices for Microsoft PowerPoint DrawingML format.

Usage

```
dml_pptx(file = "Rplots.dml", width = 6, height = 6, offx = 1,
  offy = 1, bg = "white", fonts = list(), pointsize = 12,
  editable = TRUE, id = 1L, last_rel_id = 1L,
  raster_prefix = "raster_", standalone = TRUE)
```

Arguments

file	the file where output will appear.
height, width	Height and width in inches.
offx, offy	top and left origin of the plot
bg	Default background color for the plot (defaults to "white").
fonts	Named list of font names to be aliased with fonts installed on your system. If unspecified, the R default families sans, serif, mono and symbol are aliased to the family returned by match_family() . When you use specific fonts, you will need that font installed on your system. This can be check with package gdttools and function <code>gdttools::font_family_exists()</code> . An example: <code>list(sans = "Roboto", serif = "Times", mono = "Courier")</code> .
pointsize	default point size.
editable	should vector graphics elements (points, text, etc.) be editable.
id	specifies a unique identifier (integer) within the slide that will contain the DrawingML instructions.
last_rel_id	specifies the last unique identifier (integer) within relationship file that will be used to reference embedded raster images if any.
raster_prefix	string value used as prefix for png files produced when raster objects are printed on the graphical device.
standalone	produce a standalone drawingml file? If FALSE, omits xml header and namespaces.

See Also[Devices](#)**Examples**

```
dml_pptx( file = tempfile() )
plot(1:11,(-5:5)^2, type='b', main="Simple Example")
dev.off()
```

dml_xlsx*DrawingML graphic device for Microsoft Excel*

Description

Graphics devices for Microsoft Excel DrawingML format.

Usage

```
dml_xlsx(file = "Rplots.dml", width = 6, height = 6, offx = 1,
  offy = 1, bg = "white", fonts = list(), pointsize = 12,
  editable = TRUE, id = 1L, last_rel_id = 1L,
  raster_prefix = "raster_", standalone = TRUE)
```

Arguments

<code>file</code>	the file where output will appear.
<code>height, width</code>	Height and width in inches.
<code>offx, offy</code>	top and left origin of the plot
<code>bg</code>	Default background color for the plot (defaults to "white").
<code>fonts</code>	Named list of font names to be aliased with fonts installed on your system. If unspecified, the R default families <code>sans</code> , <code>serif</code> , <code>mono</code> and <code>symbol</code> are aliased to the family returned by <code>match_family()</code> .
<code>pointsize</code>	default point size.
<code>editable</code>	should vector graphics elements (points, text, etc.) be editable.
<code>id</code>	specifies a unique identifier (integer) within the slide that will contain the DrawingML instructions.
<code>last_rel_id</code>	specifies the last unique identifier (integer) within relationship file that will be used to reference embedded raster images if any.
<code>raster_prefix</code>	string value used as prefix for png files produced when raster objects are printed on the graphical device.
<code>standalone</code>	produce a standalone drawingml file? If FALSE, omits xml header and namespaces.

See Also[Devices](#)**Examples**

```
dml_xlsx( file = tempfile() )
plot(1:11,(-5:5)^2, type='b', main="Simple Example")
dev.off()
```

`ph_with.dml`*add a plot output as vector graphics into a PowerPoint object*

Description

produces a vector graphics output from R plot instructions stored in a [dml](#) object and add the result in an rpptx object produced by [read_pptx](#).

Usage

```
## S3 method for class 'dml'
ph_with(x, value, location, ...)
```

Arguments

<code>x</code>	a pptx device
<code>value</code>	dml object
<code>location</code>	a location for a placeholder.
<code>...</code>	Arguments to be passed to methods

Examples

```
anyplot = dml(code = barplot(1:5, col = 2:6), bg = "wheat")

library(officer)
doc <- read_pptx()
doc <- add_slide(doc, "Title and Content", "Office Theme")
doc <- ph_with(doc, anyplot, location = ph_location_fullsize())

fileout <- tempfile(fileext = ".pptx")
print(doc, target = fileout)
```

 ph_with_vg

add a plot output as vector graphics into a PowerPoint object

Description

produces a vector graphics output from R plot instructions and add the result in a PowerPoint document object produced by [read_pptx](#).

These functions will be deprecated and function [ph_with.dml](#) should be used instead.

Usage

```
ph_with_vg(x, code, ggobj = NULL, type = "body", index = 1, ...)
```

```
ph_with_vg_at(x, code, ggobj = NULL, left, top, width, height, ...)
```

Arguments

x	an rpptx object produced by <code>officer::read_pptx</code>
code	plot instructions
ggobj	ggplot objet to print. argument code will be ignored if this argument is supplied.
type	placeholder type
index	placeholder index (integer). This is to be used when a placeholder type is not unique in the current slide, e.g. two placeholders with type 'body'.
...	arguments passed on to dml_pptx .
left, top	left and top origin of the plot on the slide in inches.
height, width	Height and width in inches.

 xl_add_vg

add a plot output as vector graphics into an Excel object

Description

produces a vector graphics output from R plot instructions and add the result in an Excel sheet. by [read_xlsx](#).

Usage

```
xl_add_vg(x, sheet, code, left, top, width, height, ...)
```


Arguments

<code>x</code>	an <code>rxlsx</code> object produced by <code>officer::read_xlsx</code>
<code>sheet</code>	sheet label/name
<code>code</code>	plot instructions
<code>left, top</code>	left and top origin of the plot on the slide in inches.
<code>height, width</code>	Height and width in inches.
<code>...</code>	arguments passed on to dml_xlsx .

Examples

```
library(officer)
my_ws <- read_xlsx()
my_ws <- xl_add_vg(my_ws, sheet = "Feuil1",
  code = barplot(1:5, col = 2:6), width = 6, height = 6, left = 1, top = 2 )
print(my_ws, target = "vg.xlsx")
```

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