

Package ‘vmsbase’

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Description

VMSbase package gives you the tools you need to process, analyze and plot your VMS and Logbook data. VMSbase is equipped by Viewer Tools to visually inspect data at different steps of the analyses and to produce effective outputs for reports and scientific publications. Viewers are conceived to show the VMS pings, to visualize single or multiple tracks for fishing vessels, or to represent the VMS data on Google Viewer, so that the user can produce easy to interpret and more realistic visualization of both fishing effort and effort behaviour. VMSbase represents the implementation of several R routines which have been developed by the "Tor Vergata" University of Rome Team involved in the Italian National Program for the Data Collection Framework for Fisheries Data between 2009-2012.

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vmsbase-package	3
Assign_Area	4
bathymetry	4
CountMap	5
get_wdgt_vals	5
gui_dcf_ind	6
gui_join_lb_vms	7
gui_lb_db_create	7
gui_lb_db_stat	8
gui_lb_editraw	9
gui_lb_met_cla	9
gui_lb_met_dis	10
gui_lb_met_edi	11
gui_mark_fis_poi	11
gui_out_grid	12
gui_vms_db_are	13
gui_vms_db_clean	13
gui_vms_db_create	14
gui_vms_db_cut	15
gui_vms_db_dep	15
gui_vms_db_intr	16
gui_vms_db_sel	17
gui_vms_db_stat	17
gui_vms_editraw	18
gui_vms_met_pred	19
gui_vms_save_bat	19
gui_vms_view_intrp	20
gui_vms_view_ping	21
gui_vms_view_track	21
gui_vms_viz_adv	22
harbCoo	23
Join2shp	23
kno2kmh	24
latex2dec	24
log_Cla	25
log_DB	25
log_File	25
lonsex2dec	26
plotNet	26
polymap	27
que_vms_DB	27
rad2deg	28
saveRawLogBook	28
saveRawVms	29
set_wdgt_sel	29
set_wdgt_vals	30

turn_wdgt_off	30
turn_wdgt_on	31
vms_DB	31
vms_File	32

Index 33

vmsbase-package	<i>VMSbase Package</i>
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Description

VMSbase package gives you the tools you need to process, analyze and plot your VMS and Logbook data. With VMSbase you can easily visualize data in different ways, unearth geographic patterns, and convey that information in a straightforward manner.

Details

VMSbase provides everything you need to extract information from VMS data with a single, easy-to-use package which combines the potentiality of R with a user-friendly graphical interface.

VMSbase is equipped by Viewer Tools to visually inspect data at different steps of the analyses and to produce effective outputs for reports and scientific publications. Viewers are conceived to show the VMS pings, to visualize single or multiple tracks for fishing vessels, or to represent the VMS data on Google Viewer, so that the user can produce easy to interpret and more realistic visualization of both fishing effort and effort behaviour.

VMSbase handles data in Structured Query Language (SQL) database, to increase memory efficiency and loading or storing of large dataset.

All the tools have their visual interfaces and it is possible to visually inspect VMS and Logbook databases, which are progressively modified through the analyses.

Some analyses provided by VMSbase need external resources in order to be applied. I.e. the identification of on land and in harbours VMS pings requires dry land and harbours maps, while the assignment of VMS pings to specific sea areas is based on one among different partitionings.

VMSbase represents the implementation of several R routines which have been developed by the "Tor Vergata" University of Rome Team involved in the Italian National Program for the Data Collection Framework for Fisheries Data between 2009-2012.

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References

If you need help in installing or using VMSbase, please write to: support@vmsbase.org

If you are interested in collaborating with us, please write to: contact@vmsbase.org

Assign_Area *Assign Area - Internal Function*

Description

The Assign_Area is the internal function that implements the Assign Area routine.

Usage

```
Assign_Area(evt, box)
```

Arguments

evt	The VMS Track Data
box	The Sea Areas Shape File Box

Details

This function, with a VMS DB Track and a Sea Areas Shape File, (see [gui_vms_db_are](#)), finds the Sea Area that contain the VMS DB Track.

Value

This function does not return a value.

References

free text reference Pointers to the literature related to this object.

See Also

[gui_vms_db_are](#)

bathymetry *Bathymetry rData File class*

Description

Bathymetry rData File reference Class

- path character The Path to the Bathymetry rData file
- data XYZ-matrix The loaded Bathymetry data

Details

bathymetry class is a reference class for the Bathymetry rData file.

CountMap	<i>Effort Count - Internal Function</i>
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Description

The CountMap is the internal function that implements the Effort Count routine.

Usage

```
CountMap(xy, GridPS)
```

Arguments

xy	The VMS Fishing Point Data
GridPS	The Sea Area Grid File

Details

This function, with a VMS DB Track and a Sea Areas Shape File, (see [gui_out_grid](#)), computes the Effort Count Vector.

Value

This function does not return a value.

References

free text reference Pointers to the literature related to this object.

See Also

[gui_out_grid](#)

get_wdgt_vals	<i>Get Widget Values - Internal Function</i>
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Description

The get_wdgt_vals is the internal function that implements the routine to get the current value from all the widgets in the list.

Usage

```
get_wdgt_vals(widget_list)
```

Arguments

widget_list A list of widgets

Details

This function, with a widgets list, get the current value from all the widgets in the list as a vector of characters.

See Also

[set_wdgt_vals](#); [set_wdgt_sel](#)

gui_dcf_ind

DCF indicators GUI

Description

The `gui_dcf_ind` function implements the graphical user interface for the DCF indicators computation routine.

Usage

```
gui_dcf_ind()
```

Details

This function, with a count vector generated by [gui_out_grid](#), computes the DCF indicators 5 and 6.

Value

This function does not return a value.

References

free text reference Pointers to the literature related to this object.

See Also

[gui_out_grid](#)

gui_join_lb_vms	<i>VMS-LB Match GUI</i>
-----------------	-------------------------

Description

The `gui_join_lb_vms` function implements the graphical user interface for the VMS-LB Matching routine.

Usage

```
gui_join_lb_vms(lb_db_name = "", vms_db_name = "")
```

Arguments

<code>vms_db_name</code>	The path of a VMS DataBase
<code>lb_db_name</code>	The path of a LogBook DataBase

Details

This function, with both VMS and LogBook databases, performs a VMS-LB track match based on vessel, track and time conformity.

Value

This function does not return a value.

References

free text reference Pointers to the literature related to this object.

gui_lb_db_create	<i>LogBook DataBase Creation GUI</i>
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Description

The `gui_lb_db_create` function implements the graphical user interface for the creation of a logbook database. This function, with an edited logbook dataset (see [gui_lb_editraw](#)), creates a new logbook database.

Usage

```
gui_lb_db_create()
```

Value

This function does not return a value. After the execution a logbook database will be deployed.

References

free text reference Pointers to the literature related to this object.

See Also

[gui_lb_editraw](#)

gui_lb_db_stat	<i>LogBook DB Status GUI</i>
----------------	------------------------------

Description

The `gui_lb_db_stat` function implements the graphical user interface for the LogBook DB Status viewer.

Usage

```
gui_lb_db_stat(lb_db_name = "")
```

Arguments

`lb_db_name` The path of a LogBook DataBase

Details

This function, with a LogBook database, shows the current LogBook DB status.

Value

This function does not return a value.

References

free text reference Pointers to the literature related to this object.

gui_lb_editraw	<i>Raw LogBook Editing GUI</i>
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Description

The `gui_lb_editraw` function implements the graphical user interface for the editing of a raw logbook dataset

Usage

```
gui_lb_editraw()
```

Details

This function, with a raw logbook dataset, produces an edited version of it. The user must select, for each mandatory field, the column name where the data is stored.

Value

This function does not return a value. After the execution the user is asked where to put the edited file.

References

free text reference Pointers to the literature related to this object.

gui_lb_met_cla	<i>LogBook Metier Classification GUI</i>
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Description

The `gui_lb_met_cla` function implements the graphical user interface for the LogBook metier classification

Usage

```
gui_lb_met_cla(lb_db_name = "")
```

Arguments

`lb_db_name` The path of a LogBook DataBase

Details

This function, with a LogBook DB and a Metier Discovery object (see [gui_lb_met_dis](#)), computes a fuzzy classification of the logbooks in the selected db according to the data provided from the Metier Discovery object.

Value

This function does not return a value. After the execution the computed result will be added to the logbook database in the 'lb_cla' table.

References

free text reference Pointers to the literature related to this object.

See Also

[gui_lb_met_dis](#)

gui_lb_met_dis

LogBook Metier Discovery GUI

Description

The gui_lb_met_dis function implements the graphical user interface for the LogBook Metier Discovery

Usage

```
gui_lb_met_dis(lb_db_name = "")
```

Arguments

lb_db_name The path of a LogBook DataBase

Details

This function, with a logbook database, performs a clustering over the whole db calculating the distance or dissimilarity between every observation in the sample.

Value

This function does not return a value. After the execution the user is asked where to save the result file.

References

free text reference Pointers to the literature related to this object.

gui_lb_met_edi	<i>Metier Editing GUI</i>
----------------	---------------------------

Description

The gui_lb_met_edi function implements the graphical user interface for the editing of a LogBook Metier file

Usage

```
gui_lb_met_edi()
```

Details

In this gui, with a LogBook Metier file, the user can change the simple discovery ordering of the clusters to a corresponding international metier code.

Value

This function does not return a value. After the execution, the edited names will be added to the LogBook Metier file.

References

free text reference Pointers to the literature related to this object.

gui_mark_fis_poi	<i>Mark Fishing Points GUI</i>
------------------	--------------------------------

Description

The gui_mark_fis_poi function implements the graphical user interface for the Fishing Point Marking routine.

Usage

```
gui_mark_fis_poi(vms_db_name = "", harb_file_name = "")
```

Arguments

vms_db_name The path of a VMS DataBase
harb_file_name The path of a shape file with harbours point data

Details

This function, with a VMS database and a shape file with harbours points, performs a filtered search over the whole db assigning fishing status to the vms interpolated data.

Value

This function does not return a value.

References

free text reference Pointers to the literature related to this object.

gui_out_grid	<i>VMS Effort Gridding GUI</i>
--------------	--------------------------------

Description

The `gui_out_grid` function implements the graphical user interface for the VMS Effort Gridding

Usage

```
gui_out_grid(vms_db_name = "")
```

Arguments

`vms_db_name` The path of a VMS DataBase

Details

This function, with a VMS DB and a Grid Sea Area Map shape file, computes the total fishing effort (in hours) over each cell of the submitted grid, relative to the selected metier

Value

This function does not return a value. The result count will be plotted on the submitted grid. The user can both save the result count vector as an `r` object (necessary for [gui_dcf_ind](#)), or the annotated grid shape file.

References

free text reference Pointers to the literature related to this object.

See Also

[gui_dcf_ind](#)

gui_vms_db_are	<i>VMS DB Area Assignment GUI</i>
----------------	-----------------------------------

Description

The gui_vms_db_are function implements the graphical user interface for the VMS Assign Area routine.

Usage

```
gui_vms_db_are(vms_db_name = "")
```

Arguments

vms_db_name The path of a VMS DataBase

Details

This function, with a VMS database, assigns areas to VMS tracks according to median positions.

Value

This function does not return a value.

References

free text reference Pointers to the literature related to this object.

gui_vms_db_clean	<i>VMS DB Clean GUI</i>
------------------	-------------------------

Description

The gui_vms_db_clean function implements the graphical user interface for the VMS DataBase Cleaning routine.

Usage

```
gui_vms_db_clean(vms_db_name = "", map_file_name = "", harb_file_name = "")
```

Arguments

vms_db_name The path of a VMS DataBase
map_file_name The path of a shape file with land polygon data
harb_file_name The path of a shape file with harbours point data

Details

This function, with a VMS database and two shape files with land polygon and harbours points, performs a filtered search over the whole db assigning warning status to the vms raw data.

Value

This function does not return a value.

References

free text reference Pointers to the literature related to this object.

<code>gui_vms_db_create</code>	<i>VMS DataBase Creation GUI</i>
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Description

The `gui_vms_db_create` function implements the graphical user interface for the creation of a VMS DataBase.

Usage

```
gui_vms_db_create()
```

Details

This function, with an edited vms dataset (see [gui_vms_editraw](#)), creates a new VMS DataBase.

Value

This function does not return a value. After the execution a VMS DataBase will be deployed.

References

free text reference Pointers to the literature related to this object.

See Also

[gui_vms_editraw](#)

gui_vms_db_cut	<i>VMS DB Cut GUI</i>
----------------	-----------------------

Description

The `gui_vms_db_cut` function implements the graphical user interface for the VMS Track cutting routine.

Usage

```
gui_vms_db_cut(vms_db_name = "")
```

Arguments

`vms_db_name` The path of a VMS DataBase

Details

This function, with a VMS cleaned database (see [gui_vms_db_clean](#)), assign track numbers to the raw pings of each vessel in the VMS DB.

Value

This function does not return a value.

References

free text reference Pointers to the literature related to this object.

See Also

[gui_vms_db_clean](#)

gui_vms_db_dep	<i>VMS DB Depth Assignment GUI</i>
----------------	------------------------------------

Description

The `gui_vms_db_dep` function implements the graphical user interface for the VMS Assign Depth routine.

Usage

```
gui_vms_db_dep(vms_db_name = "")
```

Arguments

vms_db_name The path of a VMS DataBase

Details

This function, with a VMS database, assigns depths to VMS interpolated points according to positions on the 3D spline of XYZ bathymetry data downloaded from NOAA servers.

Value

This function does not return a value.

References

free text reference Pointers to the literature related to this object.

gui_vms_db_intr *VMS DB Interpolation GUI*

Description

The `gui_vms_db_intr` function implements the graphical user interface for the VMS Track Interpolation routine.

Usage

```
gui_vms_db_intr(vms_db_name = "")
```

Arguments

vms_db_name The path of a VMS DataBase

Details

This function, with a VMS cleaned and cutted database (see [gui_vms_db_cut](#) and [gui_vms_db_clean](#)), interpolates track data of each vessel in the VMS DB.

Value

This function does not return a value.

References

free text reference Pointers to the literature related to this object.

See Also

[gui_vms_db_cut](#) [gui_vms_db_clean](#)

gui_vms_db_sel	<i>VMS DataBase Select GUI</i>
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Description

The `gui_vms_db_sel` function implement the graphical user interface for the VMS DataBase Select routine.

Usage

```
gui_vms_db_sel(vms_db_name = "")
```

Arguments

`vms_db_name` The path of a VMS DataBase

Details

This function, with a VMS DataBase (see [gui_vms_db_stat](#)), enables the user to perform queries on, and extract data from, the submitted VMS DataBase.

Value

This function does not return a value.

References

free text reference Pointers to the literature related to this object.

See Also

[gui_vms_db_stat](#)

gui_vms_db_stat	<i>VMS DataBase Status GUI</i>
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Description

The `gui_vms_db_stat` function implements the graphical user interface for the VMS DataBase Status viewer.

Usage

```
gui_vms_db_stat(vms_db_name = "")
```

Arguments

vms_db_name The path of a VMS DataBase

Details

This function, with a VMS DataBase, shows the current VMS DataBase status.

Value

This function does not return a value.

References

free text reference Pointers to the literature related to this object.

gui_vms_editraw *Raw VMS Editing GUI*

Description

The gui_vms_editraw function implements the graphical user interface for the editing of a raw vms dataset

Usage

```
gui_vms_editraw()
```

Details

This function, with a raw vms dataset, produces an edited version of it. The user must select, for each mandatory field, the column name where the data is stored.

Value

This function does not return a value. After the execution the user is asked where to put the edited file.

References

free text reference Pointers to the literature related to this object.

gui_vms_met_pred	<i>Predict Metier GUI</i>
------------------	---------------------------

Description

The gui_vms_met_pred function implements the graphical user interface for the Metier Prediction

Usage

```
gui_vms_met_pred(vms_db_name = "")
```

Arguments

vms_db_name The path of a VMS DataBase

Details

This function, with a VMS database and a shape file with harbours points, performs a neural network prediction over the whole db assigning metier data to vms tracks based on a training with existing vms-lb match data given by the database.

Value

This function does not return a value.

References

free text reference Pointers to the literature related to this object.

gui_vms_save_bat	<i>VMS DB Save Bathymetry GUI</i>
------------------	-----------------------------------

Description

The gui_vms_save_bat function implements the graphical user interface for the VMS Save Bathymetry routine.

Usage

```
gui_vms_save_bat(vms_db_name = "")
```

Arguments

vms_db_name The path of a VMS DataBase

Details

This function, with a VMS database, downloads an XYZ bathymetry file from NOAA servers.

Value

This function does not return a value.

References

free text reference Pointers to the literature related to this object.

See Also

[gui_vms_view_ping](#) [gui_vms_view_track](#) [gui_vms_view_intrp](#)

gui_vms_view_intrp *VMS DB View Interpolated Data GUI*

Description

The `gui_vms_view_intrp` function implements the graphical user interface for the VMS DB routine to view interpolated data.

Usage

```
gui_vms_view_intrp(vms_db_name = "", bathy_file_name = "")
```

Arguments

<code>vms_db_name</code>	The path of a VMS DataBase
<code>bathy_file_name</code>	The path of a Bathymetry file

Details

This function, with a VMS database, plots vessel and track data.

Value

This function does not return a value.

References

free text reference Pointers to the literature related to this object.

See Also

[gui_vms_view_ping](#) [gui_vms_view_track](#) [gui_vms_save_bat](#)

gui_vms_view_ping	<i>VMS DB View Raw Ping Data GUI</i>
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Description

The `gui_vms_view_ping` function implements the graphical user interface for the VMS DB routine to view raw ping data.

Usage

```
gui_vms_view_ping(vms_db_name = "", bathy_file_name = "")
```

Arguments

<code>vms_db_name</code>	The path of a VMS DataBase
<code>bathy_file_name</code>	The path of a Bathymetry file

Details

This function, with a VMS database, plots vessel data.

Value

This function does not return a value.

References

free text reference Pointers to the literature related to this object.

See Also

[gui_vms_save_bat](#) [gui_vms_view_track](#) [gui_vms_view_intrp](#)

gui_vms_view_track	<i>VMS DB View Track Data GUI</i>
--------------------	-----------------------------------

Description

The `gui_vms_view_track` function implements the graphical user interface for the VMS DB routine to view track data.

Usage

```
gui_vms_view_track(vms_db_name = "", bathy_file_name = "")
```

Arguments

vms_db_name The path of a VMS DataBase
bathy_file_name The path of a Bathymetry file

Details

This function, with a VMS database, plots vessel and track data.

Value

This function does not return a value.

References

free text reference Pointers to the literature related to this object.

See Also

[gui_vms_view_ping](#) [gui_vms_save_bat](#) [gui_vms_view_intrp](#)

gui_vms_viz_adv

VMS DB View Track Data GUI

Description

The `gui_vms_view_track` function implements the graphical user interface for the VMS DB routine to view vessel and track data with the Google Maps capabilities.

Usage

```
gui_vms_viz_adv(vms_db_name = "")
```

Arguments

vms_db_name The path of a VMS DataBase

Details

This function, with a VMS database, plots vessel and track data on Hybrid Satellite images from Google Maps.

Value

This function does not return a value.

References

free text reference Pointers to the literature related to this object.

See Also

[gui_vms_view_ping](#) [gui_vms_view_track](#) [gui_vms_view_intrp](#)

harbCoo	<i>Harbours Coordinates Shape File class</i>
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Description

Harbours coordinates Shape File reference Class

- path character The Path to the harbours coordinates shape file
- data SpatialPointsDataFrame The loaded harbours coordinates data

Details

harbCoo class is a reference class for the Harbours Coordinates shape file.

Join2shp	<i>Shape File Data Joining - Internal Function</i>
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Description

The Join2shp is the internal function that implements the Shape File Data Joining routine.

Usage

```
Join2shp(shpfile, datavector, dirdest)
```

Arguments

shpfile	The Original Grid Shape File
datavector	The Effort Count Vector
dirdest	The File Destination Directory

Details

This function, with a Grid Shape File, an Effort Count Vector and a File Destination Directory, (see [gui_out_grid](#)), creates a new Grid Shape File annotated with the Effort Count Vector.

Value

This function does not return a value.

References

free text reference Pointers to the literature related to this object.

See Also

[gui_out_grid](#)

kno2kmh	<i>Knots to Km/h speed conversion function</i>
---------	--

Description

kno2kmh converts speed in knots to km/h values.

Usage

kno2kmh(speed)

Arguments

speed	The value in knots of the speed.
-------	----------------------------------

Value

The function returns the speed value converted in km/h

latsex2dec	<i>Sexagesimal to Decimal Latitude conversion function</i>
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Description

latsex2dec converts sexagesimal latitude data to decimal latitude values.

Usage

latsex2dec(degree, minute, second, direction)

Arguments

degree	The value in degrees of the latitude.
minute	The value in minutes of the latitude.
second	The value in seconds of the latitude.
direction	The direction, as "N" or "S", of the latitude.

Value

The function returns the latitude value converted in the decimal numeral system

log_Cla	<i>LogBook Clustering class</i>
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Description

LogBook Clustering rData file reference Class

- data character The Clustering result data
- options character Metier manual annotation

Details

log_Cla class is a reference class for the Logbook Clustering rData file.

log_DB	<i>LogBook DataBase class</i>
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Description

LogBook DataBase reference Class

- dir character path of the LogBook DataBase
- db character name of the LogBook DataBase
- tab character tables in the LogBook DataBase

Details

log_DB class is a reference class for the Logbook DataBase.

log_File	<i>LogBook File Class</i>
----------	---------------------------

Description

LogBook File reference Class

- path character path of the logbook file
- data data.frame data from the logbook file

Details

log_File class is a reference class for the LogBook file.

lonsex2dec	<i>Sexagesimal to Decimal Longitude conversion function</i>
------------	---

Description

lonsex2dec converts sexagesimal longitude data to decimal longitude values.

Usage

```
lonsex2dec(degree, minute, second, direction)
```

Arguments

degree	The value in degrees of the longitude.
minute	The value in minutes of the longitude.
second	The value in seconds of the longitude.
direction	The direction, as "E" or "W", of the longitude.

Value

The function returns the longitude value converted in the decimal numeral system

plotNet	<i>Neural Network Plotting - Internal Function</i>
---------	--

Description

The plotNet is the internal function that implements the Neural Network Plotting routine.

Usage

```
plotNet(net, Dg, ConfMat)
```

Arguments

net	The Neural Network
Dg	The Prediction Index
ConfMat	The Confusion Matrix

Details

This function, with a Neural Network, a Prediction Index and a Confusion Matrix, generated by [gui_vms_met_pred](#), plots the graphical overall result of the neural network prediction.

Value

This function does not return a value.

References

free text reference Pointers to the literature related to this object.

See Also

[gui_vms_met_pred](#)

polymap	<i>Land Map Shape File class</i>
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Description

Land Map Shape File reference Class

- path character The Path to the Land Map shape file
- data SpatialPolygonsDataFrame The loaded Land Map data

Arguments

path	character	The Path to the Land Map shape file
data	SpatialPolygonsDataFrame	The loaded Land Map data

Details

polymap class is a reference class for the Land Map shape file.

que_vms_DB	<i>VMS DataBase Query class</i>
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Description

VMS DataBase Query reference Class

- dir character path of the VMS DataBase
- db character name of the VMS DataBase
- que character query for the VMS DataBase

Details

que_vms_DB class is a reference class for the VMS DataBase.

rad2deg	<i>Radians to Degree Angles conversion function</i>
---------	---

Description

rad2deg converts radian heading data to degree values.

Usage

```
rad2deg(heading)
```

Arguments

heading	The value in radians of the heading.
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Value

The function returns the heading value converted in degrees

saveRawLogBook	<i>Raw LogBook editing function</i>
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Description

saveRawLogBook implements the routines that converts raw values to standard data.

Usage

```
saveRawLogBook(rawfile, widget)
```

Arguments

rawfile	The raw LogBook dataset.
widget	The widget list that contains the editing infos.

Value

The function returns the standardized VMS data.

See Also

[gui_lb_editraw](#)

saveRawVms	<i>Raw VMS editing function</i>
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Description

saveRawVms implements the routines that converts raw values to standard data.

Usage

```
saveRawVms(rawfile, widget)
```

Arguments

rawfile	The raw VMS dataset.
widget	The widget list that contains the editing infos.

Value

The function returns the standardized VMS data.

See Also

[gui_vms_editraw](#)

set_wdgt_sel	<i>Set Widget Selection - Internal Function</i>
--------------	---

Description

The set_wdgt_sel is the internal function that implements the routine to set the current value to all the widgets in the list.

Usage

```
set_wdgt_sel(widget_list, col_vals)
```

Arguments

widget_list	A list of widgets
col_vals	A vector of characters

Details

This function, with a widgets list and a vector of characters, set the current selected value to all the widgets in the list, according to the order in the character vector provided.

See Also

[get_wdgt_vals](#); [set_wdgt_vals](#)

set_wdgt_vals	<i>Set Widget Values - Internal Function</i>
---------------	--

Description

The `set_wdgt_vals` is the internal function that implements the routine to set available values to all the widgets in the list.

Usage

```
set_wdgt_vals(widget_list, col_vals)
```

Arguments

<code>widget_list</code>	A list of widgets
<code>col_vals</code>	A vector of characters

Details

This function, with a widgets list and a vector of characters, assigns the vector of character values to all the widgets in the list

See Also

[get_wdgt_vals](#); [set_wdgt_sel](#)

turn_wdgt_off	<i>Turn Widget Off - Internal Function</i>
---------------	--

Description

The `turn_wdgt_off` is the internal function that implements the routine to switch off all the widgets in the list.

Usage

```
turn_wdgt_off(widget_list)
```

Arguments

<code>widget_list</code>	A list of widgets
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Details

This function, with a widgets list, turns off all the widgets in the list.

See Also

[turn_wdgt_on](#)

turn_wdgt_on	<i>Turn Widget On - Internal Function</i>
--------------	---

Description

The turn_wdgt_on is the internal function that implements the routine to switch on all the widgets in the list.

Usage

```
turn_wdgt_on(widget_list)
```

Arguments

widget_list A list of widgets

Details

This function, with a widgets list, turns on all the widgets in the list.

See Also

[turn_wdgt_off](#)

vms_DB	<i>VMS DataBase class</i>
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Description

VMS DataBase reference Class

- dir character path of the VMS DataBase
- db character name of the VMS DataBase
- tab character tables in the VMS DataBase

Details

vms_DB class is a reference class for the VMS DataBase.

`vms_File`*VMS File Class*

Description

VMS File reference Class

- path character path of the vms file
- data data.frame data from the vms file

Details

`vms_File` class is a reference class for the VMS file.

Index

*Topic **package**

vmsbase-package, 3

Assign_Area, 4

bathymetry, 4

bathymetry-class (bathymetry), 4

CountMap, 5

get_wdgt_vals, 5, 30

gui_dcf_ind, 6, 12

gui_join_lb_vms, 7

gui_lb_db_create, 7

gui_lb_db_stat, 8

gui_lb_editraw, 7, 8, 9, 28

gui_lb_met_cla, 9

gui_lb_met_dis, 9, 10, 10

gui_lb_met_edi, 11

gui_mark_fis_poi, 11

gui_out_grid, 5, 6, 12, 23, 24

gui_vms_db_are, 4, 13

gui_vms_db_clean, 13, 15, 16

gui_vms_db_create, 14

gui_vms_db_cut, 15, 16

gui_vms_db_dep, 15

gui_vms_db_intr, 16

gui_vms_db_sel, 17

gui_vms_db_stat, 17, 17

gui_vms_editraw, 14, 18, 29

gui_vms_met_pred, 19, 26, 27

gui_vms_save_bat, 19, 20–22

gui_vms_view_intrp, 20, 20, 21–23

gui_vms_view_ping, 20, 21, 22, 23

gui_vms_view_track, 20, 21, 21, 23

gui_vms_viz_adv, 22

harbCoo, 23

harbCoo-class (harbCoo), 23

Join2shp, 23

kno2kmh, 24

latex2dec, 24

log_Cla, 25

log_Cla-class (log_Cla), 25

log_DB, 25

log_DB-class (log_DB), 25

log_File, 25

log_File-class (log_File), 25

lonsex2dec, 26

plotNet, 26

polymap, 27

polymap-class (polymap), 27

que_vms_DB, 27

que_vms_DB-class (que_vms_DB), 27

rad2deg, 28

saveRawLogBook, 28

saveRawVms, 29

set_wdgt_sel, 6, 29, 30

set_wdgt_vals, 6, 30, 30

turn_wdgt_off, 30, 31

turn_wdgt_on, 31, 31

vms_DB, 31

vms_DB-class (vms_DB), 31

vms_File, 32

vms_File-class (vms_File), 32

VMSbase (vmsbase-package), 3

vmsbase (vmsbase-package), 3

vmsbase-package, 3