Package 'PBSadmb'

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Title ADMB for R Using Scripts or GUI

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Depends R (>= 3.5.0), PBSmodelling (>= 2.68.6)

Imports methods

Description A collection of software provides R support for 'ADMB'
(Automatic Differentiation Model Builder) and a 'GUI'
interface facilitates the conversion of 'ADMB' template
code to 'C code' followed by compilation to a binary executable.
Stand-alone functions can also be run by users
not interested in clicking a 'GUI'.

License GPL (>= 2)

URL https://github.com/pbs-software/pbs-admb,
https://github.com/pbs-software/pbs-modelling

NeedsCompilation no

Repository CRAN

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Contents

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admb *Start the PBSadmb GUI for ADMB*

Description

Start up the PBSadmb GUI for controlling and running AD Model Builder.

Usage

```
admb(prefix="", wdf="admbWin.txt", pathfile="ADpaths.txt")
```

Arguments

prefix	string name prefix of the ADMB project (e.g., "vonb").
wdf	string name of the *window description file* that creates the GUI.
pathfile	string name of 2-column text file that details the relevant paths for the R variables admbpath, gccpath, and editor.

Details

The pathfile has now replaced the optfile, which no longer exists as an argument. The pathfile identifies valid paths, which are passed to the options manager. Additionally, the user can change whichever path settings s/he wishes in the GUI.

The package still recognizes the file ADopts.txt, which has been demoted to a back-up file that will be saved only when the user pushes the Save button on the first tab in the GUI. If ADopts.txt exists and the options file .PBSadmb is not available (i.e. NULL), then ADopts.txt will be used on start up to populate the GUI.

Warning

Do not call your pathfile="ADopts.txt" unless you want to tempt fate.

Note

On UNIX systems the MinGW compiler and UNIX tools are readily available; therefore, only the admbpath (path to ADMB's home directory) and the path to a text editor are needed.

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locus opus: Offsite, Vancouver BC
Last modified Rd: 2018-09-28

See Also

setADpath, readADopts, readADpaths, makeAD

---

appendLog *Append Data to Log File*

Description

Append summary information or output to a previously created log file.

Usage

```
appendLog(prefix, lines)
```

Arguments

prefix	string name prefix of the ADMB project (e.g., "vonb").
lines	data to append to 'prefix'.log).

Value

No explicit value reurned. Appends data into a log file `'prefix'.log`.

Note

A wrapper function that can be called from a GUI exists as `.win.appendLog`.

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Last modified `Rd: 2009-09-10`

See Also

`startLog`, `editADfile`

`atget` *Get/Put Objects From/To Temporary Work Environment*

Description

These functions are wrappers to the PBSmodelling accessor functions that get/print objects from or put objects into a temporary work environment, in this case `.PBSadmbEnv`. Working objects include `PBSadmb`, which acts as a storage object for some of the functions, and `.PBSadmb`, which controls the options for the user's project.

Usage

```
atget(...)
atcall(...)
atprint(...)
atput(...)
alisp(...)
```

Arguments

`...`	For `atget` through to `atput`, the only free argument is: `x` – name (with or without quotes) of an object to retrieve or store in the temporary environment; cannot be represented by a variable. Fixed arguments: `penv = parent.frame(), tenv = .PBSadmbEnv` See `tget` for additional information. For `alisp`, there is only one fixed argument: `pos = .PBSadmbEnv` All other arguments are available – see `lisp`

Details

These accessor functions were developed as a response to the CRAN repository policy statement: "Packages should not modify the global environment (user's workspace)."

Value

Objects are retrieved from or sent to the temporary working environment to/from the place where the function(s) are called. Additionally, `atcall` invisibly returns the object without transferring, which is useful when the object is a function that the user may wish to call, for example, `atcall(myfunc)()`, or as arguments in other functions.

Note

Additional wrapper functions to access functions in `.PBSadmbEnv` are named with the prefix `.win` (none at the moment).

Author(s)

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Last modified `Rd: 2023-11-10`

References

CRAN Repository Policy

See Also

In package **PBSmodelling**:
`tget`, and `lisp`

`checkADopts` *Check ADMB Options for Path Integrity*

Description

Check that the options object `.PBSadmb` has all required components and that paths point to actual files on the hard drive.

Usage

```
checkADopts(opts=getOptions(atcall(.PBSadmb)),
   check=c("admbpath","gccpath","msysbin","editor"),
   warn=TRUE, popup=FALSE, verify=TRUE)
```

Arguments

opts	list – ADMB options values.
check	character – components (directory paths) of .PBSadmb to check.
warn	logical – if TRUE, print the results of the check to the R console.
popup	logical – if TRUE, display program location problems in a popup GUI.
verify	logical – if TRUE, then the 'Verify' button in the GUI was pressed. This only affects the message generation 'All programs found'. Command line call does not depend on GUI.

Value

Boolean value where TRUE indicates all programs were located in the specified directories and FALSE if at least one program cannot be found. The returned Boolean scalar has two attributes:
warn – named list of test results, and
message – named vector of test results.

Note

A wrapper function that can be called from a GUI exists as .win.checkADopts.

Author(s)

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Last modified Rd: 2018-10-03

See Also

setADpath,readADopts

---

cleanAD *Clean ADMB-Generated Files from the Working Directory*

Description

Detects files in the working directory with the specified prefix and removes them all save those with the suffix .tpl, .dat, and .pin.

Usage

```
cleanAD(prefix)
```

Arguments

prefix	string name prefix of the ADMB project (e.g., "vonb").

Details

Aside from potential garbage files with the specified `prefix`, other files associated with ADMB are detected. Also files `*.tmp` and `*.bak` are displayed. Calling `cleanAD` invokes the hidden function `.cleanUp`, which creates a GUI menu of the potential garbage files. The user can select whichever files s/he wishes for disposal.

Value

Returns nothing. Invokes a GUI menu of potential garbage files.

Note

A wrapper function that can be called from a GUI exists as `.win.cleanAD`.

Author(s)

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Last modified `Rd: 2009-09-10`

See Also

`makeAD`, `runAD`, `readRep`

---

compAD *Compile C Code*

Description

Compile C++ code in `'prefix'.cpp` to create a binary object file `'prefix'.o`.

Usage

```
compAD(prefix, raneff=FALSE, safe=TRUE, dll=FALSE, debug=FALSE,
   logfile=TRUE, add=TRUE, verbose=TRUE, pathfile=NULL)
```

Arguments

`prefix`	string name prefix of the ADMB project (e.g., `"vonb"`).
`raneff`	logical: use the random effects model, otherwise use the normal model (currently does not influence the compile stage, but the argument is preserved here for future development).
`safe`	logical: if `TRUE`, use safe mode with bounds checking on all array objects, otherwise use optimized mode for fastest execution.
`dll`	create dll (rather than executable)
`debug`	compile with debug symbols

logfile	logical: if TRUE, create a log file of the messages from the shell call.
add	logical: if TRUE, append shell call messages to an exsiting log file.
verbose	logical: if TRUE, report the shell call an its messages to the R console.
pathfile	string name of 2-column text file that details the relevant paths for the R variables admbpath, gccpath, and editor.

Details

This function uses the C++ comiler declared in .PBSadmb. If logfile=TRUE, any errors will appear in 'prefix'.log. If verbose=TRUE, they will appear in the R console.

Value

Invisibly returns the shell call and its messages.

Note

A wrapper function that can be called from a GUI exists as .win.compAD.

The optional pathfile is offered for use in command (non-GUI) functions. Users can easily create this file in a text editor. Note that on UNIX systems, only the admbpath (actually the path to ADMB's home directory) and text editor are used because the MinGW compiler (gccpath) and UNIX tools are already recognised.

Author(s)

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Last modified Rd: 2015-01-27

See Also

convAD, linkAD, makeAD, readADpaths

---

convAD *Convert TPL Code to CPP Code*

Description

Convert code in 'prefix'.tpl to C++ code in 'prefix'.cpp.

Usage

```
convAD(prefix, raneff=FALSE, safe=TRUE, dll=FALSE, debug=FALSE,
   logfile=TRUE, add=TRUE, verbose=TRUE, pathfile=NULL)
```

Arguments

prefix	string name prefix of the ADMB project (e.g., "vonb").
raneff	logical: if TRUE, use the random effects model executable tpl2rem.exe, otherwise use the normal model executable tpl2cpp.exe.
safe	logical: if TRUE, use safe mode with bounds checking on all array objects, otherwise use optimized mode for fastest execution.
dll	create dll (rather than executable)
debug	compile with debug symbols
logfile	logical: if TRUE, create a log file of the messages from the shell call.
add	logical: if TRUE, append shell call messages to an exsiting log file.
verbose	logical: if TRUE, report the shell call an its messages to the R console.
pathfile	string name of 2-column text file that details the relevant paths for the R variables admbpath, gccpath, and editor.

Details

This function invokes the ADMB command tpl2cpp.exe or tpl2rem.exe, if raneff is FALSE or TRUE respectively. If logfile=TRUE, any errors will appear in 'prefix'.log. If verbose=TRUE, they will appear in R console.

Value

Invisibly returns the shell call and its messages.

Note

A wrapper function that can be called from a GUI exists as .win.convAD.

The optional pathfile is offered for use in command (non-GUI) functions. Users can easily create this file in a text editor. Note that on UNIX systems, only the admbpath (actually the path to ADMB's home directory) and text editor are used because the MinGW compiler (gccpath) and UNIX tools are already recognised.

Author(s)

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Last modified Rd: 2014-02-27

See Also

compAD, linkAD, makeAD, readADpaths

convOS *Convert Text Files to Default OS Format*

Description

Convert text files to the default format of the operating system.

Usage

```
convOS(inam, onam = inam, path = getwd() )
```

Arguments

inam	string vector of names specifying files to be converted to the format of the operating system.
onam	string vector of name specifying the output files (the default overwrites the input file).
path	string specifying the path where the input files are located (defaults to current working directory).

Value

Text file(s) formatted in accordance with standards of the operating system.

Note

This function essentially executes a `readLines` command followed by a call to `writeLines`.

Author(s)

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Last modified `Rd: 2009-12-04`

See Also

`copyFiles`, `.addQuotes`

`copyFiles` *Copy System Files*

Description

Copy files with specified prefixes and suffixes from one location to another.

Usage

```
copyFiles(prefix, suffix=NULL, srcdir=getwd(), dstdir=getwd(), ask=TRUE)
```

Arguments

`prefix`	string scalar/vector of potential file prefixes.
`suffix`	string scalar/vector of potential file suffixes.
`srcdir`	source directory from which to copy files.
`dstdir`	destination directory to copy files to.
`ask`	logical: if `TRUE`, popup boxes will prompt the user for every instance that a file will be overwritten.

Details

This function uses R's `list.files` and `file.copy` functions. The pattern recognition tends not to work when given the wildcard character `*`; however, the user may use this character, and the code will interpret it.

Value

Invisibly returns a Boolean vector with names of files that have been copied or not.

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Last modified `Rd: 2011-02-14`

See Also

`editAD`

dot-PBSadmbEnv *PBSadmb Environment*

Description

An environment set aside for PBSadmb.

Usage

```
.PBSadmbEnv
```

Format

A new environment with a `.GlobalEnv` parent.

Details

The environment is created in `'zzz.r'` and is used by `PBSadmb` functions `'alisp'`, `'atget'`, `'atput'`, `'atprint'`, and `'atcall'`.

Source

Generated by a call to the base function `new.env()`.

See Also

In **PBSadmb**:
`alisp`, `atget`
In **PBSmodelling**:
`lisp`, `tget`

dot-win.funs *GUI Windows Wrappers*

Description

Wrapper functions to run existing or temporary functions from a GUI's function call.

Usage

```
.win.appendLog(winName="PBSadmb")
.win.checkADopts(winName="PBSadmb")
.win.checkADpath(winName="PBSadmb")
.win.checkPrefix(winName="PBSadmb")
.win.cleanAD(winName="PBSadmb")
.win.compAD(winName="PBSadmb")
.win.convAD(winName="PBSadmb")
.win.editAD(winName="PBSadmb")
.win.editPLT()
.win.findClean(winName="cleanWindow")
.win.findTPL(suffix=".tpl",winName="PBSadmb")
.win.linkAD(winName="PBSadmb")
.win.makeAD(winName="PBSadmb")
.win.plotMC(winName="PBSadmb")
.win.readADopts(winName="PBSadmb")
.win.readADpaths(winName="PBSadmb")
.win.readRep(winName="PBSadmb")
.win.run(winName="PBSadmb")
.win.runAD(winName="PBSadmb")
.win.runMC(winName="PBSadmb")
.win.saveADpaths(winName="PBSadmb")
.win.setADpath(winName="PBSadmb")
.win.setADver(winName="PBSadmb")
.win.showADargs(winName="PBSadmb")
.win.showGUIargs(winName="PBSadmb")
.win.startLog(winName="PBSadmb")
.win.suggestPath(winName="PBSadmb")
.win.viewCode(pkg="PBSadmb")
.win.viewRep(winName="PBSadmb")
.win.writeADopts(winName="PBSadmb")
```

Arguments

winName	character – name of a GUI window containing widgets
suffix	character – file name suffix (e.g., '.tpl')
pkg	character – name of R package

Details

PBSmodelling Windows (Graphical User Interfaces or GUIs) call wrapper functions that call non-GUI functions in the package.

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Last modified Rd: 2023-11-09

See Also

In **PBSadmb**:
appendLog, checkADopts, cleanAD, compAD, convAD, editAD, linkAD, makeAD, plotMC, readADopts, readADpaths, readRep, runAD, runMC, saveADpaths, setADpath, setADver, showADargs, startLog, suggestPath, writeADopts
In **PBSmodelling**:
getWinAct, getWinVal, tget

---

editAD *Edit ADMB Files*

Description

Edit files associated with specified prefix and suffixes.

Usage

```
editAD(prefix, suffix=c(".tpl",".cpp",".log"))
```

Arguments

prefix	string name prefix of the ADMB project (e.g., "vonb").
suffix	string scalar/vector specifying one or more suffixes.

Value

Invisibly returns Boolean vector with elements TRUE if files exist, FALSE if they do not.

Note

A wrapper function that can be called from a GUI exists as .win.editAD.

This function explicitly uses the editor chosen for PBSadmb. PBSmodelling has another function openFile that uses Windows file associations or an application specified with setPBSext.

Author(s)

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Last modified Rd: 2018-09-28

See Also

editADfile, setADpath

editADfile *Edit an ADMB File*

Description

Edit an ADMB file using the text editor specified in `.PBSadmb`.

Usage

```
editADfile(fname)
```

Arguments

`fname`	string name of file in current working directory (or elsewhere if path delimited by / or \).

Value

Returns Boolean: `TRUE` if file exists, `FALSE` if it does not.

Note

This function explicitly uses the editor chosen for **PBSadmb**. **PBSmodelling** has another function `openFile` that uses Windows file associations or an application specified with `setPBSext`.

Author(s)

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Last modified `Rd: 2018-09-28`

See Also

`editAD`, `setADpath`

linkAD *Link Object Files to Make an Executable*

Description

Links the binary object file `'prefix'.o` to the ADMB libraries and produces the executable file `'prefix'.exe`.

Usage

```
linkAD(prefix, raneff=FALSE, safe=TRUE, dll=FALSE, debug=FALSE,
   logfile=TRUE, add=TRUE, verbose=TRUE, pathfile=NULL)
```

Arguments

prefix	string name prefix of the ADMB project (e.g., "vonb").
raneff	logical: use the random effects model, otherwise use the normal model.
safe	logical: if TRUE, use safe mode with bounds checking on all array objects, otherwise use optimized mode for fastest execution.
dll	create dll (rather than executable)
debug	compile with debug symbols
logfile	logical: if TRUE, create a log file of the messages from the shell call.
add	logical: if TRUE, append shell call messages to an exsiting log file.
verbose	logical: if TRUE, report the shell call an its messages to the R console.
pathfile	string name of 2-column text file that details the relevant paths for the R variables admbpath, gccpath, and editor.

Details

This function uses the C++ comiler declared in .PBSadmb. If logfile=TRUE, any errors will appear in 'prefix'.log. If verbose=TRUE, they will appear in the R console.

Value

Invisibly returns the shell call and its messages.

Note

A wrapper function that can be called from a GUI exists as .win.linkAD.

The optional pathfile is offered for use in command (non-GUI) functions. Users can easily create this file in a text editor. Note that on UNIX systems, only the admbpath (actually the path to ADMB's home directory) and text editor are used because the MinGW compiler (gccpath) and UNIX tools are already recognised.

Author(s)

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Last modified Rd: 2015-01-27

See Also

convAD, compAD, makeAD, readADpaths

makeAD *Make an Executable Binary File from a C File*

Description

Essentially a wrapper function that calls in sequence: convAD, compAD, and linkAD.

Usage

```
makeAD(prefix, raneff=FALSE, safe=TRUE, dll=FALSE, debug=FALSE,
   logfile=TRUE, add=TRUE, verbose=TRUE, pathfile=NULL)
```

Arguments

prefix	string name prefix of the ADMB project (e.g., "vonb").
raneff	logical: use the random effects model, otherwise use the normal model.
safe	logical: if TRUE, use safe mode with bounds checking on all array objects, otherwise use optimized mode for fastest execution.
dll	create dll (rather than executable)
debug	compile with debug symbols
logfile	logical: if TRUE, create a log file of the messages from the shell call.
add	logical: if TRUE, append shell call messages to an exsiting log file.
verbose	logical: if TRUE, report the shell call an its messages to the R console.
pathfile	string name of 2-column text file that details the relevant paths for the R variables admbpath, gccpath, and editor.

Details

This function uses the C++ comiler declared in .PBSadmb. If logfile=TRUE, any errors will appear in 'prefix'.log. If verbose=TRUE, they will appear in the R console.

Value

Returns nothing. The three functions called by makeAD each return the shell call and its messages.

Note

A wrapper function that can be called from a GUI exists as .win.makeAD.

The optional pathfile is offered for use in command (non-GUI) functions. Users can easily create this file in a text editor. Note that on UNIX systems, only the admbpath (actually the path to ADMB's home directory) and text editor are used because the MinGW compiler (gccpath) and UNIX tools are already recognised.

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Last modified `Rd: 2015-01-27`

See Also

`convAD`, `compAD`, `linkAD`, `runAD`, `readADpaths`

`PBSadmb` *PBS ADMB Package*

Description

The R package **PBSadmb** gives complete R support to the external program AD Model Builder, released into the public domain in 2009. The program offers users a remarkably efficient tool for estimating parameters and their uncertainty, based on complex nonlinear statistical models.

In a standard ADMB installation, users would interact with the program via a DOS command shell (in Windows) or a bash shell (in Linux or Mac OS X). The package **PBSadmb** makes it possible to interact entirely from an R console, as a common interface for all operating systems. A single R script can encapsulate commands to ADMB, as well as all analyses that follow. The package includes protocols for writing code to make the integration between R and ADMB almost seamless.

PBSadmb also provides a Graphical User Interface (GUI) that facilitates the steps required for a complete ADMB analysis. Both new and experienced users can use the GUI for tutorial and educational purposes.

You can obtain **PBSadmb** from the Comprehensive R Archive Network. Always use the current version of **PBSadmb** with the most recent version of **PBSmodelling**, another package available from CRAN.

PBSadmb represents just one of a series of R packages developed at the Pacific Biological Station in Nanaimo, British Columbia. A more advanced version of **PBSadmb** might be available on GitHub. Any evolving package (Windows binary and source tarball) is built after using CRAN's rigorous `R CMD check --as-cran` routine (on a 64-bit Windows 10 system) and posted to Google Drive.

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Last modified `Rd: 2023-11-10`

plotMC *Plot Results of MCMC Simulation*

Description

Plot results of an ADMB MCMC simulation using various plot methods.

Usage

```
plotMC(prefix, act="pairs", pthin=1, useCols=NULL)
```

Arguments

prefix	string name prefix of the ADMB project (e.g., "vonb").
act	string scalar: action describing plot type (current choices: "pairs", "eggs", "acf", "trace", and "dens").
pthin	numeric scalar indicating interval at which to collect records from the .mc.dat file for plotting.
useCols	logical vector indicating which columns of .mc.dat to plot.

Note

A wrapper function that can be called from a GUI exists as .win.plotMC. Use the PBSadmb GUI to explore these plots easily.

Author(s)

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Last modified Rd: 2009-09-10

See Also

runMC, showADargs

readADopts *Read an ADMB Options List into Memory From a File*

Description

Create a PBSoptions class object called .PBSadmb (stored in the package's working environment PBSadmbEnv) and read in ADMB options from an ASCII text file using a load function that ultimately calls PBSmodelling::readList.

Usage

```
readADopts(optfile="ADopts.txt")
```

Arguments

optfile	string name of an ASCII text file containing ADMB options information.

Value

No values returned. Reads the ADMB options into the list object .PBSadmb.

Note

A wrapper function that can be called from a GUI exists as .win.readADopts (*not currently used*).

Author(s)

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Last modified Rd: 2019-03-14

See Also

In package **PBSadmb**:
setADpath, readADpaths, writeADopts
In package **PBSmodelling**:
loadOptions

readADpaths *Read ADMB Paths From a Text File*

Description

Read or save ADMB paths (admbpath, gccpath, msysbin, editor) from or to a simple, 2-column text file where the first column gives the R variable name and the second column specifies the path (enclosed by double quotation marks "").

Usage

```
readADpaths(pathfile)
saveADpaths(pathfile)
```

Arguments

pathfile	string name of 2-column text file that details the relevant paths for the R variables admbpath, gccpath, msysbin, and editor.

Details

The simplest way to pass valid paths to the options manager in **PBSadmb** is to supply a text file in the working directory. This file can be constructed easily using any text editor. An example might look like:

```
admbpath "C:/admb"
gccpath  "C:/mingw"
msysbin  "C:/mingw/msys/bin"
editor   "C:/Windows/System32/notepad.exe"
```

Note

On UNIX systems the MinGW compiler and UNIX tools are readily available; therefore, only the admbpath (path to ADMB's home directory) and the path to a text editor are needed.

The user can supply any number of paths in a pathfile, which are passed to the options manager; however, only the above four paths are used at present.

Author(s)

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Last modified Rd: 2018-09-28

See Also

readADopts, convAD, compAD, linkAD, makeAD

readRep *Read an ADMB Report into R Memory*

Description

Import ADMB-generated report files into R's memory using the names of the report files to name the R-objects.

Usage

```
readRep(prefix, suffix=c(".cor",".rep",".std",".mc.dat"), global=FALSE)
```

Arguments

prefix	string name prefix of the ADMB project (e.g., "vonb").
suffix	string scalar/vector specifying one or more suffixes.
global	logical: if TRUE, save the imported reports as objects to global environment using the same names as the report files.

Details

If the report object is one of c(".cor", ".std", ".mc.dat"), the report object is a data frame, otherwise it is a string vector. Multiple report objects are returned as a list of objects. A single report object is returned as the object itself.

This function attempts to detect the file format from a number of possibilities. For example, if the file has the special format recognized by PBSmodelling, then the function returns a list with named components. The example vonb included with this package shows how to write the template to get consistent variable names between ADMB and R. See the User's Guide for complete details.

Value

Invisibly returns the list of report objects. If only one report is imported, a single report object is returned.

Note

A wrapper function that can be called from a GUI exists as .win.readRep.

Author(s)

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Last modified Rd: 2009-09-10

See Also

editADfile, .win.viewRep

runAD *Run an Executable Binary File*

Description

Run the executable binary file 'prefix'.exe that was created by makeAD.

Usage

```
runAD(prefix, argvec="", logfile=TRUE, add=TRUE, verbose=TRUE)
```

Arguments

prefix	string name prefix of the ADMB project (e.g., "vonb").
argvec	string scalar/vector of arguments appropriate for the executable 'prefix'.exe.
logfile	logical: if TRUE, create a log file of the messages from the shell call.
add	logical: if TRUE, append shell call messages to an exsiting log file.
verbose	logical: if TRUE, report the shell call an its messages to the R console.

Details

This function typically reads the two files 'prefix'.dat and 'prefix'.pin, although in same cases one or both of these files may not be necessary.

If logfile=TRUE, output (including error messages, if any) will appear in 'prefix'.log. If verbose=TRUE, it will appear in the R console.

Value

Invisibly returns the results of the shell call.

Note

A wrapper function that can be called from a GUI exists as .win.runAD.

Author(s)

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Last modified Rd: 2009-09-10

See Also

runMC, makeAD, cleanAD

runMC *Run an Executable Binary File in MCMC Mode*

Description

Run the executable binary file 'prefix'.exe, created by makeAD, to generate MCMC simulations.

Usage

```
runMC(prefix, nsims=2000, nthin=20, outsuff=".mc.dat",
      logfile=FALSE, add=TRUE, verbose=TRUE)
```

Arguments

prefix	string name prefix of the ADMB project (e.g., "vonb").
nsims	numeric scalar indicating number of MCMC simulations to perform.
nthin	numeric scalar indicating the sampling rate or thinning of the nsims MCMC simulations to report.
outsuff	string name suffix of the MCMC output data file.
logfile	logical: if TRUE, create a log file of the messages from the shell call.
add	logical: if TRUE, append shell call messages to an exsiting log file.
verbose	logical: if TRUE, report the shell call an its messages to the R console.

Details

This function runs 'prefix'.exe twice, first with the arguments -mcmc 'nsims' -mcsave 'nthin' and second with the argument -mceval. By default, output goes to the file 'prefix'.mc.dat, although a user can specify a different output suffix.

To see this function in action, use the PBSadmb GUI with the example vonb or simpleMC.

Value

Invisibly returns the results of the shell call.

Note

A wrapper function that can be called from a GUI exists as .win.runMC.

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Last modified Rd: 2009-09-10

See Also

runAD, makeAD, cleanAD

setADpath *Create ADMB Options List*

Description

Creates an options list object detailing the pathways to the ADMB home directory, the GCC home directory, the MSYS (Unix utilities) bin directoy, and the user's preferred text editor. Also keeps track of software versions for ADMB and GCC.

Usage

```
setADpath(admbpath, gccpath, msysbin, editor)
setADver(admbver, gccver)
```

Arguments

admbpath	character – explicit path to the user's ADMB home directory.
gccpath	character – explicit path to the user's GCC home directory.
msysbin	character – explicit path to the user's MSYS bin directory (binary executables and libraries).
editor	character – explicit path and program to use for editing text.
admbver	character – version number of ADMB software.
gccver	character – version number of g++ software.

Value

Creates a global, hidden list object called .PBSadmb, located in the temporary environment .PBSadmbEnv. Use the functions atget, atput, atcall, and atprint to get, put, call, and print the object .PBSadmb. The function alisp lists all the objects in the .PBSadmbEnv environment.

Note

These functions replace makeADopts. The old control file called ADopts.txt is retained as a backup file system, which is accessed on R session start-up and first call to the function admb to initialize the contents of the options manager .PBSadmb and the GUI. However, if a path file (e.g., ADpaths.txt) exists, the paths in this file will override those taken from ADopts.txt.

Additionally, the 'Verify' button always consults the admb version file (if it exists) and the g++ executable to collect version information. If not available, version information is set to an empty string.

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locus opus: Offsite, Vancouver BC
Last modified Rd: 2018-09-28

See Also

readADopts, writeADopts

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setupAD *Set Up Paths for PBSadmb*

Description

Set up path information by reading from a pathfile (default = ADpaths.txt) and checking that certain executable files exist.

Usage

```
setupAD(pathfile)
```

Arguments

pathfile	string name of 2-column text file that details the relevant paths for the R variables admbpath, gccpath, and editor.

Details

This program is useful primarily for console-based function calls. It sets up the background options for **PBSadmb** functions (convAD, compAD, linkAD) by reading paths from a file and checking to make sure that they are valid (i.e., contain certain exectuable files like tpl2cpp and g++). The options are store in a PBSoptions class objects called .PBSadmb in the temporary environment .PBSadmbEnv.

Note

To access the options manager in the temporary working environment, use the **PBSadmb** accessor functions (atget, atput, atcall, atprint). For eample:

```
atprint(.PBSadmb)
```

On UNIX systems the MinGW compiler and UNIX tools are readily available; therefore, only the admbpath (path to ADMB's home directory) and the path to a text editor are needed.

Author(s)

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Last modified Rd: 2014-02-27

See Also

readADpaths, checkADopts, makeAD

showADargs *Show All Arguments for an ADMB Executable*

Description

Show all arguments available for an ADMB executable in the default text editor.

Usage

```
showADargs(prefix, ed=TRUE)
```

Arguments

prefix	string name prefix of the ADMB project (e.g., "vonb").
ed	logical: if TRUE, write the ADMB arguments to a file and view them with the text editor, else display the arguments on the R console.

Value

Invisibly returns the argument list.

Note

A wrapper function that can be called from a GUI exists as `.win.showADargs`.

Author(s)

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Last modified Rd: 2009-09-10

See Also

editADfile, runAD

startLog *Start a Log File*

Description

Start a log file by removing any previous version and appending header information.

Usage

```
startLog(prefix)
```

Arguments

prefix	string name prefix of the ADMB project (e.g., "vonb").

Value

No explicit value reurned. Writes header lines into a log file 'prefix'.log.

Note

A wrapper function that can be called from a GUI exists as .win.startLog.

Author(s)

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Last modified Rd: 2009-09-10

See Also

appendLog, editADfile

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suggestPath *Suggest a Path to a Specified Program*

Description

Suggest a directory path from the system PATH where a program specified by the user might be located.

Usage

```
suggestPath(progs, ipath = NULL, file_ext = NULL)
```

Arguments

progs	string vector of program names without the extension (assumes .exe in Windows). Unix programs do not have extensions.
ipath	string specified by the user as the initial path (directory) to check before checking all other directories on the PATH.
file_ext	user can specify an alternative extension if the program does not end in .exe

.

Details

This function determines whether the specified programs can be located on the user's system.

A wrapper function called .win.suggestPath is used by the **PBSadmb** GUI to suggest paths for the ADMB home, the Windows MinGW home, and an editor.

Value

Returns a logical vector where each element corresponds to a program searched. If the element is TRUE, then the program was found on the path, which is supplied as the name of the vector element. If the element is FALSE, the program may exist on the user's system, but is not in any of the directories specified by the PATH environment of the system.

The returned vector has a list attribute where each item in the list corresponds to each element in the vector, and shows the results of the search for each of the directories.

Author(s)

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Last modified Rd: 2023-11-09

See Also

setADpath

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writeADopts *Writes the ADMB Options List from Memory to a File*

Description

Writes the global ADMB options list to a file using the function PBSmodelling::saveOptions.

Usage

```
writeADopts(optfile="ADopts.txt")
```

Arguments

optfile	character – name of the intended output file.

Value

Returns opts invisibly. Writes the options list object to an ASCII file.

Note

A wrapper function that can be called from a GUI exists as .win.writeADopts (*not currently used*).

Author(s)

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Last modified Rd: 2019-03-14

See Also

In package **PBSadmb**:
atget, readADopts, setADpath
In package **PBSmodelling**:
getOptions, setOptions in getOptions, saveOptions in loadOptions

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