Utilities

- R CMD check more compactly displays the tests of DESCRIPTION meta-information. It now reports demos and vignettes without available index information. Unless installation tests are skipped, checking is aborted if the package dependencies cannot be resolved at run time. Rd files are now also explicitly checked for empty \name and \title entries. The examples are always run with T and F redefined to give an error if used instead of TRUE and FALSE.

- The Perl code to build help now removes an existing example file if there are no examples in the current help file.

- R CMD Rdindex is now deprecated in favor of function `Rdindex()` in package tools.

- `Sweave()` now encloses the Sinput and Soutput environments of each chunk in an Schunk environment. This allows to fix some vertical spacing problems when using the latex class slides.

C-level facilities

- A full double-precision LAPACK shared library is made available as -lRlapack. To use this include `$(LAPACK_LIBS) $(BLAS_LIBS)` in PKG_LIBS.

- Header file R_ext/Lapack.h added. C declarations of BLAS routines moved to R_ext/BLAS.h and included in R_ext/Applic.h and R_ext/Linpack.h for backward compatibility.

- R will automatically call initialization and unload routines, if present, in shared libraries/DLLs during `dyn.load()` and `dyn.unload()` calls. The routines are named R_init_<dll name> and R_unload_<dll name>, respectively. See the Writing R Extensions Manual for more information.

- Routines exported directly from the R executable for use with `.C()`, `.Call()`, `.Fortran()` and `.External()` are now accessed via the registration mechanism (optionally) used by packages. The ROUTINES file (in src/appl/) and associated scripts to generate FFTab.h and FFDecl.h are no longer used.

- Entry point Rf_append is no longer in the installed headers (but is still available). It is apparently unused.

- Many conflicts between other headers and R's can be avoided by defining STRICT_R_HEADERS and/or R_NO_REMAP – see 'Writing R Extensions' for details.

- New entry point R_GetX11Image and formerly undocumented ptr_R_GetX11Image are in new header R_ext/GetX11Image. These are used by package tkrplot.

Changes on CRAN

by Kurt Hornik and Friedrich Leisch

New contributed packages

Davies useful functions for the Davies quantile function and the Generalized Lambda distribution. By Robin Hankin.

GRASS Interface between GRASS 5.0 geographical information system and R, based on starting R from within the GRASS environment using values of environment variables set in the GISRC file. Interface examples should be run outside GRASS, others may be run within. Wrapper and helper functions are provided for a range of R functions to match the interface metadata structures. Interface functions by Roger Bivand, wrapper and helper functions modified from various originals by interface author.

MCMCpack This package contains functions for posterior simulation for a number of statistical models. All simulation is done in compiled C++ written in the Scythe Statistical Library Version 0.3. All models return coda mcmc objects that can then be summarized using coda functions or the coda menu interface. The package also contains some useful utility functions, including some additional PDFs and pseudo-random number generators for statistical distributions. By Andrew D. Martin, and Kevin M. Quinn.

RSvgDevice A graphics device for R that uses the new w3.org xml standard for Scalable Vector Graphics. By T Jake Luciani.

SenSrivastava Collection of datasets from Sen & Srivastava: Regression Analysis, Theory, Methods and Applications, Springer. Sources for individual data files are more fully documented in

the book. By Kjetil Halvorsen.

abind Combine multi-dimensional arrays. This is a generalization of cbind and rbind. Takes a sequence of vectors, matrices, or arrays and produces a single array of the same or higher dimension. By Tony Plate and Richard Heiberger..

ade4 Multivariate data analysis and graphical display. By Jean Thioulouse, Anne-Beatrice Dufour and Daniel Chessel.

amap Hierarchical Clustering and Principal Component Analysis (With general and robusts methods). By Antoine Lucas.

anm The package contains an analog model for statistical/empirical downscaling. By Alexandra Imbert & Rasmus E. Benestad.

clim.pact The package contains R functions for retrieving data, making climate analysis and downscaling of monthly mean and daily mean global climate scenarios. By Rasmus E. Benestad.

dispmod Functions for modelling dispersion in GLM. By Luca Scrucca.

effects Graphical and tabular effect displays, e.g., of interactions, for linear and generalised linear models. By John Fox.

gbm This package implements extensions to Freund and Schapire's AdaBoost algorithm and J. Friedman's gradient boosting machine. Includes regression methods for least squares, absolute loss, logistic, Poisson, Cox proportional hazards partial likelihood, and AdaBoost exponential loss. By Greg Ridgeway.

genetics Classes and methods for handling genetic data. Includes classes to represent genotypes and haplotypes at single markers up to multiple markers on multiple chromosomes. Function include allele frequencies, flagging homo/heterozygotes, flagging carriers of certain alleles, computing disequilibrium, testing Hardy-Weinberg equilibrium, …. By Gregory Warnes and Friedrich Leisch.

glmmML A Maximum Likelihood approach to mixed models. By Göran Broström..

gpclib General polygon clipping routines for R based on Alan Murta's C library. By R interface by Roger D. Peng; GPC library by Alan Murta.

grasper R-GRASP uses generalized regressions analyses to automate the production of spatial predictions. By A. Lehmann, J.R. Leathwick, J.McC. Overton, ported to R by F. Fivaz.

gstat variogram modelling; simple, ordinary and universal point or block (co)kriging, and sequential Gaussian or indicator (co)simulation; variogram and map plotting utility functions. By Edzer J. Pebesma and others.

hier.part Variance partition of a multivariate data set. By Chris Walsh and Ralph MacNally.

hwde Fits models for genotypic disequilibria, as described in Huttley and Wilson (2000), Weir (1996) and Weir and Wilson (1986). Contrast terms are available that account for first order interactions between loci. By J.H. Maindonald.

ismev Functions to support the computations carried out in 'An Introduction to Statistical Modeling of Extreme Values' by Stuart Coles. The functions may be divided into the following groups; maxima/minima, order statistics, peaks over thresholds and point processes. Original S functions by Stuart Coles, R port and R documentation files by Alec Stephenson.

locfit Local Regression, Likelihood and density estimation. By Catherine Loader.

mimR An R interface to MIM for graphical modelling in R. By Søren Højsgaard.

mix Estimation/multiple imputation programs for mixed categorical and continuous data . Original by Joseph L. Schafer, R port by Brian Ripley.

multidim multidimensional descritptive statistics: factorial methods and classification. Original by André Carlier & Alain Croquette, R port by Mathieu Ros & Antoine Lucas.

normalp A collection of utilities refered to normal of order p distributions (General Error Distributions). By Angelo M. Mineo.

pls.pcr Multivariate regression by PLS and PCR. By Ron Wehrens.

polspline Routines for the polynomial spline fitting routines hazard regression, hazard estimation with flexible tails, logspline, lspec, polyclass, and polymars, by C. Kooperberg and coauthors . By Charles Kooperberg.

rimage This package provides functions for image processing, including sobel filter, rank filters, fft, histogram equalization, and reading JPEG file. This package requires fftw http://www.fftw.org/ and libjpeg http://www.ijg.org>. By Tomomi Takashina.

session Utility functions for interacting with R processes from external programs. This package includes functions to save and restore session information (including loaded packages, and attached data objects), as well as functions to evaluate strings containing R commands and return the printed results or an execution transcript. By Gregory R. Warnes.

snow Support for simple parallel computing in R. By Luke Tierney, A. J. Rossini, and Na Li.

statmod Miscellaneous biostatistical modelling functions. By Gordon Smyth.

survey Summary statistics, generalised linear models, and general maximum likelihood estimation for stratified, cluster-sampled, unequally weighted survey samples. By Thomas Lumley.

vcd Functions and data sets based on the book "Visualizing Categorical Data" by Michael Friendly. By David Meyer, Achim Zeileis, Alexandros Karatzoglou, and Kurt Hornik.

New Omegahat packages

REventLoop An abstract event loop mechanism that is toolkit independent and can be used to to replace the R event loop. This allows one to use the Gtk or Tcl/Tk's event loop which gives better response and coverage of all event sources (e.g. idle events, timers, etc.) . By Duncan Temple Lang.

RGdkPixbuf S language functions to access the facilities in GdkPixbuf for manipulating images. This is used for loading icons to be used in widgets such as buttons, HTML renderers, etc. By Duncan Temple Lang.

RGtkExtra A collection of S functions that provide an interface to the widgets in the gtk+extra library such as the GtkSheet data-grid display, icon list, file list and directory tree. By Duncan Temple Lang.

RGtkGlade S language bindings providing an interface to Glade, the interactive Gnome GUI creator. This allows one to instantiate GUIs built with the interactive Glade tool directly within S. The callbacks can be specified as S functions within the GUI builder. By Duncan Temple Lang.

RGtkHTML A collection of S functions that provide an interface to creating and controlling an HTML widget which can be used to display HTML documents from files or content generated dynamically in S. This also supports embedded objects created and managed within S code, include graphics devices, etc. By Duncan Temple Lang.

RGtk Facilities in the S language for programming graphical interfaces using Gtk, the Gnome GUI toolkit. By Duncan Temple Lang.

SWinRegistry Provides access from within R to read and write the Windows registry. By Duncan Temple Lang.

SWinTypeLibs This provides ways to extract type information from type libraries and/or DCOM objects that describes the methods, properties, etc. of an interface. This can be used to discover available facilities in a COM object or automatically generate S and C code to interface to such objects. By Duncan Temple Lang.

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