

Version 2.1 (Released October 29, 2009)

Created vignettes that present example GRTS survey designs for finite, linear, and areal resources.

Created a function named `geodalbers` that projects latitude and longitude (spheroid) models of the globe to Albers projection in the plane.

Modified function `cont.cdfctest` to correct an error caused by improper handling of an empty subpopulation.

Modified function `relrisk.analysis` to correct an error resulting from inclusion of more than one response variable in the `response.var` argument.

Modified function `dsgnsum` to produce summary tables for the actual set of design variables that are present rather than a standard set of design variables.

Modified function `dframe.check` to terminate execution when missing site ID values are encountered in the `sites`, `design`, `subpop`, `data.cat`, `data.cont`, or `data.rr` data frames. Note that `dframe.check` is called by functions `cat.analysis`, `cont.analysis`, `cont.cdfctest`, and `relrisk.analysis`.

Version 2.0 (Released June 16, 2008)

Eliminated use of argument `unitsize` (known sum of size-weights) by library functions. Restricted argument `popsize` to provide only the known size of the resource for use in ratio adjustment of estimators. Created a new argument named `pcfsize` to provide resource size for calculation of finite and continuous population correction factors for single-stage samples.

Modified function `irs` to eliminate checking for existence of x-coordinates and y-coordinates when the type of frame is "finite" and the frame is included in the `att.frame` data frame.

Modified functions `cat.analysis`, `cont.analysis`, `cont.cdfctest`, and `relrisk.analysis` to add logical variables to their argument lists that specify use of finite or continuous population correction factors or use of size weights in analysis routines.

Modified functions `category.est`, `cdf.decon`, `cdf.est`, `cdf.test`, `relrisk.est` and `total.est` to add logical variables to their argument lists that specify use of finite or continuous population correction factors or use of size-weights.

Modified C functions `parseFields` and `readDbfFile` to ensure that blank values in the shapefile attributes (dbf) file are converted to R missing values (NA).

Modified C function `writeDbfFile` to output blank values for R missing values (NA) when creating the shapefile attributes (dbf) file.

Modified functions `grts`, `irs`, and `sp2shape` to ensure that an output shapefile attributes (dbf) file containing character variables with missing values can be read without error.

Version 1.7 (Released November 9, 2007)

Created a function named `cont.cdfctest` that tests for differences between cumulative distribution functions (CDFs) for pairs of subpopulations within a population Type for a collection of response variables generated by a probability survey. Also, modified function `cdf.test` so that it is consistent with functions that are called by high-level functions `cat.analysis` and `cont.analysis`.

Modified C functions `intersect`, `linSampleIRS`, `lintFcn`, and `linSample` to eliminate warning messages that were generated during package creation.

Modified function `grts` so that argument `do.sample` provides a value for each stratum.

Modified function `grtspts` so that, when source of the frame equals "att.frame", the current number of grid levels for hierarchical randomization and the final number of grid levels is printed to the console while the function is executing.

Created a function named `relrisk.analysis` that conducts relative risk analysis for a collection of response variables generated by a probability survey. Also, renamed function `relrisk` to `relrisk.est` and modified the function so that it is consistent with functions that are called by high-level functions `cat.analysis` and `cont.analysis`.

Modified function `grtspts` and C function `numLevels` to terminate the algorithm for determining the number of grid levels for hierarchical randomization when the maximum value of total inclusion probability for the grid cells stops changing as the number of levels increases.

Created functions named `cdf.plot` and `cont.cdfplot` that create cumulative distribution function (CDF) plots using the data frame named "CDF" contained in the output object created by function `cont.analysis`. Function `cdf.plot` creates a single CDF plot, and function `cont.cdfplot` creates a set of CDF plots.

Created a function named `read.sas` that can read SAS datasets or a SAS XPORT (transport) file.

Modified C functions `getRecordShapeSizes`, `readDbfFile`, `parsePoints`, `parsePointsZ`, `parsePointsM`, `parsePolygon`, `parsePolygonZ`, and `parsePolygonM` to generate error messages and terminate execution when a shapefile containing a Null record is encountered.

Modified functions `irslin` and `irsarea` in addition to C function `getRecordIDs` to ensure that sample points are selected in random order for linear and areal IRS designs.

Modified the `grts` function to ensure that, when the type of random selection is "unequal", an oversample is apportioned correctly whenever the category sample sizes are proportional to the oversample size.

Version 1.6 (Released January 18, 2007)

For C functions that read shapefiles from the current directory, replaced calls to `_findfirst` and `_findnext` with code using calls to `readdir`. Also, created a C function named `matchFiles` that determines whether file names in the current directory have a desired file extension. These changes were implemented to facilitate portability of the package.

Modified functions grts and irs to accommodate use of a factor for the ID variable in the attributes data frame.

Modified functions grts and irs to ensure that sample weights are correctly adjusted when an oversample is present and the type of random selection is "Continuous".

Version 1.5 (Released December 6, 2006)

Modified C functions getRecordShapeSizes and lintFcn to accommodate Polyline shapefiles that have multiple parts.

Version 1.4 (Released October 10, 2006)

Modified functions dsgnsum and sp2shape to accommodate the change in representation from AttributeList to data.frame for the data slot of sp package objects belonging to class SpatialPointsDataFrame.

Modified functions grts and irs to print a warning message when the type of frame equals "finite" and a stratum name in the design list matches only a single value in the stratum column of the attributes data frame. For this case, function grtspts is not called since the sample will be composed of a single point.

Modified functions grts, grtspts, grtslin, and grtsarea to change the maximum value allowed for arguments startlev (the initial number of hierarchical levels to use for the GRTS grid) and maxlev (the maximum number of hierarchical levels to use for the GRTS grid) from 12 to 11.

Added an example polylines dataset to the data directory.

Modified functions grts and irs to allow use of an sp package object as the source of the frame. An argument named sp.object was added to the argument list for grts and irs.

Modified functions grts, grtspts, grtslin, grtsarea, irs, irspts, irslin, and irsarea to remove use of argument xy.frame as an option for source of the frame. Then modified functions grts, grtspts, irs, and irspts to allow incorporation of frame coordinates in the attributes data frame when the type of frame equals "finite". Also, removed argument elmsize from functions grts and irs since the argument no longer was required.

Modified functions grts and irs to ensure that the ID values for elements of the frame provided in att.frame are unique.

Modified functions grts and irs to ensure that valid values are provided for the panel and caty.n arguments in the design list.

Version 1.3 (Released August 1, 2006)

Added an example polygons dataset to the data directory.

Incorporated the CHANGES, README, and UserGuide files into the help page.

Version 1.2 (Released June 27, 2006)

Modified function `irsarea` and created a C function named `getRecordIDs` to ensure that an IRS sample is selected when argument `type.frame` is set to "area" in function `irs`.

Created a function named `sp2shape` and a C function named `writeShapeFilePolygon` that convert objects created by the R package "sp" to ESRI shapefiles. Also, renamed the C function `writeShapeFile` to `writeShapeFilePoint`.

Version 1.1 (Released May 31, 2006)

Modified functions `grts` and `irs` to ensure that the levels of `mdcaty` (the variable in the attributes data frame that specifies the unequal probability category for each element in the frame) are equivalent to the names in `caty.n` (the vector of sample sizes for each category in `mdcaty`, which is required for each element of the design list for which the selection type is "Unequal").

Modified functions `grts` and `irs` to ensure that the columns of `xy.frame` are named "x" and "y" when `xy.frame` is provided and `type.frame` equals "finite".

Modified functions `grts` and `irs` so that the sample weights are correctly adjusted when an oversample is requested and when the realized sample size is less than the desired sample size.

Modified the C functions so that the library can accommodate M-type shapefiles.

Version 1.0 (Released May 5, 2006)

This is the original version of the library.