Package: grtsdb (via r-universe)

August 30, 2024

Title Create a Sampling Frame Using GRTS

Version 0.2

Description Create an SQLite database containing the sampling framework for different levels of resolution. Take a sample from this framework.

License GPL-3

URL https://inbo.github.io/grtsdb/, https://github.com/inbo/grtsdb

BugReports https://github.com/inbo/grtsdb/issues

Imports DBI, RSQLite, assertthat

Suggests knitr, rmarkdown, testthat, tidyverse

VignetteBuilder knitr

Encoding UTF-8

LazyData true

Roxygen list(markdown = TRUE)

RoxygenNote 7.1.2

Repository https://inbo.r-universe.dev

RemoteUrl https://github.com/inbo/grtsdb

RemoteRef HEAD

RemoteSha efa9643c563c6fb08c11dbfa9217880f54dc233a

Contents

`add_legacy_sites` *Add legacy sites*

Description

Add legacy sites

Usage

```
add_legacy_sites(legacy, bbox, cellsize, grtsdb = connect_db())
```

Arguments

`legacy`	A matrix with coordinates of the legacy sites. One column for every dimension.
`bbox`	A two-column matrix. The first column has the minimum, the second the maximum values. Rows represent the spatial dimensions.
`cellsize`	The size of each cell. Either a single value or one value for each dimension.
`grtsdb`	the grtsdb object

See Also

Other legacy: `drop_legacy_sites()`, `extract_legacy_sample()`

`add_level` *Add a level to the grtsdb*

Description

Add a level to the grtsdb

Usage

```
add_level(bbox, cellsize, grtsdb = connect_db(), verbose = TRUE, level)
```

Arguments

bbox	A two-column matrix. The first column has the minimum, the second the maximum values. Rows represent the spatial dimensions.
cellsize	The size of each cell. Either a single value or one value for each dimension.
grtsdb	the grtsdb object
verbose	Display progress
level	the required level

See Also

Other base: connect_db(), extract_sample(), reexports

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compact_db *Compact the database by removing the lower levels and all indices*

Description

Compact the database by removing the lower levels and all indices

Usage

```
compact_db(grtsdb = connect_db())
```

Arguments

grtsdb	the grtsdb object

See Also

Other utility: create_index(), has_index(), is_grtsdb(), n_level(), which_level()

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connect_db *connect to or create an SQLite database*

Description

connect to or create an SQLite database

Usage

```
connect_db(db = getOption("grtsdb", "grts.sqlite"))
```

Arguments

db	the name or path of the database

See Also

Other base: add_level(), extract_sample(), reexports

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create_index *Add the index to the table*

Description

Add the index to the table

Usage

```
create_index(level, grtsdb = connect_db(), legacy = FALSE, ...)
```

Arguments

level	the required level
grtsdb	the grtsdb object
legacy	Use legacy sites. Defaults to FALSE.
...	Arguments passed on to add_level verbose Display progress bbox A two-column matrix. The first column has the minimum, the second the maximum values. Rows represent the spatial dimensions. cellsize The size of each cell. Either a single value or one value for each dimension.

See Also

Other utility: compact_db(), has_index(), is_grtsdb(), n_level(), which_level()

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drop_legacy_sites *Drop the table with legacy sites for a given level*

Description

Drop the table with legacy sites for a given level

Usage

```
drop_legacy_sites(level, grtsdb = connect_db())
```

Arguments

level	the required level
grtsdb	the grtsdb object

See Also

Other legacy: add_legacy_sites(), extract_legacy_sample()

`extract_legacy_sample` *Extract the GRTS sample with legacy sites*

Description

Extract the GRTS sample with legacy sites

Usage

```
extract_legacy_sample(
  grtsdb = connect_db(),
  samplesize,
  bbox,
  cellsize,
  verbose = TRUE,
  offset
)
```

Arguments

grtsdb	the grtsdb object
samplesize	the required sample size
bbox	A two-column matrix. The first column has the minimum, the second the maximum values. Rows represent the spatial dimensions.
cellsize	The size of each cell. Either a single value or one value for each dimension.
verbose	Display progress
offset	An optional number of samples to skip. This is useful in cases where you need extra samples.

See Also

Other legacy: add_legacy_sites(), drop_legacy_sites()

extract_sample *extract the grts sample*

Description

extract the grts sample

Usage

```
extract_sample(
  grtsdb = connect_db(),
  samplesize,
  bbox,
  cellsize,
  verbose = TRUE,
  offset
)
```

Arguments

grtsdb	the grtsdb object
samplesize	the required sample size
bbox	A two-column matrix. The first column has the minimum, the second the maximum values. Rows represent the spatial dimensions.
cellsize	The size of each cell. Either a single value or one value for each dimension.
verbose	Display progress
offset	An optional number of samples to skip. This is useful in cases where you need extra samples.

See Also

Other base: add_level(), connect_db(), reexports

has_index *has a table the required index*

Description

has a table the required index

Usage

```
has_index(level, grtsdb = connect_db(), legacy = FALSE, ...)
```

Arguments

level	the required level
grtsdb	the grtsdb object
legacy	Use legacy sites. Defaults to FALSE.
...	Arguments passed on to add_level verbose Display progress bbox A two-column matrix. The first column has the minimum, the second the maximum values. Rows represent the spatial dimensions. cellsize The size of each cell. Either a single value or one value for each dimension.

See Also

Other utility: compact_db(), create_index(), is_grtsdb(), n_level(), which_level()

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is_grtsdb *Check is an object is a grtsdb*

Description

Check is an object is a grtsdb

Usage

```
is_grtsdb(grtsdb = getOption("grtsdb", "grts.sqlite"))
```

Arguments

grtsdb	the grtsdb object

See Also

Other utility: compact_db(), create_index(), has_index(), n_level(), which_level()

n_level — *Calculate the required level based on a bounding box and a cellsize*

Description

Calculate the required level based on a bounding box and a cellsize

Usage

```
n_level(bbox, cellsize)
```

Arguments

bbox	A two-column matrix. The first column has the minimum, the second the maximum values. Rows represent the spatial dimensions.
cellsize	The size of each cell. Either a single value or one value for each dimension.

Value

the required level to cover the bbox using a grid with cellsize

See Also

Other utility: compact_db(), create_index(), has_index(), is_grtsdb(), which_level()

which_level — *Return a vector of level number which are available in the database*

Description

Return a vector of level number which are available in the database

Usage

```
which_level(grtsdb = connect_db())
```

Arguments

grtsdb	the grtsdb object

See Also

Other utility: compact_db(), create_index(), has_index(), is_grtsdb(), n_level()

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