

Package: sfhelper (via r-universe)

January 16, 2025

Title Repair Functions for 'sf' Package Objects

Version 0.2.2.0

Description A group of functions that support the 'sf' package, focused primarily on repairing polygons that break when re-projected.

License MIT + file LICENSE

Encoding UTF-8

RoxygenNote 7.3.2

Imports RCurl, rjson, mapview, sf, stringr, dplyr, ggplot2

Suggests testthat (>= 3.0.0)

Config/testthat/edition 3

NeedsCompilation no

Author Mark Ravina [aut, cre]
(<<https://orcid.org/0000-0002-8726-7618>>)

Maintainer Mark Ravina <mark.ravina@austin.utexas.edu>

Repository CRAN

Date/Publication 2025-01-15 10:40:02 UTC

Config/pak/sysreqs libfontconfig1-dev libfreetype6-dev libgdal-dev
gdal-bin libgeos-dev make libicu-dev libpng-dev libssl-dev
libproj-dev libsqlite3-dev libudunits2-dev zlib1g-dev

Contents

| | |
|--------------------------------|---|
| geolocate | 2 |
| st_equal_grid | 2 |
| st_match_geometry | 3 |
| st_transform_outline | 4 |
| st_transform_repair | 4 |

| | |
|--------------|----------|
| Index | 5 |
|--------------|----------|

geolocate *Geolocate historical toponyms*

Description

This function uses the API for the World Historical Gazetteer to geolocate place names. It takes the place name and region as inputs and returns a data frame with results, primarily the longitude and latitude.

Usage

```
geolocate(df, place = "place", iso = "iso")
```

Arguments

| | |
|-------|--|
| df | A data frame with two columns, places names and two-letter ISO codes for regions |
| place | A column with toponyms in the data frame |
| iso | A column of ISO codes for regions |

Value

A data frame of the geospatial data

Examples

```
# Search for Paris and Edo (now Tokyo)
example.df <- data.frame("place" = c("Paris", "Edo"), "iso" = c("FR", "JP"))
geolocate(example.df)
```

st_equal_grid *Create and equal area grid for multiple maps*

Description

Create and equal area grid for multiple maps

Usage

```
st_equal_grid(places, titles, buffer, map_theme)
```

Arguments

| | |
|-----------|--|
| places | a list of sf object |
| titles | a character vector of title for the maps |
| buffer | a numeric vector of buffer values |
| map_theme | a ggplot theme |

Value

A list of sf objects

| | |
|-------------------|--|
| st_match_geometry | <i>Match and set geometry for a data frame</i> |
|-------------------|--|

Description

This function sets the geometry in a target data frame based on matching values in a source data frame

Usage

```
st_match_geometry(source, target, match_field)
```

Arguments

| | |
|-------------|--|
| source | An sf data frame with a geometry column |
| target | A data frame |
| match_field | A column name (in quotes) for matching, shared by both data frames |

Value

A sf data frame

Examples

```
a <- sf::st_polygon(list(rbind(c(-90,40),c(-90,50),c(-95,50),c(-95,40),c(-90,40))))
b <- sf::st_polygon(list(rbind(c(-80,30),c(-80,20),c(-70,20),c(-70,30),c(-80,30))))
ab <- sf::st_sfc(a,b)
sf::st_crs(ab) <- 4326
source.sf <- data.frame("match_field"=c("A","B"))
sf::st_geometry(source.sf) <- ab
target.df <- data.frame("match_field"=c("A","A","B","C"))
```

st_transform_outline *Create outline of sf projection*

Description

Create outline of sf projection

Usage

```
st_transform_outline(crs)
```

Arguments

crs The crs for transforming the sf

Value

An sf object

st_transform_repair *Repair sf polygons*

Description

Repair sf polygons

Usage

```
st_transform_repair(x, crs)
```

Arguments

x An sf object with unprojected coordinates
crs The crs for transforming the sf

Value

An sf object

Index

- * **geometry**
 - st_match_geometry, 3
- * **map**
 - geolocate, 2
 - st_equal_grid, 2
 - st_match_geometry, 3
 - st_transform_outline, 4
 - st_transform_repair, 4
- * **meridian**
 - st_transform_repair, 4
- * **sf**
 - geolocate, 2
 - st_equal_grid, 2
 - st_match_geometry, 3
 - st_transform_outline, 4
 - st_transform_repair, 4
- * **spatial**
 - geolocate, 2
 - st_equal_grid, 2
 - st_match_geometry, 3
 - st_transform_outline, 4
 - st_transform_repair, 4

geolocate, 2

st_equal_grid, 2

st_match_geometry, 3

st_transform_outline, 4

st_transform_repair, 4