Package ‘crsmeta’

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Title Extract Coordinate System Metadata

Version 0.3.0

Description Obtain coordinate system metadata from various data formats. There are functions to extract a ‘CRS’ (coordinate reference system, <https://en.wikipedia.org/wiki/Spatial_reference_system>) in ‘EPSG’ (European Petroleum Survey Group, <http://www.epsg.org/>), 'PROJ4' <https://proj.org/>, or 'WKT2' (Well-Known Text 2, <http://docs.opengeospatial.org/is/12-063r5/12-063r5.html>) forms. This is purely for getting simple metadata from in-memory formats, please use other tools for out of memory data sources.

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Encoding UTF-8

LazyData true

RoxygenNote 7.1.0

Depends R (>= 3.5.0)

Suggests testthat (>= 2.1.0), spelling

Imports methods

URL https://github.com/hypertidy/crsmeta

BugReports https://github.com/hypertidy/crsmeta/issues

Language en-US

NeedsCompilation no

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| crs_epsg     | Extract 'EPSG' value |

Description

Obtain the 'EPSG' string from an object, if it has one. Supported inputs include sf.

Usage

  crs_epsg(x, ...)

Arguments

  x          object with 'EPSG' value
  ...        ignored

Value

  integer (or NA)

References

  EPSG website

See Also

  crs_wkt2() crs_proj() crs_input()

Examples

  crs_epsg(sfx)
  x <- sf
  attr(x$geom, "crs")$epsg <- NA ## oh no we lost it
  crs_epsg(x)

  crs_epsg(sfx_new) ## NA, doesn't exist now
Extract 'input' value

**Description**

Obtain the 'input' string from an object, if it has one. Supported inputs include sf (>= 0.8-1 - probably).

**Usage**

```r
crs_input(x, ...)
```

**Arguments**

- `x`: object with 'input' value
- `...`: ignored

**Value**

character (or NA)

**Warning**

Note that the 'input' value could be almost anything, there is a huge variety of inputs that can work such as 4326, projstrings, WKT2 strings, EPSG declarations 'EPSG:4326', or common strings like 'WGS84' or 'NAD27'.

Strings like '+init=epsg:4326' have been deprecated but still can work, so beware.

**References**

- sf

**See Also**

- `crs_wkt2()`  
  - `crs_proj()`  
  - `crs_epsg()`

**Examples**

```r
crs_input(sfx) ## doesn't have one

crs_input(sfx_new) ## a proj4string
```
Description

Obtain the 'PROJ4' string from an object, if it has one. Supported inputs include raster, sf, sp, and silicate.

Usage

```
crs_proj(x, ...)  
```

Arguments

- `x`: object with 'PROJ4' string
- `...`: ignored

Value

character string (or NA)

References

PROJ system website

See Also

crs_epsg(), crs_wkt2(), crs_input()

Examples

```
crs_proj(sfx)  
crs_proj(sfx$geom)  
crs_proj(sfx_new) ## NA
```
**Description**

Obtain the 'WKT2' string from an object, if it has one. Supported inputs include sp and sf.

**Usage**

```r
crs_wkt2(x, 

```  
```r
crs_wkt(x, 

```

**Arguments**

- `x` : object with 'WKT2' string
- `...` : ignored

**Details**

The functions `crs_wkt()` and `crs_wkt2()` are aliased, they do the same thing.

**Value**

character string (or NA)

**Warning**

For WKT2 only, PROJ6 and beyond

**References**

WKT2 specification

**See Also**

`crs_epsg()` `crs_proj()` `crs_wkt()` `crs_input()`

**Examples**

```r
crs_wkt2(sfx) # NA  
crs_wkt2(sfx$geom) # NA

crs_wkt2(sfx_new)  
crs_wkt2(sfx_new$geom)
```
Description

A copy of the 'minimal_mesh' data set from the silicate package, with coordinate reference system information added.

Details

`sfx` is the old-style PROJ.4 and EPSG code CRS (prior to sf 0.8-1).
`sfx_new` is the new-style WKT2, with user input.

Warning

do not use this data in real situations, or as exemplary of the 'sf' format. It was created purely to add examples to this package.

Examples

```r
## three equivalent representations, of increasing richness
crs_epsg(sfx)

   crs_proj(sfx)

crs_wkt2(sfx)  ## did not exist in earlier sf

## new style
   crs_epsg(sfx_new)  ## NA!
crs_proj(sfx_new)  ## NA!

   crs_input(sfx_new)
crs_wkt(sfx_new)
```
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