Package 'crsmeta'

October 12, 2022

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.

License GPL-3

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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R topics documented:

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

crs_epsg(sfx_new) ## NA, doesn't exist now
```

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crs_input *Extract 'input' value*

Description

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

Usage

```
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

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

crs_input(sfx_new)  ## a proj4string
```

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crs_proj   *Extract 'PROJ4' string*

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
```

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crs_wkt2 *Extract 'WKT2' string*

Description

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

Usage

```
crs_wkt2(x, ...)

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

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

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

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sfx *Simple features example data*

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

```
## 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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