Package 'fgdr'

October 13, 2022

Title Utilities for Fundamental Geo-Spatial Data

Version 1.1.1

Description Read and Parse for Fundamental Geo-Spatial Data (FGD) which downloads XML file from providing site (<https://fgd.gsi.go.jp/download/menu.php>). The JPGIS format file provided by FGD so that it can be handled as an R spatial object such as 'sf' and 'raster', 'terra' or 'stars'.
Supports the FGD version 4.1, and accepts fundamental items and digital elevation models.

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Imports data.table (>= 1.12.8), jpmesh (>= 1.1.1), magrittr (>= 1.5), purrr (>= 0.2.5), raster (>= 2.6.7), readr (>= 1.3.1), rlang (>= 0.2.2), sf (>= 0.6.3), stars (>= 0.3-1), stringr (>= 1.3.1), terra (>= 0.8-2), tibble (>= 3.0.0), units (>= 0.6.6), xml2 (>= 1.2.0)

Encoding UTF-8

URL https://github.com/uribo/fgdr

BugReports https://github.com/uribo/fgdr/issues

RoxygenNote 7.1.2

Suggests covr (>= 3.4.0), roxygen2 (>= 6.1.1), testthat (>= 2.3.1)

Depends R (>= 3.3.0)

NeedsCompilation no

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Repository CRAN

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R topics documented:

`dem_check` *DEM input file status check*

Description

DEM input file status check

Usage

```
dem_check(file, .verbose = TRUE, ...)
```

Arguments

`file`	XML file download from fgd
`.verbose`	`logical`. suppress info input XML file's about DEM information.
`...`	Additional arguments passed on to other functions.

`fgd_line_parse` *Line element parsed*

Description

Line element parsed

Usage

```
fgd_line_parse(file)
```

Arguments

`file`	XML file download from fgd

Details

type AdmArea, BldA, WA

read_fgd *Read and Parse Fundamental Geospatial Data (FGD) file*

Description

The JPGIS (GML) format file provided by FGD as input, the fundamental items in the file is read as an 'sf' object. Supporting FGD Version 4.1 (2016/10/31).

Usage

```
read_fgd(file)
```

Arguments

file	Path to XML file

Details

Support following items: Administrative Area ('AdmArea'), Administrative Boundary ('AdmBdry'), Representative point of Administrative Area ('AdmPt'), Building Area ('BldA'), Building Outline ('BldL'), Contour ('Cntr'), Community Boundary ('CommBdry'), Representative Point of Community Area ('CommPt'), Coastline ('Cstline'), Elevation Point ('ElevPt'), Geodetic Control Point ('GCP'), Railroad Track Centerline ('RailCL'), Road Component ('RdCompt'), Road Edge ('RdEdg'), Water Area ('WA'), Water Line ('WL') and Waterside Structure Line ('WStrL').

Value

A sf

See Also

https://fgd.gsi.go.jp/download/ref_kihon.html

Examples

```
# Administrative Area
read_fgd(system.file("extdata/FG-GML-000000-AdmPt-dummy.xml", package = "fgdr"))
```

read_fgd_dem *Read and Parse Fundamental Geospatial Data (FGD) dem file*

Description

The JPGIS (GML) format file provided by FGD as input, the digital elevation models in the file are read as a data.frame or spatial object (raster, stars or terra). Supporting FGD Version 4.1 (2016/10/31)

Usage

```
read_fgd_dem(file, resolution = c(5, 10), return_class)
```

Arguments

file	Path to XML file
resolution	the number of dem mesh size resolution: 5m or 10m
return_class	one of return object class: 'data.table' for faster than data.frame, 'data.frame', 'raster', 'stars' or 'terra'

Value

A tibble (data.frame), raster, stars or terra

See Also

https://fgd.gsi.go.jp/download/ref_dem.html

Examples

```
fgd_5dem <- system.file("extdata/FG-GML-0000-00-00-DEM5A-dummy.xml", package = "fgdr")
read_fgd_dem(fgd_5dem,
             resolution = 5,
             return_class = "data.table")
read_fgd_dem(fgd_5dem,
             resolution = 5,
             return_class = "data.frame")
# return as raster
read_fgd_dem(fgd_5dem,
             resolution = 5,
             return_class = "raster")
# return as stars
fgd_10dem <- system.file("extdata/FG-GML-0000-10-dem10b-dummy.xml", package = "fgdr")
read_fgd_dem(fgd_10dem,
             resolution = 10,
             return_class = "stars")
```

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