Package: vtkr (via r-universe)

August 30, 2024

Title Read a Limited Subset of Visualization Toolkit Formats

Version 0.0.0.9000

Description Read some VTK formats. VTK is the Visualization Toolkit
<https://en.wikipedia.org/wiki/VTK>.

License GPL-3

Encoding UTF-8

LazyData true

RoxygenNote 6.1.1

Suggests testthat (>= 2.1.0), spelling

Language en-US

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

RemoteUrl https://github.com/hypertidy/vtkr

RemoteRef HEAD

RemoteSha 4272d6cef732caf6d20695518b8e194f0b06dc7e

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read_vtk_points   *Read VTK points*

Description

Read a VTK (Visualization Toolkit) STRUCTURED GRID of POINTS.

Usage

```
read_vtk_points(x, ..., quiet = FALSE)
```

Arguments

x	VTK file name
...	ignored
quiet	if 'FALSE' (the default), refrain from reporting extra information

Details

Only BINARY supported for now.

Note that we currently do not recreate the matrix of data, just return the points. The header is printed if 'verbose = TRUE' so the dimensions reported there may be used.

Specification of the format found at https://vtk.org/wp-content/uploads/2015/04/file-formats.pdf on 2019-10-09.

Value

matrix of x, y, z coordinates

Examples

```
f <- system.file("extdata/STRUCTURED_GRID/volcano_points.vtk", package = "vtkr", mustWork = TRUE)
xyz <- read_vtk_points(f)
```

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read_vtk_triangles   *Read VTK triangles*

Description

Read a VTK (Visualization Toolkit) UNSTRUCTURED GRID of POINTS with triangle CELLS.

Usage

```
read_vtk_triangles(x, ..., quiet = FALSE)
```

Arguments

x	VTK file name
...	ignored
quiet	if 'FALSE' (the default), refrain from reporting extra information

Details

Note that we currently do not recreate the matrix of data, just return the points and the triangle. The header is printed if 'verbose = TRUE'.

Specification of the format found at https://people.sc.fsu.edu/~jburkardt/data/vtk/vtk.html on 2019-10-09.

Value

list, with 'xyz' matrix of x, y, z coordinates, and 'tri' matrix of triangle index (1-based)

Examples

```
f <- system.file("extdata/UNSTRUCTURED_GRID/rbc_001.vtk", package = "vtkr", mustWork = TRUE)
mesh0 <- read_vtk_triangles(f)
#library(rgl)
#tm <- tmesh3d(t(mesh0$xyz), t(mesh0$tri), homogeneous = FALSE)
#shade3d(tm, col = "grey")
#rglwidget()
```

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