NAME

mbgrd2gltf - convert bathymetric grid data to GLTF format with optional settings, including Draco compression.

VERSION

Version 5.8

SYNOPSIS

mbgrd2gltf
<filepath>

[**-b** | --binary]
[**-o** | --output *<output filepath>]*

[**-e** | --exaggeration *<vertical exaggeration>]*

[**-m** | --max-size *<max size>]*

[**-c** | --compression *<compression ratio>]*

[**-d** | --draco]
[**-q** | --quantization *<quantization number>]*

[**-h** | --help]

DESCRIPTION

MBgrd2gltf is a tool designed to convert grid data files (GRD) to Graphics Library Transmission Format (GLTF) files. It can generate output in: a binary to create a more compact GLTF file, exaggerate vertex altitude to enhance topographic features, and cap the max-size of the GLTF so the output files don't exceed size constraints. Furthermore, optional Draco compression can reduce the outputed GLTF file size even more while maintaining good visual quality. With Draco, one can specify the quantization level, which affects the precision of mesh vertices.

MB-SYSTEM AUTHORSHIP

David W. Caress
Monterey Bay Aquarium Research Institute
Dale N. Chayes
Center for Coastal and Ocean Mapping
University of New Hampshire
Christian do Santos Ferreira
MARUM - Center for Marine Environmental Sciences
University of Bremen

OPTIONS

<filepath>
Specify the path to the input GMT GRD file.

-b, --binary
Generate the output in binary GLTF format. Binary GLTF is more compact and typically loads faster in applications.

-o, --output
Specify the path to the folder where the output GLTF file will be written.

-e, --exaggeration
Specify the vertical exaggeration factor as a decimal number, which multiplies the vertex altitudes. This can enhance the visibility of topographic features.

-m, --max-size
Specify the maximum size of the output buffer data in megabytes. This is useful for ensuring that the output files do not exceed certain size constraints. Actual size may vary based on compression settings.

-c, --compression
Specify the compression ratio as a decimal number, indicating the desired ratio of uncompressed to compressed size. This setting controls the general output file size.

-d, --draco
Enable Draco compression to further reduce the file size and improve loading times in 3D environments. Draco is an open-source library for compressing and decompressing 3D geometric meshes and point clouds.

-q, --quantization
Specify the quantization level for Draco compression. Quantization level affects the precision of the mesh vertices. Higher values increase compression but reduce precision, potentially affecting the visual quality of the terrain.

-h, --help
Display help message and exit. Provides more information on command usage and options.

EXAMPLES

Convert a GMT GRD file to a GLTF file with default settings:

```
mbgrd2gltf input.grd
```

Convert a GRD file to binary GLTF with specified output folder and Draco compression at a quantization level of 10:

```
mbgrd2gltf input.grd --binary --output /path/to/output --draco --quantization 10
```

SEE ALSO

mbinfo(1)
mbprocess(1)
mblist(1)

BUGS

Please report any bugs on the MB-System GitHub Issue Tracker.