

RYSKDecoder

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Chapter 1

Mantis Vision: RYSK

A collection of plugins for compression and decompression of geometry data using a proprietary algorithm.

Plugins

The RYSK family of plugins and libraries is composed of following items:

- **RYSKEncoder** plugin
 - contains filters needed for RYSK compression
- **RYSKDecoder** plugin
 - contains filters needed for RYSK decompression
- **RYSKIO** plugin
 - contains special RYSK input/output filters
- **RYSKData** plugin
 - contains RYSK data layers
- **RYSK** library
 - contains definitions of data layers associated with RYSK data

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Details

Compiled with MVD Draco Compression version 4.0.0.

Chapter 2

Data layer types

[DataTypeRYSKData](#)

2.1 **DataTypeRYSKData**

A data layer containing RYSK-compressed data.

Type GUID

537F847E-6E63-4837-9868-FF2A4FF350A6

Status properties

- **"RYSK data size"**
Indicates a size of the data in bytes.

Chapter 3

Draco

RYSK is a work derived from Google's Draco library (<https://github.com/google/draco>). Draco is licensed under the Apache License, Version 2.0. You may obtain a copy of the license at <http://www.apache.org/licenses/LICENSE-2.0>, or check a local file [Apache v2 license](#).

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A version of Draco the RYSK is based on is the 1.4.1 release from 8th of December, 2020. Original sources of the version were further modified

- to avoid unnecessary copying of geometric and/or compressed input data to an encoder/decoder in case those already reside in an application-allocated memory and can be passed to the coders directly,
- to avoid unnecessary copying of geometric output data from a decoder by forcing the decoder to use an application-allocated memory instead of allocating its own.

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Chapter 4

Filters

[MutateRYSKEncoder](#)

[MutateRYSKDecoder](#)

[TargetRYSKWriter](#)

4.1 MutateRYSKEncoder

A mutate filter for compression of geometry data into RYSK data.

Type GUID

5C5FFE94-993E-465E-B556-48875A90B717

Parameters

- **"Drop encoded layers"**
Indicates whether original uncompressed RYSK data shall be dropped from atoms after compression or preserved.
- **"Force IFrames"**
Forces compression to encode every RYSK frame as a keyframe.

4.2 MutateRYSKDecoder

A mutate filter for decompression of RYSK data into geometry data.

Type GUID

D52FE894-0CCE-41CE-831F-88D28CA06793

Parameters

- **"Drop decoded layers"**
Indicates whether original compressed RYSK data shall be dropped from atoms after decompression or preserved.

4.3 TargetRYSKWriter

A target filter for serialization of RYSK data (i.e. content of a sequence of [DataTypeRYSKData](#) data layers) into a binary file with the `.syk` extension.

Type GUID

C8E90305-ABBE-41B2-84EB-8B2400AFA437

Parameters

- **"Enable Recording"**
Enables/disables recording.
- **"Output File Path"**
Specifies a path for the file. The path can be changed in runtime, in which case a file at the original path is closed and a new one at the new path is opened for writing.

A target filter for serialization of RYSK data (i.e. content of a sequence of [DataTypeRYSKData](#) data layers) into a binary file with the `.syk` extension.

Type GUID

25CD280D-B5D2-4D7C-A3C1-577D72AA4EB8

Parameters

- **"Enable Recording"**
Enables/disables recording.
- **"Output File Path"**
Specifies a path for the file. The path can be changed in runtime, in which case a file at the original path is closed and a new one at the new path is opened for writing.

Chapter 5

nanoflann

RYSK is a work derived from nanoflann header-only library (<https://github.com/jlblancoc/nanoflann>). nanoflann is licensed under the BSD license. To obtain a copy of the license check a local file [BSD license](#).

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Chapter 6

Release Notes

1.0.0

Initial version.

Plugins

- **1.0.0_P1** | updated `MVCommon` 3rdparty dependency to version 4.0.0
- **1.0.0_P2** | updated for `Mvx2` framework version 5.0.0
- **1.0.0_P3** | updated `MVDracoCompression` dependency to version 4.0.0

Documentation

- **1.0.0_D1** | added 'release notes' section
- **1.0.0_D2** | added a section for each plugin's filter

1.1.0

Enable use of RYSK decoder via simple C-style export wrapper.

Plugins

- **1.1.0_P1** | exposed RYSK decoder using C-style exports

