

Package ‘qoi’

April 17, 2024

Type Package

Title Read and Write QOI Images

Date 2024-04-17

Version 0.1.0

Author Johannes Friedrich [aut, trl, cre],
Dominic Szablewski [cph] (C library 'qoi')

Maintainer Johannes Friedrich <Johannes.Friedrich@posteo.de>

URL <https://github.com/JohannesFriedrich/qoi4R>

BugReports <https://github.com/JohannesFriedrich/qoi4R/issues>

Description The new QOI file format offers a very simple but efficient image compression algorithm. This package provides an easy and simple way to read, write and display bitmap images stored in the QOI (Quite Ok Image) format. It can read and write both files and in-memory raw vectors.

License MIT + file LICENSE

Encoding UTF-8

NeedsCompilation yes

RoxygenNote 7.3.1

Depends R (>= 2.10)

LazyData true

Suggests testthat (>= 3.0.0)

Config/testthat/edition 3

Repository CRAN

Date/Publication 2024-04-17 17:40:12 UTC

R topics documented:

readQOI	2
Rlogo_RGBA	2
writeQOI	3

Index	4
--------------	----------

readQOI	<i>Read an QOI image into a RGB(A) raster array</i>
---------	---

Description

Read an QOI image into a RGB(A) raster array

Usage

```
readQOI(qoi_image_path)
```

Arguments

qoi_image_path **character (required)**: Path to a stored qoi-image

Value

A matrix with integer (0-255) RGB(A) values with dimensions height x width x channels. Until now 3 (RGB) and 4 (RGBA) channels are integrated in the specification. If the decoding went wrong the returned value is NULL.

Author(s)

Johannes Friedrich

Examples

```
## (1) Read RGBA values from file
path <- system.file("extdata", "Rlogo.qoi", package="qoi")
rlogo_qoi <- readQOI(path)
dim(rlogo_qoi)

## (2) plot them
plot.new()
```

Rlogo_RGBA	<i>RGBA values for the Rlogo (https://www.r-project.org/logo/)</i>
------------	--

Description

RGBA values for the Rlogo (<https://www.r-project.org/logo/>)

Format

[matrix] with 561 x 724 x 4 elements

Author(s)

Johannes Friedrich

`writeQOI`*Write an QOI image from an RGB(A) raster array or matrix*

Description

Write an QOI image from an RGB(A) raster array or matrix

Usage

```
writeQOI(image, target = raw())
```

Arguments

`image` **matrix (required)**: Image represented by a integer matrix or array with values in the range of 0 to 255.

`target` **character or connections or raw**: Either name of the file to write, a binary connection or a raw vector (`raw()` - the default - is good enough) indicating that the output should be a raw vector.

Value

The result is either stored in a file (if `target` is a file name), in a raw vector (if `target` is a raw vector) or sent to a binary connection.

Author(s)

Johannes Friedrich

Examples

```
## (1) Write to raw() -> see bytes
bin <- writeQOI(Rlogo_RGBA)
rawToChar(head(bin)) ## qoif

## Not run:
## (2) Write to a *.qoi file
writeQOI(Rlogo_RGBA, "Rlogo_RGBA.qoi")

## End(Not run)
```

Index

character, [2](#), [3](#)
connections, [3](#)

matrix, [3](#)

raw, [3](#)
readQOI, [2](#)
Rlogo_RGBA, [2](#)

writeQOI, [3](#)