

# Package ‘read.dbc’

September 16, 2016

**Title** Read Data Stored in DBC (Compressed DBF) Files

**Description** Functions for reading and decompressing the DBC (compressed DBF) files. Please note that this is the file format used by the Brazilian Ministry of Health (DATASUS) to publish healthcare datasets. It is not related to the Fox-Pro or CANdb DBC file formats.

**Version** 1.0.5

**Depends** R (>= 3.3.0)

**Imports** foreign

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**URL** <https://github.com/danicat/read.dbc>

**BugReports** <https://github.com/danicat/read.dbc/issues>

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**Encoding** UTF-8

**LazyData** true

**RoxygenNote** 5.0.1.9000

**NeedsCompilation** yes

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**Repository** CRAN

**Date/Publication** 2016-09-16 07:13:47

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`dbc2dbf`*Decompress a DBC (compressed DBF) file*

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### Description

This function allows you decompress a DBC file into its DBF counterpart. Please note that this is the file format used by the Brazilian Ministry of Health (DATASUS), and it is not related to the FoxPro or CANdb DBC file formats.

### Usage

```
dbc2dbf(input.file, output.file)
```

### Arguments

<code>input.file</code>	The name of the DBC file (including extension)
<code>output.file</code>	The output file name (including extension)

### Details

DBC is the extension for compressed DBF files (from the 'XBASE' family of databases). This is a proprietary file format used by the Brazilian government to make available public healthcare datasets (by its agency called DATASUS).

It uses internally the PKWare's Data Compression Library (DCL) "implode" compression algorithm. When decompressed, it becomes a regular DBF file.

### Value

Return TRUE if succeeded, FALSE otherwise.

### Author(s)

Daniela Petruzalek, <daniela.petruzalek@gmail.com>

### Source

The internal C code for `dbc2dbf` is based on `blast` decompressor and `blast-dbf` (see *References*).

### References

The PKWare ZIP file format documentation (contains the "implode" algorithm specification) available at <https://support.pkware.com/display/PKZIP/APPNOTE>, current version <https://pkware.cachefly.net/webdocs/casestudies/APPNOTE.TXT>.

`blast` source code in C: <https://github.com/madler/zlib/tree/master/contrib/blast>

`blast-dbf`, DBC to DBF command-line decompression tool: <https://github.com/eaglebh/blast-dbf>

**See Also**[read.dbc](#)**Examples**

```
# Input file name
in.f <- system.file("files/sids.dbc", package = "read.dbc")

# Output file name
out.f <- tempfile(fileext = ".dbc")

# The call return logi = TRUE on success
if( dbc2dbf(input.file = in.f, output.file = out.f) ) {
  print("File decompressed!")
  file.remove(out.f)
}
```

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`read.dbc`*Read Data Stored in DBC (compressed DBF) Files*

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**Description**

This function allows you to read a DBC (compressed DBF) file into a data frame. Please note that this is the file format used by the Brazilian Ministry of Health (DATASUS), and it is not related to the FoxPro or CANdb DBC file formats.

**Usage**

```
read.dbc(file, ...)
```

**Arguments**

<code>file</code>	The name of the DBC file (including extension)
<code>...</code>	Further arguments to be passed to <a href="#">read.dbf</a>

**Details**

DBC is the extension for compressed DBF files (from the 'XBASE' family of databases). This is a proprietary file format used by the brazilian government to make available public healthcare datasets (by it's agency called DATASUS). `read.dbc` relies on the [dbc2dbf](#) function to decompress the DBC into a temporary DBF file.

After decompressing, it reads the temporary DBF file into a `data.frame` using [read.dbf](#) from the foreign package.

**Value**

A `data.frame` of the data from the DBC file.

**Note**

DATASUS is the name of the Department of Informatics of the Brazilian Health System and is responsible for publishing public healthcare data. Besides the DATASUS, the Brazilian National Agency for Supplementary Health (ANS) also uses this file format for its public data.

This function was tested using files from both DATASUS and ANS to ensure compliance with the format, and hence ensure its usability by researchers.

As a final note, neither this project, nor its author, has any association with the Brazilian government.

**Author(s)**

Daniela Petruzalek, <daniela.petruszalek@gmail.com>

**See Also**

[dbc2dbf](#)

**Examples**

```
# The 'sids.dbc' file is the compressed version of 'sids.dbf' from the "foreign" package.
x <- read.dbc(system.file("files/sids.dbc", package="read.dbc"))
str(x)
summary(x)

# This is a small subset of U.S. NOAA storm database.
storm <- read.dbc(system.file("files/storm.dbc", package="read.dbc"))
head(x)
str(x)

## Don't run!
## The following code will download data from the "Declarations of Death" database for
## the Brazilian state of Parana, year 2013. Source: DATASUS / Brazilian Ministry of Health
url <- "ftp://ftp.datasus.gov.br/dissemin/publicos/SIM/CID10/DORES/DOPR2013.dbc"
download.file(url, destfile = "DOPR2013.dbc")
dopr <- read.dbc("DOPR2013.dbc")
head(dopr)
str(dopr)
```

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