

MBS Real Studio GhostScript Plugin Documentation

Christian Schmitz

May 15, 2012

0.1 Introduction

This is the PDF version of the documentation for the Real Studio Plug-in from Monkeybread Software Germany. Plugin part: MBS Real Studio GhostScript Plugin

0.2 Content

- 1 List of all topics 3
- 2 All items in this plugin 5
- 3 List of all classes 15

Chapter 1

List of Topics

• 2 Ghostscript	5
– 2.1 class GhostScriptMBS	5
* 2.1.1 Close	5
* 2.1.1 GSDeleteInstance	6
* 2.1.1 GSExit as integer	6
* 2.1.1 GSInit(parameters() as string) as integer	6
* 2.1.1 GSInitMT(parameters() as string) as integer	7
* 2.1.1 GSNew as integer	7
* 2.1.1 GSNewMT as integer	8
* 2.1.1 GSRunString(data as string, UserErrors as integer, byref ExitCode as integer) as integer	8
* 2.1.1 GSRunStringBegin(UserErrors as integer, byref ExitCode as integer) as integer	8
* 2.1.1 GSRunStringContinue(data as string, UserErrors as integer, byref ExitCode as integer) as integer	9
* 2.1.1 GSRunStringEnd(UserErrors as integer, byref ExitCode as integer) as integer	9
* 2.1.1 LoadAPIdll(libname as string)	9
* 2.1.1 LoadAPIframework(libraryfile as folderitem)	10
* 2.1.1 LoadAPIlibrary(libname as string)	10
* 2.1.1 LoadLibrary(file as folderitem)	10
* 2.1.1 LoadLibrary(path as string)	11
* 2.1.1 RunParams(parameters() as string, runstring as string) as integer	11
* 2.1.1 RunParamsMT(parameters() as string, runstring as string) as integer	11
* 2.1.1 UnloadAPI	12
* 2.1.2 Copyright as String	12
* 2.1.2 InstanceHandle as Integer	12
* 2.1.2 LibraryHandle as Integer	12

* 2.1.2 LoadError as Integer	13
* 2.1.2 LoadErrorString as String	13
* 2.1.2 Product as String	13
* 2.1.2 Revision as Integer	13
* 2.1.2 RevisionDate as Integer	14
* 2.1.3 Input(byref s as string) as integer	14
* 2.1.3 Output(s as string) as integer	14
* 2.1.3 OutputError(s as string) as integer	14

Chapter 2

Ghostscript

2.1 class GhostScriptMBS

class GhostScriptMBS

Plugin Version: 5.0 Console & Web: Yes Mac: Yes, Win: Yes, Linux: Yes, . **Function:** A class to run the open source ghostscript library in a REALbasic application.

Notes:

The plug-in helps you to use GhostScript in REALbasic.

You need to check yourself with artifex for getting a license for use of Ghostscript:

<http://www.artifex.com/indexlicense.htm>

This plugin is available on request for users with a commercial GhostScript license.

2.1.1 Methods

Close

Plugin Version: 5.0 Console & Web: Yes Mac: Yes, Win: Yes, Linux: Yes, . **Function:** The destructor.

Notes:

There is no need to call this method except you want to free all resources of this object now without waiting for Realbasic to do it for you.

(e.g. some Realbasic versions crash on Windows if there are plugin objects not closed.)

GSDeleteInstance

Plugin Version: 5.4 Console & Web: Yes Mac: Yes, Win: Yes, Linux: Yes, . **Function:** Destroy an instance of Ghostscript.

Notes: Before you call this, Ghostscript must have finished. If Ghostscript has been initialised, you must call GSExit before GSDeleteInstance.

GSExit as integer

Plugin Version: 5.4 Console & Web: Yes Mac: Yes, Win: Yes, Linux: Yes, . **Function:** Exit the interpreter.

Notes: This must be called on shutdown if GSInit() has been called, and just before GSDeleteInstance().

GSInit(parameters() as string) as integer

Plugin Version: 5.4 Console & Web: Yes Mac: Yes, Win: Yes, Linux: Yes, . **Function:** Initialise the interpreter.

Notes:

Pass an array of parameter things. String must have the needed encoding (no UTF16).

Error codes for all GS* functions:

0	No errors
e_Quit	"quit" has been executed. This is not an error. GSExit() must be called next.
e_NeedInput	More input is needed by GSRunStringContinue(). This is not an error.
e_Info	"gs -h" has been executed. This is not an error. GSExit() must be called next.
<0	Error
<= -100	Fatal error. GSExit() must be called next.

see ierrors.h from Ghostscript for more details on the error codes.

GSInitMT(parameters() as string) as integer

Plugin Version: 11.2 Console & Web: Yes Mac: Yes, Win: Yes, Linux: Yes, . **Function:** Initialise the interpreter.

Notes:

Pass an array of parameter things. String must have the needed encoding (no UTF16).

Error codes for all GS* functions:

0	No errors
e_ Quit	"quit" has been executed. This is not an error. GSExit() must be called next.
e_ NeedInput	More input is needed by GSRunStringContinue(). This is not an error.
e_ Info	"gs -h" has been executed. This is not an error. GSExit() must be called next.
<0	Error
<= -100	Fatal error. GSExit() must be called next.

see ierrors.h from Ghostscript for more details on the error codes.

This is the multithreaded version which works very well if you run it in a thread. Input event will not be called, but output and outputError events.

GSNew as integer

Plugin Version: 5.4 Console & Web: Yes Mac: Yes, Win: Yes, Linux: Yes, . **Function:** Create a new instance of Ghostscript.

Notes:

This instance is passed to most other GS* functions.
At this stage, Ghostscript supports only one instance.

Please do not use RunParams together with the GS* functions.
GS* functions work on a lower level.

Handle is set.

GSNewMT as integer

Plugin Version: 11.2 Console & Web: Yes Mac: Yes, Win: Yes, Linux: Yes, . **Function:** Create a new instance of Ghostscript.

Notes:

This instance is passed to most other GS* functions.
At this stage, Ghostscript supports only one instance.

Please do not use RunParams/RunParamsMT together with the GS* functions.
GS* functions work on a lower level.

Handle is set.
Use GSNewMT if you want to use GSInitMT.

This is the multithreaded version which works very well if you run it in a thread. Input event will not be called, but output and outputError events.

GSRunString(data as string, UserErrors as integer, byref ExitCode as integer) as integer

Plugin Version: 5.4 Console & Web: Yes Mac: Yes, Win: Yes, Linux: Yes, . **Function:** Runs data through the interpreter.

Notes:

If this function returns ≤ -100 , either quit or a fatal error has occurred. You must call GSExit() next. The only exception is GSRunStringContinue() which will return e_ NeedInput (-106) if all is well.
There is a 64 KB length limit on any buffer submitted to a gsapi_run_* function for processing. If you have more than 65535 bytes of input then you must split it into smaller pieces and submit each in a separate GSRunStringContinue() call.

GSRunStringBegin(UserErrors as integer, byref ExitCode as integer) as integer

Plugin Version: 5.4 Console & Web: Yes Mac: Yes, Win: Yes, Linux: Yes, . **Function:** Runs data through the interpreter.

Notes:

If this function returns ≤ -100 , either quit or a fatal error has occurred. You must call GSExit() next. The

only exception is `GSRunStringContinue()` which will return `e_ NeedInput (-106)` if all is well. There is a 64 KB length limit on any buffer submitted to a `gsapi_run_*` function for processing. If you have more than 65535 bytes of input then you must split it into smaller pieces and submit each in a separate `GSRunStringContinue()` call.

GSRunStringContinue(data as string, UserErrors as integer, byref ExitCode as integer) as integer

Plugin Version: 5.4 Console & Web: Yes Mac: Yes, Win: Yes, Linux: Yes, . **Function:** Runs data through the interpreter.

Notes:

If this function returns ≤ -100 , either quit or a fatal error has occurred. You must call `GSExit()` next. The only exception is `GSRunStringContinue()` which will return `e_ NeedInput (-106)` if all is well. There is a 64 KB length limit on any buffer submitted to a `gsapi_run_*` function for processing. If you have more than 65535 bytes of input then you must split it into smaller pieces and submit each in a separate `GSRunStringContinue()` call.

GSRunStringEnd(UserErrors as integer, byref ExitCode as integer) as integer

Plugin Version: 5.4 Console & Web: Yes Mac: Yes, Win: Yes, Linux: Yes, . **Function:** Runs data through the interpreter.

Notes:

If this function returns ≤ -100 , either quit or a fatal error has occurred. You must call `GSExit()` next. The only exception is `GSRunStringContinue()` which will return `e_ NeedInput (-106)` if all is well. There is a 64 KB length limit on any buffer submitted to a `gsapi_run_*` function for processing. If you have more than 65535 bytes of input then you must split it into smaller pieces and submit each in a separate `GSRunStringContinue()` call.

LoadAPIdll(libname as string)

Plugin Version: 8.1 Console & Web: Yes Mac: Yes, Win: Yes, Linux: Yes, . **Function:** Loads the shared library.

Notes:

Only for Windows DLLs.
Deprecated in plugin version 10.4.

LoadAPIframework(libaryfile as folderitem)

Plugin Version: 8.1 Console & Web: Yes Mac: Yes, Win: No, Linux: Yes, . **Function:** Loads the shared library.

Example:

```
dim g as new GhostScriptMBS
g.LoadAPIframework getfolderitem("Ghostscript.framework")
```

Notes:

Only for frameworks on Mac OS X.
Deprecated in plugin version 10.4.

LoadAPIlibrary(libname as string)

Plugin Version: 8.1 Console & Web: Yes Mac: Yes, Win: No, Linux: Yes, . **Function:** Loads the shared library.

Notes:

Only for Linux .so files or Mac OS X .dylib files.
Deprecated in plugin version 10.4.

LoadLibrary(file as folderitem)

Plugin Version: 10.4 Console & Web: Yes Mac: Yes, Win: Yes, Linux: Yes, . **Function:** Loads the Ghostscript shared library.

Notes: Loads a Windows DLL, a Linux shared library, a Mac OS X shared library or a Mac OS X framework from the given path.

See also:

- 2.1.1 LoadLibrary(path as string)

LoadLibrary(path as string)

Plugin Version: 10.4 Console & Web: Yes Mac: Yes, Win: Yes, Linux: Yes, . **Function:** Loads the Ghostscript shared library.

Notes: Loads a Windows DLL, a Linux shared library, a Mac OS X shared library or a Mac OS X framework from the given path.

See also:

- 2.1.1 LoadLibrary(file as folderitem)

10

RunParams(parameters() as string, runstring as string) as integer

Plugin Version: 5.0 Console & Web: Yes Mac: Yes, Win: Yes, Linux: Yes, . **Function:** Runs the ghostscript engine.

Notes:

runstring can be empty.

Returns an error code:

0 - success

1 - error, shared library was not loaded

or one of the Ghostscript error codes.

RunParamsMT(parameters() as string, runstring as string) as integer

Plugin Version: 11.2 Console & Web: Yes Mac: Yes, Win: Yes, Linux: Yes, . **Function:** Runs the ghostscript engine.

Notes:

runstring can be empty.

Returns an error code:

0 - success

1 - error, shared library was not loaded

or one of the Ghostscript error codes.

This is the multithreaded version which works very well if you run it in a thread. Input event will not be called, but output and outputError events.

UnloadAPI

Plugin Version: 6.4 Console & Web: Yes Mac: Yes, Win: Yes, Linux: Yes, . **Function:** Unloads the shared library.

Notes:

Reverses what LoadAPI does.

So if you loaded a ghostscript dll file, this file will be unloaded and the file closed.

In special cases you may need to force a reset of the ghostscript library by unloading it and loading it later again.

2.1.2 Properties

Copyright as String

Plugin Version: 5.0 Console & Web: Yes Mac: Yes, Win: Yes, Linux: Yes, . **Function:** The copyright string of the Ghostscript library.

Notes: (Read only property)

InstanceHandle as Integer

Plugin Version: 5.4 Console & Web: Yes Mac: Yes, Win: Yes, Linux: Yes, . **Function:** The handle.

Notes:

Used internally for the functions GSExit, GSRunStringEnd, GSNew, GSInit, GSRunStringContinue, GSRunStringBegin, GSRunString and GSDeleteInstance.

(Read only property)

LibraryHandle as Integer

Plugin Version: 5.0 Console & Web: Yes Mac: Yes, Win: Yes, Linux: Yes, . **Function:** The handle of the loaded shared library.

Notes: (Read only property)

LoadError as Integer

Plugin Version: 5.0 Console & Web: Yes Mac: Yes, Win: Yes, Linux: Yes, . **Function:** The error code from loading the shared library.

Notes:

0 if no error.

(Read and Write property)

LoadErrorString as String

Plugin Version: 5.0 Console & Web: Yes Mac: Yes, Win: Yes, Linux: Yes, . **Function:** The error message.

Notes:

If loading of the shared library fails on a Mac an error message is stored in this string.

(Read and Write property)

Product as String

Plugin Version: 5.0 Console & Web: Yes Mac: Yes, Win: Yes, Linux: Yes, . **Function:** The product string of the Ghostscript library.

Notes: (Read only property)

Revision as Integer

Plugin Version: 5.0 Console & Web: Yes Mac: Yes, Win: Yes, Linux: Yes, . **Function:** The revision of the Ghostscript library.

Example:

```
dim g as new GhostScriptMBS
msgbox str(g.Revision) // e.g. "850"
```

Notes: (Read only property)

RevisionDate as Integer

Plugin Version: 5.0 Console & Web: Yes Mac: Yes, Win: Yes, Linux: Yes, . **Function:** The revision date of the Ghostscript library.

Example:

```
dim g as new GhostScriptMBS
msgbox format(g.RevisionDate,"0") // e.g. "20041220"
```

Notes: (Read only property)

2.1.3 Events**Input(byref s as string) as integer**

Plugin Version: 5.0 Console & Web: No Mac: Yes, Win: Yes, Linux: Yes, . **Function:** Read something for the library.

Notes: Return 0 for Endoffile and -1 for error.

Output(s as string) as integer

Plugin Version: 5.0 Console & Web: No Mac: Yes, Win: Yes, Linux: Yes, . **Function:** The library has something to output.

Notes: Return lenb(s) to tell the library how much you have written.

OutputError(s as string) as integer

Plugin Version: 5.0 Console & Web: No Mac: Yes, Win: Yes, Linux: Yes, . **Function:** The library has something to output on the error channel.

Notes: Return lenb(s) to tell the library how much you have written.

Chapter 3

List of all classes

- GhostScriptMBS

5