CGPSConverter Reference

Graphics & Imaging > Quartz

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CGPSConverter Reference

Derived From:	*CFType Reference*
Framework:	ApplicationServices/ApplicationServices.h
Companion guide	Quartz 2D Programming Guide
Declared in	CGPSConverter.h

Overview

`CGPSConverterRef` is an opaque type used to convert PostScript data to PDF data. The PostScript data is supplied by a data provider and written into a data consumer. When you create a PostScript converter object, you can supply callback functions for Quartz to invoke at various stages of the conversion process,

Functions

CGPSConverterAbort

Tells a PostScript converter to abort a conversion at the next available opportunity.

```
bool CGPSConverterAbort (
   CGPSConverterRef converter
);
```

Parameters

converter

A PostScript converter.

Return Value

A Boolean value that indicates whether the converter is currently converting data (`true` if it is).

Availability

Available in Mac OS X version 10.3 and later.

Declared In

`CGPSConverter.h`

CGPSConverterConvert

Uses a PostScript converter to convert PostScript data to PDF data.

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```
bool CGPSConverterConvert (
   CGPSConverterRef converter,
   CGDataProviderRef provider,
   CGDataConsumerRef consumer,
   CFDictionaryRef options
);
```

Parameters

converter

A PostScript converter.

provider

A Quartz data provider that supplies PostScript data.

consumer

A Quartz data provider that will receive the resulting PDF data.

options

This parameter should be `NULL`; it is reserved for future expansion of the API.

Return Value

A Boolean value that indicates whether the PostScript conversion completed successfully (`true` if it did).

Discussion

The conversion is thread safe, however it is not possible to have more than one conversion job in process within a given address space or process. If a given thread is running a conversion and another thread starts a new conversion, the second conversion will block until the first conversion is complete.

Important: Although `CGPSConverterConvert` is thread safe (it uses locks to prevent more than one conversion at a time in the same process), it is not thread safe with respect to the Resource Manager. If your application uses the Resource Manager on a separate thread, you should either use locks to prevent `CGPSConverterConvert` from executing during your usage of the Resource Manager or you should perform your conversions using the Post Script converter in a separate process.

In general, you can avoid this issue by using nib files instead of Resource Manager resources.

Availability

Available in Mac OS X version 10.3 and later.

Declared In

`CGPSConverter.h`

CGPSConverterCreate

Creates a new PostScript converter.

```
CGPSConverterRef CGPSConverterCreate (
   void *info,
   const CGPSConverterCallbacks *callbacks,
   CFDictionaryRef options
);
```

Parameters

info

A pointer to the data that will be passed to the callbacks.

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callbacks

A pointer to a PostScript converter callbacks structure that specifies the callbacks to be used during a conversion process.

options

This parameter should be `NULL`; it is reserved for future expansion of the API.

Return Value

A new PostScript converter, or `NULL` if a converter could not be created. You are responsible for releasing this object.

Availability

Available in Mac OS X version 10.3 and later.

Declared In

`CGPSConverter.h`

CGPSConverterGetTypeID

Returns the Core Foundation type identifier for PostScript converters.

```
CFTypeID CGPSConverterGetTypeID (
   void
);
```

Return Value

The Core Foundation identifier for the opaque type `CGPSConverterRef` (page 12).

Availability

Available in Mac OS X version 10.3 and later.

Declared In

`CGPSConverter.h`

CGPSConverterIsConverting

Checks whether the converter is currently converting data.

```
bool CGPSConverterIsConverting (
   CGPSConverterRef converter
);
```

Parameters

converter

A PostScript converter.

Return Value

Returns `true` that indicates if the conversion is in progress.

Availability

Available in Mac OS X version 10.3 and later.

Declared In

`CGPSConverter.h`

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Callbacks by Task

Performing Custom Tasks at the Document Level

`CGPSConverterBeginDocumentCallback` (page 8)
Performs custom tasks at the beginning of a PostScript conversion process.

`CGPSConverterEndDocumentCallback` (page 9)
Performs custom tasks at the end of a PostScript conversion process.

Performing Custom Tasks at the Page Level

`CGPSConverterBeginPageCallback` (page 9)
Performs custom tasks at the beginning of each page in a PostScript conversion process.

`CGPSConverterEndPageCallback` (page 10)
Performs custom tasks at the end of each page of a PostScript conversion process.

Reporting Progress and Messages

`CGPSConverterProgressCallback` (page 11)
Reports progress periodically during a PostScript conversion process.

`CGPSConverterMessageCallback` (page 10)
Passes messages generated during a PostScript conversion process.

Performing Custom Clean-up Tasks

`CGPSConverterReleaseInfoCallback` (page 12)
Performs custom tasks when a PostScript converter is released.

Callbacks

CGPSConverterBeginDocumentCallback

Performs custom tasks at the beginning of a PostScript conversion process.

```
typedef void (*CGPSConverterBeginDocumentCallback)(void
*info);
```

If you name your function `MyConverterBeginDocument`, you would declare it like this:

```
size_t MyConverterBeginDocument (
    void *info
);
```


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Parameters

info

A generic pointer to private data shared among your callback functions. This is the same pointer you supplied to `CGPSConverterCreate` (page 6).

Availability
Available in Mac OS X v10.3 and later.

Declared In
`CGPSConverter.h`

CGPSConverterBeginPageCallback

Performs custom tasks at the beginning of each page in a PostScript conversion process.

```
typedef void (*CGPSConverterBeginPageCallback)(void
*info, size_t pageNumber, CFDictionaryRef pageInfo);
```

If you name your function `MyConverterBeginDocument`, you would declare it like this:

```
void MyConverterBeginPage (
    void *info,
   size_t pageNumber,
   CFDictionaryRef pageInfo
);
```

Parameters

info

A generic pointer to private data shared among your callback functions. This is the same pointer you supplied to `CGPSConverterCreate` (page 6).

pageNumber

The current page number. Page numbers start at `1`.

pageInfo

A dictionary that contains contextual information about the page. This parameter is reserved for future API expansion, and is currently unused.

Availability
Available in Mac OS X v10.3 and later.

Declared In
`CGPSConverter.h`

CGPSConverterEndDocumentCallback

Performs custom tasks at the end of a PostScript conversion process.

```
typedef void (*CGPSConverterEndDocumentCallback)(void
*info, bool success);
```

If you name your function `MyConverterEndDocument`, you would declare it like this:

```
void MyConverterEndDocument (
    void *info,
```


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```
    bool success
);
```

Parameters

info

A generic pointer to private data shared among your callback functions. This is the same pointer you supplied to `CGPSConverterCreate` (page 6).

success

A Boolean value that indicates whether the PostScript conversion completed successfully (`true` if it did).

Availability
Available in Mac OS X v10.3 and later.

Declared In
`CGPSConverter.h`

CGPSConverterEndPageCallback

Performs custom tasks at the end of each page of a PostScript conversion process.

```
typedef void (*CGPSConverterEndPageCallback)(void
*info, size_t pageNumber, CFDictionaryRef pageInfo);
```

If you name your function `MyConverterEndPage`, you would declare it like this:

```
void MyConverterEndPage (
   void *info,
   size_t *pageNumber,
   CFDictionaryRef pageInfo
);
```

Parameters

info

A generic pointer to private data shared among your callback functions. This is the same pointer you supplied to `CGPSConverterCreate` (page 6).

pageNumber

The current page number. Page numbers start at `1`.

pageInfo

A dictionary that contains contextual information about the page. This parameter is reserved for future API expansion, and is currently unused.

Availability
Available in Mac OS X v10.3 and later.

Declared In
`CGPSConverter.h`

CGPSConverterMessageCallback

Passes messages generated during a PostScript conversion process.

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```
typedef void (*CGPSConverterMessageCallback)(void
*info, CFStringRef message);
```

If you name your function `MyConverterMessage`, you would declare it like this:

```
void MyConverterMessage (
    void *info,
   CFStringRef message
);
```

Parameters

info

A generic pointer to private data shared among your callback functions. This is the same pointer you supplied to `CGPSConverterCreate` (page 6).

message

A string containing the message from the PostScript conversion process.

Discussion

There are several kinds of message that might be sent during a conversion process. The most likely are font substitution messages, and any messages that the PostScript code itself generates. Any PostScript messages written to `stdout` are routed through this callback—typically these are debugging or status messages and, although uncommon, can be useful in debugging. In addition, there may be error messages if the document is malformed.

Availability

Available in Mac OS X v10.3 and later.

Declared In

`CGPSConverter.h`

CGPSConverterProgressCallback

Reports progress periodically during a PostScript conversion process.

```
typedef void (*CGPSConverterProgressCallback)(void
*info);
```

If you name your function `MyConverterProgress`, you would declare it like this:

```
void MyConverterProgress (
    void *info
);
```

Parameters

info

A generic pointer to private data shared among your callback functions. This is the same pointer you supplied to `CGPSConverterCreate` (page 6).

Availability

Available in Mac OS X v10.3 and later.

Declared In

`CGPSConverter.h`

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CGPSConverterReleaseInfoCallback

Performs custom tasks when a PostScript converter is released.

```
typedef void (*CGPSConverterReleaseInfoCallback)(void
*info);
```

If you name your function `MyConverterReleaseInfo`, you would declare it like this:

```
void MyConverterReleaseInfo (
  void *info
);
```

Parameters

info

A generic pointer to private data shared among your callback functions. This is the same pointer you supplied to `CGPSConverterCreate` (page 6).

Availability

Available in Mac OS X v10.3 and later.

Declared In

`CGPSConverter.h`

Data Types

CGPSConverterRef

An opaque data type used to convert PostScript data to PDF data.

```
typedef struct CGPSConverter *CGPSConverterRef;
```

Availability

Available in Mac OS X v10.3 and later.

Declared In

`CGPSConverter.h`

CGPSConverterCallbacks

A structure for holding the callbacks provided when you create a PostScript converter object.

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```
struct CGPSConverterCallbacks {
    unsigned int version;
    CGPSConverterBeginDocumentCallback beginDocument;
    CGPSConverterEndDocumentCallback endDocument;
    CGPSConverterBeginPageCallback beginPage;
    CGPSConverterEndPageCallback endPage;
    CGPSConverterProgressCallback noteProgress;
    CGPSConverterMessageCallback noteMessage;
    CGPSConverterReleaseInfoCallback releaseInfo;
};
typedef struct CGPSConverterCallbacks CGPSConverterCallbacks;
```

Fields

`version`
: The version number of the structure passed in as a parameter to the converter creation functions. The structure defined below is version `0`.

`beginDocument`
: The callback called at the beginning of the conversion of the PostScript document, or `NULL`.

`endDocument`
: The callback called at the end of conversion of the PostScript document, or `NULL`.

`beginPage`
: The callback called at the start of the conversion of each page in the PostScript document, or `NULL`.

`endPage`
: The callback called at the end of the conversion of each page in the PostScript document, or `NULL`.

`noteProgress`
: The callback called periodically during the conversion to indicate that conversion is proceeding, or `NULL`.

`noteMessage`
: The callback called to pass any messages that might result during the conversion, or `NULL`.

`releaseInfo`
: The callback called when the converter is deallocated, or `NULL`.

Availability

Available in Mac OS X v10.3 and later.

Declared In

`CGPSConverter.h`

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Document Revision History

This table describes the changes to *CGPSConverter Reference*.

Date	Notes
2006-12-22	Added additional thread safety information to the function CGPSConverterConvert.
2006-01-10	Made minor editorial corrections.
2005-04-29	Updated for Mac OS X v10.4.
	Added introductory material and the function `CGPSConverterIsConverting` (page 7).
2004-02-26	First version of this document. An earlier version of this information appeared in *Quartz 2D Reference*.

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