
CGPDFArray Reference

Graphics & Animation: 2D Drawing



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Apple Inc.
1 Infinite Loop
Cupertino, CA 95014
408-996-1010

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CGPDFArray Reference

Derived From:	None
Framework:	ApplicationServices/ApplicationServices.h
Companion guide	Quartz 2D Programming Guide
Declared in	CGPDFArray.h

Overview

The `CGPDFArray` header file defines an opaque type that encapsulates a PDF array. A PDF array represents an array structure in a PDF document. PDF arrays may be heterogeneous—that is, they may contain any other PDF objects, including PDF strings, PDF dictionaries, and other PDF arrays.

Many `CGPDFArray` functions to retrieve values from a PDF array take the form:

```
bool CGPDFArrayGet<DataType> (  
    CGPDFArrayRef array,  
    size_t index,  
    <DataType>Ref *value  
);
```

These functions test the data type of the object at the specified index. If the object is not of the expected type, the function returns `false`. If the object is of the expected type, the function returns `true`, and the object is passed back in the `value` parameter.

This opaque type is not derived from `CType` and therefore there are no functions for retaining and releasing it. `CGPDFArray` objects exist only as constituent parts of a `CGPDFDocument` object, and they are managed by their container.

Functions

CGPDFArrayGetArray

Returns whether an object at a given index in a PDF array is another PDF array and, if so, retrieves that array.

```
bool CGPDFArrayGetArray (
    CGPDFArrayRef array,
    size_t index,
    CGPDFArrayRef *value
);
```

Parameters*array*

A PDF array. If this parameter is not a valid PDF array, the behavior is undefined.

index

The index of the value to retrieve. If the index is outside the index space of the array (0 to N-1, where N is the count of the array), the behavior is undefined.

value

On input, a pointer to a PDF array. If the value at the specified index is a PDF array, then on return that array, otherwise the value is unspecified.

Return Value

Returns `true` if there is a PDF array at the specified index, otherwise `false`.

Availability

Available in Mac OS X version 10.3 and later.

Declared In

CGPDFArray.h

CGPDFArrayGetBoolean

Returns whether an object at a given index in a PDF array is a PDF Boolean and, if so, retrieves that Boolean.

```
bool CGPDFArrayGetBoolean (
    CGPDFArrayRef array,
    size_t index,
    CGPDFBoolean *value
);
```

Parameters*array*

A PDF array. If this parameter is not a valid PDF array, the behavior is undefined.

index

The index of the value to retrieve. If the index is outside the index space of `array` (0 to N-1, where N is the count of `array`), the behavior is undefined.

value

On input, a pointer to a PDF Boolean. If the value at the specified index is a PDF Boolean, then on return that Boolean, otherwise the value is undefined.

Return Value

Returns `true` if there is a PDF Boolean at the specified index, otherwise `false`.

Availability

Available in Mac OS X version 10.3 and later.

Declared In

CGPDFArray.h

CGPDFArrayGetCount

Returns the number of items in a PDF array.

```
size_t CGPDFArrayGetCount (
    CGPDFArrayRef array
);
```

Parameters

array

A PDF array. If this parameter is not a valid PDF array, the behavior is undefined.

Return Value

Returns the number of items in the array.

Availability

Available in Mac OS X version 10.3 and later.

Declared In

CGPDFArray.h

CGPDFArrayGetDictionary

Returns whether an object at a given index in a PDF array is a PDF dictionary and, if so, retrieves that dictionary.

```
bool CGPDFArrayGetDictionary (
    CGPDFArrayRef array,
    size_t index,
    CGPDFDictionaryRef *value
);
```

Parameters

array

A PDF array. If this parameter is not a valid PDF array, the behavior is undefined.

index

The index of the value to retrieve. If the index is outside the index space of the array (0 to N-1, where N is the count of the array), the behavior is undefined.

value

On input, a pointer to a PDF dictionary. If the value at the specified index is a PDF dictionary, then on return that dictionary, otherwise the value is undefined.

Return Value

Returns `true` if there is a PDF dictionary at the specified index, otherwise `false`.

Availability

Available in Mac OS X version 10.3 and later.

Declared In

CGPDFArray.h

CGPDFArrayGetInteger

Returns whether an object at a given index in a PDF array is a PDF integer and, if so, retrieves that object.

```
bool CGPDFArrayGetInteger (
    CGPDFArrayRef array,
    size_t index,
    CGPDFInteger *value
);
```

Parameters*array*

A PDF array. If this parameter is not a valid PDF array, the behavior is undefined.

index

The index of the value to retrieve. If the index is outside the index space of the array (0 to N-1, where N is the count of the array), the behavior is undefined.

value

On input, a pointer to a PDF integer. If the value at the specified index is a PDF integer value, then on return contains that value, otherwise the value is undefined.

Return Value

Returns `true` if there is a PDF integer at the specified index, otherwise `false`.

Availability

Available in Mac OS X version 10.3 and later.

Declared In

CGPDFArray.h

CGPDFArrayGetName

Returns whether an object at a given index in a PDF array is a PDF name reference (represented as a constant C string) and, if so, retrieves that name.

```
bool CGPDFArrayGetName (
    CGPDFArrayRef array,
    size_t index,
    const char **value
);
```

Parameters*array*

A PDF array. If this parameter is not a valid PDF array, the behavior is undefined.

index

The index of the value to retrieve. If the index is outside the index space of the array (0 to N-1, where N is the count of the array), the behavior is undefined.

value

An uninitialized pointer to a constant C string. If the value at the specified index is a reference to a PDF name (represented by a constant C string) then upon return, contains that value; otherwise the value is undefined.

Return Value

Returns `true` if there is an array of characters at the specified index, otherwise `false`.

Availability

Available in Mac OS X version 10.3 and later.

Declared In

CGPDFArray.h

CGPDFArrayGetNull

Returns whether an object at a given index in a Quartz PDF array is a PDF null.

```
bool CGPDFArrayGetNull (
    CGPDFArrayRef array,
    size_t index
);
```

Parameters*array*

A PDF array. If this parameter is not a valid PDF array, the behavior is undefined.

index

The index of the value to retrieve. If the index is outside the index space of the array (0 to N-1, where N is the count of the array), the behavior is undefined.

Return Value

Returns `true` if there is a PDF null at the specified index, otherwise `false`.

Availability

Available in Mac OS X version 10.3 and later.

Declared In

CGPDFArray.h

CGPDFArrayGetNumber

Returns whether an object at a given index in a PDF array is a PDF number and, if so, retrieves that object.

```
bool CGPDFArrayGetNumber (
    CGPDFArrayRef array,
    size_t index,
    CGPDFReal *value
);
```

Parameters*array*

A PDF array. If this parameter is not a valid PDF array, the behavior is undefined.

index

The index of the value to retrieve. If the index is outside the index space of the array (0 to N-1, where N is the count of the array), the behavior is undefined.

value

On input, a pointer to a PDF number. If the value at the specified index is a PDF number, then on return contains that value, otherwise the value is undefined.

Return Value

Returns `true` if there is a PDF number at the specified index, otherwise `false`.

Availability

Available in Mac OS X version 10.3 and later.

Declared In

CGPDFArray.h

CGPDFArrayGetObject

Returns whether an object at a given index in a PDF array is a PDF object and, if so, retrieves that object.

```
bool CGPDFArrayGetObject (
    CGPDFArrayRef array,
    size_t index,
    CGPDFObjectRef *value
);
```

Parameters*array*

A PDF array. If this parameter is not a valid PDF array, the behavior is undefined.

index

The index of the value to retrieve. If the index is outside the index space of the array (0 to N-1, where N is the count of the array), the behavior is undefined.

value

On input, a pointer to a PDF object. If the value at the specified index is a PDF object, then on return contains that object, otherwise the value is undefined.

Return Value

Returns `true` if there is a PDF object at the specified index, otherwise `false`.

Availability

Available in Mac OS X version 10.3 and later.

Declared In

CGPDFArray.h

CGPDFArrayGetStream

Returns whether an object at a given index in a PDF array is a PDF stream and, if so, retrieves that stream.

```
bool CGPDFArrayGetStream (
    CGPDFArrayRef array,
    size_t index,
    CGPDFStreamRef *value
);
```

Parameters*array*

A PDF array. If this parameter is not a valid PDF array, the behavior is undefined.

index

The index of the value to retrieve. If the index is outside the index space of the array (0 to N-1, where N is the count of the array), the behavior is undefined.

value

On input, a pointer to a PDF stream. If the value at the specified index is a PDF stream, then on return that stream, otherwise the value is undefined.

Return Value

Returns `true` if there is a PDF stream at the specified index, otherwise `false`.

Availability

Available in Mac OS X version 10.3 and later.

Declared In

CGPDFArray.h

CGPDFArrayGetString

Returns whether an object at a given index in a PDF array is a PDF string and, if so, retrieves that string.

```
bool CGPDFArrayGetString (
    CGPDFArrayRef array,
    size_t index,
    CGPDFStringRef *value
);
```

Parameters

array

A PDF array. If this parameter is not a valid PDF array, the behavior is undefined.

index

The index of the value to retrieve. If the index is outside the index space of the array (0 to N-1, where N is the count of the array), the behavior is undefined.

value

On input, a pointer to a PDF string. If the value at the specified index is a PDF string, then on return that string, otherwise the value is undefined.

Return Value

Returns `true` if there is a PDF stream at the specified index, otherwise `false`.

Availability

Available in Mac OS X version 10.3 and later.

Declared In

CGPDFArray.h

Data Types

CGPDFArrayRef

An opaque type that encapsulates a PDF array.

```
typedef struct CGPDFArray *CGPDFArrayRef;
```

Availability

Available in Mac OS X v10.3 and later.

Declared In

CGPDFArray.h

Document Revision History

This table describes the changes to *CGPDFArray Reference*.

Date	Notes
2008-10-15	Updated the note about not retaining and releasing this object.
2006-12-22	Made minor editorial changes.
2006-04-04	Updated introduction.
2005-04-29	Revised introduction.
2004-02-26	First version of this document. An earlier version of this information appeared in <i>Quartz 2D Reference</i> .

REVISION HISTORY

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