
ABMultiValue Reference for C

[Carbon > Apple Applications](#)



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ABMultiValue Reference for C

Derived From:	CType
Framework:	AddressBook/ABAddressBookC.h
Companion guide	Address Book Programming Guide for Mac OS X
Declared in	ABAddressBookC.h

Overview

The `ABMultiValue` and `ABMutableMultiValue` opaque types are used to represent properties that might have multiple values. Each value in a multi-value list must be the same type, and has an associated pre-defined or user-defined label, and unique identifier. The labels, however, need not be unique. For example, you can have multiple “Home” phone numbers. Each multi-value object may have a primary identifier—used to lookup a default value when a label is not provided. For example, a person record may have multiple addresses with the labels “Home” and “Work”, where “Work” is designated as the primary value. Instances of this class are immutable, see `ABMutableMultiValue` for functions that manipulate the content of a multi-value list.

You can access values using a numeric index (similar to an array). Use the [ABMultiValueCopyIdentifierAtIndex](#) (page 5) function to get an identifier, the [ABMultiValueCopyLabelAtIndex](#) (page 6) function to get a label, and the [ABMultiValueCopyValueAtIndex](#) (page 7) function to get a value. However, a numeric index is temporary since a multi-value list may change. Each value or entry in a multi-value list has a unique identifier which can be used to save a reference to a specific value—the identifier is guaranteed never to change.

Use the [ABMultiValueCopyPrimaryIdentifier](#) (page 7) function to get the primary identifier (the identifier associated with the primary value).

The `ABMultiValue` opaque type is “toll-free bridged” with its Objective-C counterpart. This means that the `ABMultiValueRef` type is interchangeable in function or method calls with instances of the `ABMultiValue` class.

Functions

ABMultiValueCopyIdentifierAtIndex

Returns the identifier at the given index.

```

CFStringRef ABMultiValueCopyIdentifierAtIndex (
    ABMultiValueRef multiValue,
    CFIndex index
);

```

Parameters*multiValue*

The multi-value list that you wish to access.

index

The index of the identifier you wish to obtain. If this parameter is out of bounds, this function raises an exception.

Return Value

The identifier at *index* in *multiValue*. You are responsible for releasing this object.

Discussion

Each value in a multi-value list must be the same type, and has an associated pre-defined or user-defined label, and unique identifier. Use the [ABMultiValueCopyLabelAtIndex](#) (page 6) function to get a label, and the [ABMultiValueCopyValueAtIndex](#) (page 7) function to get a value.

Availability

Available in Mac OS X v10.2 and later.

Declared In

ABAddressBookC.h

ABMultiValueCopyLabelAtIndex

Returns the label for the given index.

```

CFStringRef ABMultiValueCopyLabelAtIndex (
    ABMultiValueRef multiValue,
    CFIndex index
);

```

Parameters*multiValue*

The multi-value list that you wish to access.

index

The index of the identifier you wish to obtain. If this parameter is out of bounds, this function raises an exception.

Return Value

The label at *index* in *multiValue*. You are responsible for releasing this object.

Discussion

Each value in a multi-value list must be the same type, and has an associated pre-defined or user-defined label, and unique identifier. Use the [ABMultiValueCopyIdentifierAtIndex](#) (page 5) function to get a identifier, and the [ABMultiValueCopyValueAtIndex](#) (page 7) function to get a value.

Availability

Available in Mac OS X v10.2 and later.

Related Sample Code

AddressBookCarbon

Declared In

ABAddressBookC.h

ABMultiValueCopyPrimaryIdentifier

Returns the identifier for the primary value.

```
CFStringRef ABMultiValueCopyPrimaryIdentifier (
    ABMultiValueRef multiValue
);
```

Parameters*multiValue*

The multi-value list that you wish to access.

Return Value

The unique identifier for the primary value. You are responsible for releasing this object.

Discussion

Use the [ABMultiValueCopyIdentifierAtIndex](#) (page 5) function to get index for the returned identifier, and the [ABMultiValueCopyValueAtIndex](#) (page 7) function to get its value.

Availability

Available in Mac OS X v10.2 and later.

Declared In

ABAddressBookC.h

ABMultiValueCopyValueAtIndex

Returns the value for the given index.

```
CTypeRef ABMultiValueCopyValueAtIndex (
    ABMultiValueRef multiValue,
    CFIndex index
);
```

Parameters*multiValue*

The multi-value list that you wish to access.

index

The index of the identifier you wish to obtain. If this parameter is out of bounds, this function raises an exception.

Return ValueThe value at *index* in *multiValue*. You are responsible for releasing this object.**Discussion**

Each value in a multi-value list must be the same type, and has an associated pre-defined or user-defined label, and unique identifier. Use the [ABMultiValueCopyIdentifierAtIndex](#) (page 5) function to get a identifier, and the [ABMultiValueCopyLabelAtIndex](#) (page 6) function to get a label.

Availability

Available in Mac OS X v10.2 and later.

Related Sample Code

AddressBookCarbon

Declared In

ABAddressBookC.h

ABMultiValueCount

Returns the number of entries in a multi-value list.

```
CFIndex ABMultiValueCount (
    ABMultiValueRef multiValue
);
```

Parameters

multiValue

The multi-value list that you wish to access.

Return Value

The number of entries in *multiValue*.

Availability

Available in Mac OS X v10.2 and later.

Related Sample Code

AddressBookCarbon

Declared In

ABAddressBookC.h

ABMultiValueCreate

Returns a new ABMultiValue object.

```
ABMultiValueRef ABMultiValueCreate (
    void
);
```

Return Value

A new ABMultiValue object. You are responsible for releasing this object.

Availability

Available in Mac OS X v10.2 and later.

Declared In

ABAddressBookC.h

ABMultiValueCreateCopy

Returns a copy of a multi-value object.


```
ABMultiValueRef ABMultiValueCreateCopy (
    ABMultiValueRef multiValue
);
```

Parameters

multiValue

The multi-value object you wish to copy. You are responsible for releasing this object.

Return Value

A copy of *multiValue*.

Availability

Available in Mac OS X 10.2 and later.

Declared In

ABAddressBookC.h

ABMultiValueCreateMutableCopy

Returns a mutable copy of a multi-value object.

```
ABMutableMultiValueRef ABMultiValueCreateMutableCopy (
    ABMultiValueRef multiValue
);
```

Parameters

multiValue

The multi-value object you wish to copy.

Return Value

A mutable copy of *multiValue*. You are responsible for releasing this object.

Availability

Available in Mac OS X v10.2 and later.

Declared In

ABAddressBookC.h

ABMultiValueIndexForIdentifier

Returns the index for the given identifier.

```
CFIndex ABMultiValueIndexForIdentifier (
    ABMultiValueRef multiValue,
    CFStringRef identifier
);
```

Parameters

multiValue

The multi-value list that you wish to access.

identifier

The identifier whose index you wish to obtain.

Return Value

The index of *identifier*.

Availability

Available in Mac OS X v10.2 and later.

Declared In

ABAddressBookC.h

ABMultiValuePropertyType

Returns the type for the values in a multi-value list.

```
ABPropertyType ABMultiValuePropertyType (  
    ABMultiValueRef multiValue  
);
```

Parameters

multiValue

The multi-value list whose property type you wish to obtain.

Return Value

The property type of *multiValue*. If the list is empty or its values are of different types, returns `kABErrorInProperty`.

Availability

Available in Mac OS X v10.2 and later.

Declared In

ABAddressBookC.h

Data Types

ABMultiValueRef

A reference to an `ABMultiValue` or `ABMutableMultiValue` object.

```
typedef const struct __ABMultiValue *ABMultiValueRef;
```

Availability

Available in Mac OS X v10.2 and later.

Declared In

ABAddressBookC.h

Document Revision History

This table describes the changes to *ABMultiValue Reference for C*.

Date	Notes
2003-08-20	Revised for Mac OS X v10.3.
2003-03-01	First version of <i>ABMultiValue Reference for C</i> .

REVISION HISTORY

Document Revision History

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