
ABMutableMultiValue Reference for C

Data Management: Contact Data



2003-08-20



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ABMutableMultiValue Reference for C

Derived From:	ABMultiValue : 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 as 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 `ABMutableMultiValue` are mutable, see `ABMultiValue` for additional functions that access the content of a multi-value list.

You can use either the [ABMultiValueAdd](#) (page 5) or [ABMultiValueInsert](#) (page 7) functions to add value/label pairs to a multi-value list. You can remove an entry in a multi-value list using the [ABMultiValueRemove](#) (page 7) function. You can also replace values and labels using the [ABMultiValueReplaceLabel](#) (page 8) and [ABMultiValueReplaceValue](#) (page 8) functions.

Use the [ABMultiValueSetPrimaryIdentifier](#) (page 9) function to set the primary identifier—that is, designate the corresponding value as the default value for a multi-value list. Use the [ABMultiValueCopyIdentifierAtIndex](#) function to get the unique identifier for a value/label pair.

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

Functions

ABMultiValueAdd

Adds a value and its label to a multi-value list.

```
bool ABMultiValueAdd (
    ABMutableMultiValueRef multiValue,
    CFTypeRef value,
    CFStringRef label,
    CFStringRef *outIdentifier
);
```

Parameters*multiValue*

The multi-value list you wish to modify.

value

An object representing a value in a multi-value list—it must be of the correct type. For example, if *multiValue* is the value for a property of type `kABMultiStringProperty`, then *value* needs to be a `CFString` object. See [Property Types](#) for a list of supported types in a multi-value list (see descriptions of the `kABMulti...` constants). If *value* is `NULL`, this function raises an exception.

label

The label for *value*—it need not be unique. If *label* is `NULL`, this function raises an exception.

outIdentifier

If *value* is added successfully, this parameter returns the new identifier.

Return Value

`true` if successfully, `false` otherwise.

Discussion

This function performs no type checking and will let you add a value whose type does not match the types of the other values in the list. However, if you try to use a multi-value list whose values are not all of the same type, functions, such as the `ABRecord ABRecordSetValue` function, will return `NULL` or `kABErrorInProperty`.

Availability

Available in Mac OS X v10.2 and later.

Declared In

`ABAddressBookC.h`

ABMultiValueCreateMutable

Returns a newly created mutable multi-value list object.

```
ABMutableMultiValueRef ABMultiValueCreateMutable (
    void
);
```

Return Value

A newly created `ABMutableMultiValue` object. You are responsible for releasing this object.

Availability

Available in Mac OS X v10.2 and later.

Declared In

`ABAddressBookC.h`

ABMultiValueInsert

Inserts a value and its label at the given index in a multi-value list.

```

bool ABMultiValueInsert (
    ABMutableMultiValueRef multiValue,
    CTypeRef value,
    CFStringRef label,
    CFIndex index,
    CFStringRef *outIdentifier
);

```

Parameters

multiValue

The multi-value list you wish to modify.

value

An object representing a value in a multi-value list—it must be of the correct type. For example, if *multiValue* is the value for a property of type `kABMultiStringProperty`, then *value* needs to be a `CFString` object. See [Property Types](#) for a list of supported types in a multi-value list (see descriptions of the `kABMulti...` constants). If *value* is `NULL`, this function raises an exception.

label

The label for *value*—it need not be unique. If *label* is `NULL`, this function raises an exception.

index

The index to insert *value* at. If *index* is out of bounds, this function raises an exception.

outIdentifier

If *value* is added successfully, this parameter returns the new identifier.

Return Value

`true` if successfully, `false` otherwise.

Discussion

This function performs no type checking and will let you add a value whose type does not match the types of the other values in the list. However, if you try to use a multi-value list whose values are not all of the same type, functions, such as the `ABRecordABRecordSetValue` function, will return `NULL` or `kABErrorProperty`.

Version Notes

Availability

Available in Mac OS X v10.2 and later.

Declared In

`ABAddressBookC.h`

ABMultiValueRemove

Removes the value and label at the given index.

```
bool ABMultiValueRemove (
    ABMutableMultiValueRef multiValue,
    CFIndex index
);
```

Parameters*multiValue*

The multi-value list you wish to modify.

*index*The index of the entry to be removed. If *index* is out of bounds, this function raises an exception.**Return Value**

true if successfully, false otherwise.

Availability

Available in Mac OS X v10.2 and later.

Declared In

ABAddressBookC.h

ABMultiValueReplaceLabel

Replaces the label at the given index.

```
bool ABMultiValueReplaceLabel (
    ABMutableMultiValueRef multiValue,
    CFStringRef label,
    CFIndex index
);
```

Parameters*multiValue*

The multi-value list you wish to modify.

*label*The new label at *index*—it need not be unique. If *label* is NULL, this function raises an exception.*index*The index of the entry to be modified. If *index* is out of bounds, this function raises an exception.**Return Value**

true if successfully, false otherwise.

Availability

Available in Mac OS X v10.2 and later.

Declared In

ABAddressBookC.h

ABMultiValueReplaceValue

Replaces the value at the given index.

```
bool ABMultiValueReplaceValue (
    ABMutableMultiValueRef multiValue,
    CFTypeRef value,
    CFIndex index
);
```

Parameters*multiValue*

The multi-value list you wish to modify.

value

An object representing the new value in a multi-value list—it must be of the correct type. For example, if *multiValue* is the value for a property of type `kABMultiStringProperty`, then *value* needs to be a `CFString` object. See [Property Types](#) for a list of supported types in a multi-value list (see descriptions of the `kABMulti...` constants). If *value* is `NULL`, this function raises an exception.

index

The index of the entry to be modified. If *index* is out of bounds, this function raises an exception.

Return Value

`true` if successfully, `false` otherwise.

Availability

Available in Mac OS X v10.2 and later.

Declared In

`ABAddressBookC.h`

ABMultiValueSetPrimaryIdentifier

Sets the primary value to be the value for the given identifier.

```
bool ABMultiValueSetPrimaryIdentifier (
    ABMutableMultiValueRef multiValue,
    CFStringRef identifier
);
```

Parameters*multiValue*

The multi-value list you wish to modify.

identifier

The identifier corresponding to the value you wish to designate as the primary value for this multi-value list. Use the `ABMultiValueCopyIdentifierAtIndex` function to get the identifier given the index. If *identifier* is `NULL`, this function raises an exception.

Return Value

`true` if successfully, `false` otherwise.

Availability

Available in Mac OS X v10.2 and later.

Declared In

`ABAddressBookC.h`

Data Types

ABMutableMultiValueRef

A reference to an ABMutableMultiValue object.

```
typedef struct __ABMultiValue *ABMutableMultiValueRef;
```

Availability

Available in Mac OS X v10.2 and later.

Declared In

ABAddressBookC.h

Document Revision History

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

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

REVISION HISTORY

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