ABMutableMultiValue Reference for C

Apple Applications > Address Book

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ABMutableMultiValue Reference for C

Derived From:	ABMultiValue : CFType
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 returns `NULL` or `kABErrorInProperty`.

Availability
Available in Mac OS X v10.2 and later.

Related Sample Code
AddressBookCarbon

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.

Related Sample Code
AddressBookCarbon

Declared In
`ABAddressBookC.h`

ABMultiValueInsert

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

```
bool ABMultiValueInsert (
   ABMutableMultiValueRef multiValue,
   CFTypeRef 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 ABRecord `ABRecordSetValue` function, will returns `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 *ABMutableMultiValue Reference for C*.

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