
ABMultiValue Reference

Data Management: Contact Data



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ABMultiValue Reference

Derived From:	CTypeRef
Framework:	AddressBook/AddressBook.h
Declared in	ABMultiValue.h

Overview

The `ABMultiValue` opaque type (whose objects are known as **multivalued**) implements a property that can have multiple values. All the contained values must be of the same type. Each value has a unique identifier and a nonunique label, which may be one of the provided labels or one defined by the user.

For example, if a multivalued property is used to store phone numbers, there may be multiple Work phone numbers. These have the same label, but different unique identifiers.

Multivalued properties are immutable. To use mutable multivalued properties, see *ABMutableMultiValue Reference*.

Functions by Task

Getting Values and Labels

[ABMultiValueCopyValueAtIndex](#) (page 7)

Returns the value at a particular location within a multivalued property.

[ABMultiValueCopyArrayOfAllValues](#) (page 6)

Returns an array with the values in a multivalued property.

[ABMultiValueGetCount](#) (page 7)

Returns the number of values in a multivalued property.

[ABMultiValueGetFirstIndexOfValue](#) (page 8)

Returns the first location of a value in a multivalued property.

[ABMultiValueCopyLabelAtIndex](#) (page 6)

Returns the label for a value in a multivalued property.

Getting Value Identifiers

[ABMultiValueGetIdentifierAtIndex](#) (page 8)

Returns the identifier of a value in a multivalued property.

[ABMultiValueGetIndexForIdentifier](#) (page 8)

Returns the location (within a multivalue property) of a value with a given identifier.

Getting Property Information

[ABMultiValueGetPropertyType](#) (page 9)

Returns the type of the values contained in a multivalue property.

Functions

ABMultiValueCopyArrayOfAllValues

Returns an array with the values in a multivalue property.

```
CFArrayRef ABMultiValueCopyArrayOfAllValues (
    ABMultiValueRef multiValue
);
```

Parameters

multiValue

The multivalue property whose values are being return.

Return Value

Array containing the values in *multiValue*.

Availability

Available in iOS 2.0 and later.

Declared In

ABMultiValue.h

ABMultiValueCopyLabelAtIndex

Returns the label for a value in a multivalue property.

```
CFStringRef ABMultiValueCopyLabelAtIndex (
    ABMultiValueRef multiValue,
    CFIndex index
);
```

Parameters

multiValue

The multivalue property with the value whose label to return.

index

Location of the value within *multiValue* whose label to return.

Raises an exception when out of bounds.

Return Value

Label for the value at *index* within *multiValue*.

Discussion

If there is no label for the value at *index*, returns NULL.

Availability

Available in iOS 2.0 and later.

Declared In

ABMultiValue.h

ABMultiValueCopyValueAtIndex

Returns the value at a particular location within a multivalue property.

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

Parameters

multiValue

The multivalue property from which to obtain the value.

index

Location of the desired value within *multiValue*.

Raises an exception when out of bounds.

Return Value

The value at *index* in *multiValue*.

Availability

Available in iOS 2.0 and later.

Declared In

ABMultiValue.h

ABMultiValueGetCount

Returns the number of values in a multivalue property.

```
CFIndex ABMultiValueGetCount (
    ABMultiValueRef multiValue
);
```

Parameters

multiValue

The multivalue property whose value are being counted.

Return Value

The number of values in *multiValue*.

Availability

Available in iOS 2.0 and later.

Declared In

ABMultiValue.h

ABMultiValueGetFirstIndexOfValue

Returns the first location of a value in a multivalue property.

```
CFIndex ABMultiValueGetFirstIndexOfValue (
    ABMultiValueRef multiValue,
    CTypeRef value
);
```

Parameters

multiValue

The multivalue property in which to search for *value*.

value

The value to search for in *multiValue*.

Return Value

Location of *value* within *multiValue*, -1 if *value* is not present in *multiValue*.

Availability

Available in iOS 2.0 and later.

Declared In

ABMultiValue.h

ABMultiValueGetIdentifierAtIndex

Returns the identifier of a value in a multivalue property.

```
ABMultiValueIdentifier ABMultiValueGetIdentifierAtIndex (
    ABMultiValueRef multiValue,
    CFIndex index
);
```

Parameters

multiValue

The multivalue property with the identifier to return.

index

Location of the value within *multiValue* whose identifier is being returned.

Return Value

Identifier of the value at *index* within *multiValue*.

Availability

Available in iOS 2.0 and later.

Declared In

ABMultiValue.h

ABMultiValueGetIndexForIdentifier

Returns the location (within a multivalue property) of a value with a given identifier.


```
CFIndex ABMultiValueGetIndexForIdentifier (
    ABMultiValueRef multiValue,
    ABMultiValueIdentifier identifier
);
```

Parameters

multiValue

The multivalue property in which to look for the *identifier* value identifier.

identifier

The identifier of the value whose location within *multiValue* is being returned.

Return Value

Location within *multiValue* that contains the value with *identifier* as its identifier.

Availability

Available in iOS 2.0 and later.

Declared In

ABMultiValue.h

ABMultiValueGetPropertyType

Returns the type of the values contained in a multivalue property.

```
ABPropertyType ABMultiValueGetPropertyType (
    ABMultiValueRef multiValue
);
```

Parameters

multiValue

The multivalue property whose type is being returned.

Return Value

The type of the values contained in *multiValue* or `kABInvalidPropertyType` when *multiValue* is empty or contains values of different types.

Availability

Available in iOS 2.0 and later.

See Also

ABMultiValueCreateMutable

Declared In

ABMultiValue.h

Data Types

ABMultiValueRef

Reference to a multivalue property.

```
typedef CTypeRef ABMultiValueRef;
```

Availability

Available in iOS 2.0 and later.

Declared In

ABMultiValue.h

ABMultiValueIdentifier

Identifies multivalued properties.

```
typedef int32_t ABMultiValueIdentifier;
```

Discussion

See “[Invalid Multivalued-Property Identifier](#)” (page 10).

Availability

Available in iOS 2.0 and later.

Declared In

ABMultiValue.h

Constants

Invalid Multivalued-Property Identifier

This preprocessor definition identifies a multivalued property with values whose type does not match its declared type.

```
#define kABMultiValueInvalidIdentifier -1
```

Constants

kABMultiValueInvalidIdentifier

Invalid multivalued property.

Available in iOS 2.0 and later.

Declared in ABMultiValue.h.

Discussion

See [ABMultiValueIdentifier](#) (page 10).

Document Revision History

This table describes the changes to *ABMultiValue Reference*.

Date	Notes
2010-03-23	Minor editorial changes throughout.
2009-05-20	Added a note about the return value of <code>ABMultiValueCopyLabelAtIndex</code> . Removed preliminary document boilerplate.
2008-10-15	Minor wording changes. Added companion document.
2008-06-19	New document that describes the opaque type for accessing Address Book properties with multiple values.

REVISION HISTORY

Document Revision History