Dictionary Services Reference

User Experience > Text & Fonts

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Dictionary Services Reference

Derived From:	CFType
Framework:	CoreServices/CoreServices.h, Carbon/Carbon.h
Companion guide	Dictionary Services Programming Guide
Declared in	DictionaryServices.h MacApplication.h

Overview

Dictionary Services provides functions that let you access dictionaries programmatically from within your application. There are three functions described in this reference. Two of them are defined in the Core Services framework; the third is defined in the Carbon framework.

A dictionary is any look-up reference that is built using the Dictionary Development Kit. The contents of a dictionary can serve many purposes. The most typical use is to provide definitions for a single language, but you can create content for a thesaurus, bilingual dictionaries (such as English-Japanese), in-house glossaries, and professional dictionaries (such as legal, medical, and technical).

Functions by Task

Searching Dictionaries

`DCSGetTermRangeInString` (page 6)
Determines the range of the longest word or phrase with respect to an offset.

`DCSCopyTextDefinition` (page 6)
Returns the definition associated with the provided text range.

Displaying Dictionary Results

`HIDictionaryWindowShow` (page 7)
Displays dictionary search result in a dictionary window.

Functions

DCSCopyTextDefinition

Returns the definition associated with the provided text range.

```
CFStringRef DCSCopyTextDefinition (
   DCSDictionaryRef dictionary,
   CFStringRef textString,
   CFRange range
);
```

Parameters

dictionary

This parameter is reserved for future use, so pass `NULL`. Dictionary Services searches in all active dictionaries.

textString

Text that contains the word or phrase to look up.

range

A range that specifies the location of the word or phrase in the `textString` parameter. If text string exactly specifies the word or phrase that you want to look up, you can pass the range of the text string. For example, for the word `make`, you would pass (`0`,`4`) to specify the range.

If the `textString` parameter contains the word or phrase, but does not specify it exactly, then pass the range returned by the function `DCSGetTermRangeInString` (page 6).

Return Value

The definition of the word or phrase, as plain text. The returned text does not contain any elements that are marked with a `priority` attribute whose value is `2`.

Discussion

This function returns the description of the first matching record found in the the active dictionaries. It searches first in the default word definition dictionary which, in the English environment, is the Oxford dictionary.

Availability

Available in Mac OS X v10.5 and later.

Declared In

`DictionaryServices.h`

DCSGetTermRangeInString

Determines the range of the longest word or phrase with respect to an offset.

```
CFRange DCSGetTermRangeInString (
   DCSDictionaryRef dictionary,
   CFStringRef textString,
   CFIndex offset
);
```

Parameters

dictionary

This parameter is reserved for future use, so pass `NULL`. Dictionary Services searches in all active dictionaries.

textString

Text that contains the word or phrase to look up.

offset

A character offset in the `textString` parameter.

Return Value

The range that specifies the location, around the specified offset, of the word or phrase , or the constant `kCFNotFound`.

Discussion

You can use this function to determine the range of text that contains a word or phrase. After you determine the range, you can pass the result to the functions `DCSCopyTextDefinition` (page 6) and `HIDictionaryWindowShow` (page 7).

To see how this works, follow these steps:

1. In Mac OS X v10.5 or later, open Text Edit.
2. Type `It is a foggy day in San Francisco, California.`
3. Control-click `Francisco` (don't select it). Then, choose "Lookup in Dictionary".

Note that the Dictionary window appears with a definition of San Francisco. The function `DCSGetTermRangeInString` automatically detected the range of the phrase San Francisco, using `Francisco` as the text string to search for and a character offset in this string. The function expanded the range until it found a possible match.

You can also point the cursor at the word `Francisco` and, without making a selection or clicking, type Command-Control-D. `DCSGetTermRangeInString` detects the range.

The function `DCSGetTermRangeInString` only returns the range. You must call `DCSCopyTextDefinition` (page 6) to copy the definition and `HIDictionaryWindowShow` (page 7) to display the definition in a Dictionary window.

Availability

Available in Mac OS X v10.5 and later.

Declared In

`DictionaryServices.h`

HIDictionaryWindowShow

Displays dictionary search result in a dictionary window.

```
void HIDictionaryWindowShow( DCSDictionaryRef dictionary,
        CFTypeRef textString,
        CFRange selectionRange,
        CTFontRef textFont,
        CGPoint textOrigin,
        Boolean verticalText,
        const CGAffineTransform *viewTransform );
```

Parameters

dictionary

This parameter is reserved for future use, so pass `NULL`. Dictionary Services searches in all active dictionaries.

textString

Text that contains the word or phrase to look up specified as one of the following: a `CFString` object, a `CFAttributedString` object, or a `CFData` object that contains text in Rich Text Format. Dictionary Services uses the text attributes to draw the title of the dictionary window. If you provide the text string as a `CFString` object, you must also provide a display font in the `textFont` parameter.

selectionRange

If you are using this function to show the results associated with text selected by the user, then provide the selection range of the `textString` parameter. If you are using this function to show the results associated with calling the `DCSGetTermRangeInString` (page 6) function, then provide the range returned by that function.

textFont

The Core Text font to use for the title of the dictionary window. You must provide a font only when the `textString` parameter is a `CFString` object; otherwise Dictionary Services ignores this parameter.

textOrigin

The origin, in screen pixels, of the typographic baseline of the characters specified by the `selectionRange` parameter. The top left of the screen is (`0`, `0`).

verticalText

This parameter is reserved for future use. Dictionary Services draws the text in a horizontal orientation regardless of whether you pass `true` or `false`.

viewTransform

The affine transformation matrix to apply to the window that contains the text string. Pass `NULL` to use the identity matrix. Use this to align the dictionary window with the original text. You can only apply a scaling transform; you cannot apply other types of transformations.

Discussion

This function opens a window to display the definition of a word or phrase.

Availability

Available in Mac OS X v10.5 and later.

Declared In

`MacApplication.h`

Data Types

DCSDictionaryRef

An opaque object that represents a dictionary file.

```
typedef const struct __DCSDictionary* DCSDictionaryRef;
```

Discussion
This data type is reserved for future use.

Availability
Available in Mac OS X v10.5 and later.

Declared In
`DictionaryServices.h`

Document Revision History

This table describes the changes to *Dictionary Services Reference*.

Date	Notes
2007-05-29	New document that describes functions that support programmatic access to dictionaries.

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