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API Collection

# AXAttributeConstants.h

## Overview

Each `UIElement` has a set of attributes that assistive applications use to get information about the `UIElement`. The list of attributes vary depending on the type of `UIElement`. The value of some attributes can be changed, while others cannot. For example, changing the "value" attribute of a slider changes the slider's setting.

Attribute values are stored as Core Foundation types, `CTypeRefs`, and are reference counted (`CFRetain`/`CFRelease`). Some attributes have a particular type associated with them. For example, the "title" attribute, if defined, always has a string value, regardless of the type of `UIElement` from which it is obtained. A `UIElement`'s "value" attribute, however, varies with the `UIElement`. For example, a text field's value is a string whereas a checkbox's value is a boolean. You need to explicitly test the returned objects, using the `CFGetTypeID` function, for what type they really are.

Finally, some attribute values hold simple structures, such as `CGPoint` and `CGRect`, instead of regular `CTypes`. These are still passed between the target and assistive application as `CTypeRefs`, but they merely wrap an encoded version of the structure. You need to use the functions `AXValueCreate` and `AXValueGetValue` to convert between the structures and `CTypeRefs`. Each supported structure has an `AXValueType` associated with it. The `AXValueGetType` function returns the `AXValueType` of the structure contained within a `CTypeRef`.

## Topics

## Constants

See the Overview section above for header-level documentation.

`struct AXMenuItemModifiers`

Values that indicate the keyboard shortcut modifiers for a menu item (used with the `kAXMenuItemCmdModifiersAttribute` attribute).