CTFont Reference

Carbon > Text & Fonts

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CTFont Reference

Derived From:	CFType
Framework:	ApplicationServices/CoreText
Declared in	CTFont.h

Overview

The CTFont opaque type represents a Core Text font object. Font objects represent fonts to an application, providing access to characteristics of the font, such as point size, transform matrix, and other attributes. Fonts provide assistance in laying out glyphs relative to one another and are used to establish the current font when drawing in a graphics context.

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Functions

CTFontCopyAttribute

Returns the value associated with an arbitrary attribute of the given font.

```
CFTypeRef CTFontCopyAttribute (
   CTFontRef font,
   CFStringRef attribute
);
```

Parameters

font

The font reference.

attribute

The requested attribute.

Return Value

A retained reference to an arbitrary attribute or `NULL` if the requested attribute is not present.

Discussion

Refer to the attribute definitions documentation for information as to how each attribute is packaged as a `CFType`.

Availability

Available in Mac OS X v10.5 and later.

Declared In

`CTFont.h`

CTFontCopyAvailableTables

Returns an array of font table tags.

```
CFArrayRef CTFontCopyAvailableTables (
   CTFontRef font,
   CTFontTableOptions options
);
```

Parameters

font

The font reference.

options

The font table options.

Return Value

An array of `CTFontTableTag` (page 42) values for the given font and the supplied options.

Discussion

The returned set will contain unboxed values, which can be extracted like so:

```
CTFontTableTag tag = (CTFontTableTag)(uintptr_t)CFArrayGetValueAtIndex(tags,
index);
```

Availability

Available in Mac OS X v10.5 and later.

Declared In

`CTFont.h`

CTFontCopyCharacterSet

Returns the Unicode character set of the font.

```
CFCharacterSetRef CTFontCopyCharacterSet (
   CTFontRef font
);
```

Parameters

font

The font reference.

Return Value
A retained reference to the font's character set.

Discussion
The returned character set covers the nominal referenced by the font's Unicode `'cmap'` table.

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

Declared In
`CTFont.h`

CTFontCopyDisplayName

Returns the display name of the given font.

```
CFStringRef CTFontCopyDisplayName (
   CTFontRef font
);
```

Parameters

font

The font reference.

Discussion
A retained reference to the localized display name of the font.

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

Declared In
`CTFont.h`

CTFontCopyFamilyName

Returns the family name of the given font.

```
CFStringRef CTFontCopyFamilyName (
   CTFontRef font
);
```

Parameters

font

The font reference.

Return Value
A retained reference to the family name of the font.

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

Declared In
`CTFont.h`

CTFontCopyFeatures

Returns an array of font features.

```
CFArrayRef CTFontCopyFeatures (
   CTFontRef font
);
```

Parameters

font

The font reference.

Return Value
An array of font feature dictionaries for the font reference.

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

Declared In
`CTFont.h`

CTFontCopyFeatureSettings

Returns an array of font feature-setting tuples.

```
CFArrayRef CTFontCopyFeatureSettings (
   CTFontRef font
);
```

Parameters

font

The font reference.

Return Value
A normalized array of font feature-setting dictionaries. The array contains only the nondefault settings that should be applied to the font, or `NULL` if the default settings should be used.

Discussion
A feature-setting dictionary is a tuple of a `kCTFontFeatureTypeIdentifierKey` (page 38) key-value pair and a `kCTFontFeatureSelectorIdentifierKey` (page 38) key-value pair. Each setting dictionary indicates which setting is enabled. It is the caller's responsibility to handle exclusive and nonexclusive settings as necessary.

The feature settings are verified against those that the font supports and any that do not apply are removed. Further, feature settings that represent a default setting for the font are also removed.

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

Declared In
`CTFont.h`

CTFontCopyFontDescriptor

Returns the normalized font descriptor for the given font reference.

```
CTFontDescriptorRef CTFontCopyFontDescriptor (
   CTFontRef font
);
```

Parameters

font
The font reference.

Return Value
A normalized font descriptor for a font containing enough information to recreate this font at a later time.

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

Declared In
`CTFont.h`

CTFontCopyFullName

Returns the full name of the given font.

```
CFStringRef CTFontCopyFullName (
   CTFontRef font
);
```

Parameters

font
The font reference.

Return Value
A retained reference to the full name of the font.

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

Declared In
`CTFont.h`

CTFontCopyGraphicsFont

Returns a Core Graphics font reference and attributes.

```
CGFontRef CTFontCopyGraphicsFont (
   CTFontRef font,
   CTFontDescriptorRef *attributes
);
```

Parameters

font

The font reference.

attributes

On output, points to a font descriptor containing additional attributes from the font. Can be `NULL`. Must be released by the caller.

Return Value
A `CGFontRef` object for the given font reference.

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

Declared In
`CTFont.h`

CTFontCopyLocalizedName

Returns a reference to a localized name for the given font.

```
CFStringRef CTFontCopyLocalizedName (
   CTFontRef font,
   CFStringRef nameKey,
   CFStringRef *language
);
```

Parameters

font

The font reference.

nameKey

The name specifier. See "Name Specifier Constants" (page 34) for possible values.

language

On output, points to the language string of the returned name string. The format of the language identifier conforms to the RFC 3066bis standard.

Return Value
A specific localized name from the font reference or `NULL` if the font does not have an entry for the requested name key.

Discussion
The name is localized based on the user's global language preference precedence. That is, the user's language preference is a list of languages in order of precedence. So, for example, if the list had Japanese and English, in that order, then a font that did not have Japanese name strings but had English strings would return the English strings.

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

Declared In
`CTFont.h`

CTFontCopyName

Returns a reference to the requested name of the given font.

```
CFStringRef CTFontCopyName (
   CTFontRef font,
   CFStringRef nameKey
);
```

Parameters

font
The font reference.

nameKey
The name specifier. See "Name Specifier Constants" (page 34) for possible values.

Return Value
The requested name for the font, or `NULL` if the font does not have an entry for the requested name. The Unicode version of the name is preferred, otherwise the first available version is returned.

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

Declared In
`CTFont.h`

CTFontCopyPostScriptName

Returns the PostScript name of the given font.

```
CFStringRef CTFontCopyPostScriptName (
   CTFontRef font
);
```

Parameters

font
The font reference.

Return Value
A retained reference to the PostScript name of the font.

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

Declared In
`CTFont.h`

CTFontCopySupportedLanguages

Returns an array of languages supported by the font.

```
CFArrayRef CTFontCopySupportedLanguages (
   CTFontRef font
);
```

Parameters

font

The font reference.

Return Value
A retained reference to an array of languages supported by the font. The array contains language identifier strings as `CFStringRef` objects. The format of the language identifier conforms to the RFC 3066bis standard.

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

Declared In
`CTFont.h`

CTFontCopyTable

Returns a reference to the font table data.

```
CFDataRef CTFontCopyTable (
   CTFontRef font,
   CTFontTableTag table,
   CTFontTableOptions options
);
```

Parameters

font

The font reference.

table

The font table identifier as a `CTFontTableTag` (page 42) constant. See "Font Table Tag Constants" (page 42) for possible values.

options

The font table options.

Return Value
A retained reference to the font table data as a `CFDataRef` object. The table data is not actually copied; however, the data reference must be released.

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

Declared In
`CTFont.h`

CTFontCopyTraits

Returns the traits dictionary of the given font.

```
CFDictionaryRef CTFontCopyTraits (
   CTFontRef font
);
```

Parameters

font

The font reference.

Return Value

A retained reference to the font traits dictionary. Individual traits can be accessed with the trait key constants.

Discussion

See the Constants section of *CTFontDescriptor Reference* for a definition of the font traits.

Availability

Available in Mac OS X v10.5 and later.

Declared In

`CTFont.h`

CTFontCopyVariation

Returns a variation dictionary from the font reference.

```
CFDictionaryRef CTFontCopyVariation (
   CTFontRef font
);
```

Parameters

font

The font reference.

Return Value

The current variation instance as a dictionary.

Discussion

The keys for each variation correspond to the variation identifier obtained via `kCTFontVariationAxisIdentifierKey` (page 37), which represents the four-character axis code as a CFNumber object.

Availability

Available in Mac OS X v10.5 and later.

Declared In

`CTFont.h`

CTFontCopyVariationAxes

Returns an array of variation axes.

```
CFArrayRef CTFontCopyVariationAxes (
   CTFontRef font
);
```

Parameters

font

The font reference.

Return Value

An array of variation axes dictionaries. Each variation axis dictionary contains the five variation axis keys listed in "Font Variation Axis Dictionary Keys" (page 37).

Availability

Available in Mac OS X v10.5 and later.

Declared In

CTFont.h

CTFontCreateCopyWithAttributes

Returns a new font with additional attributes based on the original font.

```
CTFontRef CTFontCreateCopyWithAttributes (
   CTFontRef font,
   CGFloat size,
   const CGAffineTransform *matrix,
   CTFontDescriptorRef attributes
);
```

Parameters

font

The original font reference on which to base the new font.

size

The point size for the font reference. If `0.0` is specified, the original font's size is preserved.

matrix

The transformation matrix for the font. If `NULL` is specified, the original font's matrix is preserved.

attributes

A font descriptor containing additional attributes that the new font should contain.

Return Value

A new font reference converted from the original with the specified attributes.

Discussion

This function provides a mechanism to change attributes quickly on a given font reference in response to user actions. For instance, the size can be changed in response to a user manipulating a size slider.

Availability

Available in Mac OS X v10.5 and later.

Declared In

CTFont.h

CTFontCreateCopyWithFamily

Returns a new font in the specified family based on the traits of the original font.

```
CTFontRef CTFontCreateCopyWithFamily (
   CTFontRef font,
   CGFloat size,
   const CGAffineTransform *matrix,
   CFStringRef family
);
```

Parameters

font

The original font reference on which to base the new font.

size

The point size for the font reference. If `0.0` is specified, the original font's size is preserved.

matrix

The transformation matrix for the font. If `NULL` is specified, the original font's matrix is preserved.

family

The name of the desired family.

Return Value

A new font reference with the original traits in the given family, or `NULL` if none is found in the system.

Availability

Available in Mac OS X v10.5 and later.

Declared In

`CTFont.h`

CTFontCreateCopyWithSymbolicTraits

Returns a new font in the same font family as the original with the specified symbolic traits.

```
CTFontRef CTFontCreateCopyWithSymbolicTraits (
   CTFontRef font,
   CGFloat size,
   const CGAffineTransform *matrix,
   uint32_t symTraitValue,
   uint32_t symTraitMask
);
```

Parameters

font

The original font reference on which to base the new font.

size

The point size for the font reference. If `0.0` is specified, the original font's size is preserved.

matrix

The transformation matrix for the font. If `NULL` is specified, the original font's matrix is preserved.

symTraitValue

The value of the symbolic traits.

symTraitMask

The mask bits of the symbolic traits.

Return Value
A new font reference in the same family with the given symbolic traits. or `NULL` if none is found in the system.

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

Declared In
`CTFont.h`

CTFontCreateForString

Returns a new font reference that can best map the given string range based on the current font.

```
CTFontRef CTFontCreateForString (
   CTFontRef currentFont,
   CFStringRef string,
   CFRange range
);
```

Parameters

currentFont

The current font that contains a valid cascade list.

string

A unicode string containing characters that cannot be encoded by the current font.

range

A `CFRange` structure specifying the range of the string that needs to be mapped.

Return Value
The best substitute font from the cascade list of the current font that can encode the specified string range. If the current font is capable of encoding the string range, then it is retained and returned.

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

Declared In
`CTFont.h`

CTFontCreatePathForGlyph

Creates a path for the specified glyph.

```
CGPathRef CTFontCreatePathForGlyph(
    CTFontRef font,
    CGGlyph glyph,
    const CGAffineTransform *transform
);
```

Parameters

font

The font reference.

glyph

The glyph.

transform

An affine transform applied to the path. Can be `NULL`. If `NULL`, `CGAffineTransformIdentity` is used.

Return Value
A CGPath object containing the glyph outlines, `NULL` on error. Must be released by caller.

Discussion
Creates a path from the outlines of the glyph for the specified font. The path reflects the font point size, matrix, and transform parameter, applied in that order. The transform parameter is most commonly be used to provide a translation to the desired glyph origin.

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

Declared In
`CTFont.h`

CTFontCreateUIFontForLanguage

Returns the special user-interface font for the given language and user-interface type.

```
CTFontRef CTFontCreateUIFontForLanguage (
   CTFontUIFontType uiType,
   CGFloat size,
   CFStringRef language
);
```

Parameters

uiType

A constant specifying the intended user-interface use for the requested font reference. See "Enumerations" (page 39) for possible values.

size

The point size for the font reference. If `0.0` is specified, the default size for the requested user-interface type is used.

language

Language specifier string to select a font for a particular localization. If `NULL` is specified, the current system language is used. The format of the language identifier should conform to the RFC 3066bis standard.

Return Value
The correct font for various user-interface uses.

Discussion
The only required parameter is the *uiType* selector; the other parameters have default values.

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

Declared In
`CTFont.h`

CTFontCreateWithFontDescriptor

Returns a new font reference that best matches the given font descriptor.

```
CTFontRef CTFontCreateWithFontDescriptor (
   CTFontDescriptorRef descriptor,
   CGFloat size,
   const CGAffineTransform *matrix
);
```

Parameters

descriptor

A font descriptor containing attributes that specify the requested font.

size

The point size for the font reference. If `0.0` is specified, the default font size of `12.0` is used.

matrix

The transformation matrix for the font. If `NULL` is specified, the identity matrix is used.

Return Value

A CTFontRef that best matches the attributes provided with the font descriptor.

Discussion

The *size* and *matrix* parameters override any specified in the font descriptor unless they are unspecified (`0.0` for *size* and `NULL` for *matrix*). A best match font is always returned, and default values are used for any unspecified parameters.

Availability

Available in Mac OS X v10.5 and later.

Declared In

`CTFont.h`

CTFontCreateWithGraphicsFont

Creates a new font reference from an existing Core Graphics font reference.

```
CTFontRef CTFontCreateWithGraphicsFont (
   CGFontRef graphicsFont,
   CGFloat size,
   const CGAffineTransform *matrix,
   CTFontDescriptorRef attributes
);
```

Parameters

graphicsFont

A valid Core Graphics font reference.

size

The point size for the font reference. If `0.0` is specified the default font size of 12.0 is used.

matrix

The transformation matrix for the font. If `NULL`, the identity matrix is used. Optional.

attributes

Additional attributes that should be matched. Optional.

Return Value
A new font reference for an existing `CGFontRef` object with the specified size, matrix, and additional attributes.

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

Declared In
`CTFont.h`

CTFontCreateWithName

Returns a new font reference for the given name.

```
CTFontRef CTFontCreateWithName (
   CFStringRef name,
   CGFloat size,
   const CGAffineTransform *matrix
);
```

Parameters

name

The font name for which you wish to create a new font reference. A valid PostScript name is preferred, although other font name types are matched in a fallback manner.

size

The point size for the font reference. If `0.0` is specified, the default font size of `12.0` is used.

matrix

The transformation matrix for the font. If `NULL` is specified, the identity matrix is used.

Return Value
Returns a `CTFontRef` that best matches the name provided with size and matrix attributes.

Discussion
The *name* parameter is the only required parameter, and default values are used for unspecified parameters (`0.0` for *size* and `NULL` for *matrix*). If all parameters cannot be matched identically, a best match is found.

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

Declared In
`CTFont.h`

CTFontCreateWithPlatformFont

Creates a new font reference from an ATS font reference.

```
CTFontRef CTFontCreateWithPlatformFont (
   ATSFontRef platformFont,
   CGFloat size,
   const CGAffineTransform *matrix,
   CTFontDescriptorRef attributes
);
```

Parameters

platformFont

A valid `ATSFontRef` object.

size

The point size for the font reference. If `0.0` is specified the default font size of 12.0 is used.

matrix

The transformation matrix for the font. If `NULL`, the identity matrix is used. Optional.

attributes

A `CTFontDescriptorRef` containing additional attributes that should be matched. Optional.

Return Value

A new font reference for an `ATSFontRef` with the specified size, matrix, and additional attribtues.

Availability

Available in Mac OS X v10.5 and later.

Declared In

`CTFont.h`

CTFontCreateWithQuickdrawInstance

Returns a font reference for the given QuickDraw instance.

```
CTFontRef CTFontCreateWithQuickdrawInstance (
   ConstStr255Param name,
   int16_t identifier,
   uint8_t style,
   CGFloat size
);
```

Parameters

name

The QuickDraw font name. If zero length, *identifier* must be specified.

identifier

The QuickDraw font identifier. Can be `0`, but if so, *name* must be specified.

style

The QuickDraw font style.

size

The point size for the font reference. If `0.0` is specified, the default size of 12.0 is used.

Return Value

The best font instance matching the QuickDraw instance information.

Discussion

This function is provided for compatibility support between Core Text and clients needing to support QuickDraw-style font references. QuickDraw is a deprecated technology in Mac OS X v10.4 and later.

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

Declared In
`CTFont.h`

CTFontGetAdvancesForGlyphs

Calculates the advances for an array of glyphs and returns the summed advance.

```
double CTFontGetAdvancesForGlyphs (
   CTFontRef font,
   CTFontOrientation orientation,
   const CGGlyph glyphs[],
   CGSize advances[],
   CFIndex count
);
```

Parameters

font
: The font reference.

orientation
: The intended drawing orientation of the glyphs. Used to determined which glyph metrics to return.

glyphs
: An array of `count` number of glyphs.

advances
: An array of `count` number of `CGSize` objects to receive the computed glyph advances. If `NULL`, only the overall advance is calculated.

count
: The capacity of the *glyphs* and *advances* buffers.

Return Value
The summed glyph advance of an array of glyphs.

Discussion
Individual glyph advances are passed back via the *advances* parameter. These are the ideal metrics for each glyph scaled and transformed in font space.

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

Declared In
`CTFont.h`

CTFontGetAscent

Returns the scaled font-ascent metric of the given font.

```
CGFloat CTFontGetAscent (
   CTFontRef font
);
```

Parameters

font

The font reference.

Return Value
The font-ascent metric scaled according to the point size and matrix of the font reference.

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

Declared In
`CTFont.h`

CTFontGetBoundingBox

Returns the scaled bounding box of the given font.

```
CGRect CTFontGetBoundingBox (
   CTFontRef font
);
```

Parameters

font

The font reference.

Return Value
The design bounding box of the font, which is the rectangle defined by `xMin`, `yMin`, `xMax`, and `yMax` values for the font. Returns `CGRectNull` on error.

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

Declared In
`CTFont.h`

CTFontGetBoundingRectsForGlyphs

Calculates the bounding rects for an array of glyphs and returns the overall bounding rectangle for the glyph run.

```
CGRect CTFontGetBoundingRectsForGlyphs (
   CTFontRef font,
   CTFontOrientation orientation,
   const CGGlyph glyphs[],
   CGRect boundingRects[],
   CFIndex count
);
```

Parameters

font

The font reference.

orientation

The intended drawing orientation of the glyphs. Used to determined which glyph metrics to return.

glyphs

An array of *count* number of glyphs.

boundingRects

On output, the computed glyph rectangles in an array of *count* number of `CGRect` objects. If `NULL`, only the overall bounding rectangle is calculated.

count

The capacity of the *glyphs* and *boundingRects* buffers.

Return Value
The overall bounding rectangle for an array or run of glyphs. Returns `CGRectNull` on error.

Discussion
The bounding rectangles of the individual glyphs are returned through the *boundingRects* parameter. These are the design metrics from the font transformed in font space.

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

Declared In
`CTFont.h`

CTFontGetCapHeight

Returns the cap-height metric of the given font.

```
CGFloat CTFontGetCapHeight (
   CTFontRef font
);
```

Parameters

font

The font reference.

Return Value
The font cap-height metric scaled according to the point size and matrix of the font reference.

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

Declared In
`CTFont.h`

CTFontGetDescent

Returns the scaled font-descent metric of the given font.

```
CGFloat CTFontGetDescent (
   CTFontRef font
);
```

Parameters

font

The font reference.

Return Value
The font-descent metric scaled according to the point size and matrix of the font reference.

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

Declared In
`CTFont.h`

CTFontGetGlyphCount

Returns the number of glyphs of the given font.

```
CFIndex CTFontGetGlyphCount (
   CTFontRef font
);
```

Parameters

font

The font reference.

Return Value
The number of glyphs in the font.

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

Declared In
`CTFont.h`

CTFontGetGlyphsForCharacters

Provides basic Unicode encoding for the given font, returning by reference an array of `CGGlyph` values corresponding to a given array of Unicode characters for the given font.

```
Boolean CTFontGetGlyphsForCharacters (
   CTFontRef font,
   const UniChar characters[],
   CGGlyph glyphs[],
   CFIndex count
);
```

Parameters

font

The font reference.

characters
An array of Unicode characters.

glyphs
On output, points to an array of glyph values.

count
The capacity of the character and glyph arrays.

Return Value
`True` if the font could encode all Unicode characters; otherwise `False`.

Discussion
If a glyph could not be encoded, a value of `0` is passed back at the corresponding index in the *glyphs* array and the function returns `False`. It is the responsibility of the caller to handle the Unicode properties of the input characters.

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

Declared In
`CTFont.h`

CTFontGetGlyphWithName

Returns the `CGGlyph` value for the specified glyph name in the given font.

```
CGGlyph CTFontGetGlyphWithName (
   CTFontRef font,
   CFStringRef glyphName
);
```

Parameters

font
The font reference.

glyphName
The glyph name as a `CFString` object.

Return Value
The glyph value for the named glyph as a `CGGlyph` object, or if the glyph name is not recognized, the `.notdef` glyph index value.

Discussion
The returned `CGGlyph` object can be used with any of the subsequent glyph data accessors or directly with Core Graphics.

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

Declared In
`CTFont.h`

CTFontGetLeading

Returns the scaled font-leading metric of the given font.

```
CGFloat CTFontGetLeading (
   CTFontRef font
);
```

Parameters

font

The font reference.

Return Value
The font-leading metric scaled according to the point size and matrix of the font reference.

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

Declared In
CTFont.h

CTFontGetMatrix

Returns the transformation matrix of the given font.

```
CGAffineTransform CTFontGetMatrix (
   CTFontRef font
);
```

Parameters

font

The font reference.

Return Value
The transformation matrix for the given font reference. This is the matrix that was provided when the font was created.

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

Declared In
CTFont.h

CTFontGetPlatformFont

Returns an ATS font reference and attributes.

```
ATSFontRef CTFontGetPlatformFont (
   CTFontRef font,
   CTFontDescriptorRef *attributes
);
```

Parameters

font

The font reference.

attributes

On output, points to a font descriptor containing additional attributes from the font. Can be NULL. Must be released by the caller.

Return Value
An `ATSFontRef` object for the given font reference.

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

Declared In
`CTFont.h`

CTFontGetSize

Returns the point size of the given font.

```
CGFloat CTFontGetSize (
   CTFontRef font
);
```

Parameters

font
The font reference.

Return Value
The point size of the given font reference. This is the point size provided when the font was created.

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

Declared In
`CTFont.h`

CTFontGetSlantAngle

Returns the slant angle of the given font.

```
CGFloat CTFontGetSlantAngle (
   CTFontRef font
);
```

Parameters

font
The font reference.

Return Value
The transformed slant angle of the font. This is equivalent to the italic or caret angle with any skew from the tranformation matrix applied.

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

Declared In
`CTFont.h`

CTFontGetStringEncoding

Returns the best string encoding for legacy format support.

```
CFStringEncoding CTFontGetStringEncoding (
   CTFontRef font
);
```

Parameters

font

The font reference.

Return Value
The best string encoding for the font.

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

Declared In
`CTFont.h`

CTFontGetSymbolicTraits

Returns the symbolic traits of the given font.

```
CTFontSymbolicTraits CTFontGetSymbolicTraits (
   CTFontRef font
);
```

Parameters

font

The font reference.

Return Value
The symbolic traits of the font. This is equivalent to the `kCTFontSymbolicTrait` value of the traits dictionary.

Discussion
See the Constants section of *CTFontDescriptor Reference* for a definition of the font traits.

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

Declared In
`CTFont.h`

CTFontGetTypeID

Returns the type identifier for Core Text font references.

```
CFTypeID CTFontGetTypeID (
   void
);
```

Return Value
The identifier for the CTFont opaque type.

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

Declared In
`CTFont.h`

CTFontGetUnderlinePosition

Returns the scaled underline position of the given font.

```
CGFloat CTFontGetUnderlinePosition (
   CTFontRef font
);
```

Parameters

font

The font reference.

Return Value
The font underline-position metric scaled according to the point size and matrix of the font reference.

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

Declared In
`CTFont.h`

CTFontGetUnderlineThickness

Returns the scaled underline-thickness metric of the given font.

```
CGFloat CTFontGetUnderlineThickness (
   CTFontRef font
);
```

Parameters

font

The font reference.

Return Value
The font underline-thickness metric scaled according to the point size and matrix of the font reference.

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

Declared In
`CTFont.h`

CTFontGetUnitsPerEm

Returns the units-per-em metric of the given font.

```
unsigned CTFontGetUnitsPerEm (
   CTFontRef font
);
```

Parameters

font

The font reference.

Return Value
The units per em of the font.

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

Declared In
CTFont.h

CTFontGetVerticalTranslationsForGlyphs

Calculates the offset from the default (horizontal) origin to the vertical origin for an array of glyphs.

```
void CTFontGetVerticalTranslationsForGlyphs (
   CTFontRef font,
   const CGGlyph glyphs[],
   CGSize translations[],
   CFIndex count
);
```

Parameters

font

The font reference.

glyphs

An array of *count* number of glyphs.

translations

On output, the computed origin offsets in an array of *count* number of `CGSize` objects.

count

The capacity of the *glyphs* and *translations* buffers.

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

Declared In
CTFont.h

CTFontGetXHeight

Returns the x-height metric of the given font.

```
CGFloat CTFontGetXHeight (
   CTFontRef font
);
```

Parameters

font

The font reference.

Return Value

The font x-height metric scaled according to the point size and matrix of the font reference.

Availability

Available in Mac OS X v10.5 and later.

Declared In

`CTFont.h`

Data Types

CTFontRef

A reference to a Core Text font object.

```
typedef const struct __CTFont *CTFontRef;
```

Availability

Available in Mac OS X v10.5 and later.

Declared In

`CTFont.h`

Constants

Global Variables

Name Specifier Constants

Name specifier constants provide access to the different names associated with a font.

```
const CFStringRef kCTFontCopyrightNameKey;
const CFStringRef kCTFontFamilyNameKey;
const CFStringRef kCTFontSubFamilyNameKey;
const CFStringRef kCTFontStyleNameKey;
const CFStringRef kCTFontUniqueNameKey;
const CFStringRef kCTFontFullNameKey;
const CFStringRef kCTFontVersionNameKey;
const CFStringRef kCTFontPostScriptNameKey;
const CFStringRef kCTFontTrademarkNameKey;
const CFStringRef kCTFontManufacturerNameKey;
const CFStringRef kCTFontDesignerNameKey;
const CFStringRef kCTFontDescriptionNameKey;
const CFStringRef kCTFontVendorURLNameKey;
const CFStringRef kCTFontDesignerURLNameKey;
const CFStringRef kCTFontLicenseNameKey;
const CFStringRef kCTFontLicenseURLNameKey;
const CFStringRef kCTFontSampleTextNameKey;
const CFStringRef kCTFontPostScriptCIDNameKey;
```

Constants

`kCTFontCopyrightNameKey`

The name specifier for the copyright name.

Available in Mac OS X v10.5 and later.

Declared in `CTFont.h`.

`kCTFontFamilyNameKey`

The name specifier for the family name.

Available in Mac OS X v10.5 and later.

Declared in `CTFont.h`.

`kCTFontSubFamilyNameKey`

The name specifier for the subfamily name.

Available in Mac OS X v10.5 and later.

Declared in `CTFont.h`.

`kCTFontStyleNameKey`

The name specifier for the style name.

Available in Mac OS X v10.5 and later.

Declared in `CTFont.h`.

`kCTFontUniqueNameKey`

The name specifier for the unique name.

Available in Mac OS X v10.5 and later.

Declared in `CTFont.h`.

`kCTFontFullNameKey`

The name specifier for the full name.

Available in Mac OS X v10.5 and later.

Declared in `CTFont.h`.

`kCTFontVersionNameKey`

The name specifier for the version name.

Available in Mac OS X v10.5 and later.

Declared in `CTFont.h`.

`kCTFontPostScriptNameKey`
The name specifier for the PostScript name.

Available in Mac OS X v10.5 and later.

Declared in `CTFont.h`.

`kCTFontTrademarkNameKey`
The name specifier for the trademark name.

Available in Mac OS X v10.5 and later.

Declared in `CTFont.h`.

`kCTFontManufacturerNameKey`
The name specifier for the manufacturer name.

Available in Mac OS X v10.5 and later.

Declared in `CTFont.h`.

`kCTFontDesignerNameKey`
The name specifier for the designer name.

Available in Mac OS X v10.5 and later.

Declared in `CTFont.h`.

`kCTFontDescriptionNameKey`
The name specifier for the description name.

Available in Mac OS X v10.5 and later.

Declared in `CTFont.h`.

`kCTFontVendorURLNameKey`
The name specifier for the vendor URL name.

Available in Mac OS X v10.5 and later.

Declared in `CTFont.h`.

`kCTFontDesignerURLNameKey`
The name specifier for the designer URL name.

Available in Mac OS X v10.5 and later.

Declared in `CTFont.h`.

`kCTFontLicenseNameKey`
The name specifier for the license name.

Available in Mac OS X v10.5 and later.

Declared in `CTFont.h`.

`kCTFontLicenseURLNameKey`
The name specifier for the license URL name.

Available in Mac OS X v10.5 and later.

Declared in `CTFont.h`.

`kCTFontSampleTextNameKey`
The name specifier for the sample text name string.

Available in Mac OS X v10.5 and later.

Declared in `CTFont.h`.

`kCTFontPostScriptCIDNameKey`
The name specifier for the PostScript character identifier (CID) font name.

Available in Mac OS X v10.5 and later.

Declared in `CTFont.h`.

Declared In
`CTFont.h`

Font Variation Axis Dictionary Keys

These constants provide keys to font variation axis dictionary values.

```
const CFStringRef kCTFontVariationAxisIdentifierKey;
const CFStringRef kCTFontVariationAxisMinimumValueKey;
const CFStringRef kCTFontVariationAxisMaximumValueKey;
const CFStringRef kCTFontVariationAxisDefaultValueKey;
const CFStringRef kCTFontVariationAxisNameKey;
```

Constants
`kCTFontVariationAxisIdentifierKey`
Key to get the variation axis identifier value as a `CFNumberRef` object.

Available in Mac OS X v10.5 and later.

Declared in `CTFont.h`.

`kCTFontVariationAxisMinimumValueKey`
Key to get the variation axis minimum value as a `CFNumberRef` object.

Available in Mac OS X v10.5 and later.

Declared in `CTFont.h`.

`kCTFontVariationAxisMaximumValueKey`
Key to get the variation axis maximum value as a `CFNumberRef` object.

Available in Mac OS X v10.5 and later.

Declared in `CTFont.h`.

`kCTFontVariationAxisDefaultValueKey`
Key to get the variation axis default value as a `CFNumberRef` object.

Available in Mac OS X v10.5 and later.

Declared in `CTFont.h`.

`kCTFontVariationAxisNameKey`
Key to get the localized variation axis name string.

Available in Mac OS X v10.5 and later.

Declared in `CTFont.h`.

Declared In
`CTFont.h`

Font Feature Constants

These constants provide keys to font feature dictionary values.

```
const CFStringRef kCTFontFeatureTypeIdentifierKey;
const CFStringRef kCTFontFeatureTypeNameKey;
const CFStringRef kCTFontFeatureTypeExclusiveKey;
const CFStringRef kCTFontFeatureTypeSelectorsKey;
const CFStringRef kCTFontFeatureSelectorIdentifierKey;
const CFStringRef kCTFontFeatureSelectorNameKey;
const CFStringRef kCTFontFeatureSelectorDefaultKey;
const CFStringRef kCTFontFeatureSelectorSettingKey;
```

Constants

`kCTFontFeatureTypeIdentifierKey`

Key to get the font feature type value as a `CFNumberRef` object.

Available in Mac OS X v10.5 and later.

Declared in `CTFont.h`.

`kCTFontFeatureTypeNameKey`

Key to get the localized font feature type name as a `CFString` object.

Available in Mac OS X v10.5 and later.

Declared in `CTFont.h`.

`kCTFontFeatureTypeExclusiveKey`

Key to get the font feature exclusive setting of the feature as a `CFBoolean` object. The value associated with this key indicates whether the feature selectors associated with this type should be mutually exclusive.

Available in Mac OS X v10.5 and later.

Declared in `CTFont.h`.

`kCTFontFeatureTypeSelectorsKey`

Key to get the the array of font feature selectors as a `CFArrayRef` object. This is an array of selector dictionaries that contain the values for the font feature selector keys listed in this group.

Available in Mac OS X v10.5 and later.

Declared in `CTFont.h`.

`kCTFontFeatureSelectorIdentifierKey`

Key to be used with a selector dictionary corresponding to a feature type to obtain the selector identifier value as a `CFNumberRef` object.

Available in Mac OS X v10.5 and later.

Declared in `CTFont.h`.

`kCTFontFeatureSelectorNameKey`

Key to be used with a selector dictionary to get the localized name string for the selector as a `CFStringRef` object.

Available in Mac OS X v10.5 and later.

Declared in `CTFont.h`.

`kCTFontFeatureSelectorDefaultKey`

Key to be used with a selector dictionary to get the default indicator for the selector. This value is a `CFBooleanRef` object, which if present and true, indicates that this selector is the default setting for the current feature type.

Available in Mac OS X v10.5 and later.

Declared in `CTFont.h`.

`kCTFontFeatureSelectorSettingKey`

Key to be used with a selector dictionary to get or specify the current setting for the selector. This value is a `CFBooleanRef` object to indicate whether this selector is on or off. If this key is not present, the default setting is used.

Available in Mac OS X v10.5 and later.

Declared in `CTFont.h`.

Declared In
`CTFont.h`

Enumerations

User Interface Type Constants

These constants represent the specific user-interface purpose to specify for font creation.

```
enum { kCTFontNoFontType = -1,
kCTFontUserFontType = 0,
kCTFontUserFixedPitchFontType = 1,
kCTFontSystemFontType = 2,
kCTFontEmphasizedSystemFontType = 3,
kCTFontSmallSystemFontType = 4,
kCTFontSmallEmphasizedSystemFontType = 5,
kCTFontMiniSystemFontType = 6,
kCTFontMiniEmphasizedSystemFontType = 7,
kCTFontViewsFontType = 8,
kCTFontApplicationFontType = 9,
kCTFontLabelFontType = 10,
kCTFontMenuTitleFontType = 11,
kCTFontMenuItemFontType = 12,
kCTFontMenuItemMarkFontType = 13,
kCTFontMenuItemCmdKeyFontType = 14,
kCTFontWindowTitleFontType = 15,
kCTFontPushButtonFontType = 16,
kCTFontUtilityWindowTitleFontType = 17,
kCTFontAlertHeaderFontType = 18,
kCTFontSystemDetailFontType = 19,
kCTFontEmphasizedSystemDetailFontType = 20,
kCTFontToolbarFontType = 21,
kCTFontSmallToolbarFontType = 22,
kCTFontMessageFontType = 23,
kCTFontPaletteFontType = 24,
kCTFontToolTipFontType = 25,
kCTFontControlContentFontType = 26};
typedef uint32_t CTFontUIFontType;
```

Constants
`kCTFontNoFontType`

The user-interface font type is not specified.

Available in Mac OS X v10.5 and later.

Declared in `CTFont.h`.

`kCTFontUserFontType`
The font used by default for documents and other text under the user's control (that is, text whose font the user can normally change).

Available in Mac OS X v10.5 and later.

Declared in `CTFont.h`.

`kCTFontUserFixedPitchFontType`
The font used by default for documents and other text under the user's control when that font is fixed-pitch.

Available in Mac OS X v10.5 and later.

Declared in `CTFont.h`.

`kCTFontSystemFontType`
The system font used for standard user-interface items such as button labels, menu items, and so on.

Available in Mac OS X v10.5 and later.

Declared in `CTFont.h`.

`kCTFontEmphasizedSystemFontType`
The system font used for emphasis in alerts.

Available in Mac OS X v10.5 and later.

Declared in `CTFont.h`.

`kCTFontSmallSystemFontType`
The standard small system font used for informative text in alerts, column headings in lists, help tags, and small controls.

Available in Mac OS X v10.5 and later.

Declared in `CTFont.h`.

`kCTFontSmallEmphasizedSystemFontType`
The small system font used for emphasis.

Available in Mac OS X v10.5 and later.

Declared in `CTFont.h`.

`kCTFontMiniSystemFontType`
The standard miniature system font used for mini controls and utility window labels and text.

Available in Mac OS X v10.5 and later.

Declared in `CTFont.h`.

`kCTFontMiniEmphasizedSystemFontType`
The miniature system font used for emphasis.

Available in Mac OS X v10.5 and later.

Declared in `CTFont.h`.

`kCTFontViewsFontType`
The view font used as the default font of text in lists and tables.

Available in Mac OS X v10.5 and later.

Declared in `CTFont.h`.

`kCTFontApplicationFontType`
The default font for text documents.

Available in Mac OS X v10.5 and later.

Declared in `CTFont.h`.

`kCTFontLabelFontType`
The font used for labels and tick marks on full-size sliders.

Available in Mac OS X v10.5 and later.

Declared in `CTFont.h`.

`kCTFontMenuTitleFontType`
The font used for menu titles.

Available in Mac OS X v10.5 and later.

Declared in `CTFont.h`.

`kCTFontMenuItemFontType`
The font used for menu items.

Available in Mac OS X v10.5 and later.

Declared in `CTFont.h`.

`kCTFontMenuItemMarkFontType`
The font used to draw menu item marks.

Available in Mac OS X v10.5 and later.

Declared in `CTFont.h`.

`kCTFontMenuItemCmdKeyFontType`
The font used for menu-item command-key equivalents.

Available in Mac OS X v10.5 and later.

Declared in `CTFont.h`.

`kCTFontWindowTitleFontType`
The font used for window titles.

Available in Mac OS X v10.5 and later.

Declared in `CTFont.h`.

`kCTFontPushButtonFontType`
The font used for a push button (a rounded rectangular button with a text label on it).

Available in Mac OS X v10.5 and later.

Declared in `CTFont.h`.

`kCTFontUtilityWindowTitleFontType`
The font used for utility window titles.

Available in Mac OS X v10.5 and later.

Declared in `CTFont.h`.

`kCTFontAlertHeaderFontType`
The font used for alert headers.

Available in Mac OS X v10.5 and later.

Declared in `CTFont.h`.

`kCTFontSystemDetailFontType`
The standard system font used for details.

Available in Mac OS X v10.5 and later.

Declared in `CTFont.h`.

`kCTFontEmphasizedSystemDetailFontType`
The system font used for emphasis in details.

Available in Mac OS X v10.5 and later.

Declared in `CTFont.h`.

`kCTFontToolbarFontType`
The font used for labels of toolbar items.

Available in Mac OS X v10.5 and later.

Declared in `CTFont.h`.

`kCTFontSmallToolbarFontType`
The small font used for labels of toolbar items.

Available in Mac OS X v10.5 and later.

Declared in `CTFont.h`.

`kCTFontMessageFontType`
The font used for standard interface items, such as button labels, menu items, and so on.

Available in Mac OS X v10.5 and later.

Declared in `CTFont.h`.

`kCTFontPaletteFontType`
The font used in tool palettes.

Available in Mac OS X v10.5 and later.

Declared in `CTFont.h`.

`kCTFontToolTipFontType`
The font used for tool tips.

Available in Mac OS X v10.5 and later.

Declared in `CTFont.h`.

`kCTFontControlContentFontType`
The font used for contents of user-interface controls.

Available in Mac OS X v10.5 and later.

Declared in `CTFont.h`.

Discussion
Use these constants with the `CTFontCreateUIFontForLanguage` (page 20) function to indicate the intended user interface use of the font reference to be created.

Declared In
`CTFont.h`

Font Table Tag Constants

Font table tags provide access to font table data.

```
enum {
kCTFontTableBASE    = 'BASE',
kCTFontTableCFF     = 'CFF ',
kCTFontTableDSIG    = 'DSIG',
kCTFontTableEBDT    = 'EBDT',
kCTFontTableEBLC    = 'EBLC',
kCTFontTableEBSC    = 'EBSC',
kCTFontTableGDEF    = 'GDEF',
kCTFontTableGPOS    = 'GPOS',
kCTFontTableGSUB    = 'GSUB',
kCTFontTableJSTF    = 'JSTF',
kCTFontTableLTSH    = 'LTSH',
kCTFontTableOS2     = 'OS/2',
kCTFontTablePCLT    = 'PCLT',
kCTFontTableVDMX    = 'VDMX',
kCTFontTableVORG    = 'VORG',
kCTFontTableZapf    = 'Zapf',
kCTFontTableAcnt    = 'acnt',
kCTFontTableAvar    = 'avar',
kCTFontTableBdat    = 'bdat',
kCTFontTableBhed    = 'bhed',
kCTFontTableBloc    = 'bloc',
kCTFontTableBsln    = 'bsln',
kCTFontTableCmap    = 'cmap',
kCTFontTableCvar    = 'cvar',
kCTFontTableCvt     = 'cvt ',
kCTFontTableFdsc    = 'fdsc',
kCTFontTableFeat    = 'feat',
kCTFontTableFmtx    = 'fmtx',
kCTFontTableFpgm    = 'fpgm',
kCTFontTableFvar    = 'fvar',
kCTFontTableGasp    = 'gasp',
kCTFontTableGlyf    = 'glyf',
kCTFontTableGvar    = 'gvar',
kCTFontTableHdmx    = 'hdmx',
kCTFontTableHead    = 'head',
kCTFontTableHhea    = 'hhea',
kCTFontTableHmtx    = 'hmtx',
kCTFontTableHsty    = 'hsty',
kCTFontTableJust    = 'just',
kCTFontTableKern    = 'kern',
kCTFontTableLcar    = 'lcar',
kCTFontTableLoca    = 'loca',
kCTFontTableMaxp    = 'maxp',
kCTFontTableMort    = 'mort',
kCTFontTableMorx    = 'morx',
kCTFontTableName    = 'name',
kCTFontTableOpbd    = 'opbd',
kCTFontTablePost    = 'post',
kCTFontTablePrep    = 'prep',
kCTFontTableProp    = 'prop',
kCTFontTableTrak    = 'trak',
kCTFontTableVhea    = 'vhea',
kCTFontTableVmtx    = 'vmtx'
};
typedef uint32_t CTFontTableTag;
```

Constants

`kCTFontTableBASE`
Font table tag for the font baseline.
Available in Mac OS X v10.5 and later.
Declared in `CTFont.h`.

`kCTFontTableCFF`
Font table tag for a PostScript font program.
Available in Mac OS X v10.5 and later.
Declared in `CTFont.h`.

`kCTFontTableDSIG`
Font table tag for a digital signature.
Available in Mac OS X v10.5 and later.
Declared in `CTFont.h`.

`kCTFontTableEBDT`
Font table tag for an embedded bitmap.
Available in Mac OS X v10.5 and later.
Declared in `CTFont.h`.

`kCTFontTableEBLC`
Font table tag for the embedded bitmap location.
Available in Mac OS X v10.5 and later.
Declared in `CTFont.h`.

`kCTFontTableEBSC`
Font table tag for embedded bitmap scaling.
Available in Mac OS X v10.5 and later.
Declared in `CTFont.h`.

`kCTFontTableGDEF`
Font table tag for glyph definition.
Available in Mac OS X v10.5 and later.
Declared in `CTFont.h`.

`kCTFontTableGPOS`
Font table tag for glyph positioning.
Available in Mac OS X v10.5 and later.
Declared in `CTFont.h`.

`kCTFontTableGSUB`
Font table tag for glyph substitution.
Available in Mac OS X v10.5 and later.
Declared in `CTFont.h`.

`kCTFontTableJSTF`
Font table tag for justification.
Available in Mac OS X v10.5 and later.
Declared in `CTFont.h`.

`kCTFontTableLTSH`
Font table tag for linear threshold.
Available in Mac OS X v10.5 and later.
Declared in `CTFont.h`.

`kCTFontTableOS2`
Font table tag for OS/2 and Windows-specific metrics.
Available in Mac OS X v10.5 and later.
Declared in `CTFont.h`.

`kCTFontTablePCLT`
Font table tag for PCL 5 data.
Available in Mac OS X v10.5 and later.
Declared in `CTFont.h`.

`kCTFontTableVDMX`
Font table tag for vertical device metrics.
Available in Mac OS X v10.5 and later.
Declared in `CTFont.h`.

`kCTFontTableVORG`
Font table tag for vertical origin.
Available in Mac OS X v10.5 and later.
Declared in `CTFont.h`.

`kCTFontTableZapf`
Font table tag for glyph reference.
Available in Mac OS X v10.5 and later.
Declared in `CTFont.h`.

`kCTFontTableAcnt`
Font table tag for accent attachment.
Available in Mac OS X v10.5 and later.
Declared in `CTFont.h`.

`kCTFontTableAvar`
Font table tag for axis variation.
Available in Mac OS X v10.5 and later.
Declared in `CTFont.h`.

`kCTFontTableBdat`
Font table tag for bitmap data.
Available in Mac OS X v10.5 and later.
Declared in `CTFont.h`.

`kCTFontTableBhed`
Font table tag for bitmap font header.
Available in Mac OS X v10.5 and later.
Declared in `CTFont.h`.

`kCTFontTableBloc`
Font table tag for bitmap location.
Available in Mac OS X v10.5 and later.
Declared in `CTFont.h`.

`kCTFontTableBsln`
Font table tag for baseline.
Available in Mac OS X v10.5 and later.
Declared in `CTFont.h`.

`kCTFontTableCmap`
Font table tag for character-to-glyph mapping.
Available in Mac OS X v10.5 and later.
Declared in `CTFont.h`.

`kCTFontTableCvar`
Font table tag for control value variation, or CVT variation.
Available in Mac OS X v10.5 and later.
Declared in `CTFont.h`.

`kCTFontTableCvt`
Font table tag for control value table.
Available in Mac OS X v10.5 and later.
Declared in `CTFont.h`.

`kCTFontTableFdsc`
Font table tag for font descriptor.
Available in Mac OS X v10.5 and later.
Declared in `CTFont.h`.

`kCTFontTableFeat`
Font table tag for layout feature.
Available in Mac OS X v10.5 and later.
Declared in `CTFont.h`.

`kCTFontTableFmtx`
Font table tag for font metrics.
Available in Mac OS X v10.5 and later.
Declared in `CTFont.h`.

`kCTFontTableFpgm`
Font table tag for font program.
Available in Mac OS X v10.5 and later.
Declared in `CTFont.h`.

`kCTFontTableFvar`
Font table tag for font variation.
Available in Mac OS X v10.5 and later.
Declared in `CTFont.h`.

`kCTFontTableGasp`
Font table tag for grid-fitting/scan-conversion.
Available in Mac OS X v10.5 and later.
Declared in `CTFont.h`.

`kCTFontTableGlyf`
Font table tag for glyph data.
Available in Mac OS X v10.5 and later.
Declared in `CTFont.h`.

`kCTFontTableGvar`
Font table tag for glyph variation.
Available in Mac OS X v10.5 and later.
Declared in `CTFont.h`.

`kCTFontTableHdmx`
Font table tag for horizontal device metrics.
Available in Mac OS X v10.5 and later.
Declared in `CTFont.h`.

`kCTFontTableHead`
Font table tag for font header.
Available in Mac OS X v10.5 and later.
Declared in `CTFont.h`.

`kCTFontTableHhea`
Font table tag for horizontal header.
Available in Mac OS X v10.5 and later.
Declared in `CTFont.h`.

`kCTFontTableHmtx`
Font table tag for horizontal metrics.
Available in Mac OS X v10.5 and later.
Declared in `CTFont.h`.

`kCTFontTableHsty`
Font table tag for horizontal style.
Available in Mac OS X v10.5 and later.
Declared in `CTFont.h`.

`kCTFontTableJust`
Font table tag for justification.
Available in Mac OS X v10.5 and later.
Declared in `CTFont.h`.

`kCTFontTableKern`
Font table tag for kerning.
Available in Mac OS X v10.5 and later.
Declared in `CTFont.h`.

`kCTFontTableLcar`
Font table tag for ligature caret.
Available in Mac OS X v10.5 and later.
Declared in `CTFont.h`.

`kCTFontTableLoca`
Font table tag for index to location.
Available in Mac OS X v10.5 and later.
Declared in `CTFont.h`.

`kCTFontTableMaxp`
Font table tag for maximum profile.
Available in Mac OS X v10.5 and later.
Declared in `CTFont.h`.

`kCTFontTableMort`
Font table tag for morph.
Available in Mac OS X v10.5 and later.
Declared in `CTFont.h`.

`kCTFontTableMorx`
Font table tag for extended morph.
Available in Mac OS X v10.5 and later.
Declared in `CTFont.h`.

`kCTFontTableName`
Font table tag for naming table.
Available in Mac OS X v10.5 and later.
Declared in `CTFont.h`.

`kCTFontTableOpbd`
Font table tag for optical bounds.
Available in Mac OS X v10.5 and later.
Declared in `CTFont.h`.

`kCTFontTablePost`
Font table tag for PostScript information.
Available in Mac OS X v10.5 and later.
Declared in `CTFont.h`.

`kCTFontTablePrep`
Font table tag for control value program, `'prep'` table.
Available in Mac OS X v10.5 and later.
Declared in `CTFont.h`.

`kCTFontTableProp`
Font table tag for properties.
Available in Mac OS X v10.5 and later.
Declared in `CTFont.h`.

`kCTFontTableTrak`
: Font table tag for tracking.

  Available in Mac OS X v10.5 and later.

  Declared in `CTFont.h`.

`kCTFontTableVhea`
: Font table tag for vertical header.

  Available in Mac OS X v10.5 and later.

  Declared in `CTFont.h`.

`kCTFontTableVmtx`
: Font table tag for vertical metrics.

  Available in Mac OS X v10.5 and later.

  Declared in `CTFont.h`.

Declared In
`CTFont.h`

Font Table Option Constants

These constants describe font table options.

```
enum {
kCTFontTableOptionNoOptions = 0,
kCTFontTableOptionExcludeSynthetic = (1 << 0)
};
typedef uint32_t CTFontTableOptions;
```

Constants
`kCTFontTableOptionNoOptions`
: No font table options are specified.

  Available in Mac OS X v10.5 and later.

  Declared in `CTFont.h`.

`kCTFontTableOptionExcludeSynthetic`
: The font table excludes synthetic font data.

  Available in Mac OS X v10.5 and later.

  Declared in `CTFont.h`.

Declared In
`CTFont.h`

Document Revision History

This table describes the changes to *CTFont Reference*.

Date	Notes
2007-06-29	New document that describes the Core Text opaque type that represents a font.

Document Revision History

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