Uniform Type Identifiers Reference

Data Management: Data Types & Collections

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Introduction to Uniform Type Identifiers Reference

One of the challenges facing application developers is the proliferation of methods to identify types of data. For example, some text files may be assigned a `'TEXT'` file type (as originally designed for Mac OS 9 and earlier), while others may simply have a `.txt` filename extension. Some may have the `.text` extension instead. In addition, some file types might be subsets of other types; an application that opens all `.txt` files should probably also be able to open those with a `.html` extension. Determining all the possible files an application could read could become impossible. The user experience then suffers, with users not understanding why an application can open one text file but not another.

To solve this problem, Apple has defined a syntax for special data identifiers called **uniform type identifiers**. Each UTI provides a unique identifier for a particular file type, data type, directory or bundle type, and so on. In addition, other type identifier namespaces for a particular type can be grouped under one UTI, with utility functions available to translate from one format to another.

This document is for Mac OS X and iOS application developers that need to create or otherwise manipulate data that may be exchanged with other applications or services. For example, applications often need to be aware of the type of data they handle when:

- Displaying, or manipulating, files, bundles, or folders

- Accessing streaming data

- Copying and pasting between documents or applications

- Dragging and dropping between applications

Support for uniform type identifiers is available in Mac OS X v10.3 and later and iOS 3.0 and later.

Organization of This Document

This document is organized into the following chapters:

- "System-Declared Uniform Type Identifiers" (page 9) describes UTIs defined by Apple.

See Also

Uniform Type Identifiers Overview describes UTIs and how to use them.

UTType Reference describes the functions used to manipulate UTIs.

System-Declared Uniform Type Identifiers

The following tables list uniform type identifiers (UTIs) that are declared by the system as of Mac OS X v10.4.

> **Note:** These tables list only UTIs declared by the system. Other UTIs may be declared privately by Apple applications (Mail, for example) and third-party developers.

Table 1 lists UTIs that are defined by the system.

Table 1   System-defined uniform type identifiers

Identifier (Constant)	Conforms to	Tags	Comments
public.item (`kUTTypeItem`)	-		Base type for the physical hierarchy.
public.content (`kUTTypeContent`)	-		Base type for all document content.
public.composite-content (`kUTTypeComposite-Content`)	public.content		Base type for mixed content. For example, a PDF file contains both text and special formatting data.
public.data (`kUTTypeData`)	public.item		Base physical type for byte streams (flat files, pasteboard data, and so on).
public.database	-		Base functional type for databases.
public.calendar-event	-		Base functional type for scheduled events.
public.message (`kUTTypeMessage`)	-		Base type for messages (email, IM, and so on).

Identifier (Constant)	Conforms to	Tags	Comments
public.presentation	public.composite-content		Base type for presentations.
public.contact (`kUTTypeContact`)	-		Base type for contact information.
public.archive (`kUTTypeArchive`)	-		Base type for an archive of files and directories.
public.disk-image (`kUTTypeDiskImage`)	public.archive		Base type for items mountable as a volume.
public.text (`kUTTypeText`)	public.content, public.data		Base type for all text, including text with markup information (HTML, RTF, and so on).
public.plain-text (`kUTTypePlainText`)	public.text	.txt, text/plain	Text of unspecified encoding, with no markup. Equivalent to the MIME type text/plain
public.utf8-plain-text (`kUTTypeUTF8PlainText`)	public.plain-text	'utf8', NSStringPBoardType	Unicode-8
public.utf16-external-plain-text (`kUTTypeUTF16External-PlainText`)	public.plain-text	'ut16'	Unicode-16 with byte-order mark (BOM), or if BOM is not present, an external representation byte order (big-endian).
public.utf16-plain-text (`kUTTypeUTF16PlainText`)	public.plain-text	'utxt'	Unicode-16, native byte order, with an optional byte-order mark (BOM).

Identifier (Constant)	Conforms to	Tags	Comments
com.apple.traditional-mac-plain-text	public.plain-text	'TEXT'	Classic Mac OS text.
public.rtf (`kUTTypeRTF`)	public.text	'RTF ', .rtf, text/rtf, NeXT Rich Text Format 1.0 pasteboard type, NSRTFPBoardType	Rich Text.
com.apple.ink.inktext (`kUTTypeInkText`)	public.data		Opaque InkText data.
public.html (`kUTTypeHTML`)	public.text	'HTML', .html, .htm, text/html, Apple HTML pasteboard type	HTML text.
public.xml (`kUTTypeXML`)	public.text	.xml, text/xml	XML text.
public.source-code (`kUTTypeSourceCode`)	public.plain-text		Generic source code.
public.c-source (`kUTTypeCSource`)	public.source-code	.c	C source code.
public.objective-c-source (`kUTTypeObjective-CSource`)	public.source-code	.m	Objective-C source code.
public.c-plus-plus-source (`kUTTypeCPlus-PlusSource`)	public.source-code	.cp, .cpp, .c++, .cc, .cxx	C++ source code.
public.objective-c-plus-plus-source (`kUTTypeObjectiveCPlusPlusSource`)	public.source-code	.mm	Objective-C++ source code.
public.c-header (`kUTTypeCHeader`)	public.source-code	.h	C header file.
public.c-plus-plus-header (`kUTTypeCPlus-PlusHeader`)	public.source-code	.hpp, .h++ , .hxx	C++ header file.
com.sun.java-source (`kUTTypeJavaSource`)	public.source-code	.java, .jav	Java source code
public.script	public.source-code		Base type for scripting language source code.
public.assembly-source	public.source-code	.s	Assembly language source code.

Identifier (Constant)	Conforms to	Tags	Comments
com.apple.rez-source	public.source-code	.r	Rez source code.
public.mig-source	public.source-code	.defs, .mig	Mig definition source code.
com.apple.symbol-export	public.source-code	.exp	Symbol export list.
com.netscape.javascript-source	public.source-code, public.executable	.js, .jscript, .javascript, text/javascript	JavaScript.
public.shell-script	public.script	.sh, .command	Shell script.
public.csh-script	public.shell-script	.csh	C-shell script.
public.perl-script	public.shell-script	.pl, .pm, text/x-perl-script	Perl script.
public.python-script	public.shell-script	.py, text/x-python-script	Python script.
public.ruby-script	public.shell-script	.rb, .rbw, text/ruby-script	Ruby script.
public.php-script	public.shell-script	.php, .php3, .php4, .ph3, .ph4, .phtml, text/x-php-script, text/php, application/php	PHP script.
com.sun.java-web-start	public.xml	.jnlp, application/x-java, jnlp-file, application/jnlp	Java web start.
com.apple.applescript.text	public.script	.applescript	AppleScript text.
com.apple.applescript.script	public.data	.scpt, 'osas'	AppleScript.
public.object-code	public.data, public.executable	.o	Object code.
com.apple.mach-o-binary	public.data, public.executable		Mach-O binary.
com.apple.pef-binary	public.data, public.executable		PEF (CFM-based) binary
com.microsoft.windows-executable	public.data, public.executable	.exe, application/x-msdownload	Microsoft Windows application.
com.microsoft.windows-dynamic-link-library	public.data, public.executable	.dll, application/x-msdownload	Microsoft dynamic link library.
com.sun.java-class	public.data, public.executable	.class	Java class.

Identifier (Constant)	Conforms to	Tags	Comments
com.sun.java-archive	public.data, public.executable, public.archive	.jar , application/java-archive	Java archive.
com.apple.quartz-composer-composition	public.data, public.executable	.qtz , application/x-quartzcomposer	Quartz Composer composition.
org.gnu.gnu-tar-archive	public.data, public.archive	.gtar, application/x-gtar	GNU archive.
public.tar-archive	org.gnu.gnu-tar-archive	.tar, application/x-tar, application/tar	Tar archive.
org.gnu.gnu-zip-archive	public.data, public.archive	.gz, .gzip, application/x-gzip, application/gzip	Gzip archive.
org.gnu.gnu-zip-tar-archive	org.gnu.gnu-zip-archve	.tgz	Gzip tar archive.
com.apple.binhex-archive	public.data, public.archive	.hqx, application/mac-binhex40, application/mac-binhex, application/binhex	BinHex archive.
com.apple.macbinary-archive	public.data, public.archive	.bin, application/x-macbinary, application/macbinary	MacBinary archive.
public.url (kUTTypeURL)	public.data	'url '	Uniform Resource Locator.
public.file-url (kUTTypeFileURL)	public.url	'furl'	File URL.
public.url-name	-	'urln'	URL name.
public.vcard (kUTTypeVCard)	public.data, public.content	'vCrd', .vcf, .vcard, text/directory, text/vcard, text/x-vcard, Apple Vcard, pasteboard type	vCard (electronic business card).
public.image (kUTTypeImage)	public.data, public.content		Base type for images.
public.fax	public.image		Base type for fax images.
public.jpeg (kUTTypeJPEG)	public.image	'JPEG', .jpg, .jpeg, image/jpeg	JPEG image.
public.jpeg-2000 (kUTTypeJPEG2000)	public.image	'jp2 ', .jp2, image/jp2	JPEG 2000 image.

Identifier (Constant)	Conforms to	Tags	Comments
public.tiff (`kUTTypeTIFF`)	public.image	'TIFF', .tif, .tiff, image/tiff, NeXT TIFF v4.0 pasteboard type, NSTIFFPBoardType	TIFF image.
public.camera-raw-image	public.image		Base type for digital camera raw image formats.
com.apple.pict (`kUTTypePICT`)	public.image	'PICT', .pic, .pct, .pict, image/pict, image/x-pict, image/x-macpict	PICT image
com.apple.macpaint-image	public.image	.pntg, 'PNTG'	MacPaint image.
public.png (`kUTTypePNG`)	public.image	'PNGf', .png, image/png	PNG image
public.xbitmap-image	public.image	.xbm, image/x-quicktime	X bitmap image.
com.apple.quicktime-image (`kUTTypeQuickTimeImage`)	public.image	'qtif', .qif, .qtif, image/x-quicktime	QuickTime image.
com.apple.icns (`kUTTypeAppleICNS`)	public.image	'icns', .icns	Mac OS icon image.
com.apple.txn.text-multimedia-data (`kUTTypeTXNTextAnd MultimediaData`)	public.data, public.composite-content	'txtn'	MLTE (Textension) format for mixed text and multimedia data.
public.audiovisual-content (`kUTTypeAudioVisual Content`)	public.data, public.content		Base type for any audiovisual content.
public.movie	public.audiovisual-content		Base type for movies (video with optional audio or other tracks).
public.video (`kUTTypeVideo`)	public.movie		Base type for video (no audio).
com.apple.quicktime-movie (`kUTTypeQuickTimeMovie`)	public.movie	'MooV', .mov, .qt, video/quicktime	QuickTime movie.
public.avi	public.movie	.avi, .vfw, 'Vfw ', video/avi, video/msvideo, video/x-msvideo	AVI movie.

Identifier (Constant)	Conforms to	Tags	Comments
public.mpeg (`kUTTypeMPEG`)	public.movie	'MPG ', 'MPEG', .mpg, .mpeg, .m75, .m15, video/mpg, video/mpeg, video/x-mpg, video/x-mpeg	MPEG-1 or MPEG-2 content.
public.mpeg-4 (`kUTTypeMPEG4`)	public.movie	'mpg4', .mp4, video/mp4, video/mp4v	MPEG-4 content.
public.3gpp	public.movie	.3gp, .3gpp, '3gpp', video/3gpp, audio/3gpp	3GPP movie.
public.3gpp2	public.movie	.3g2 , .3gp2 , '3gp2', video/3gpp2, audio/3gpp2	3GPP2 movie.
public.audio (`kUTTypeAudio`)	public.audiovisual-content		Base type for audio (no video).
public.mp3 (`kUTTypeMP3`)	public.audio	'MPG3', 'mpg3', 'Mp3 ', 'MP3 ', 'mp3!', 'MP3!', .mp3, audio/mpeg, audio/mpeg3, audio/mpg, audio/mp3, audio/x-mpeg, audio/x-mpeg3, audio/x-mpg, audio/x-mp3	MPEG-3 audio.
public.mpeg-4-audio (`kUTTypeMPEG4Audio`)	public.audio, public.mpeg4	'M4A ', .m4a	MPEG-4 audio.
com.apple.protected-mpeg-4-audio (`kUTTypeAppleProtected MPEG4Audio`)	public.audio	'M4P ', 'M4B ', .m4p, .m4b	Protected MPEG-4 audio. (iTunes music store format)
public.ulaw-audio	public.audio	.au, .ulw, .snd, 'ULAW', audio/basic, audio/au, audio/snd	µLaw audio.
public.aifc-audio	public.audio	.aifc, .aiff, .aif, 'AIFC', audio/aiff, audio/x-aiff	AIFF-C audio.
public.aiff-audio	public.audio	.aiff, .aif, 'AIFF', audio/aiff, audio/x-aiff	AIFF audio.
com.apple.coreaudio-format	public.audio	.caf, 'caff'	Core Audio format.
public.directory (`kUTTypeDirectory`)	public.item		Base type for directories.
public.folder (`kUTTypeFolder`)	public.directory		A plain folder (that is, not a package).

Identifier (Constant)	Conforms to	Tags	Comments
public.volume (`kUTTypeVolume`)	public.folder		A volume.
com.apple.package (`kUTTypePackage`)	public.directory		A package (that is, a directory presented to the user as a file).
com.apple.bundle (`kUTTypeBundle`)	public.directory	'BNDL', .bundle	A directory with an internal structure specified by Core Foundation Bundle Services. .
public.executable	-		Base type for executable data.
com.apple.application (`kUTTypeApplication`)	public.executable		Base type for applications and other launchable files.
com.apple.application-bundle (`kUTTypeApplication-Bundle`)	com.apple.package, com.apple.bundle, com.apple.application	'APPL', .app	Application bundle.
com.apple.application-file (`kUTTypeApplication-File`)	com.apple.application public.data	'APPL'	Application file.
com.apple.deprecated-application-file	com.apple.application-file	'APPC', 'APPD', 'APPE', 'appe', 'CDEV', 'cdev', 'dfil'	Deprecated application file.
com.apple.plugin	com.apple.bundle, com.apple.package	.plugin	Plugin.
com.apple.metadata-importer	com.apple.plugin	.mdimporter	Spotlight importer plugin.
com.apple.dashboard-widget	com.apple.bundle, com.apple.package	.wdgt	Dashboard widget.
public.cpio-archive	public.data	.cpio	CPIO archive.
com.pkware.zip-archive	public.data, public.archive	.zip, application/zip	Zip archive.
com.apple.webarchive (`kUTTypeWebArchive`)	public.data, public.composite-content		Web Kit webarchive format.

Identifier (Constant)	Conforms to	Tags	Comments
com.apple.framework (`kUTTypeFramework`)	com.apple.bundle	'FMWK', .framework	Framework.
com.apple.rtfd (`kUTTypeRTFD`)	com.apple.package, public.composite-content	.rtfd	Rich Text Format Directory. That is, Rich Text with content embedding, on-disk format.
com.apple.flat-rtfd (`kUTTypeFlatRTFD`)	public.data, public.composite-content	NeXT RTFD pasteboard type, NSRTFDPBoardType	Rich Text with content embedding, pasteboard format.
com.apple.resolvable (`kUTTypeResolvable`)	-		Items that the Alias Manager can resolve.
public.symlink (`kUTTypeSymLink`)	public.item, com.apple.resolvable		UNIX-style symlink.
com.apple.mount-point (`kUTTypeMountPoint`)	public.item, com.apple.resolvable		A volume mount point
com.apple.alias-record (`kUTTypeAliasRecord`)	public.data, com.apple.resolvable	'alis'	Alias record.
com.apple.alias-file (`kUTTypeAliasFile`)	public.data, com.apple.resolvable		Alias file.
public.font	public.data		Base type for fonts.
public.truetype-font	public.font		TrueType font.
com.adobe.postscript-font	public.font		PostScript font.
com.apple.truetype-datafork-suitcase-font	public.truetype-font	.dfont, 'dfon'	TrueType data fork font.
public.opentype-font	public.font	.otf, 'OTTO'	PostScript OpenType font.
public.truetype-ttf-font	public.truetype-font	.ttf	TrueType OpenType font.
public.truetype-collection-font	public.font	.ttc, 'ttcf'	TrueType collection font.
com.apple.font-suitcase	public.font	.suit, 'FFIL', 'ffil', 'sfnt', 'tfil'	Font suitcase.

Identifier (Constant)	Conforms to	Tags	Comments
com.adobe.postscript-lwfn-font	com.adobe.postscript-font	'LWFN'	PostScript Type 1 outline font.
com.adobe.postscript-pfb-font	com.adobe.postscript-font	.pfb	PostScriptType1 outline font.
com.adobe.postscript.pfa-font	com.adobe.postscript-font	.pfa	PostScriptType 1 outline font.
com.apple.colorsync-profile	public.data	.icc, .icm, .pf , 'prof'	ColorSync profile.

Table 2 lists UTIs used to identify alternate tags. You use these to specify alternate methods of tag identification in UTI declarations.

Table 2   Uniform type identifiers for alternate tags

Identifier	Conforms to	Comments
public.filename-extension	public.case-insensitive-text	Filename extension.
public.mime-type	public.case-insensitive-text	MIME type.
com.apple.ostype	public.text	Four-character code (type `OSType`).
com.apple.nspboard-type	public.text	NSPasteboard type.

Table 3 lists third-party UTIs that the system redeclares as imported types.

Table 3   Imported uniform type identifiers

Identifier (Constant)	Conforms to	Tags	Comments
com.adobe.pdf (`kUTTypePDF`)	public.data, public.composite-content	'PDF ', .pdf, application/pdf, Apple PDF pasteboard type	PDF data.
com.adobe.postscript	public.data	.ps, application/postscript	PostScript data.
com.adobe.encapsulated-postscript	com.adobe.postscript	.eps, NeXT Encapsulated PostScript v1.2 pasteboard type	Encapsulated PostScript.
com.adobe.photoshop-image	public.image	.psd, '8BPS, ' image/x-photoshop, image/photoshop, image/psd, application/photoshop	Adobe Photoshop document.
com.adobe.illustrator.ai-image	public.image	.ai	Adobe Illustrator document.

Identifier (Constant)	Conforms to	Tags	Comments
com.compuserve.gif (`kUTTypeGIF`)	public.image	'GIFf', .gif, image/gif	GIF image.
com.microsoft.bmp (`kUTTypeBMP`)	public.image	'BMP ', 'BMPf', .bmp	Windows bitmap image.
com.microsoft.ico (`kUTTypeICO`)	public.image	.ico	Windows icon image.
com.microsoft.word.doc	public.data	'W8BN', .doc, application/msword	Microsoft Word data.
com.microsoft.excel.xls	public.data	'XLS8', .xls, application/vnd.ms-excel	Microsoft Excel data.
com.microsoft.powerpoint.ppt	public.data, public.presentation	.ppt, 'SLD8', application/mspowerpoint	Microsoft PowerPoint presentation.
com.microsoft.waveform-audio	public.audio	.wav, .wave, '.WAV', 'WAVE', audio/wav, audio/wave	Waveform audio.
com.microsoft.advanced-systems-format	public.audiovisual-content	.asf , 'ASF_', video/x-ms-asf	Microsoft Advanced Systems format.
com.microsoft.windows-media-wm	public.movie, com.microsoft.advanced-systems-format	.wm, video/x-ms-wm	Windows media.
com.microsoft.windows-media-wmv	public.movie, com.microsoft.advanced-systems-format	.wmv, video/x-ms-wmv	Windows media.
com.microsoft.windows-media-wmp	public.movie, com.microsoft.advanced-systems-format	.wmp, video/x-ms-wmp	Windows media.
com.microsoft.windows-media-wma	public.audio, com.microsoft.advanced-systems-format	.wma, video/x-ms-wma	Windows media audio.
com.microsoft.advanced-stream-redirector	public.xml, public.audiovisual-content	.asx, 'ASX_', video/x-ms-asx	Advanced Stream Redirector.
com.microsoft.windows-media-wmx	public.audio, com.microsoft.advanced-stream-redirector	.wmx , video-x-ms-wmx	Windows media.
com.microsoft.windows-media-wvx	public.audio, com.microsoft.advanced-stream-redirector	.wvx, video-x-ms-wvx	Windows media.

Identifier (Constant)	Conforms to	Tags	Comments
com.microsoft.windows-media-wax	public.audio, com.microsoft.advanced-stream-redirector	.wax, video-x-ms-wax	Windows media audio.
com.apple.keynote.key	com.apple.package, public.presentation	.key	Apple Keynote document.
com.apple.keynote.kth	com.apple.package, public.composite-content	.kth	Apple Keynote theme.
com.truevision.tga-image	public.image	.tga, 'TPIC', image/targa, image/tga, application/tga	TGA image.
com.sgi.sgi-image	public.image	.sgi, '.SGI', image/sgi	Silicon Graphics image.
com.ilm.openexr-image	public.image	.exr	OpenEXR image.
com.kodak.flashpix.image	public.image	.fpx, image/fpx, application/vnd.fpx	FlashPix image.
com.j2.jfx-fax	public.fax	.jfx	J2 fax.
com.js.efx-fax	public.fax	.efx, image/efax	eFax fax.
com.digidesign.sd2-audio	public.audio	.sd2, 'Sd2f'	Digidesign Sound Designer II audio.
com.real.realmedia	public.movie	.rm, 'PNRM', application/vnd.rn-realmedia	RealMedia.
com.real.realaudio	public.audio	.ram, .ra , 'PNRA', audio/vnd.rn-realaudio, audio/x-pn-realaudio	RealMedia audio.
com.real.smil	public.xml	.smil, application/smil	Real synchronized multimedia integration language.
com.allume.stuffit-archive	public.data, public.archive	.sit, .sitx, application/x-stuffit, application/x-sit , application/stuffit	Stuffit archive.

Document Revision History

This table describes the changes to *Uniform Type Identifiers Reference*.

Date	Notes
2009-11-17	New document based on the table of system-declared UTIs previously included in Uniform Type Identifiers Overview.