Glossary

active input area   In inline input, the area of the application window in which the user enters text for conversion by a text service component. The application and the text service component share responsibility for the active input area.

advance width   The full width of a glyph, measured from the **glyph origin** to the other side of the glyph, including any white space on either side.

alignment   The horizontal placement of lines of text with respect to the left and right edges of the text area. Alignment can be left, right, centered, or **justified** (flush on both left and right edges). Not to be confused with **line direction.**

alphabet   The set of letters, or **characters,** used to write a language. The alphabet used by the Roman script consists of 26 letters.

Apple event   A high-level event that is used for communication and data sharing among applications.

Apple event handler   An application-defined function that extracts pertinent data from an Apple event, performs the action requested by the Apple event, and returns a result.

application font   The default font for use by applications. The application font is defined by each script system.

Arabic calendar   A lunar calendar used in much of the Arabic world. There are two Arabic calendars supported by the Arabic script system: the astronomical lunar calendar, based on the moon's phases as actually observed at each location around the world; and the civil lunar calendar, a statutory version of the astronomical calendar. In both versions, the positions in time of each month vary from year to year.

Arabic numerals   In the Macintosh script management system, numerals native to the Arabic writing system and not used in the Roman writing system. Compare **western numerals.**

ascent line   An imaginary horizontal line that coincides with the tops of the tallest characters in a font. See also **base line, descent line, x-height.**

ASCII character set   The standard set of Roman characters, with character-code values from $00 to $7F. Also called **low ASCII,** to distinguish them from character codes with values from $80 to $FF, which are sometimes called *high ASCII* or *extended ASCII.* The Roman characters that are part of each non-Roman character set are the low ASCII set only. Compare **Macintosh character set** and **Standard Roman character set.**

associated font   A Roman font whose glyphs are automatically substituted for glyphs of a non-Roman font, for characters in the Roman range. For example, the Arabic script system uses an associated font to display all Roman characters, even within script runs of Arabic text.

attribute type   An integer constant describing a data attribute of a dictionary entry.

auxiliary script   A script system other than the system script that is available for application use. An auxiliary script can be used in documents, but it does not affect the default behavior of the system software.

background   The part of a glyph bitmap that surrounds the pixels that constitute the glyph itself. Compare **foreground.**

background color   The color that QuickDraw applies to the background parts of a glyph; specified by the `bkColor` field of the current graphics port.

base line   An imaginary horizontal line that coincides with the bottom of each character in a font, excluding descenders (tails on letters such as p).

Bézier curve   A curve, used for defining character shapes in outline fonts, defined by three outline points: two on-curve points that serve as endpoints and one off-curve point that determines the degree of curvature.

bidirectional script system   A script system where text is generally right-aligned with most characters written from right to left, but with some left-to-right text as well. Arabic and Hebrew are bidirectional script systems.

bitmapped font   A font made up of bitmapped glyphs. Compare **outline font.**

bitmapped glyph   A bitmap of a character designed for display at a fixed point size for a particular display device.

Bopomofo   Chinese phonetic characters. Also called **Zhuyinfuhao.**

bottomline input   A type of input method in which the user enters text in a small window, called a **floating input window,** that appears near the bottom of the screen.

B*-tree   A data structure used by the Dictionary Manager to organize dictionary index entries for fast searching.

bundle resource   (1) A resource of type `'BNDL'` that is used by the Finder to associate an application and its files and icons. (2) A script system's **international bundle resource.**

byte offset   The indexed position of a byte in a text buffer, starting at zero for the first byte. In 1-byte script systems, byte offset is the same as **character offset,** and sequential values for byte offset correspond to the **storage order** of the characters. In 2-byte script systems, byte offset and character offset are different.

canonical string   The preferred representation of a character or string in a particular writing system, language, or region, often corresponding to a token type defined by the Script Manager `IntlTokenize` function. For example, the left literal double curly quotes (") can, in the appropriate context, also be represented as double straight quotes ("). This stored preference is the canonical string.

caret   A vertical blinking bar within a line of displayed text that marks the insertion point. Compare **cursor.**

caret position   A location (on the screen) corresponding to the offset (in memory) of the current text insertion point. At the boundary between a right-to-left and left-to-right direction run on a line, one character offset may correspond to two caret positions, and one caret position may correspond to two offsets.

case   Uppercase or lowercase, an attribute of the characters of some writing systems such as Roman.

character   A symbol standing for a sound, syllable, or notion used in a script; one of the simple elements of a written language, for example, the lowercase letter "a" or the number "1". Compare **character code, glyph.**

character attribute   The font, size, style, or color of text. Text of a single style run has uniform character attributes.

character class   A return value of the `CharacterType` function. Character class is a subtype of **character type.**

character cluster   A collection of characters treated as individual components of a whole, including a principal character plus attachments in memory. For example, in Hebrew, a cluster may be composed of a consonant, a vowel, a dot to soften the pronunciation of the consonant, and a cantillation mark.

character code   An 8-bit or 16-bit value representing a text character. Text is stored in memory as character codes. Each script system's keyboard-layout (`'KCHR'`) resource converts the virtual key codes generated by the keyboard or keypad into character codes; each script system's fonts convert the character codes into glyphs for display or printing.

character-code mapping table   A table in a font that matches character codes to glyph indexes.

character encoding   The organization of the numeric codes that represent the characters of a character set in memory.

character key   A key that generates a keyboard event when pressed (any key but Shift, Caps Lock, Command, Control, or Option).

character offset   (1) The indexed position of a character in a text buffer, starting at zero for the first character. Sequential values for character offset correspond to the **storage order** of the characters. In 1-byte script systems, character offset is equivalent to **byte offset;** in 2-byte systems it is not. (2) The horizontal separation between a character rectangle and a font rectangle—that is, the position of a given character within the font's bit image.

character origin   See **glyph origin.**

character type   A return value of the `CharacterType` function. Character type describes the features of a given character, such as whether it is a letter, number, or subscript character.

character width   The distance from one character's origin to the next character's origin. It is how far QuickDraw moves the pen after drawing a character.

client application   A program that requests text services such as input methods, spell-checking, and hyphenation from the Text Services Manager. Client applications use the Text Services Manager to search for, obtain information about, and communicate with **text service components.**

completer key   A keypress, following a **dead key,** that generates a character. The key *e* is a completer key for the dead-key combination *Option-E.*

completion character   The character produced by a completer key. The completion character for the completer key *e* pressed after the dead-key combination *Option-E* is *é.*

component   A software module of the specific type managed by the Component Manager. See also **text service component.**

component instance   A single executing version of a component. There can be more than one instance of a given component running at one time.

Component Manager   The part of system software that allows applications to find and use at runtime predefined classes of software objects called **components.**

configuration resource   See **international configuration resource.**

confirm   To accept converted text in an active input area or floating input window as final and send it to the application. Compare **convert, raw text.**

context dependence   In text, when the glyph corresponding to a character may be modified depending on the preceding or following characters in the text.

contextual script system   A script system, such as Arabic, in which the displayed glyph for a character may be context-dependent. It may be modified based on the characters it is adjacent to.

continuous style   In TextEdit, a style value that is constant over an entire selection range.

convert   To change the text entered in an active input area or floating input window into an ideographic or other complex form. An input method converts **raw text,** such as Hiragana, into converted text, such as Kanji. See also **confirm.**

current font   The current font for drawing text; the font specified in the `txFont` field of the current graphics port.

current port   The graphics port to which the next drawing or measuring operation applies. The current port is specified by the global variable `thePort`, and changed by the QuickDraw `SetPort` procedure.

current script   The script system currently used for text manipulation or display. It is the script system used by a script-aware text-handling routine when the identity of the script or its resources is not an explicit parameter of the call. The current script can be either the **font script** or the **system script.**

cursive font   A set of characters in one typeface in which letters are connected together as in cursive handwriting.

cursor   An arrow, I-beam marker, spinning disk, or other small icon that marks a screen location and moves with the mouse. Compare **caret.**

data attribute   In a dictionary, some information about raw data—for example, grammatical or context-sensitive details.

Date & Time control panel   A control panel that allows the user to set the current date and time and to specify formatting preferences for both.

date cache   A temporary storage area used to convert strings to date and time values.

dead key   A keypress or modifier-plus-keypress combination that produces no immediate effect, but instead affects the character or characters produced by the next key (called the **completer key**) that is pressed. For example, in the U.S. Roman system *Option-E* has no effect; however, when you type *e* after pressing *Option-E*, the accented form appears: *é*.

derived font   A font whose characteristics are partially determined by modifying an **intrinsic font.** A derived font might be one whose characters are scaled from an intrinsic font to achieve a desired size or are slanted to achieve an italic style.

descent line   An imaginary horizontal line that coincides with the bottoms of character descenders (such as the tail on a lowercase p) extending farthest below the **base line.** See also **ascent line.**

destination rectangle   In TextEdit, the rectangle defining the area in which the text is drawn. Text drawn in the destination rectangle is made visible to the application user in the **view rectangle.**

diacritic or **diacritical mark**   A sign that modifies the implicit sound or value of the character with which it is associated. For example, in the Roman system, the acute accent (´) is a diacritical mark.

dictionary   A collection of records used by input methods and other software modules that let the user enter, format, and process text. See also **main dictionary**, **user dictionary.**

dictionary entry   An item associated with a dictionary key. Each entry consists of raw data plus optional data attributes.

dictionary key   A Pascal search string that may have a maximum length of 129 bytes. Data associated with the key may consist of one or more dictionary entries.

Dictionary Manager   The part of Macintosh system software that makes dictionaries available to input methods.

dictionary record   In a dictionary, a key and one or more entries (data associated with the key).

direction   See **line direction.**

direction boundary   A point between offsets in memory or glyphs on a display, at which the direction of the stored or displayed text changes.

direction run   A contiguous (in memory) sequence of characters having the same right-to-left or left-to-right **line direction.**

discontinuous highlighting   A highlighting effect that can occur when a selection range crosses one or more direction boundaries.

discontinuous selection   A type of **selection range** in which the selected characters themselves are not contiguous in memory. Not to be confused with **discontinuous highlighting.**

dispatch routine   A routine in a script system that dispatches script utility calls. WorldScript I and WorldScript II each contain a single dispatch routine that works for all compatible 1-byte and 2-byte scripts, respectively.

dispatch table   A table that is part of a script system's script record; it contains the addresses of the script utilities for that script system.

display line   The horizontal extent of an area for drawing text on a display device. The left and right ends of the display line are the text area's left and right margins.

display order   The left-to-right order in which glyphs are drawn on a screen by QuickDraw. Because not all text is read left-to-right, the display order of glyphs may be different from the **storage order** of their corresponding character codes in memory.

dithering   A technique of mixing existing colors to create the effect of additional colors. Used by QuickDraw to draw dimmed text on the screen.

dual caret   A high caret and a low caret, each measuring half the line's height. The dual caret appears only when the text insertion point is at the boundary between two direction runs in a line of text. The high (primary) caret is displayed at the **primary caret position,** corresponding to the character offset in the direction run that corresponds to the **system direction.** The low (secondary) caret is displayed at the **secondary caret position,** corresponding to the character offset in the direction run that is counter to the system direction. When the caret position is unambiguous (not on a direction boundary), the primary and secondary carets are at the same position, so the user sees one caret. Compare **single caret.**

enable   To make a script system available. The Script Manager and the script extensions enable only those script systems that have a required set of resources and fonts. Compare **install, initialize.**

encoding/rendering resource   An international resource of type `'itl5'`. The encoding/rendering resource specifies character encoding or rendering information for a particular script system. The encoding/rendering resource is optional and has different formats in 1-byte and 2-byte script systems.

entry   See **dictionary entry.**

explicit scaling   Scaling performed by the Font Manager when an application specifically asks QuickDraw to change text from a particular size or shape to another. Compare **implicit scaling.**

fixed input   In **inline input,** text that has already been converted from phonetic to ideographic representation, and thus can be removed from the active input area. Usually, the text service component continually gets rid of fixed input. In certain situations, a client application may need to explicitly fix input, if for example it must suspend input in progress.

fixed token   A token associated with a single, invariant set of characters. The token `tokenPeriod` is a fixed token; it represents a period (.). The token `tokenNumeric` is not fixed; it could represent any number.

fixed-width font   A font whose characters all have the same width. Compare **proportional font.**

floating input window   A floating window used for text entry by an input method.

floating window   A window that is similar to a standard Window Manager window except that it occupies a special layer so that it always remains in front of any application windows.

floating window service   A service, managed by the Text Services Manager and the Process Manager, that provides floating windows for text service components.

font   (1) For bitmapped fonts, a complete set of glyphs in one typeface, size, and style. (2) For outline fonts, a complete set of glyphs in one typeface and style. A font also has a table that associates those glyphs with their equivalent character codes.

font characterization table   A table of parameters in a device driver that specifies how best to adapt fonts to that device.

font family   A complete set of fonts for one typeface including all available styles and sizes of the glyphs in that typeface. A font family may include both bitmapped and outline fonts. Font families are defined by resources of type `'FOND'`.

font-family ID   The number that identifies the resource file (of type `'FOND'`) that specifies the font family. Every font family has a unique font-family ID, in a range of values that determines the script system to which the font family belongs.

font force flag   A Script Manager variable that forces text whose font has an ID in the range of the Roman script system to be interpreted as belonging to the system script instead.

font height   The vertical distance from a font's ascent line to its descent line.

font ID   (1) Font-family ID. (2) The number that identifies the resource file of a particular individual font, of type `'FONT'`, `'nfnt'`, or `'sfnt'`.

font layout   (1) The mapping of character codes to the glyphs of one typeface. (2) The mapping of glyph indexes to the glyphs of one typeface.

Font Manager   The part of the Toolbox that supports the use of various fonts for QuickDraw when it draws text.

font name   The name, such as Geneva or Kyoto, given to a font family to distinguish it from other font families.

font number   See **font ID.**

font rectangle   The smallest rectangle enclosing all the glyphs in a font if the images are all superimposed over the same glyph origin.

font run   A sequence of text that is contiguous in memory and in which all characters are in the same font.

font scaling   The process of changing a glyph from one size or shape to another. The Font Manager can scale bitmapped and outline fonts by changing both sizes and shapes of glyphs.

font scaling factors   Ratios that indicate how the Font Manager should scale a glyph in the vertical and horizontal directions.

font script   The script system that corresponds to the current font (the font specified in the `txFont` field of the current graphics port), hence the script that determines in which writing system to display text characters in the window.

font size   The size of the glyphs in a font in points; nominally a measure of the distance from the base line of one line of text to the base line of the next line of single-spaced text.

foreground   The part of a glyph bitmap that constitutes the glyph itself. Compare **background.**

foreground color   The color that QuickDraw applies to the foreground parts of a glyph; specified by the `fgColor` field of the current graphics port.

full justification   See **justification.**

garbage data   A type of data in a dictionary that exists if the size of the information associated with a key increases or decreases or if the information is deleted. This data is no longer used by the dictionary.

global width table   A data structure used by the Font Manager to communicate character widths to QuickDraw.

glyph   The distinct visual representation of a character in a form that a screen or printer can display. A glyph may represent one character (the lowercase *a*), more than one character (the *fi* ligature, two characters but one glyph), or a nonprinting character (the space character).

glyph index   A number that specifies a particular glyph in a font. Some fonts directly specify glyphs with character codes, whereas others map character codes to glyph indexes, which in turn specify the glyphs.

glyph origin   The point on a base line used as a reference location for drawing a glyph. QuickDraw draws a glyph so that the glyph origin corresponds to the current **pen position.**

graphics port   A complete drawing environment in QuickDraw, including such elements as a bitmap, a subset of it in which to draw, a character font, patterns for drawing and erasing, and other graphics characteristics. Graphics ports can be either black-and-white (data type `grafPort`) or color (data type `CgrafPort`).

greeked   Said of text that is drawn so that its individual characters are replaced with shading or illegible marks. Text at very small point sizes is often greeked when drawn to the screen.

Gregorian calendar   The calendar used in Europe and America. It is not universally accepted—for example, different calendar systems are often used in Japan, China, and the Middle East.

Han   A general term for Chinese-derived ideographic characters. Includes **Hanzi, Kanji,** and **Hanja.**

Hangul   A Korean subscript which consists of blocks of component glyphs called **Jamo** that are arranged and transformed into boxes. Hangul characters differ from typical **character clusters** in that they are treated as singular units in memory; there are no principal characters and attachments.

Hanja   Korean ideographic characters borrowed from Chinese.

Hanzi   Native Chinese ideographic characters.

high caret   See **primary caret.**

highlighting   The display of text in inverse video or with a colored background, to designate a **selection range.**

Hiragana   A cursive, phonetic subscript of the Japanese writing system, with 50 syllables that represent all sounds of the Japanese language. Compare **Katakana.**

ideographic   A type of character representation in which characters do not represent pronunciation alone, but are also related to the component meanings of words; for example, Japanese Kanji, Chinese Hanzi, and Korean Hanja.

implicit scaling   Scaling performed by the Font Manager when an application asks QuickDraw to draw text in a size that is not represented by the available fonts. Compare **explicit scaling.**

index   (1) The part of a dictionary through which records are retrieved. Each index entry contains a **key.** (2) A zero-based, ordinal position in a buffer or data structure.

initialize   For a script system, to create and set up a script record at system startup. Script systems either initialize themselves or are initialized by the Script Manager. Only script systems that are **installed** can be initialized.

inline input   An input method that allows the user to enter text directly into a document. In inline input, entry and conversion of characters take place at the current line position—where the converted text is intended to appear—rather than in a separate window. Inline input is the principal example of the kind of text service supported by the Text Services Manager.

input method   A software facility for 2-byte script systems that converts phonetic or syllabic characters, entered from a keyboard, into ideographic or other complex representations of text. Because 2-byte script systems have too many characters to be entered directly from a keyboard, the input method uses a conversion technique, such as translating sequences of phonetic characters that are typed into a special input window. For example, the Japanese script system provides software for transcribing Kana (phonetic Japanese) into ideographic Kanji.

insertion mode   For a dictionary, the manner in which insertion of a new record occurs—for example, whether its data adds to or replaces data of an existing matching key.

insertion point   A location (offset) in a text buffer at which the next insertion or deletion of text is to take place. An insertion point is equivalent to a **selection range** of zero characters.

install   To place (the resources of a script system) in the System file.

intercharacter spacing   Extra pixels that are added between glyphs, in addition to the space surrounding the glyph as defined by the font, in formatting or justifying text.

interface type   A specification of the set of Apple events and component commands associated with a component; part of the component description record. Currently, all text service components have the same interface type: kTextService, whose associated 4-character tag is 'tsvc'.

international bundle resource   An international resource of type 'itlb'. The international bundle resource identifies the complete set of international resources and keyboard resources used by a script system. It also specifies some of the script's default behavior. Every script system has one international bundle resource.

international configuration resource   An international resource of type 'itlc'. The international configuration resource identifies and configures the system script. There is only one international configuration resource for each Macintosh System file, regardless of the number of script systems it supports.

international resources   A specific set of resources used by the Script Manager, the Text Utilities, and TextEdit. The international resources contain information specific to language or region, such as date and time formats, sorting order, and word-break rules.

international resources cache   A cache that holds resource IDs of international resources used by an application.

international resources selection flag   A Script Manager variable that determines which set of international resources are to be used for text processing operations. When the flag is set, the resources belonging to the system script are used. When the flag is clear, the resources belonging to the font script are used.

interword spacing   Extra pixels that are added to word delimiters—whether white space or extension bars—when formatting or justifying text.

intrinsic font   A font whose characteristics are entirely defined in a 'FONT' or 'NFNT' resource. The plain-style font of any family is an intrinsic font. Other styles may or may not be intrinsic. Compare **derived font.**

'itl0' resource   See **numeric-format resource.**

'itl1' resource   See **long-date-format resource.**

'itl2' resource   See **string-manipulation resource.**

'itl4' resource   See **tokens resource.**

'itl5' resource   See **encoding/rendering resource.**

'itlb' resource   See **international bundle resource.**

'itlc' resource   See **international configuration resource.**

'itlk' resource   See **key-remap resource.**

'itlm' resource   See **script-sorting resource.**

Jamo   An individual phonetic glyph in the Korean script that is transformed and combined into clusters called **Hangul.**

jumping caret   See **single caret.**

justification   A type of **alignment** that involves the spreading or compressing of printed text to fit into a given line width so that it is flush on both left and right edges of the text area (destination rectangle).

Kana   A collective term for the Japanese subscripts **Hiragana** and **Katakana.**

Kanji   Japanese ideographic characters borrowed from Chinese.

kashida   Extension bars drawn between specific Arabic characters to create justified text.

Katakana   An angular, phonetic subscript of the Japanese writing system, with 50 syllables that represent all sounds of the Japanese language. Compare **Hiragana.**

'KCAP' resource   See **key caps resource.**

'KCHR' resource   See **keyboard-layout resource.**

'kcs#' resource   See **keyboard icons family.**

'kcs4' resource   See **keyboard icons family.**

'kcs8' resource   See **keyboard icons family.**

kern   To draw part of a glyph so that it overlaps the space of an adjacent glyph.

key   See **dictionary key.**

keyboard   (1) A hardware input device consisting of an array of keys that the user presses in order to enter text into the computer. (2) For the Macintosh script management system, a keyboard-layout resource that provides for keyboard input in a given script system. In this sense, to change keyboards means to activate a different keyboard layout, rather than physically switching keyboards.

Keyboard control panel   A control panel that allows the user to switch among available keyboard layouts.

keyboard equivalent   The combination of the Command key and another key, used to invoke a menu item from the keyboard.

keyboard icon   A small icon associated with each keyboard through its keyboard-layout ('KCHR') resource. Keyboard icons are used in the Keyboard menu and the Keyboard control panel.

keyboard icon family   A set of keyboard resources, of types 'kcs#', 'kcs4', and 'kcs8'. The keyboard icon family specifies keyboard icons for screens of different bit depth (black-and white, 4-bit, and 8-bit, respectively). There is one keyboard icon family for every keyboard-layout ('KCHR') resource.

keyboard layout   (1) The specification of the physical arrangement of keys on a keyboard and the characters produced when those keys are pressed. (2) The keyboard-layout resource.

keyboard-layout resource   A keyboard resource of type 'KCHR'. The keyboard-layout resource defines a particular character set by associating a character code with each virtual key code produced by a keystroke or combination of keystrokes on the keyboard or keypad. Each script system has one or more 'KCHR' resources.

Keyboard menu   A menu on the right side of the menu bar that appears when more than one script system is enabled. The Keyboard menu is managed by the Operating System and permits the user to change keyboard layouts, input methods, and script systems for text input.

keyboard resources   A specific set of resources used by the Script Manager, the Text Utilities, and TextEdit for text input. The keyboard resources provide for text input in any language from any keyboard, for convenient switching from one input language to another on a single keyboard, and for simultaneous input from multiple keyboards.

keyboard script   The script system for keyboard input. It determines the character input method and the mapping of keystrokes to character codes. The keyboard script may be different from the font script, which determines how text is displayed.

keyboard swap resource   A keyboard resource of type 'KSWP'. The keyboard swap resource specifies key combinations that can be used to change the keyboard script and the current keyboard layout. There is one 'KSWP' resource per system.

Key Caps   A desk accessory that displays the keyboard layout for a given keyboard and a specified font.

key caps resource   A keyboard resource of type 'KCAP'. The key caps resource specifies the physical arrangement of keys on a keyboard and is used by the Key Caps desk accessory. There is one 'KCAP' resource for each physical keyboard supported.

key code   An integer representing a key on the keyboard or keypad, without reference to the character the key stands for. See also **raw key code** and **virtual key code.**

key entry   In a Dictionary Manager dictionary, contains raw data and optional attributes. Each entry may have a maximum length of 256 bytes. The maximum length of the associated data is 1024 bytes.

key-map resource   A keyboard resource of type `'KMAP'`. The key-map resource takes the raw key codes that have been generated by the keyboard microprocessor and maps them into standard virtual key codes. There is exactly one `'KMAP'` resource for each physical keyboard on a Macintosh system.

key-remap resource   A keyboard resource of type `'itlk'`. The key-remap resource provides hardware-specific modifications for certain keyboards. It remaps a few key combinations into the virtual key codes needed for input to certain versions of the keyboard-layout (`'KCHR'`) resource. There is one `'itlk'` resource for every `'KCHR'` resource that needs one.

key translation   The process of converting raw key codes to virtual key codes, and thence to character codes, during text input.

`'KMAP'` resource   See **key-map resource.**

`'KSWP'` resource   See **keyboard swap resource.**

language   For the Macintosh script management system, a particular implementation of a writing system. Languages within a writing system usually share a character set but differ in rules of composition. For example, English and Spanish are two languages within the Roman writing system.

language code   A number used to indicate a particular written version of a language on the Macintosh. Constants are defined for each of the language codes recognized by the Macintosh script management system.

large character set   A character set with more than 256 characters. Japanese, Chinese, and Korean writing systems have large character sets. The script system for such a writing system requires 2-byte **character codes,** and is therefore called a **2-byte script system.**

leading (pronounced "LED-ing")   The amount of blank vertical space between the descent line of one line of text and the ascent line of the next line of single-spaced text. In early typesetting, strips of lead were placed between lines of type for spacing, hence the term. See also **line spacing.**

leading edge   The edge of a glyph that is encountered first when reading text of that glyph's script system. Compare **trailing edge.**

ligature   A glyph that is created when two or more characters are combined to create a new character.

line breaking   The automatic continuation of text from the end of one line to the beginning of the next without ending the line in the middle of a word.

line direction   Also called *text direction, character direction,* or simply *direction.* The direction in which text in a particular language is written and read. The English language has a left-to-right line direction; Arabic and Hebrew have a (primarily) right-to-left line direction. See also **system direction.** Line direction is not the same as **alignment.**

line spacing   The vertical distance between two lines of type, measured from base line to base line. For example, 10/12 indicates 10-point type with 12 points base to base (that is, with 2 points of **leading**).

localization   The adaptation of system software or applications to a particular language or region. Localization involves translating strings and providing proper conventions for sorting, date and time formats, currency and measurement units, calendars, numbers, and other culturally specific items such as icons.

localized system software   Macintosh system software that has been adapted to a particular language or region. Localization may involve adding a second script system, as in the case of Japanese system software; or it may simply require modifying the U.S. Roman script system, as in the case of French or Turkish system software.

long-date-format resource   An international resource of type `'itl1'`. The long-date-format resource defines conventions for formatting long dates, including names of days and months. Each installed script system has one or more long-date-format resources.

low ASCII character set   Same as **ASCII character set;** the standard set of Roman characters with character-code values from $00 to $7F.

low caret   See **secondary caret.**

Macintosh character set   The characters and character codes originally defined for the Macintosh computer. The Macintosh character set consists of the **ASCII character set,** plus additional characters (sometimes called *high ASCII* or *extended ASCII*) with character codes between $80 and $D8. Compare **Standard Roman character set.**

Macintosh script management system   The Script Manager, the script-aware parts of other text managers, the WorldScript extensions, and one or more Macintosh script systems.

main dictionary   A dictionary that contains most of the information used by an input method for its conversion operations. Compare **user dictionary.**

missing character glyph   The glyph in a font that is drawn when no glyph is defined for a character code in a font.

mixed-directional text   The combination of writing systems with left-to-right and right-to-left directions—within a single line of text.

modifier key   Any of the following keys on a Macintosh keyboard: Option, Caps Lock, Shift, Command, Control.

monospaced font   See **fixed-width font.**

monostyled edit record   A TextEdit record used to contain text that is set in a single font, size, and face.

mouse-down region   The region between the caret position and the middle of an adjacent character that maps unambiguously to a single character offset.

moving caret   See **single caret.**

multistyled edit record   A TextEdit record that contains text with style information that can vary from character to character. A multistyled edit record contains a number of additional subsidiary data structures that support the text styling information.

native   Characters in a character set that belong to the character set traditionally defined for the writing system of that font. For example, a Hebrew font can display both Hebrew characters and Roman characters. The Hebrew characters are native to the font and the script system; the Roman characters are not.

neighborhood base font   The font with the lowest font family ID for a particular script system.

no-match character   The character produced when the keystroke that follows a dead key is a space character or is not a valid completer key. The no-match character is usually a stand-alone accent form; for example, the no-match character for the dead-key combination Option-E is ´.

null scrap   A scrap that is created and initialized for a TextEdit **multistyled edit record** to store style information associated with an insertion point.

number parts table   A table in the tokens resource that contains number-formatting information.

Numbers control panel   A control panel that allows the user to specify default number and currency formats for text of the system script.

numeric-format resource   An international resource of type `'itl0'`. The numeric-format resource defines conventions for formatting numeric strings. Each installed script system has one or more numeric-format resources.

off-curve point   An **outline point** between two **on-curve points** that determines the curve of the line between the two on-curve points. A **Bézier curve** is defined by all three points.

on-curve point   One of the **outline points** that determines the shape of a **Bézier curve**. Two on-curve points and one off-curve point are required to define the curve.

1-byte complex script system   A script system that supports a writing system with a small character set (requires only 1-byte characters), but that is characterized by bidirectional or contextual text. Arabic and Hebrew are examples of complex 1-byte script systems.

1-byte extension   See **WorldScript I.**

1-byte simple script system   A script system that supports a writing system with a small character set (requires only 1-byte characters), has a left-to-right text direction only, and that is non-contextual. The Roman script system is an example of a 1-byte simple script system.

Operating System   A specific installation of Macintosh system software. The Operating System (or *system*) consists of the System file and its associated resources, and the Operating System components of the ROM-based Macintosh Toolbox.

outline font   A font made up of outline glyphs in a particular typeface and style, with no size restriction. The Font Manager can generate thousands of point sizes from the same outline font.

outline highlighting   The highlighting of a selection range by drawing an outline around the selected characters. Typically used to show a selection range in an inactive window.

outline point   A point used by the Font Manager to calculate the lines and curves that constitute an outline glyph. See also **on-curve point** and **off-curve point.**

Pascal string   An array of characters, consisting of a length byte followed by up to 255 bytes of data. Compare **text string.**

pen position   The screen position where QuickDraw begins to draw a character, as specified by the `penLoc` field of the active graphics port.

Pinyin   A system for writing Chinese ideographs by using Roman letters to represent the sounds.

point   A QuickDraw data structure that defines a screen location.

port   See **graphics port.**

port font   The font for drawing text in a graphics port, as specified in the `txFont` field of the graphics port record.

primary caret   The high caret that is displayed at the **primary caret position;** part of a **dual caret.**

primary caret position   When a dual caret appears, the screen location that marks the insertion point for text whose line direction matches the **primary line direction.**

primary line direction   The dominant line direction (right-to-left or left-to-right) of the current text. The primary line direction is typically specified by the value of the system direction global variable, `SysDirection`.

private scrap   A scrap used exclusively by TextEdit.

proportional font   Any font in which different characters have different widths; thus, the space taken up by words having the same number of letters can vary.

raw data   In a dictionary, any information related to the key entry. The information can be the explanation of the key in a general dictionary, or perhaps all the Han characters with the pronunciation of the key entry in an East Asian dictionary.

raw key code   A key code generated by a keyboard prior to any processing by the `'KMAP'` resource. See also **virtual key code.**

raw text   Characters in an active input area or floating input window that have not yet been converted to ideographic or other final form. Compare **convert, confirm.**

region   For the Macintosh script management system, a particular subset of a language. A region can represent a linguistic or cultural entity, not necessarily corresponding to a nation, whose language is different enough from other versions of the same language that it merits a specific localized version of Macintosh system software. For example, U.S. and British are two regional variations that are subsets of the English language.

region code   A number indicating the Macintosh version of the written language of a particular region. Constants are defined for each of the region codes recognized by the Macintosh script management system.

Roman character set   A set of characters used for the Roman writing system. Roman character sets include the **Standard Roman character set, Macintosh character set,** and **ASCII character set.**

Roman writing system   The visual representation of words and letters based on the Roman alphabet (a, b, c, and so forth). Developed during the Roman empire, Roman is the most widely used writing system in the world today. For example, Roman is used in most countries of Europe, the Americas, Africa, Oceania, and some Asian nations.

run   A sequence of characters that are contiguous in memory and share a set of common attributes. See, for example, **direction run, script run, font run,** and **style run.**

scaling   The adjustment in size or shape of the glyphs of a font. The Font Manager performs both **implicit scaling** and **explicit scaling,** at the request of QuickDraw.

script   See **script system.**

script-aware   Said of a routine or system-software manager that takes the current script system into account when manipulating or displaying text.

script code   A number indicating a particular script system on the Macintosh. Constants are defined for each of the script codes recognized by the Macintosh script management system.

script-defaulted result flag   A Script Manager variable that indicates whether the system script has replaced the font script due to the unavailability of the font script.

script extension   A part of the Macintosh script management system that allows for convenient and efficient creation of new script systems. Each script system provides tables in its international resources that specify the proper text-manipulation and formatting behavior; the script extension interprets those tables when an application makes a text-related call. There are two script extensions: **WorldScript I,** the universal 1-byte script system extension, and **WorldScript II,** the universal 2-byte script system extension.

script-forced result flag   A Script Manager variable that indicates whether the system script has replaced the font script due to font forcing.

script-language record   A record that defines a script and language supported by a text service component.

script-language support record   An array of script-language records that defines all the scripts and languages supported by a text service component.

script record   A private data structure, maintained by the script management system, that defines each enabled script system, and through which calls to that script system are dispatched.

script run   A sequence of text that is contiguous in memory and belongs to a single script system.

script-sorting resource   An international resource, of type `'itlm'`. The script-sorting resource lists all defined script codes, language codes, and region codes, in proper sorting order. It also maps each region to its parent language, and each language to its parent script. An application uses the script-sorting resource to sort multiple-language lists. There is only one script-sorting resource for each version of the Macintosh system software.

script system   A collection of software facilities that provides for the representation of a specific writing system. It consists of a set of keyboard resources, a set of international resources, one or more fonts, and possibly a script system extension (1-byte or 2-byte). Script systems include Roman, Japanese, Arabic, Traditional Chinese, Simplified Chinese, Hebrew, Greek, Thai, and Korean. Types of script systems include 1-byte simple, 1-byte complex, and 2-byte.

script utility   The low-level equivalent to one of a large group of script-aware Script Manager, Text Utilities, or QuickDraw text routines. Some script utilities are handled by the script management system; others are passed on to script systems. Script utilities all use the `_ScriptUtil` trap.

secondary caret   The low caret that is displayed at the **secondary caret position;** part of a **dual caret.**

secondary caret position   The screen location (denoted by the secondary caret) associated with the character that has an opposing direction from the primary line direction.

secondary script   See **auxiliary script.**

selection range   The series of characters in memory where the next editing operation is to occur. The onscreen glyphs of those characters are commonly highlighted. The characters in a selection range are always contiguous in memory, but their glyphs are not necessarily so on screen.

selector   An integer value that controls the function of a multipurpose routine. For example, the Script Manager uses selectors to figure out which variable you want to read when calling `GetScriptManagerVariable`.

simple script system   See **1-byte simple script system.**

single caret   In unidirectional text, the standard text-insertion caret. In mixed-directional text, one caret that appears at the place where the user will insert the next character, given the current keyboard script. At a boundary between two direction runs, the single caret can correspond to either the primary line direction or the secondary line direction. Because changing the keyboard script in that situation changes the caret location, the single caret is also called a *moving caret* or *jumping caret*. Compare **dual caret.**

slop   In justified text, the amount of space (in pixels) that must be added to a line of text to make it exactly fit the desired line length. The slop value for a line is to be distributed among the style runs, words, and characters on the line.

small character set   A character set with no more than 256 characters. Roman, Hebrew, and Arabic have small character sets. The script system for such a writing system needs only 1-byte **character codes,** and is therefore called a 1-byte script system.

sorting hook   A routine in the string-manipulation (`'itl2'`) resource that controls sorting behavior for a particular script system.

source mask   A value that specifies which of a script system's subscripts the `TransliterateText` function is to operate on.

split caret   See **dual caret.**

Standard Roman character set   The 256 characters and character codes that are supplied with the Macintosh Roman script system. The Standard Roman character set consists of the **Macintosh character set** plus additional defined characters with character codes between $D9 and $FF.

storage order   The order in which character codes are stored in memory. Storage order may be different from **display order.**

string-manipulation resource   An international resource of type `'itl2'`. The string-manipulation resource defines conventions for comparing text elements, including sorting order, character types, case conversion, and word breaks. Each installed script system has one or more string-manipulation resources.

style   A visual attribute, other than size, applied as a systematic variation to the plain (unstyled) characteristics of a font's glyphs. The set of styles supported by QuickDraw consists of bold, italic, underline, outline, shadow, condense, and extend.

style code   A byte-length mask with one bit set for each QuickDraw-supported style to be applied.

styled text   Text that is displayed in multiple styles.

style run   A sequence of text that is contiguous in memory and in which all the characters are in the same font, size, style, color, and script system.

style scrap   A TextEdit scrap that stores style information associated with text that is cut or copied.

subscript   A distinguishable subset of characters included within a script—for example, Japanese Hiragana, Katakana, Kanji, and Romaji.

synthetic font   A font created by the Font Manager from a **bitmapped font** resource by expanding the 1-bit font into a font that matches the current screen depth.

system direction   The horizontal placement of interface elements, including the default line direction (left-to-right or right-to-left) for text in the system script. System direction is specified by the global variable `SysDirection`.

System file   A file, located in the System Folder, that contains the basic system software plus some system resources, such as international and keyboard resources of installed script systems.

system font   The font used to display text in menus, dialog boxes, alert boxes, and so forth in a given script system. For example, in the Roman script system, the system font is Chicago.

system script   The primary script system used by various parts of the Operating System, such as in dialog boxes and menu bars. The system script affects system defaults, such as the system font, line direction, and text-formatting rules. All other scripts are secondary to the system script. The system script is specified in the system software's configuration resource (`'itlc'`).

target format   A value that specifies what format the `TransliterateText` function is to convert text into.

target modifier   A value that provides formatting information beyond that specified in the **target format**, for use by the `TransliterateText` function.

text   The written representation of language. Text is a sequence of symbols that conveys meaning to its reader. The set of symbols used, and the most basic rules for their presentation, constitute the writing system of the text. The lexical, grammatical, and semantic significance of combinations of the symbols constitute the language of the text.

Text control panel   A control panel, available on non-U.S. versions of system software, that allows the user to set aspects of the text behavior of any enabled script system.

text rendering   The process of preparing characters that are stored in memory for display as glyphs.

text segment   For text layout, the portion of a style run (it may be the entire style run) that falls on a single text line. Most text measuring and drawing routines work on a single text segment at a time.

text service   A text-entry or text-processing function provided by a text service component. Inline input is one example of a text service.

text service component   A software module that is a registered component with the Component Manager, and that is used for entry, processing, or formatting of text. Text service components use the Text Services Manager to request action from and send information to client applications.

text service component type   A specification of the function associated with a particular kind of text service component; part of its component description record. Currently, only one text service component type is defined: `'inpm'`, specifying an inline input method.

Text Services Manager   The part of system software that manages the interactions between applications that request text services and text service components that provide them.

text string   An array of characters referenced by a pointer and a length word. A text string may contain up to 32,767 bytes of character data. Compare **Pascal string.**

text style   See **style.**

token   An abstract category of text element that stands for a name, symbol, punctuation, quoted literal, or other sequence of characters.

token block record   A parameter block used by the `IntlTokenize` function. The token block record contains, among other information, a pointer to a list of **token records.**

tokenization   A function provided by the Script Manager and individual script systems. Tokenization identifies the different lexical elements in an arbitrary string of text by using localized information from the tokens resource (`'itl4'`), and converts the string to a series of **tokens.**

token record   A data structure, used by the `IntlTokenize` function, that describes an individual token.

tokens resource   An international resource of type `'itl4'`. The tokens resource contains information needed to convert text in a particular language into a series of tokens. Each installed script system has one or more tokens resources.

trailing edge   The edge of a glyph that is encountered last when reading text of that glyph's script system. Compare **leading edge.**

trailing spaces   White space characters occurring at the end of the last style run in a line of text.

transcription   The representation of sound sequences in phonetic symbols.

transfer mode   A specification of which Boolean operation to perform when drawing. In drawing text, QuickDraw uses transfer mode, along with foreground and background color, to determine how the text to be drawn (called the *source*) interacts with anything already drawn in the current graphics port, called the *destination*.

transliteration   For the Macintosh script management system, the conversion of characters that are phonetic representations of the same sound sequence between subscripts within a script. In the Roman script system, this means case conversion. For Japanese, Chinese, and Korean, transliteration refers to the conversion, without linguistic or semantic considerations, of characters from one subscript to another subscript within a script. Examples include the transliteration of Japanese Hiragana to Katakana, and the transliteration of Korean Jamo to Hangul.

transliteration resource   An international resource of type `'trsl'`. The transliteration resource provides rules for converting text phonetically from one subscript to another within a script system. The transliteration resource is optional; it is used only by 2-byte script systems.

`'trsl'` resource   See **transliteration resource**. See also **international resources.**

TSM-aware application   An application that makes calls to the Text Services Manager. A TSM-aware application can use a variety of text services such as inline input.

TSM document   A private data structure maintained by the Text Services Manager that relates one or more text service components to a particular application window.

2-byte extension   See **WorldScript II.**

2-byte script system   A script system that supports a writing system with a large character set (requires 2-byte characters) and requires sophisticated procedures for character input. Japanese, Chinese, and Korean are examples of 2-byte script systems.

Unicode   A standard for a universal character set now under development. Unicode assigns two bytes per character code, and includes all the characters of all the world's major writing systems in one character set.

unidirectional text   A sequence of text that has a single direction. Compare **mixed-directional text.**

universal script   A 1-byte complex script system that is compatible with WorldScript I.

untoken table   A table in the tokens resource that converts script-independent tokens to text of a given script system.

user dictionary   Also called an *editable dictionary*. A file, complementary to the **main dictionary** used by input methods, in which users can add information that does not exist in the main dictionary.

verb   See **selector.**

view rectangle   In TextEdit, the rectangle defining the portion of the window within which text is actually displayed. Text drawn in the **destination rectangle** is made visible to the application user in the view rectangle.

virtual key code   The key code that an application receives in keyboard events. It is the value produced after a **raw key code** has been mapped through the key-map (`'KMAP'`) and key-remap (`'itlk'`) resources.

western numerals   For the Macintosh script management system, the numerical symbols 1, 2, 3, 4, 5, 6, 7, 8, 9, and 0. Sometimes known as *Arabic numerals*, but not to be confused with the numerals native to the Arabic writing system.

word wrap   See **line breaking.**

WorldScript I   A script extension used for all 1-byte complex script systems. Code in the extension reads tables in the script system's international resources in order to provide the proper text manipulation and formatting for that script. Simple 1-byte script systems do not need to use WorldScript I.

WorldScript II   A script extension used for all 2-byte script systems. Code in the extension reads tables in the script system's international resources in order to provide the proper text manipulation and formatting for that script.

writing system   A set of characters and the basic rules for their use in creating a visual depiction of language. Writing systems may differ in the direction in which their characters and lines run, the size of the character set used, and the context sensitivity of character selection. Writing systems include Roman, Japanese, Arabic, and Hebrew. Compare **script system.** See also **language, region.**

x-height   The height of a lowercase *x* in a given font. It is the height, measured from the base line, of the main portion of most lowercase letters (excluding ascenders and descenders). See also **ascent line, base line, descent line.**

Zhuyinfuhao   Chinese phonetic characters. Also called **Bopomofo.**