

Proposed Draft Unicode Technical Report #51**UNICODE EMOJI**

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Summary

The main goal of document is to help improve the interoperability of emoji characters across implementations by providing guidelines and data.

The guidelines include design recommendations with guidance for improving interoperability across platforms and implementations and longer-term approaches to emoji. Background information about emoji is also supplied.

The data includes information about Unicode emoji characters, including: which characters normally can be considered to be emoji; which of those should be displayed by default with a text-style versus an emoji-style; how to sort and group emoji characters more naturally; useful categories for character-pickers for mobile and virtual keyboards; and useful annotations for searching emoji.

Status

*This is a **proposed draft** document which may be updated, replaced, or superseded by other documents at any time. Publication does not imply endorsement by the Unicode Consortium. This is not a stable document; it is inappropriate to cite this document as other than a work in progress.*

Please submit corrigenda and other comments with the online reporting form

[Feedback]. Related information that is useful in understanding this document is found in the [References](#). For the latest version of the Unicode Standard see [\[Unicode\]](#). For a list of current Unicode Technical Reports see [\[Reports\]](#). For more information about versions of the Unicode Standard, see [\[Versions\]](#).

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1 Introduction

WORKING DRAFT!

Emoji are pictographs (pictorial symbols) that are typically presented in a colorful cartoon form and used inline in text. They represent things such as faces, weather, vehicles and buildings, food and drink, animals and plants, or icons that represent emotions, feelings, or activities. Emoji on smartphones and in chat and email applications have become popular worldwide.

The word *emoji* comes from the Japanese:

絵 (e ≅ picture) 文 (mo ≅ writing) 字 (ji ≅ character).

Emoji may be represented internally by embedded images or as encoded characters, called *emoji characters* for clarity. Some Unicode characters are normally displayed as emoji; some are normally displayed as ordinary text, and some can be displayed both ways. See also the *OED: emoji, n.*

Emoji became available in 1999 on Japanese mobile phones. There was an early proposal in 2000 to encode DoCoMo emoji in Unicode. At that time, it was unclear whether these characters would come into widespread use—and there wasn't support from the Japanese mobile phone carriers to add them to Unicode—so no action was taken.

The emoji turned out to be quite popular in Japan, but each mobile phone carrier developed different (but partially overlapping) sets, and each mobile phone vendor used their own text encoding extensions, which were incompatible with one another. The vendors developed cross-mapping tables to allow limited interchange of emoji characters with phones from other vendors, including email. Characters from other platforms that could not be displayed were represented with ■ (U+3013 GETA MARK), but it was all too easy for the characters to get corrupted or dropped.

When non-Japanese email and mobile phone vendors started to support email exchange with the Japanese carriers, they ran into those problems. Moreover, there was no way to represent these characters in Unicode, which was the basis for text in all modern programs. In 2006, Google started work on converting Japanese emoji to Unicode private-use codes, leading to the development of internal mapping tables for supporting the carrier emoji via Unicode characters in [2007](#).

There are, however, many problems with a private-use approach, and thus a proposal was made to the Unicode Consortium to expand the scope of symbols to encompass emoji. This proposal was approved in May 2007, leading to the formation of a symbols subcommittee, and in August 2007 the technical committee agreed to support the encoding of emoji in Unicode based on a set of principles developed by the subcommittee. The following are a few of the documents tracking the progression of Unicode emoji characters.

Emoji Proposals





Date	Doc No.	Title	Authors
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2000-04-26	L2/00-152	NTT DoCoMo Pictographs	Graham Asher (Symbian)
2006-11-01	L2/06-369	Symbols (scope extension)	Mark Davis (Google)
2007-08-03	L2/07-257	Working Draft Proposal for Encoding Emoji Symbols	Kat Momoi, Mark Davis, Markus Scherer (Google)
2007-08-09	L2/07-274R	Symbols draft resolution	Mark Davis (Google)
2007-09-18	L2/07-391	Japanese TV Symbols (ARIB)	Michel Suignard (Microsoft)
2009-01-30	L2/09-026	Emoji Symbols Proposed for New Encoding	Markus Scherer, Mark Davis, Kat Momoi, Darick Tong (Google); Yasuo Kida, Peter Edberg (Apple)
2009-03-05	L2/09-025R2	Proposal for Encoding Emoji Symbols	
2010-04-27	L2/10-132	Emoji Symbols: Background Data	
2011-02-15	L2/11-052R	Wingdings and Webdings Symbols	Michel Suignard

In 2009, the first Unicode characters explicitly intended as emoji were added to Unicode 5.2 for interoperability with the ARIB set. A set of 722 characters was defined as the union of emoji characters used by Japanese mobile phone carriers: 114 of these characters were already in Unicode 5.2. In 2010, the remaining 608 emoji characters was added to Unicode 6.0, along with some other emoji characters. In 2012, a few more emoji were added to Unicode 6.1, and in 2014 a larger number were added to Unicode 7.0.

Here is a summary of when some of the major sources of pictographs used as emoji were encoded in Unicode. These sources include other characters in addition to emoji.

Major Sources

Source	Abbr	Dev. Starts	Released	Unicode Version	Sample Character			
					B&W	Color	Code	Name
Zapf Dingbats	ZDings	1989	1991-10	1.0			U+270F	pencil
ARIB	ARIB	2007	2008-10-01	5.2			U+2614	umbrella with rain drops

Japanese carriers	JCarrier	2007	2010-10-11	6.0			U+1F60E	smiling face with sunglasses
Wingdings & Webdings	WDings	2010	2014-06-16	7.0			U+1F336	hot pepper

For a detailed view of when various source sets of emoji were added to Unicode, see [emoji-versions-sources](#) (the format is explained in [Data Files](#)). The UCD data file [EmojiSources.txt](#) shows the correspondence to the original Japanese carrier symbols.

The [Selected Products](#) table lists when Unicode emoji characters were incorporated into selected products. (The PUA characters were a temporary solution.)

Selected Products

Date	Product	Version	Encoding	Display	Input	Notes, Links
2008-01	GMail mobile		PUA	color	palette	モバイル Gmail が携帯絵文字に対応しました
2008-10	GMail web		PUA	color	palette	Gmail で絵文字が使えるようになりました
2008-11	iPhone	iPhone OS 2.2	PUA	color	palette	Softbank users, others via 3rd party apps. CNET Japan article on Nov. 21, 2008.
2011-07	Mac	OSX 10.7	Unicode 6.0	color	Character Viewer	
2011-11	iPhone, iPad	iOS 5	Unicode 6.0	color	+emoji keyboard	

2012-06	Android	Jelly Bean		B&W	3rd party input	...Quick List of Jelly Bean Emoji...
2012-09	iPhone, iPad	iOS 6	+ variation selectors			
2012-08	Windows	8	Unicode only; no emoji variation sequences	desktop/tablet: b&w; phone: color	integrated in touch keyboards	
2013-08	Windows	8.1	Unicode only; emoji variation sequences	all: color	touch keyboards; phone: text prediction features (e.g. "love" -> ♥)	Color using scalable glyphs (OpenType extension)
2013-11	Android	Kitkat		color	native keyboard	...new, colorful Emoji in Android KitKat

People often ask how many emoji are in the Unicode Standard. This question does not have a simple answer, because there is no clear line separating which pictographic characters should be displayed with a typical emoji style. For a complete picture, see [Which Characters are Emoji](#).

1.1 Emoticons and Emoji

The term *emoticon* refers to a series of text characters (typically punctuation or symbols) that is meant to represent a facial expression or gesture (sometimes when viewed sideways), such as the following.

; -)

Emoticons predate Unicode and emoji, but were later adapted to include Unicode characters. The following examples use not only ASCII characters, but also U+203F (☞), U+FE35 (☞), U+25C9 (☉), and U+0CA0 (☺).

^ ^



Often implementations allow emoticons to be used to input emoji. For example, the emoticon ;-) can be mapped to 😊 in a chat window. The term *emoticon* is sometimes used in a broader sense, to also include the emoji for facial expressions and gestures. That broad sense is used in the Unicode block name *Emoticons*, covering the code points from U+1F600 to U+1F64F.

1.2 Encoding Considerations

Unicode is the foundation for text in all modern software: it's how all mobile phones, desktops, and other computers represent the text of every language. People are using Unicode every time they type a key on their phone or desktop computer, and every time they look at a web page or text in an application. It is very important that the standard be stable, and that every character that goes into it be scrutinized carefully. This requires a formal process with a long development cycle. For example, the "dark sunglasses" character was first proposed years before it was released in Unicode 7.0.

To be considered for encoding, characters must normally be in widespread use as elements of text. The emoji and various symbols were added to Unicode because of their use as characters for text-messaging in a number of Japanese manufacturers' corporate standards, and other places, or in long-standing use in widely distributed fonts such as Wingdings and Webdings. In many cases, the characters were added for complete round-tripping to and from a source set, *not* because they were inherently of more importance than other characters. For example, the 📞 *clamshell phone* character was included because it was in Wingdings and Webdings, not because it is more important than, say, a "skunk" character.

In some cases, a character was added to complete a set: for example, a 🏈 *rugby football* character was added to Unicode 6.0 to complement the 🏀 *american football* character (the ⚽ *soccer ball* had been added back in Unicode 5.2). Similarly, a mechanism was added that could be used to represent all country flags (those corresponding to a two-letter unicode_region_subtag), such as the 🇨🇦 *flag for Canada*, even though the Japanese carrier set only had 10 country flags.

People wanting to submit emoji or any other character for consideration for encoding should see [Annex C: Selection Factors](#), which also points to instructions for how to submit character encoding proposals. It may be helpful to review the [Unicode Mail List](#) as well.

For a list of frequently asked questions on emoji, see the [Unicode Emoji FAQ](#).

1.3 Goals

This document provides:

- design guidelines for improving interoperability across platforms and implementations

- data for which characters normally can be considered to be emoji
- data for which of those should be displayed by default with a text-style versus an emoji-style
- data for how to sort and group emoji characters more naturally
- data for useful categories for character-pickers for mobile and virtual keyboards
- data for useful annotations for searching emoji

It also provides background information about emoji, and discusses longer-term approaches to emoji.

As new Unicode characters are added or the “common practice” for emoji usage changes, the data and recommendations supplied by this document may change in accordance. Thus the recommendations and data will change across versions of this document.

Additions beyond Unicode 7.0 are being addressed by the Unicode Technical Committee: as any new characters are approved, this document will be updated as appropriate.

Review Note: The data presented here is draft, and may change considerably before publication. Some of the data presented here, such as collation or annotations, are slated for incorporation into the Unicode CLDR project instead.

2 Design Guidelines

Unicode characters can have different presentations. Emoji characters can have two kinds of presentation:

- an *emoji presentation*, with colorful and perhaps whimsical shapes, even animated
- a *text presentation*, such as black & white

More precisely, a text presentation is a simple foreground shape whose color which is determined by other information, such as setting a **color** on the text, while an emoji presentation determines the color(s) of the character, and is typically multicolored. In other words, when you change the text color in a word processor, a character with an emoji presentation will not change color.

Any Unicode character can be presented with text presentation, as in the Unicode charts. Both the name and the representative glyph in the Unicode chart should be taken into account when designing the appearance of the emoji, along with the images used by other vendors. The shape of the character can vary significantly. For example, here are just some of the possible images for U+1F36D LOLLIPOP, U+1F36E CUSTARD, U+1F36F HONEY POT, and U+1F370 SHORTCAKE:

While the shape of the character can vary significantly, designers should maintain the same “core” shape, based on the shapes used mostly commonly in industry practice. For example, a U+1F36F HONEY POT encodes for a pictorial representation of a pot of honey, not for some semantic like "sweet". It would be unexpected to represent U+1F36F HONEY POT as a sugar cube, for example. Deviating too far from that core shape can cause interoperability problems: see [accidentally-sending-friends-a-hairy-heart-emoji](#). Direction (whether a person or object faces to the right or left, up or down) should also be maintained where possible, because a change in direction can change the meaning: when sending 🐊👮 "crocodile shot by police", people expect any recipient to see the pistol pointing in the same direction as when they composed it. Similarly, the U+1F6B6 *pedestrian* should face to the left 🚶, not to the right.

General-purpose emoji for people and body parts should also not be given overly specific images: the general recommendation is to be as neutral as possible regarding race, ethnicity, and gender. Thus for the character U+1F64B *happy person raising one hand*, the recommendation is to use a neutral graphic like 🙌 instead of an overly-specific image like 🧑. This includes the characters listed in the annotations chart under “[human](#)”. The representative glyph used in the charts, or images from other vendors may be misleading: for example, the construction worker 👷 may be male or female. For more information, see the [Unicode Emoji FAQ](#).

Names of symbols such as BLACK MEDIUM SQUARE or WHITE MEDIUM SQUARE are not meant to indicate that the corresponding character must be presented in black or white, respectively; rather, the use of “black” and “white” in the names is generally just to contrast **filled** versus **outline** shapes, or a darker color fill versus a lighter color fill. Similarly, in other symbols such as the hands U+261A BLACK LEFT POINTING INDEX and U+261C WHITE LEFT POINTING INDEX, the words “white” and “black” also refer to outlined versus filled, and do not indicate skin color.

However, other color words in the name, such as YELLOW, typically provide a recommendation as to the emoji presentation, which should be followed to avoid interoperability problems.


Review Note: Eventually we will need to update the core spec and FAQ to match the recommendations given here.

Emoji characters may not always be displayed on a white background. They are often best given a faint, narrow contrasting border to keep the character visually distinct from





a similarly colored background. Thus a Japanese flag would have a border so that it would be visible on a white background, and a Swiss flag have a border so that it is visible on a red background.

Current practice is for emoji to have a square aspect ratio, deriving from their origin in Japanese. For interoperability, it is recommended that this practice be continued with current and future emoji.

Flag emoji characters are discussed in [Annex B: Flags](#).

Combining marks may be applied to emoji, just like they can be applied to other characters. When that is done, the combination should take on an emoji presentation. For example, a  is represented as the sequence "1" plus an emoji variation selector plus U+20E3 COMBINING ENCLOSING KEYCAP. Systems are unlikely, however, to support arbitrary combining marks with arbitrary emoji. Aside from U+20E3, the following can be used:

- U+20E4 COMBINING ENCLOSING UPWARD POINTING TRIANGLE to indicate a warning
- U+20E0 COMBINING ENCLOSING CIRCLE BACKSLASH to indicate a prohibition.

For example,  (pedestrian crossing ahead) can be represented as  + U+20E4, and  (no bicycles allowed) can be represented as  + U+20E0.

Review Note: The recommended base characters would be associated with traffic signs and perhaps a few other characters. Should we have data listing those, so that implementations would know what to concentrate on?

2.1 Gender

The following emoji have explicit gender, based on the name and explicit, intentional contrasts with other characters.

U+1F466 boy
U+1F467 girl
U+1F468 man
U+1F469 woman
U+1F474 older man
U+1F475 older woman
U+1F46B man and woman holding hands
U+1F46C two men holding hands
U+1F46D two women holding hands
U+1F6B9 mens symbol
U+1F6BA womens symbol

U+1F478 princess
U+1F46F woman with bunny ears
U+1F470 bride with veil
U+1F472 man with gua pi mao
U+1F473 man with turban

U+1F574 man in business suit levitating

U+1F385 father christmas

All others should be depicted in a gender-neutral way.











Review Note: For clarity, we may consider documenting gender-neutral characters whose names may be misleading, like *guardsman*. **To comment on this issue, go to [Feedback](#).**

2.2 Diversity

People all over the world want to have emoji that reflect more human diversity, especially for skin tone. The Unicode emoji characters for people and body parts are meant to be generic, yet following the precedents set by the original Japanese carrier images, they are often shown with a light skin tone instead of a more generic (nonhuman) appearance, such as a yellow/orange color or a silhouette.

Five symbol modifier characters that provide for a range of skin tones for human emoji are planned for Unicode Version 8.0 (scheduled for mid-2015). These characters are based on the six tones of the Fitzpatrick scale, a recognized standard for dermatology (there are many examples of this scale online, such as [FitzpatrickSkinType.pdf](#)). The exact shades may vary between implementations.

Emoji Skin Tone Modifiers

Code	Name	Samples
U+1F3FB	EMOJI MODIFIER FITZPATRICK TYPE-1-2	 
U+1F3FC	EMOJI MODIFIER FITZPATRICK TYPE-3	 
U+1F3FD	EMOJI MODIFIER FITZPATRICK TYPE-4	 
U+1F3FE	EMOJI MODIFIER FITZPATRICK TYPE-5	 
U+1F3FF	EMOJI MODIFIER FITZPATRICK TYPE-6	 

Review Note: the example shades may change before release.

These characters have been designed so that even where diverse color images for human emoji are not available, readers can see what the intended meaning was.

The default representation of these modifier characters when used alone is as a color swatch. Whenever one of these characters *immediately* follows certain characters (such as WOMAN), then a font should show the sequence as a single glyph corresponding to the image for the person(s) or body part with the specified skin tone, such as the following:



However, even if the font doesn't show the combined character, the user can still see

that a skin tone was intended:



This may fall back to a black and white stippled or hatched image such as when colorful emoji are not supported.

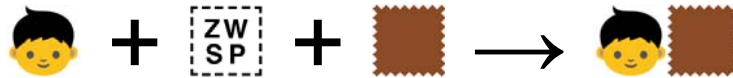


When a human emoji is not *immediately* followed by a emoji modifier character, it should use a generic non-realistic skin tone—such as that typically used for the smiley faces—or a silhouette. Dark hair is recommended for generic images that include hair. People of every skin tone can have black (or very dark brown) hair, so it is more neutral. One exception is PERSON WITH BLOND HAIR, which needs to have blond hair regardless of skin-tone.

For it to have an effect on an emoji, the emoji modifier must immediately follow that emoji. The one exception is an intervening variation selector. The modifier automatically implies the emoji presentation style, so the variation selector is not needed, but if present it must come immediately after the modified emoji character, such as in:

<U+270C VICTORY HAND, FE0F, TYPE-3>

Any other intervening character causes the emoji modifier to appear as a free-standing character. Thus





There are several emoji for multi-person groups, such as COUPLE WITH HEART. The emoji modifiers affect all the people in such characters. However, real multi-person groupings include many in which various members have different skin tones. For representing such groupings, users can employ techniques already found in current emoji practice, in which a sequence of emoji is intended to be read together as a unit, with each emoji in the sequence contributing some piece of information about the unit as a whole. Users can simply enter separate emoji characters for each member of the group, each with its own skin tone e.g.: <MAN, TYPE-1-2, WOMAN, TYPE-3>, possibly preceded by a group character.

2.2.1 Implementations

Implementations can present the emoji modifiers as separate characters in an input palette, or present the combined characters using mechanisms such as long press.

The emoji modifiers are not intended for combination with arbitrary emoji characters. Instead, they are restricted to the following 129 characters, in two separate sets:

Characters Subject to Emoji Modifiers

Type	Images	Code points and names (in code point order)
Minimal Set (27 code points)		U+1F385 FATHER CHRISTMAS U+1F466 BOY ...U+1F469 WOMAN U+1F46E POLICE OFFICER ...U+1F478 PRINCESS U+1F47C BABY ANGEL U+1F481 INFORMATION DESK PERSON ...U+1F482 GUARDSMAN U+1F486 FACE MASSAGE ...U+1F487 HAIRCUT U+1F645 FACE WITH NO GOOD GESTURE ...U+1F647 PERSON BOWING DEEPLY U+1F64B HAPPY PERSON RAISING ONE HAND U+1F64D PERSON FROWNING ...U+1F64E PERSON WITH POUTING FACE
Optional Set (102 code points)		U+261D WHITE UP POINTING INDEX U+2639 WHITE FROWNING FACE ...U+263A WHITE SMILING FACE U+270A RAISED FIST ...U+270D WRITING HAND U+1F3C2 SNOWBOARDER ...U+1F3C4 SURFER U+1F3C7 HORSE RACING U+1F3CA SWIMMER U+1F440 EYES ...U+1F450 OPEN HANDS SIGN U+1F47F IMP U+1F483 DANCER U+1F485 NAIL POLISH U+1F48B KISS MARK U+1F4AA FLEXED BICEPS U+1F590 RAISED HAND WITH FINGERS SPLAYED U+1F595 REVERSED HAND WITH MIDDLE FINGER EXTENDED ...U+1F596 RAISED HAND WITH PART BETWEEN

	MIDDLE AND RING FINGERS
	U+1F600 GRINNING FACE
	...U+1F637 FACE WITH MEDICAL MASK
	U+1F641 SLIGHTLY FROWNING FACE
	...U+1F642 SLIGHTLY SMILING FACE
	U+1F64C PERSON RAISING BOTH HANDS IN CELEBRATION
	U+1F64F PERSON WITH FOLDED HANDS
	U+1F6A3 ROWBOAT
	U+1F6B4 BICYCLIST
	...U+1F6B6 PEDESTRIAN
	U+1F6C0 BATH



















Of these characters, it is strongly recommended that the Minimal set for combination be supported. No characters outside of these two sets should be combined with emoji modifiers. These sets may change over time, with successive versions of this document.

Review Note: These sets may change before this document is final; we would particularly appreciate feedback on whether particular characters should be removed from either of these sets. In particular, we removed the "groupings", like FAMILY #1f46a, presuming that they should always be have a generic appearance, and then be followed by the human images for the family, if desired. **To comment on this issue, go to [Feedback](#).**

The following chart shows the types of display that are expected, depending on the level of support for the emoji modifier:

Expected Emoji Modifiers Display

Support Level	Emoji Type	Source	Display Color	Display B&W
Fully supported	minimal /optional	+		
	other	+		
Fallback	minimal /optional	+		

	other	 + 	 	 
Unsupported	minimal /optional	 + 	 	 
	other	 + 	 	 

The “Unsupported” rows show how the character would typically appear on a system that doesn't have a font with that character in it: with a missing glyph indicator.

The interaction between variation selectors and emoji modifiers is specified as follows:

Emoji Modifiers and Variation Selectors			
Variation Selector	Emoji Modifier	Result	Comment
None	Yes	Emoji Presentation	in the absence of other information, the skin tone modifier implies emoji appearance.
Emoji (U+FE0E)			the modified character and variation selector must form a valid variation sequence, and the order must be <modified-character, variation-selector, skin-tone-modifier>
Text (U+FE0E)		Text Presentation	—otherwise support of the variation selector would be non-conformant

Definitions

A *minimal emoji modifier sequence* is defined to be a sequence of the following form:

minimal_set_element (variation_selector)? emoji_modifier

An *optional emoji modifier sequence* is defined to be a sequence of the following form:

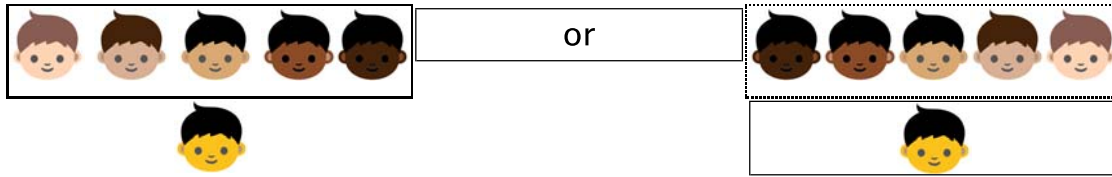
optional_set_element (variation_selector)? emoji_modifier

An *isolated emoji modifier* is one that does not occur in either a minimal or optional emoji modifier sequence.

A supported emoji modifier sequence should be treated as a single grapheme cluster for editing purposes (cursor moment, deletion, etc.); word break, line break, etc.

For input, this can be transparent to the user. On a phone, for example, a [long-press](#) on a human figure can bring up a minipalette of different skin tones, without the user having to separately find the human figure and then the modifier. The following shows some of the ways that could appear.

Minipalettes



Of course, there are many other types of diversity in human appearance besides different skin tones: Different hair styles and color, use of eyeglasses, various kinds of facial hair, different body shapes, different headwear, and so on. It is beyond the scope of Unicode to provide an encoding-based mechanism for representing every aspect of human appearance diversity that emoji users might want to indicate. The best approach for communicating very specific human images—or any type of image in which preservation of specific appearance is very important—is the use of embedded graphics, as described in [Longer Term Solutions](#).

Review Notes:

- Should we note that fonts may provide fewer distinctions among the combined characters?
- Should we provide the above in the emoji-data.txt file, in machine-readable form?
- **To comment on this issue, go to [Feedback](#).**

3 Which Characters are Emoji

There are 722 Unicode emoji characters corresponding to the Japanese carrier sets.

In addition, most vendors support another 126 characters (from Unicode 6.0 and 6.1):

Review Note: Once these are finalized, we'll replace the contents by a single image to speed up loading.

Common Additions



There are another 247 flags (aside from the 10 from the Japanese carrier sets) that can be optionally supported with Unicode 6.0 characters.

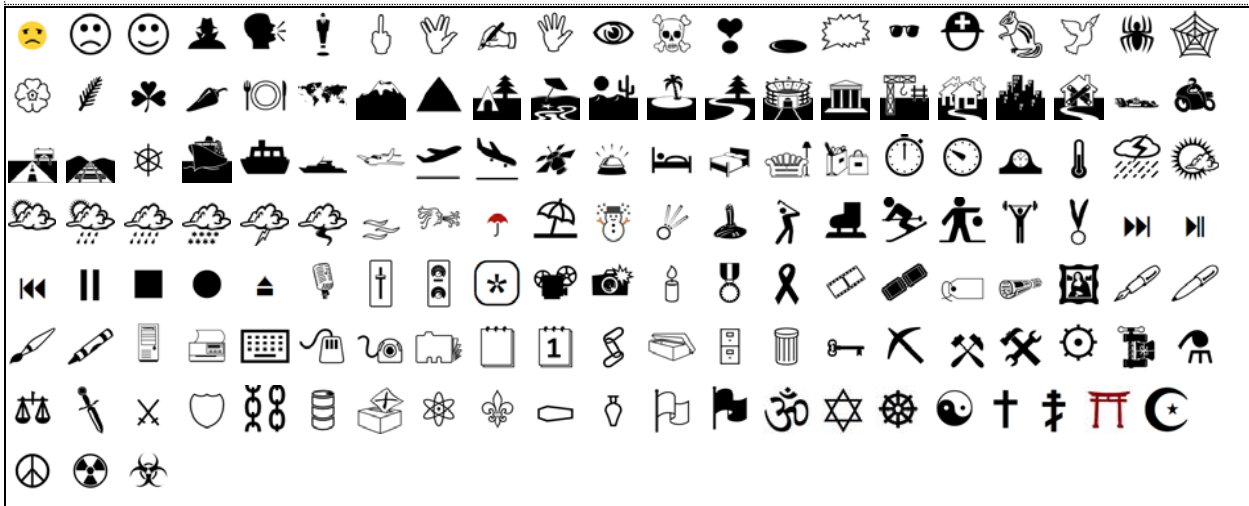
Other Flags



For more about flags, see [Annex B: Flags](#).

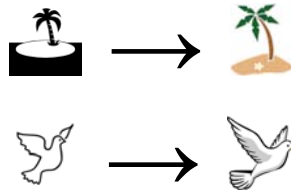
One of the goals of this document is to provide data for which Unicode characters should normally be considered to be emoji. Based on the data under development, that includes the following 150 characters. Most, but not all, of these are new in Unicode 7.0. This gives a total of 1,245 emoji characters (or sequences) for Unicode 7.0:

Standard Additions



Thus vendors that support emoji should provide a colorful appearance for each of these,

such as the following:



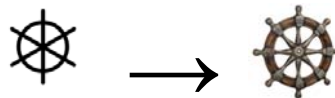
For Unicode 8.0 characters, see [Annex D: Emoji Candidates for Unicode 8.0](#).

Review Note: We would like feedback on characters that should be added or removed from the Standard Additions. Removal would be warranted if the character is not currently suited for use with an emoji presentation (although it could be added in the future), or if it would have essentially the same semantics as another emoji character. Excluded punctuation and symbols can be reviewed at [other-labels.html](#), to see if they should be included. **To comment on this issue, go to [Feedback](#).**

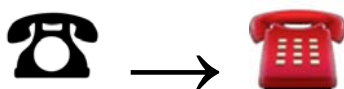
This document provides data files, described in the section [Data Files](#), for determining the set of characters which are expected to have an emoji presentation, either as a default or as a alternate presentation. While Unicode conformance allows any character to be given an emoji representation, characters that are not listed in the [Data Files](#) should not normally be given an emoji presentation. For example, pictographic symbols such as keyboard symbols or math symbols (like ANGLE) that should never be treated as emoji. These are current recommendations: existing symbols can be added to this list over time.

This data was derived by starting with the characters that came from the original Japanese sets, plus those that major vendors have provided emoji fonts for. Characters that are similar to those in shape or design were then added. Often these characters are in the same Unicode blocks as the original set, but sometimes not.

This document takes a functional view as to the identification of emoji, which is that pictographs—or symbols that have a graphical form that people may treat as pictographs, such as U+2388 HELM SYMBOL (introduced in Unicode 3.0)—are categorized as emoji, since it is reasonable to give them either an emoji or text presentation, such as:










This follows the pattern set by characters such as U+260E BLACK TELEPHONE (introduced in Unicode 1.1), which can have either an emoji or text presentation, such as:



The data does not include *non*-pictographs, except for those in Unicode that are used to represent characters from emoji sources, such as:



Game pieces, such as the dominos (   ...  ), are currently not included as emoji, with the exceptions of U+1F0CF () PLAYING CARD BLACK JOKER and U+1F004 () MAHJONG TILE RED DRAGON. These are included because they correspond each to an emoji character from one of the carrier sets.

4 Presentation Style

Certain emoji have defined variation sequences, where an emoji character can be followed by one of two invisible variation selectors:

- U+FE0E for a text presentation
- U+FE0F for an emoji presentation

This capability was added in [Unicode 6.1](#). Some systems may also provide this distinction with higher-level markup, rather than variation sequences. For more information on these selectors, see the file [StandardizedVariants.html](#).

Implementations should support both styles of presentation for the characters with variation sequences, if possible. Most of these characters were emoji that were unified with preexisting characters. Because people are now using emoji presentation for a broader set of characters, it is anticipated that more such variation sequences will be needed.

Review Note: Whenever a character could reasonably be used with either presentation, variation sequences should be proposed for Unicode 8.0, scheduled for mid-2015.

However, even where the variation selectors exist, it has not been clear for implementers what the *default* presentation for pictographs should be: emoji or text? That means that a piece of text may show up in a different style than intended when shared across platforms. While this is all a perfectly legitimate for Unicode characters —*presentation style is never guaranteed*—it is important to have a shared sense among developers of when to use emoji presentation by default, so that there are fewer unexpected and “jarring” presentations. That is, to promote interoperability across platforms and applications, implementations need to know what the generally expected default presentation is.

That is, there has been no clear line for implementers between three categories of Unicode characters:

1. **emoji-default:** those expected to have an emoji presentation by default, but can also have a text presentation
2. **text-default:** those expected to have a text presentation by default, but could also have an emoji presentation

3. **text-only**: those that should only have a text presentation

The data files, described in the section [Data Files](#), provides data to distinguish between the first two categories: see the **Default** column of [full-emoji-list](#). The data assignment is based upon current usage in browsers for Unicode 6.3 characters. For other characters, especially the new 7.0 characters, the assignment is based on that of the related emoji characters. For example, the “vulcan” hand 🖊 is marked as *emoji-default* because of the emoji styling currently given to other hands like 🖐. The *text-only* characters are all those not listed in the data files.

In general, emoji characters are marked as *text-default* if they were in common use and predated the use of emoji. The characters are otherwise marked as *emoji-default*. For example, the negative squared A and B are text-default, while the negative squared AB is emoji-default. The reason is that A and B are part of a set of negative squared letters A-Z, while the AB was a new character. The default status may change over time, however, as a result in the change in usage.

The presentation of a given emoji character depends on the environment, whether or not there is an emoji or text variation selector, and the default presentation style (emoji vs text). In Informal environments like texting and chats, for example, it is more appropriate for all emoji characters to appear by default with the emoji presentation. Conversely, in more formal environments such as word processing, it is generally better for emoji characters (those that have an emoji variation selector) to appear with the text presentation by default, and only be given the colorful emoji presentation with the emoji variation selector.

The environments thus include:

Emoji Environments

Environment	Examples
Formal	word processing
Mixed	plain web pages
Informal	texting, chats

Based on those factors, here is typical presentation behavior. However, these guidelines may change with changing user expectations.

Emoji vs Text Display

Environment	with Emoji VS	with Text VS	with no VS	
			text-default	emoji-default
Formal	emoji	text	text	text
Mixed	emoji	text	text	emoji
Informal	emoji	text	emoji	emoji

Review Note: We would like feedback on draft proposed default presentation: whether characters should have their defaults changed from emoji to text or vice versa. The chart for these characters is at <text-style.html>. To comment on this issue, go to **Feedback**.

5 Ordering and Grouping

Neither the Unicode code point order, nor the standard Unicode Collation ordering (DUCET), are currently well suited for emoji, since they separate conceptually-related characters. For example, here is a selection of characters sorted by DUCET; to users this ordering appears quite random:



The [emoji-ordering](#) data file shows an ordering for emoji characters that groups them together in a more natural fashion.



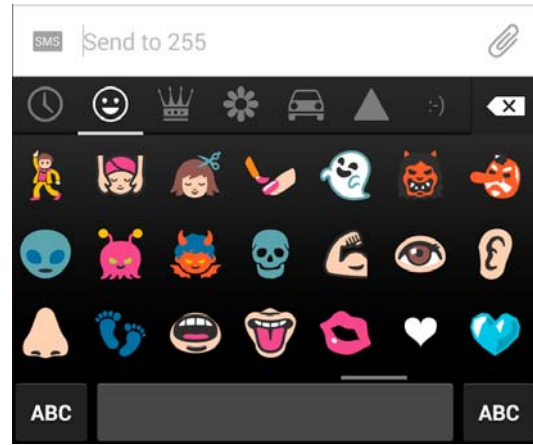
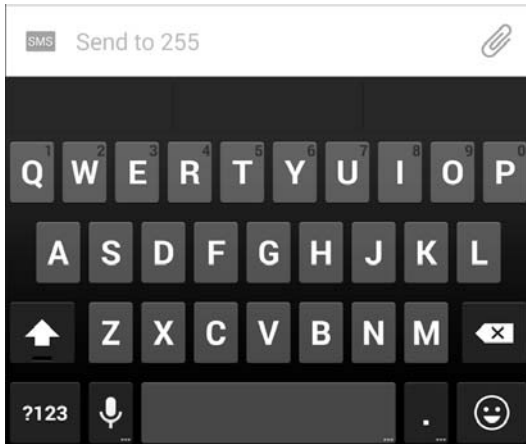
The purpose of this ordering is to group characters more naturally for the purpose of selection, but also to group them more naturally in sorted lists.

Review Note: Flesh out the text to make a better distinction between ordering and grouping.

Review Note: We would like feedback on the proposed ordering. The eventual ordering is slated to go into [CLDR](#). To comment on this issue, go to **Feedback**.

6 Input

Emoji are not typically typed on a keyboard. Instead, they are generally picked from a palette, or recognized via a dictionary. The mobile keyboards typically have a 😊 button to select a palette of emoji, such as in the left image below. Clicking on the 😊 button reveals a palette, as in the right image.



The palettes need to be organized in a meaningful way for users. They typically provide a small number of broad categories (5-10), such as People (anything associated with people), Nature, and so on. These categories typically have 100-200 emoji. More advanced palettes will have long-press enabled, so that people can press-and-hold on an emoji and have a set of related emoji pop up. This allows for faster navigation, with less scrolling through the palette.

Annotations for emoji characters are much more finely grained keywords. They can be used for searching characters, and are often easier than palettes for entering emoji characters. For example, when you type “hourglass” on your mobile phone, you could see and pick from either of the matching emoji characters 🕒 or ⌚. That is often much easier than scrolling through the palette and visually inspecting the screen. Input mechanisms may also map *emoticons* to emoji as keyboard shortcuts: typing :-) can result in 😊.

In some input systems, a word or phrase bracketed by colons is used to explicitly pick emoji characters. Thus typing in “I saw an *:ambulance:*” is converted to “I saw an 🚑”. For completeness, such systems might support all of the full Unicode names, such as *:first quarter moon with face:* for 🌙. Spaces within the phrase may be represented by `_`, as in the following:

“my *:alarm_clock:* didn’t work”



“my 🕒 didn’t work”.

However, in general the full Unicode names are not especially suitable for that sort of use; they were designed to be unique identifiers, and tend to be overly long or confusing.

7 Searching

Searching includes both searching for emoji characters in queries, and finding emoji characters in the target. These are most useful when they include the annotations as synonyms or hints. For example, when you search for 🍷 on [yelp.com](https://www.yelp.com), you see matches

for “gas station”. Conversely, searching for “gas pump” in a search engine could find pages containing 🛢️. Similarly, searching for “gas pump” in an email program can bring up all the emails containing 🛢️.

For both palette categories and annotations, there is no requirement for uniqueness: an emoji should show up wherever users would expect them. A gas pump 🛢️ might show up under “object” and “travel”; a heart ❤️ under “heart” and “emotion”, a 🐱 under “animal”, “cat”, and “heart”.

Annotations are language-specific: searching on [yelp.de](https://www.yelp.de), you’d expect a search for 🛢️ to result in matches for “Tankstelle”. Thus annotations need to be in multiple languages to be useful across languages. They should also include regional annotations within a given language, like “petrol station”, which you’d expect search for 🛢️ to result in on [yelp.co.uk](https://www.yelp.co.uk). An English annotation cannot simply be translated into different languages, since different words may have different associations in different languages. The emoji 🌵 may be associated with Mexican or Southwestern restaurants in the US, but not be associated with them in, say, Greece. The scope of this document is limited to English annotations, but can provide an example for other languages.

There is one further kind of annotation, called a *TTS name*, for text-to-speech processing. For accessibility when reading text, it is useful to have a short, descriptive name for an emoji character. A Unicode character name can often serve as a basis for this, but its requirements for name uniqueness often ends up with names that are overly long, such as *black right-pointing double triangle with vertical bar* for ▸. TTS names are also outside the current scope of this document.

Review Note: We would like feedback on changes to the [emoji-annotations](#): additions, removals, or replacements. The eventual annotations is slated to go into [CLDR](#). Note that we are not interested in acronyms. One particular issue is whether or not to include forms of the same word: smile, smiles, smiling, smiled, smiley. The current policy is to only include one form, assuming that any system using the annotations would handle related forms. However, the data has not been completely cleaned up to reflect that policy. **To comment on this issue, go to [Feedback](#).**

8 Longer Term Solutions

The longer-term goal for implementations should be to support embedded graphics, in addition to the emoji characters. Embedded graphics allow arbitrary emoji symbols, and are not be dependent on additional Unicode encoding. Some examples of where this is done are:

- [Captain America Skype Emoji](#)
- [Line Store](#)
- [Line Creators Market: Creation Guidelines](#)
- [Trello: Adding and removing stickers from cards](#)

However, to be as effective and simple to use as emoji characters, a full solution requires significant infrastructure changes to allow simple, reliable input and transport of images (stickers) in texting, chat, mobile phones, email programs, virtual and mobile keyboards, and so on. (Even so, such images will never interchange in environments

that only support plain text, such as email addresses.) Until that time, many implementations will need to use Unicode emoji instead.

For example, one necessary infrastructure change is to adapt mobile keyboards. Enabling embedded graphics would involve adding an additional custom mechanism for users to add in their own graphics or purchase additional sets, such as a + sign to add an image to the palette above. This would prompt the user to paste or otherwise select a graphic, and add annotations for dictionary selection.

Once this is done, the user could then select those graphics in the same way as selecting the Unicode emoji. If users started adding many custom graphics, the mobile keyboard might even be enhanced to allow ordering or organization of those graphics so that they can be quickly accessed. The extra graphics would need to be disabled if the target of the mobile keyboard (such as an email header line) would only accept text.

Other features required to make embedded graphics work well include the ability of images to scale with font size, inclusion of embedded images in more transport protocols, switching services and applications to use protocols that do permit inclusion of embedded images (eg, MMS versus SMS for text messages). There will always, however, be places where embedded graphics can't be used—such as email headers, SMS messages, or file names. There are also privacy aspects to implementations of embedded graphics: if the graphic itself is not packaged with the text, but instead is just a reference to an image on a server, then that server could track usage.

9 Media

There's been considerable media attention to emoji in 2014. For example, there were some 6,000 articles on the emoji appearing in Unicode 7.0, according to Google News. See the [Emoji press page](#) for many samples of such articles, and also the [Keynote](#) from the 38th Internationalization & Unicode Conference.

10 Data Files

This is a working draft document, and the data is supplied for now in HTML files, so that people can see sample appearances for the characters.

Review Note: these files will not necessarily be included in the final document, although the emoji-data.txt, the full-emoji-list.html, and emoji-ordering.html will probably be in the final version. Feedback on the files that are more useful would be appreciated.

The most important feedback on data would be on emojiData.txt. These are, in priority order, the following:

1. characters that should be added or removed
2. the default presentation style: text vs emoji

TO_DO:

1. Move the descriptions of format to each file, and replace links to Data Files above to the specific data file.

The available files are:

Data File Descriptions

File	Description
full-emoji-list	The main file: a list with images showing depictions from different sources, and the default status and annotations. For the column descriptions, see Full Emoji List .
emoji-data.txt	A plain text file with the information from the html file, plus the ordering. For now, the U+ is present, to make importing into a spreadsheet easier. The annotations and ordering are intended for incorporation into CLDR, and are split into separate data files.
emoji-ordering.txt	Ordering data slated for CLDR.
emoji-annotations.xml	Annotation data slated for CLDR.
missing-emoji-list	A list with images showing where sources don't have emoji images. The images are not what would appear in that source; instead, they show cases that are marked missing for that source in the full-emoji-list file. So, for example, the image of 📞 in the Android column means that that character (U+260E black telephone) is marked as missing for Android in full-emoji-list . Characters in a "common" row are missing in all of the sources: the image of 🇨🇦 there means that all the sources are missing the Canadian flag.
emoji-list	An abbreviated list showing characters, not images. For checking browser/platform support.
emoji-style	The proposed default presentation style for each character. Separate rows show the presentation with and without variation selectors, where applicable. Flags are shown with images. Also in column 6 of Full Emoji List .
emoji-labels	Characters grouped by palette category. These are building blocks for palette categories, which would

	group some of these together.
emoji-annotations	Characters grouped by annotation. Also in column 7 of Full Emoji List . The annotations are meant to be used in combination to winnow down the matches, so :face moon: would match the characters annotated with both “face” and with “moon”.
emoji-ordering	Draft ordering of emoji characters that groups like characters together. Unlike the labels or annotations, each character only occurs once. The flags are presented according to English name. That can be varied by language: for more information, see Annex B: Flags .
other-labels	Other general symbols and punctuation. That can be used to scan for other characters that might qualify for emoji presentation.
emoji-versions	A view of when different emoji were added to Unicode, by Unicode version.
emoji-versions-sources	A view of when different emoji were added to Unicode, and the sources. (See the Version information in Full Emoji List for the source description.) The sources indicate where a Unicode character corresponds to a character in the source. In many cases, the character had already been encoded well before the source was considered for other characters.
text-style.html	Provides a summary view of which characters have the default text style, and which have the default emoji style.

Review Note: These are all live documents and may be updated or changed at any time during the draft development process.

Typically, hovering over an image usually shows the code point and name, and clicking on the image goes to the respective row in the [Full Emoji List](#). Each image has the respective character as an alt value, so copying the image into plain text should (OS permitting) give the plain text character for that image.

The [Symbola](#) font can be installed for a readable text presentation where the emoji presentation or black&white fonts are not available on your browser. Your browser’s zoom is also useful for examining the characters and images.

10.1 Full Emoji List

For the [full-emoji-list](#) file, the columns are:

Full Emoji-List Columns

Column	Description		
Count	A line count, for reference.		
Code	The code point(s) for the emoji characters. Some rows have more than one code point where a sequence is required, such as for flags and keycaps. Clicking on the code point puts a link to that row in the address bar.		
Browser	The character, showing whatever image would be native for the browser.		
B&W*	The visual appearance of the codes, using the Unicode chart font, plus PNGs for the flags.		
Apple, Andr, Twit, Wind, GMail, DCM, KDDI, SB	<p>Images from the respective sources for comparison. The GMail...KDDI are for comparison with images used before incorporation into Unicode.</p> <p>Note that for the cells marked missing, there are sometimes B&W images that would appear on the source that are not shown here. For example, U+2639 ☹ is shown as missing for Apple, but there are B&W images for it available on Apple platforms.</p>		
Name	The character name in lowercase (or an informative gloss, for the case of flags and keycaps).		
Version	The version of Unicode in which the emoji was added. A superscript indicates the source of the character. Where a Unicode character corresponds to multiple sources, multiple superscripts will be present. The sources are:		
	z	ZDings	Zapf Dingbats
	a	ARIB	
	j	JCarrier	Japanese telephone carriers
	w	WDings	Wingdings & Webdings
	x	Other	other sources

Default	The draft proposed default presentation style. A * indicates that there are variation selectors (text and emoji) for the character.
Annotations	A list of informative annotations. Clicking on a link goes to the respective row in the emoji-annotations . Some of the annotations are included just for comparison during development and will be removed before release, such as *-apple and *-android.

Because the name and code point are already present, hovering or clicking on an image doesn't have the same effect as in other files. However, the alt values are still present for cut and paste into plain text.

Review Note: add more header information to the files and/or flesh out here and have them link to the right sections here.

Annex A: Terminology

The goal for this annex is to collect the terminology used in connection to emoji for eventual incorporation into the [Unicode Glossary](#).

Emoji - A colorful pictograph that can be used inline in text. Internally the representation is either (a) an image or (b) an encoded character. The term *emoji character* can be used for (b) where not clear from context.




Emoticon - (1) A series of text characters (typically punctuation or symbols) that is meant to represent a facial expression or gesture such as ;-) (2) a broader sense, also including emoji for facial expressions and gestures.

Review Note: Others TBD.

Annex B: Flags

There are 26 REGIONAL INDICATOR symbols that can be used in pairs to represent country flags. This mechanism was designed to be extensible, rather than be limited to just the 10 flags supported by the Japanese carriers.

Where flag emoji characters are supported, they should not just be limited to the 10 Japanese carrier flags. To avoid discriminating against other flags, they should instead be present for all of the valid country codes. More specifically, these are the [Unicode region subtags](#) that are neither deprecated, nor private use, and nor macroregions (with the exception of the EU). This can be determined mechanically from data in [CLDR](#). An overseas territory sometimes doesn't have its own flag, or only has flags for subregions. In such cases, it may share the same flag as for the country.

Emoji are generally presented with a square aspect ratio, which presents a problem for flags. The flag for Qatar  is over 250% wider than tall; for Switzerland  it is square; for Nepal  it is over 20% taller than wide. To avoid a ransom-note effect,

implementations may want to use a fixed ratio across all flags, such as 150%, with a blank band on the top and bottom. (The average width for flags is between 150% and 165%.) Narrower flags, such as the Swiss flag, may also have white bands on the side.

Flags should have a visible edge. One option is to use a 1 pixel gray line chosen to be contrasting with the adjacent field color.

The code point order of flags is by region code, which will not be intuitive for viewers, since that rarely matches the order of countries in the viewer's language. English speakers are surprised that the flag for Germany comes before the flag for Djibouti. An alternative is to present the sorted order according to the localized country name, using CLDR data.



For an open-source set of flag images (png and svg), see [region-flags](#).

Annex C: Selection Factors

To submit a proposal for a new emoji character, see [Submitting Character Proposals](#). In the past, most emoji characters have been selected primarily on the basis of compatibility. The scope is being broadened to include other factors, as listed below.

None of these factors are completely determinant. For example, the word for an object may be extremely common on the internet, but the object not necessarily a good candidate due to other factors.

Review Note: The following is a draft from the emoji subcommittee, and has yet not been reviewed yet by the Unicode Technical Committee. Agreement on these would result in modifications to [Criteria for Encoding Symbols](#). To comment on these factors, go to [Feedback](#).

- a. **Compatibility.** *Are these needed for compatibility with high-use emoji in existing systems, such as Gmail?*
 - For example, FACE WITH ROLLING EYES.
 - **Compatibility is a strong selection factor.** There are many cases where characters are or have been added for compatibility alone, such as  SQUARED NEW, or  CONSTRUCTION WORKER. In such cases, many of the other factors don't apply.
- b. **Expected usage level.** *Is there a high expected frequency of use?*
 - There are various possible measures of this that can be presented as evidence, such as:
 - whether closely-related characters show up above the median in [emojitracker.com](#)
 - the frequency of related words in web pages
 - the frequency in image search (eg, [google](#) or [bing](#))
 - whether the object is commonly encountered in daily life
 - multiple usages, such as SHARK for not only the animal, but also for a *huckster*, in *jumping the shark*, *card shark*, *loan shark*, etc.
- c. **Image distinctiveness.** *Is there a clearly recognizable image of physical objects*

that could serve as a paradigm, that would be distinct enough from other emoji?

- For example, CASSOULET or STEW probably couldn't be easily distinguished from 🍲 POT OF FOOD.
- Simple words ("NEW") or abstract symbols ("fff") would not qualify as emoji.
- Note that objects often may represent activities or modifiers, such as 😭 CRYING FACE for *crying* or 🏃 RUNNER for *running*.

d. **Disparity.** *Does the proposed pictograph fill in a gap in existing types of emoji?*

- For example, in Unicode 7.0 we have 🐅 TIGER, but not LION; 🏪 CHURCH but not MOSQUE.

e. **Frequently requested.** *Is it often requested of the Unicode Consortium, or of Unicode member companies?*

- For example, HOT DOG or UNICORN.

f. **Generality.** *Is the proposed character overly specific?*

- For example, 🍣 SUSHI represents sushi in general, even though a common image will be of a specific type, such as Maguro. Adding SABA, HAMACHI, SAKE, AMAEBI and others would be overly specific.

g. **Open-ended.** *Is it just one of many, with no special reason to favor it over others of that type?*

- For example, there are thousands of people, including occupations (DOCTOR, DENTIST, JANITOR, POLITICIAN, etc.): is there a special reason to favor particular ones of them?

h. **Representable already.** *Can the concept be represented by another emoji or sequence?*

- For example, a *crying baby* can already be represented by 😭👶 CRYING FACE + BABY
- A building associated with a particular religion might be represented by a PLACE OF WORSHIP emoji followed by a one of the many religious symbols in Unicode.
- Halloween could be represented by either just 🎃 JACK-O-LANTERN, or a sequence of 🎃👻 JACK-O-LANTERN + GHOST.

i. **Logos, Brands, UI icons, and signage.** *Are the images unsuitable for encoding as characters?*

- These are strong factors for **exclusion**.
- They include:
 - Images such as company logos, or those showing company brands as part or all of the image.
 - UI icons such as [Material Design Icons](#), [Winjs Icons](#), or [Font Awesome Icons](#), which are often discarded or modified to meet evolving UI needs.
 - Signage such as 🚶. See also Slate's [The Big Red Word vs. the Little Green Man](#).

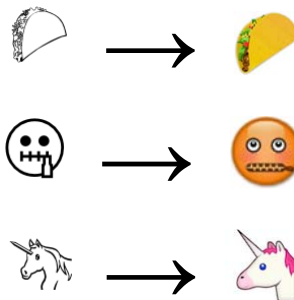
Annex D: Emoji Candidates for Unicode 8.0

Aside from the new diversity characters, the Unicode Consortium has accepted 37 other emoji characters as candidates for Unicode 8.0, scheduled for mid-2015. These are candidates—not yet finalized—so some may not appear in the release.

Review Note: The characters may also change before release. For example, we have gotten feedback that it would be better to have a STUPA character than the DHYANI BUDDHA. Names may also change or annotations be added: for example, PLACE OF WORSHIP could become PLACE OF WORSHIP OR MEDITATION. Feedback on these characters is welcome: [go to Feedback](#).
























The [Emoji modifiers](#) are discussed in *Section 2.2 Diversity*. The [Faces, Hands, and Zodiac Symbols](#) are for compatibility with other messaging and mail systems. There are many other possible emoji that could be added, but releases need to be restricted to a manageable number. Many other emoji characters, such as other food items and symbols of religious significance, are still being assessed, and could appear in a future release of the Unicode Standard. See also [Annex C: Selection Factors](#).














The images below are *draft* black and white versions for the Unicode charts. They are likely to change before release. Once finalized, vendors that support emoji should provide a colorful appearance for each of these, such as the following:



Candidate List

Glyph	Name
Emoji modifiers (See Section 2.2 Diversity)	
	EMOJI MODIFIER FITZPATRICK TYPE-1-2
	EMOJI MODIFIER FITZPATRICK TYPE-3
	EMOJI MODIFIER FITZPATRICK TYPE-4
	EMOJI MODIFIER FITZPATRICK TYPE-5
	EMOJI MODIFIER FITZPATRICK TYPE-6
Faces, Hands, and Zodiac Symbols	
	ZIPPER-MOUTH FACE

	MONEY-MOUTH FACE
	FACE WITH THERMOMETER
	NERD FACE
	THINKING FACE
	FACE WITH ROLLING EYES
	UPSIDE-DOWN FACE
	FACE WITH HEAD-BANDAGE
	ROBOT FACE
	HUGGING FACE
	SIGN OF THE HORNS
	CRAB (also Cancer)
	SCORPION (also Scorpio)
	LION FACE (also Leo)
	BOW AND ARROW (also Sagittarius)
	AMPHORA (also Aquarius)
<u>Symbols of Religious Significance</u>	
	PLACE OF WORSHIP
	KAABA
	MOSQUE
	SYNAGOGUE
	DHYANI BUDDHA
	MENORAH WITH NINE BRANCHES
	PRAYER BEADS
<u>Most Popularly Requested Emoji</u>	
	HOT DOG

	TACO
	BURRITO
	CHEESE WEDGE
	POPCORN
	BOTTLE WITH POPPING CORK
	TURKEY
	UNICORN FACE
Missing Top Sports Symbols	
	CRICKET BAT AND BALL
	VOLLEYBALL
	FIELD HOCKEY STICK AND BALL
	ICE HOCKEY STICK AND PUCK
	TABLE TENNIS PADDLE AND BALL
	BADMINTON RACQUET AND BIRDIE

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References

Review Note: We'll flesh out the references later.

[Unicode] The Unicode Standard

For the latest version, see:

<http://unicode.org/versions/latest/>

[UTR36] UTR #36: Unicode Security Considerations

<http://unicode.org/reports/tr36/>

[UTS39] UTS #39: Unicode Security Mechanisms

<http://unicode.org/reports/tr39/>

[Versions] Versions of the Unicode Standard

<http://unicode.org/versions/>

For details on the precise contents of each version of the Unicode Standard, and how to cite them.

Modifications

The following summarizes modifications from the previous revisions of this document.

Revision 1

- **Proposed Draft**

- **Draft 5**

- *Section 2.2 [Diversity](#).*
 - Emphasized that an emoji modifier must occur immediately following a emoji character (optionally with an intervening variation selector) for it to have any effect on that emoji character.
 - Illustrated that there is no particular order among the diversity modifiers in *Table: [Minipalettes](#)*
 - Recast list of conditions as new *Table: [Emoji Modifiers and Variation Selectors](#)*.
 - Added definitions for *optional emoji modifier sequence* and *isolated emoji modifier*.
- *Section 3 [Which Characters are Emoji](#).*
 - Updated the count and images in *Table: [Standard Additions](#)* based on subcommittee recommendations (for a total of 1,245). Added another sample emoji image.
- *Section 4 [Presentation Style](#).*
 - Changed "Text Only" and "Presentation" to Formal and Informal, added more explanation.
- *Section 10 [Data Files](#).*
 - Documented the split in the emoji-data.txt file.
- *Annex C: [Selection Factors](#).*
 - Added pointer to submission form, a bit more explanation.
- *Annex D: [Emoji Candidates for Unicode 8.0](#).*
 - Added two more sample emoji images.
- Updated Table of Contents to add links to tables
- Copyedits (not marked with yellow)

- **Draft 4**

- Added new selection factor [Logos, Brands, UI icons, and signage](#), and added double-links to the clauses
- Moved [Media](#) list to separate page, and reordered to most-recent-first.
- Restricted the list of recommended emoji in the data files, based on the emoji subcommittee review.
 - Correspondingly reduced the list of optional characters in *Table: [Characters Subject to Emoji Modifiers](#)*
 - Added explicit lists of emoji characters to *Section 3 [Which Characters are Emoji](#)* for easier review (than looking at the data files). Moved the numbers of characters to that section from the introduction.
- Added recommended breaking behavior to *Section 2.2.1 [Implementations](#)*.
- Added [text-style.html](#) chart for easier review of the default style for emoji characters.
- Added links to the Feedback section in relevant review notes, to make it easier for people to add feedback.
- **Draft 3**
 - Added [Annex D: Emoji Candidates for Unicode 8.0](#).
- **Draft 2**
 - Added double-linked captions to tables.
 - Added months to the dates in the table of [Major Sources](#).
 - Added more notes to [Annex B: Flags](#), and on their ordering in [Data File Descriptions](#)
 - Added text on the interaction between emoji modifiers and variation selectors in *Section 2.2.1 [Implementations](#)*
 - Removed multiple-person emoji from the minimal set in [Characters Subject to Emoji Modifiers](#)
 - Minor edits
 - Added [Annex C: Selection Factors](#)

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