

Multi-skintoned Families for Unicode 14.0: Exploration and Recommendations

Re: Recommendations for Multi-skintoned Emoji Sequences for Unicode 14.0

From: Sean Stewart on behalf of the Emoji Subcommittee (ESC)

To: Unicode Technical Committee

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Background

Following through on established ESC priorities pursuant to [L2/19-101](#), the subcommittee explored seven paths forward to extend skintone support to the existing 27 family emoji. In January of 2020, we reviewed [L2/19-392](#), a proposal to encode 7230 additional RGI sequences to enable support for presenting each person present in a family emoji rendering with his/her own skin tone.

In the proposal, two paths forward were proposed: encode exhaustive support (i.e. all skin tone permutations with replacements) and encode partial support (all skin tone permutations without replacements).

Vendors assessed the impact and feasibility of implementing [L2/19-392](#) within their platforms. The proceeding sections of this document present the outcome of these assessments and conclude with the ESC's recommendation to **leave family emojis as they are with no future plans to encode any additional RGI sequences for their skin tone support.**

Overview

As it stands, the status quo of family emojis is that there currently exists no mechanism in the RGI to attribute skin tone variations to the people present in a family emoji's rendering.

Vendors have reviewed [L2/19-392](#) and have assessed both the exhaustive and partial paths forward to bring skin tone variation support to family emojis, in addition to entertaining other options.

Seven (7) options were assessed:

1. Exhaustive support for skin tone modifiers (7230 new sequences)
2. Support a subset of skin tone modifiers (1092 new sequences)
3. Support uniform skin tones (135 new sequences)
4. Full skin tone support for one family emoji (625 new sequences)

5. Redesign family emojis (no new sequences)
6. Deprecate/remove family emojis from the keyboard (no new sequences)
7. No skin tone support (no new sequences)

Each of the sections below presents the paths forward, their assessments, and their resulting conclusions.

Paths Forward, Assessments, and Conclusions

1. Exhaustive Support for All Skin Tone Modifiers

Supporting all 7230 proposed RGI sequences proves to be challenging for several reasons including but not limited to:

- Data structure and asset growth and their on-disk size impact
- UI design enabling the selection of each family members' skin tone
- Workload required to bring support can be overwhelming for independent developers

As of Unicode 13.0, there are 3304 total emoji. Adopting an additional 7230 sequences can double the on-disk footprint of emoji-related assets like databases, fonts, and general data structures. This challenge becomes even more apparent for vendors having localization requirements for these assets.

Next, building user interfaces suitable for composing a family emoji with skin tones also proves challenging. On mobile platforms, screen real estate is limited. Many emoji palettes are drawn on smaller portions of the already small on-screen keyboard. Designing a popover-style UI to compose these family emojis in a small, compact, and easy-to-use way proves challenging. With at max, four people present in a rendering and five skin tones to select from, these popover-style UIs become confusing and complex.

Additionally, concerns were expressed for individual developers maintaining Unicode-compliant software that contain emoji-related features (e.g. screen readers, emoji pickers, emoji palettes, custom keyboards, etc.). These individuals, third party developers, or independent maintainers of software can be overwhelmed with the aforementioned challenges more so than established vendors. It is recommended that other options be assessed.

2. Support a Subset of Skin Tone Modifiers

To lower the total of new sequences to 1092, supporting only three of the five skin tones was assessed. Supporting a subset of the skin tones will lower the file size growth of assets mentioned in assessment 1.

However, supporting only a subset of skin tones can be received in poor taste by end users. It is not recommended to move forward with this approach.

3. Support Uniform Skintones

Allaying the concerns about asset size and UI usability expressed in assessment 1, vendors entertained supporting all five skin tones applied uniformly across all people in all family emoji renderings, reducing the count of new sequences to 130. This means that, for every family emoji, all of the members will forcibly share one skin tone.

This solution does cover many families who share more-or-less a common skin tone, but support for multi-racial families—or more broadly, support for families with different manifestations of skin tones—is glaringly absent. Vendors expressed concerns about inadvertent and unintentional messaging on race, skin tone, and family composition.

Additionally, users may interpret this partial solution as a precursor to exhaustive support for all skin tones in the future. This expectation will be challenging to manage for both the ESC and vendors alike. It is for these reasons that this option should not be considered.

4. Full Skin Tone Support for Only One Family Emoji

Similar to the previous assessments, encoding exhaustive skin tone support for one representative family emoji was considered. This option will significantly lower the on-disk growth of assets underlined in assessment 1 by restricting the count of new sequences to 625, but this approach affords only a single emoji through which end users can represent their family.

The challenge here is selecting a representative family emoji from the whole set. The options span from a single-parent family with one child all the way to a same-sex parents with two children of different genders. No matter which family emoji be chosen, not all real-world families will be representable via any given choice. It is for this reason that assessment 4 not be considered.

5. Redesign Family Emojis

In an effort to convey to end users that the family emojis simply do not support skin tones, the vendors considered redesigning the family emojis. Two mock-ups were performed: changing the default skin tone color to something novel and transforming each person present in a family rendering to a silhouette.

Both options seemed strange and unnatural. Families now consisted of non-standard default skin tones that drew unnecessary attention to them in keyboard palettes. Furthermore, the silhouette approach left the renderings being impersonal and overall extremely unnatural. It is therefore recommended that the design of the family emojis remain as-is.

6. Deprecate/Remove Family Emojis from the Keyboard

Vendors also considered removing (deprecating) the family emojis entirely from input methods. While deprecation would “solve” the skin tone challenge by simply brushing it under the rug by removing official support for these emojis, this solution seems heavy handed and overall unnecessary.

Although the family emojis are still in use by end users, vendors are free to choose this option. Nevertheless, not having attributable skin tones should not be grounds for the deprecation of the family emojis. It is therefore not recommended to deprecate family emojis.

7. No Skin Tone Support

Vendors also considered the status quo (where the family emojis continue to be supported, albeit without RGI skin tone variation sequences).

This solution has the least impact on outgoing software products. Additionally, this solution affords vendors and independent developers more bandwidth for supporting brand new emojis tied to future Unicode releases.

Conclusion

Ultimately, after considering the assessed options and their outcomes, it is recommended to **leave family emojis as they are with no future plans to encode any additional RGI sequences for their skin tone support.**

As a reasonable work-around, users wanting a more detailed way to represent their families with emojis can still do so with individual emoji characters (e.g. 🧑🏻 🧑🏿 🧑🏾). Users are able to select whichever skin tones—and even hair colors—that best represent their families.

Lastly, vendors can bring independent support for these ZWJ sequences to their own platforms (and some platforms already support a subset of these sequences). The ESC, however, has no future plans to add these skin tone variation sequences to the RGI.