hwemoji v1.0: pdf\LaTeX\ emoji support

Hwy

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Introduction

- To the author’s knowledge, there was no package on CTAN to date that (a) enables Unicode emojis in \LaTeX\ and (b) supports emoji sequences. There is now.

- Emoji sequences are in general emojis formed of multiple consecutive Unicode characters. The details can be found in the specifications at https://unicode.org/reports/tr51/. For example, U+1FAF1 (_magic) and U+1F3FD (money bag) side by side should form (heart.

- This package makes use of the Twemoji project’s digital assets, as licensed under the CC-BY 4.0. The project can be found at https://github.com/twitter/twemoji.

- This package supports Twemoji’s implementation of Unicode emojis as of Unicode 14.0.0, with the exceptions of: U+0023--U+20E3, U+002A--U+20E3, U+0030--U+20E3, U+0031--U+20E3, U+0032--U+20E3, U+0033--U+20E3, U+0034--U+20E3, U+0035--U+20E3, U+0036--U+20E3, U+0037--U+20E3, U+0038--U+20E3, and U+0039--U+20E3. Supporting these emojis necessitates making the characters #, *, 0, 1, 2, 3, 4, 5, 6, 7, 8, and 9 active, which would be at best disastrous.

Troubleshooting

- U+00A9 and U+00AE are now rendered as the emojis © and ® respectively. If another version of these characters is preferred, override their definitions with \DeclareUnicodeCharacter.

- Wrap emojis in braces when passing as arguments. For example, to get $\phi_0$, use $\phi_{\{0\}}$, not $\phi_0$. 
Examples

A classic

98% of people can’t solve this 😂

\[ \begin{align*}
\&+ &+ &+ = 3 \\
\&- &- &- = 0 \\
\&\mathbb{Z} &\mathbb{R} &\mathbb{P} = P^n(\mathbb{R})
\end{align*} \]

\[ H^*(\mathbb{Z}; \mathbb{R}) = \bigoplus_{k \in \mathbb{N}} H^k(\mathbb{Z}; \mathbb{R}) \] has a ring structure

\[ \mathcal{V}(-, B) : C \to \textbf{Set} \] is contravariant

\[ \mathcal{V}(A, B) = \{ \phi : A \to B | \phi \text{ is a morphism} \} \]

Given that \( \mathcal{H} \) is the derived functor of \( \mathcal{V} \) and the sequence

\[ 0 \to \mathcal{H}(H_i(\mathbb{Z}; \mathbb{R}), \mathbb{R}) \to H^i(\mathbb{Z}; \mathbb{R}) \to \]

\( \mathcal{H}(H_i(\mathbb{Z}; \mathbb{R}), \mathbb{R}) \to 0 \)

is exact,

describe \( H^*(\mathbb{Z}; \mathbb{R}) \) in terms of polynomial rings over \( \mathbb{R} \).