



The smileghost package

Ben Spitz

Version 1.0.0, 2026-07-27

Abstract

The `smileghost` package provides a resolution-independent smiling ghost symbol for use as a mathematical operator. It has correct operator spacing, scales with the current math style, is optically positioned relative to the math axis, and follows the surrounding color.

1 Quick start

Load the package and use the command `\smileghost`:

```
\usepackage{smileghost}
...
\(\smileghost T = S\)
```

This produces: $\smileghost T = S$.

The command also works outside explicit math mode: `\smileghost` produces $\smileghost$.

2 Typographic behavior

`\smileghost` is an operator atom, implemented with `\mathop...\nolimits`. TeX therefore inserts its normal thin operator space between the symbol and an ordinary operand. No manual `\,` is needed.

Input	Output	Purpose
<code>\(\smileghost T\)</code>	$\smileghost T$	ordinary use
<code>\(A\smileghost T\)</code>	$A\smileghost T$	spacing on both sides
<code>\(\smileghost_T X\)</code>	$\smileghost_T X$	subscript beside operator
<code>\(X^{\smileghost T}\)</code>	$X^{\smileghost T}$	script-style scaling
<code>\(\color{violet}\smileghost T\)</code>	$\color{violet}\smileghost T$	surrounding color

The command uses `\nolimits` because it is intended as a compact unary operator. An explicit `\limits` after the command can override this when limits above and below are desired.

3 Design and compatibility

The mark is drawn as a collection of vector paths by `pict2e`. The mark’s total height is 1.4 times the height of a zero in the current math style. It is first centered mathematically on the math axis, then raised by 0.1 times the height of a zero as an optical correction. Thus display and text styles share the normal full-size mark, while script and scriptscript styles use the corresponding smaller math fonts.

The package requires LaTeX2e and `pict2e`.

4 Accessibility

The smiling ghost has no dedicated Unicode code point, so the vector drawing does not become meaningful text when copied from a PDF and cannot supply its own spoken name to assistive technology. Authors should define the notation in nearby prose—for example, “ $\smiley T$ denotes the *ghost* of T ”—and should add suitable alternative text when their tagged-document workflow supports it.

5 License

Copyright © 2026 Ben Spitz.

This material is distributed under the LaTeX Project Public License, version 1.3c or later. The work has the LPPL maintenance status `maintained`; the Current Maintainer is Ben Spitz.