

## NAME

**Hypertext** — can one macro work for both nroff and PDF?

### YES! USE .URL

hackerb9 modified the www.tmac package so that .URL uses pdfmark to create hyperlinks when generating PDF output. This document exists as a test file to make sure everything works. HTML links already worked for www.tmac and that is unchanged. Nearly unchanged is functionality for output formats that do not support hypertext (nroff, postscript): as before, the link text is shown in blue, if possible, and then the URI is printed in angle brackets. The one minor change is that if the output is to a tty or device without color, then the text will be differentiated by underlining (nroff), italics (b&w postscript), or a dotted box (b&w pdf).

### .LINK: omit URL if a link is not possible

Also added is a new .LINK macro that works like .URL on output devices that can link (PDF & HTML), but renders as normal text, with no URL, on devices that cannot (TTY, PS).

## TESTS

### Basic test

Here is the most basic test of .URL which simply links a word to a URL: [Hello!](#)

Note that in PDF and HTML output the URL should *not* be shown above, but in nroff and postscript output it should. This [sentence is an example](#) of using .LINK which creates links when it can, but simply omits the URL when hypertext is unavailable.

### In a sentence (with punctuation surrounding)

Testing .URL in ([the middle](#)) of this sentence with parentheses around the linked text.

### Bare URL

Testing .URL with just a bare URL, no descriptive text: [⟨https://groff.org⟩](https://groff.org)

Empty string for link text, with punctuation afterward: [⟨https://groff.org⟩](https://groff.org) .

### Inline in a paragraph

Now, let's try using the .URL command in a paragraph to make sure it is not adding spurious newlines or colons. In 2009, the 6809 assembly code was documented by [Chris Cantrell of Computer Archaeology](#). In 2015 John M. Layman used that documentation to create a port to Intel's 32-bit CPU architecture (*x86*).

### MTO (mailto) test

This is a link to send mail to [hackerb9](#). Here is a bare mailto address: [groff@gnu.org](mailto:groff@gnu.org)

## ABNORMAL CONDITIONS

### Overly long bare URL (no link text provided)

Bare URLs (no description) should wrap at / (slash). [⟨https://www.columbiabasinherald.com/news/2020/mar/02/district-unveils-mascot-colors/⟩](https://www.columbiabasinherald.com/news/2020/mar/02/district-unveils-mascot-colors/)

### Splitting URLs on symbols

Groff's WWW package doesn't yet handle splitting long URLs on other symbols like ?, \_, %, or &.

[⟨https://open.spotify.com/album/32aa0867XRy3hylZWsYiKN?fbclid=IwAR3nqvaSmELmEWZu-UYdq4-N--oZ2jkEHqY2krB\\_erAsbT8DMYYjkGI7GDDg&\\_php=1⟩](https://open.spotify.com/album/32aa0867XRy3hylZWsYiKN?fbclid=IwAR3nqvaSmELmEWZu-UYdq4-N--oZ2jkEHqY2krB_erAsbT8DMYYjkGI7GDDg&_php=1)

### Overly long link text

Descriptive text should wrap to more than one output line as needed.

[Mrs. Groff is highly underrated. I love how she learns to value herself and take control of her dull life. Her beginning to feel young again is so heartwarming.](#)

### Insufficient arguments

It is an error to use .URL, .LINK, or .MTO with no arguments. When processed with groff, this document produces three error messages to the terminal like this:

```
usage: .URL <URI> [descriptive-text [affix-text [prefix-text]]]
usage: .LINK <URI> [descriptive-text [affix-text [prefix-text]]]
usage: .MTO <email> [name [after [before]]]
```