

NRO - UNIX V7 nroff-style typesetting for FreeDOS

A pertinent question for any serious user of FreeDOS who might also have an interest in typesetting is: does FreeDOS allow for the production of beautiful documents with the usual typesetter's toolbox? Well, TeX certainly made its way onto MS-DOS in the past, but I have yet to test emTeX & co., in part because I prefer the simplicity of groff. In a broader sense however, this is one of series of experiments to test and push the limits of FreeDOS to see how well it can work as a modern operating system. An important part of an operating system today is the ability to send professional looking documents in PDF, and to a lesser extent, PostScript form. This extends naturally to printing said documents as well. Does NRO solve this issue for the users of FreeDOS? Well, let us delve into the matter.

To start us off is a list of notable limitations to NRO that hamper one's ability to produce formatted output rivaling that of WordPerfect, WordStar, and other well-known MS-DOS word processors.

Notable Disclaimer: NRO does an excellent job of replicating the UNIX V7 roff "nroff", which by default does not support many of the more "modern" options that GNU's roff "groff" added in order to improve the functionality and versatility of the UNIX nroff. Additionally, if this document nonetheless sounds overly negative, it's because the positives of groff are known to all who would be interested in using NRO on DOS. Heck, I wrote this using NRO on FreeDOS, and that ain't cause I dislike it.

0. Output Formats

This is perhaps the biggest gap in NRO for the typesetting inclined. One of the joys of using a typesetting software is seeing the output beautifully reflected back when printed or ported to PDF / PostScript. Unfortunately, NRO does not have the ability to natively output either PostScript or PDF, and it is unlikely that such a feature will be added. What to do about that? Suffer. Printing everything out is another solution, though a rather poor one at that. Or maybe if I acquire the time, skills, and motivation, I might look into how BSD and GNU/Linux accomplished this, and implement it myself. No promises though, I'm not exactly a DOS guru yet. I've only used it for a few months at this point. If you read that as me being young, you're right on the money. Don't expect anything soon.

1. Macros

There aren't any I could find. If someone has NRO macros, please share them! Additional macro functions that would be lovely to have include:

- * numbered lists and headers
- * control lines (spacing) and/or comment syntax
- * font sizing
- * footnotes

I may get around to implementing mine own at some point, though far more likely is that I will only make macros using already pre-defined NRO functions. This would mean un-numbered lists and headers, leading and body paragraphs, a title format, underlined links, and not much else.

2. Italics (or Emphasis)

Without the ability to use italics in addition to and alongside underlining and boldfaced text, NRO remains more limited than the other commonly used DOS word processors. Again, I might cobble together a way to do this, eventually, though I should stress I am not a competent programmer.

3. Bold / Underline Exclusivity

Bolding and underlining text are mutually exclusive features. This is an unfortunate truth of how NRO works, and if I may speculate as to the reason, it was likely easier to implement this way and not worth the effort for the typical use case for groff and nroff: writing and rendering manpages. On the upside, those maniacs who feel inclined to use bold italicized and underlined text in large fonts are currently prevented from abusing that feature as provided on other word processing and typesetting software. This sort of person is unlikely to be user of groff however, making it a moot point. Don't worry, I used to be one of these people a few years ago. I'm not attacking those who do, merely criticizing poor taste.

Closing Remarks: See anything incorrect in this document? Let me know, and I'll fix it as soon as I get time. And should this document seem terribly done from the view of an experienced *roff user, I offer my sincerest apologies. I'm still learning it.