

A Guide to Preparing Documents with -ms

M. E. Lesk

Bell Laboratories

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This guide gives some simple examples of document preparation on Bell Labs computers, emphasizing the use of the -ms macro package. It enormously abbreviates information in

1. *Typing Documents on UNIX and GCOS*, by M. E. Lesk;
2. *Typesetting Mathematics - User's Guide*, by B. W. Kernighan and L. L. Cherry; and
3. *Tbl - A Program to Format Tables*, by M. E. Lesk.

These memos are all included in the *UNIX Programmer's Manual*, Volume 2. The new user should also have *A Tutorial Introduction to the UNIX Text Editor*, by B. W. Kernighan.

For more detailed information, read *Advanced Editing on UNIX* and *A Troff Tutorial*, by B. W. Kernighan, and (for experts) *Nroff/Troff Reference Manual* by J. F. Ossanna. Information on related commands is found (for UNIX users) in *UNIX for Beginners* by B. W. Kernighan and the *UNIX Programmer's Manual* by K. Thompson and D. M. Ritchie.

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.nr0C0.cp0.ds10.cp0.lf205 Throughout the examples, input is shown in this Helvetica sans serif font while the resulting output is shown in this Times Roman font.

UNIX Document no. 1111

.nr0C0.cp0.ds10.cp0.lf223

Commands for a TM

.TM 1978-5b3 99999 99999-11
.ND April 1, 1976
.TL
The Role of the Allen Wrench in Modern Electronics
.AU "MH 2G-111" 2345
J. Q. Pencilpusher
.AU "MH 1K-222" 5432
X. Y. Hardwired
.AI
.MH
.OK
Tools
Design
.AB
This abstract should be short enough to fit on a single page cover sheet. It must attract the reader into sending for the complete memorandum.
.AE
.CS 10 2 12 5 6 7
.NH
Introduction.
.PP
Now the first paragraph of actual text ...
...
Last line of text.
.SG MH-1234-JQP/XYH-unix
.NH
References ...

Commands not needed in a particular format are ignored.

Bell Laboratories		Cover Sheet for TM	
This information is for employees of Bell Laboratories. (GEI 13.9-3)			
Title- The Role of the Allen Wrench in Modern Electronics		Date- April 1, 1976	
Other Keywords- Tools Design		TM- 1978-5b3	
Author	Location	Ext.	Charging Case- 99999
J. Q. Pencilpusher	MH 2G-111	2345	Filing Case- 99999a
X. Y. Hardwired	MH 1K-222	5432	
ABSTRACT			
This abstract should be short enough to fit on a single page cover sheet. It must attract the reader into sending for the complete memorandum.			
Pages Text	10	Other	2
Total		12	
No. Figures	5	No. Tables	6
No. Refs.		7	
E-1932-U (6-73)		SEE REVERSE SIDE FOR DISTRIBUTION LIST	

A Released Paper with Mathematics

.nr0C0. cp0. ds10. cp0. lf395
.EQ
delim \$\$
.EN
.RP

... (as for a TM)

.CS 10 2 12 5 6 7
.NH
Introduction
.PP
The solution to the torque handle equation
.EQ (1)
sum from 0 to inf $F(x) = G(x)$
.EN
is found with the transformation $x = \rho \over \theta$ where $\rho = G'(x)$ and θ is derived ...

The Role of the Allen Wrench
in Modern Electronics

J. Q. Pencilpusher

X. Y. Hardwired

Bell Laboratories
Murray Hill, New Jersey 07974

ABSTRACT

This abstract should be short enough to fit on a single page cover sheet. It must attract the reader into sending for the complete memorandum.

April 1, 1976

The Role of the Allen Wrench
in Modern Electronics

J. Q. Pencilpusher

X. Y. Hardwired

Bell Laboratories
Murray Hill, New Jersey 07974

1. Introduction

The solution to the torque handle equation

is found with the transformation $x = \frac{\rho}{\theta}$ where $\rho = G'(x)$ and θ is derived from well-known principles.

An Internal Memorandum

.IM
.ND January 24, 1956
.TL
The 1956 Consent Decree
.AU
Able, Baker &
Charley, Attys.
.PP
Plaintiff, United States of America, having filed its complaint herein on January 14, 1949; the defendants having appeared and filed their answer to such complaint denying the substantive allegations thereof; and the parties, by their attorneys, ...

Bell Laboratories

Subject: The 1956 Consent Decree date: January 24, 1956
from: Able, Baker &
Charley, Attys.

Plaintiff, United States of America, having filed its complaint herein on January 14, 1949; the defendants having appeared and filed their answer to such complaint denying the substantive allegations thereof; and the parties, by their attorneys, having severally consented to the entry of this Final Judgment without trial or adjudication of any issues of fact or law herein and without this Final Judgment constituting any evidence or admission by any party in respect of any such issues;

Now, therefore before any testimony has been taken herein, and without trial or adjudication of any issue of fact or law herein, and upon the consent of all parties hereto, it is hereby

Ordered, adjudged and decreed as follows:

I. [Sherman Act]

This Court has jurisdiction of the subject matter herein and of all the parties hereto. The complaint states a claim upon which relief may be granted against each of the defendants under Sections 1, 2 and 3 of the Act of Congress of July 2, 1890, entitled "An act to protect trade and commerce against unlawful restraints and monopolies," commonly known as the Sherman Act, as amended.

II. [Definitions]

For the purposes of this Final Judgment:

(a) "Western" shall mean the defendant Western Electric Company, Incorporated.

Other formats possible (specify before .TL) are: .MR ("memo for record"), .MF ("memo for file"), .EG ("engineer's notes") and .TR (Computing Science Tech. Report).

Headings

.NH
Introduction.
.PP
text text text

.SH
Appendix I
.PP
text text text

1. Introduction
text text text

Appendix I
text text text

A Simple List

.IP 1.
J. Pencilpusher and X. Hardwired,
.I
A New Kind of Set Screw,
.R
Proc. IEEE
.B 75
(1976), 23-255.
.IP 2.
H. Nails and R. Irons,
.I
Fasteners for Printed Circuit Boards,
.R
Proc. ASME
.B 23
(1974), 23-24.
.LP (terminates list)

.nr0C0. cp0. ds10. cp0. lf728

1. J. Pencilpusher and X. Hardwired, *A New Kind of Set Screw*, Proc. IEEE **75** (1976), 23-255.
2. H. Nails and R. Irons, *Fasteners for Printed Circuit Boards*, Proc. ASME **23** (1974), 23-24.

.nr0C0. cp0. ds10. cp0. lf749

Displays

text text text text text text

.DS
and now
for something
completely different
.DE
text text text text text text

hoboken harrison newark roseville avenue grove street east
orange brick church orange highland avenue mountain station
south orange maplewood millburn short hills summit
new providence

and now
for something
completely different

murray hill berkeley heights gillette stirring millington
lyons basking ridge bernardsville far hills peapack gladstone

Options: .DS L: left-adjust; .DS C: line-by-line center;
.DS B: make block, then center.

Footnotes

Among the most important occupants
of the workbench are the long-nosed pliers.
Without these basic tools*

.FS
* As first shown by Tiger & Leopard
(1975).

.FE
few assemblies could be completed. They may
lack the popular appeal of the sledgehammer

Among the most important occupants of the workbench are
the long-nosed pliers. Without these basic tools* few
assemblies could be completed. They may lack the popular
appeal of the sledgehammer

* As first shown by Tiger & Leopard (1975).

Multiple Indents

This is ordinary text to point out
the margins of the page.

.IP 1.
First level item
.RS
.IP a)
Second level.
.IP b)
Continued here with another second
level item, but somewhat longer.
.RE
.IP 2.
Return to previous value of the
indenting at this point.
.IP 3.
Another
line.

This is ordinary text to point out the margins of the page.

1. First level item
 - a) Second level.
 - b) Continued here with another second level item,
but somewhat longer.
2. Return to previous value of the indenting at this point.
3. Another line.

Keeps

Lines bracketed by the following commands are kept
together, and will appear entirely on one page:

Double Column

.TL
The Declaration of Independence
.2C
.PP

When in the course of human events, it becomes
necessary for one people to dissolve the political
bonds which have connected them with another, and
to assume among the powers of the earth the
separate and equal station to which the laws of
Nature and of Nature's God entitle them, a decent
respect to the opinions of

The Declaration of Independence

When in the course of
human events, it becomes
necessary for one people to
dissolve the political bonds
which have connected them
with another, and to assume
among the powers of the
earth the separate and equal
station to which the laws of
Nature and of Nature's God
entitle them, a decent re-
spect to the opinions of
mankind requires that they
should declare the causes
which impel them to the
separation.

We hold these truths to
be self-evident, that all men
are created equal, that they

are endowed by their cre-
ator with certain unalien-
able rights, that among
these are life, liberty, and
the pursuit of happiness.
That to secure these rights,
governments are instituted
among men,

Equations

A displayed equation is marked with an equation number at the right margin by adding an argument to the EQ line:

.EQ (1.3)

$x^2 \text{ over } a^2 \sim \sqrt{p^2 z^2 + qz + r}$

.EN

A displayed equation is marked with an equation number at the right margin by adding an argument to the EQ line:

$$-\frac{2}{a^2} \text{ if } 10000 > 0 \text{ .if } 1=0 \text{ .tl ' .nr0 } C0. \text{ cp0. ds10. nr0sfont1. ft. nr0spfont1. ft1. nr0ssize9000. nr0z229000. ps9. nr0Z229000. nr0w005166. nr0h00 } >$$

.EQ 1 (2.2a)

$\mathbf{V} \bar{\text{bar}} \text{ sub } \nu \sim \text{left [pile {a above b above c } right] + left [matrix { col { A(11) above . above . } col { . above . above . } col { . above . above A(33) }} right] \cdot \text{left [pile { alpha above beta above gamma } right]}$

.EN