AT&T

UNIX™ System V
DOCUMENTER'S WORKBENCH™
Software Release 2.0

Release Notes

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Introduction

This document provides important information concerning the installation of the DOCUMENTER'S WORKBENCH Software Release 2.0. Please read this document carefully before attempting the installation procedure.

Customers who have used UNIX system text processing software before will find this release of the DOCUMENTER'S WORKBENCH Software significantly improved. Because the majority of changes are compatible with earlier releases of DOCUMENTER'S WORKBENCH tools, documents that previously formatted correctly should continue to process properly. Documents that previously had formatting problems may now format correctly.

Installation

This section guides you in the installation of the DOCUMENTER'S WORK-BENCH Software Release 2.0. Before you begin, you will probably find it helpful to read through the instructions for the computer on which the DOCUMENTER'S WORKBENCH Software will be installed: 3B20 Computer, VAX Computer, 3B15 Computer, 3B5 Computer, or 3B2 Computer. Before beginning any installation it is best to familiarize yourself with the product and the procedure.

Installing Source Code on the 3B20 Computer

This section tells you how to read the source code from its release tape and install it in the proper directories.

Reading Source Code from the Distribution Tape

The source code is distributed on a single magnetic tape containing two files in cpio format, written at 1600 bpi. The tape may be read by a system administrator with **root** user-id privileges, from the magnetic tape drive labeled "0."

The first file contains the **catable** manual entries (a list of which is included in Appendix 2). To read these into the /usr/catman directory, use the following commands:

```
# cd /usr/catman
# cpio -idcv < /dev/rmt/0mn
#
```

(Alternatively, the manual entries may be read into a local **catman** directory structure by executing the **cd** command into that directory instead of into /usr/catman.)

If you do not wish to have these manual entries on your system, execute the following command instead:

```
# < /dev/rmt/0mn
#
```

The second file on the tape contains all the source files to be installed in
/usr/src/cmd/text. A list of the source files is included in Appendix 1.
Use the following commands to read them in:

```
# cd /usr/src/cmd
# cpio -idcv < /dev/rmt/0m
#
```

You have now completed reading the source code and may proceed to
build the executable programs.

Building the DOCUMENTER'S WORKBENCH Software

To build Release 2.0 object code, the system administrator should, again,
be logged into the UNIX system, with **root** user-id privileges. The UNIX sys-
tem may be running in multi-user mode as long as no one else is using any
existing text processing software. Use the following command to build the
DOCUMENTER'S WORKBENCH Software:

```
# /usr/src/:mkcmd text col
#
```

This command will compile and install all the commands and data files
for the DOCUMENTER'S WORKBENCH Software. It will take approximately
five hours and will produce many lines of output to the terminal. You may
want to redirect the output to a file.

Installing Source Code on VAX Computers

This section tells you how to read the source code from its release tape
and install it in the proper directories.

Reading Source Code from the Distribution Tape

The source code is distributed on a single magnetic tape containing two
files in **cpio** format, written at 1600 bpi. The following instructions for
reading the tape are written for users of the VAX-11/780 and 11/750 proces-
sors.

The tape may be read by a system administrator with **root** user-id privileges, from the magnetic tape drive labeled "0."

The first file on the tape contains the catable manual entries (a list of which is included in Appendix 2). To read these into the **/usr/catman** directory, use the following commands:

```
# cd /usr/catman
# cpio -idcv < /dev/rmt/0mn
#
```

Alternatively, the manual entries may be read into a local catable directory structure by executing the **cd** command into that directory instead of into **/usr/catman**.

If you do not wish to have these manual entries on your system, execute the following command instead:

```
# < /dev/rmt/0mn
#
```

The second file on the tape contains all the source files to be installed in **/usr/src/cmd/text**. A list of source files is included in Appendix 1. Use the following commands to read them in:

```
# cd /usr/src/cmd
# cpio -idcv < /dev/rmt/0m
#
```

You have now completed reading the source code and may proceed to build the executable programs.

Building the DOCUMENTER'S WORKBENCH Software

To build Release 2.0 object code, the system administrator should, again, be logged into the UNIX system, with **root** user-id privileges. The UNIX system may be running in multi-user mode as long as no one else is using any existing text processing software. Use the following command:

```
# /usr/src/:mkcmd text col
#
```

This command will compile and install all the commands and data files of the DOCUMENTER'S WORKBENCH Software. It will take approximately five hours and will produce many lines of output to the terminal. You may want to redirect the output to a file.

Installing Source Code on the 3B5 Computer and the 3B15 Computer

This section describes the procedures for reading the source code from its release media and installing it into the proper directories.

The source code for the 3B5 Computer and 3B15 Computer is distributed on either a Lark II disk cartridge or a single magnetic tape containing two files in cpio format, written at 1600 bpi.

The media may only be read by a system administrator with **root** user-id privileges.

Reading Source Code from the Magnetic Tape

If the release media is a magnetic tape, mount the tape on drive "0." The first file on the tape contains the **catable** manual entries (listed in Appendix 2). To read these into the /usr/catman directory, use the following commands:

```
# cd /usr/catman
# cpio -idcv < /dev/rmt/0mn
#
```

Alternatively, the manual entries may be read into a local **catman** directory structure by executing the **cd** command into that directory instead of into /usr/catman.

If you do not wish to have these manual entries on your system, execute the following command instead:

```
# < /dev/rmt/0mn
#
```

The second file on the tape contains all the source files to be read into
/usr/src/cmd/text. A list of the source files is included in Appendix 1.
Use the following commands to read them in:

```
# cd /usr/src/cmd
# cpio -idcv < /dev/rmt/0m
#
```

Reading Source Code from a Lark II Disk Cartridge

The first file on the cartridge contains the catable manual entries (listed
in Appendix 2). Insert the cartridge and type the following commands:

```
# mount /dev/dsk/Ds2 /mnt -r
# cd /usr/catman
# cpio -idcv < /mnt/catman.cpio
#
```

> **NOTE**
>
> In the mount command, **D** stands for the drive number [1, 2, or 3], and 2 is
> the partition number.

Alternatively, the manual entries may be read into a local **catman** directory
structure by executing the **cd** command into that directory instead of into
/usr/catman.

If you do not wish to have these manual entries on your system, do not
execute the **cd** and **cpio** commands. You will still need to execute the
mount command.

The second file on the cartridge contains all the source files to be
installed in /usr/src/cmd/text. A list of the source files is included in
Appendix 1. To read these into /usr/src/cmd/text, execute the following
commands:

```
# cd /usr/src/cmd
# cpio -idcv < /mnt/dwb.cpio
#
```

You have now completed reading the source code and may proceed to build the executable programs.

Building the DOCUMENTER'S WORKBENCH Software

To build Release 2.0 object code, the system administrator should be logged into the UNIX system with **root** user-id privileges. The UNIX system may be running in multi-user mode as long as no one is using any existing text processing software. Use the following command:

```
# /usr/src/:mkcmd text col
#
```

This command will compile and install all the commands and data files of the DOCUMENTER'S WORKBENCH Software. It will take approximately five hours and will produce many lines of output to the terminal. You may want to redirect the output to a file.

Installing Binary Code on the 3B5 Computer

The DOCUMENTER'S WORKBENCH Software binary product for the 3B5 Computer and the 3B15 Computer, is distributed on a single magnetic tape containing two files in **cpio** format, written at 1600 bpi. This product requires approximately 6560 blocks of free space in the /usr file system. Your 3B5 Computer or 3B15 Computer will give frequent prompts and progress messages to guide you.

Installation of DOCUMENTER'S WORKBENCH Software is simple. Instructions and error messages are displayed to guide you through the process.

Reading Binary Code from the Distribution Tape

The tape may be read by a system administrator with **root** user-id privileges, from magnetic tape drive labeled "0." Read the installation procedure file onto the hard disk using the following command:

```
# cpio -iBdmuv < /dev/rmt/0mn
#
```

This command directs the system to read the first file on the tape. The first file contains several smaller files, needed for the installation procedure, which are read from the tape into the **/tmp** directory. As each file is read, its name will appear on your display screen as shown below.

```
/tmp/INSTALL
/tmp/README
/tmp/UNINSTALL
/tmp/preinstall
/tmp/postinstall
/tmp/dwb.name
/tmp/Rlist
```

All commands and catable manual entries for DOCUMENTER'S WORK-BENCH Software are on the second file. The catable manual entries and binary files are listed in Appendix 2 and Appendix 3, respectively. To run the installation procedure, type:

> # /tmp/INSTALL
> #

The system will display the name of the application and release number as follows:

> DOCUMENTER'S WORKBENCH SOFTWARE, Release 2.0

This is followed by various prompts to guide you through the installation of DOCUMENTER'S WORKBENCH Software.

NOTE
For additional information on installation procedures, use the "AT&T 3B5 Computer Installation Guide" described in the *AT&T 3B5 Computer Owner/Operator Manual.*

Removing Binary Code from the 3B5 Computer

Uninstall procedures for the 3B5 Computer and the 3B15 Computer fol-
low the same steps as the install process. The system administrator should
be logged into the UNIX system with **root** user-id privileges, after loading
the tape onto the tape drive labeled "0." Read the uninstall procedure file
onto the hard disk using the following command:

    # cpio -iBdmuv < /dev/rmt/0m
    #

To run the uninstall procedure, type:

    # /tmp/UNINSTALL
    #

Prompts and progress messages will guide you from there on.

Installing DOCUMENTER'S WORKBENCH Software on the 3B2 Computer

All commands and data for DOCUMENTER'S WORKBENCH Software are
on four floppy diskettes, labeled as follows:

    DOCUMENTER'S WORKBENCH Software Release 2.0

The following UNIX System V utilities must be installed before
DOCUMENTER'S WORKBENCH Software can be installed:

    Directory and File Management Utilities
    Terminal Filters Utilities

Installation of DOCUMENTER'S WORKBENCH Software is simple. Instruc-
tions and error messages are displayed on your terminal screen to guide you
through the process. In the following paragraphs, information that you
enter on the keyboard must be followed by a carriage return. (This is indi-
cated in the text by a <CR> at the end of such lines.)

Prerequisites

Before starting the installation, you should decide whether your application requires the fourth diskette. The fourth diskette contains the software for the Imagen Imprint-10 laser printer. The installation procedure will ask if you want the fourth diskette installed. If you do not have an Imagen printer, answer **no**; otherwise, answer **yes**.

Disk Space Requirements

The installation of the DOCUMENTER'S WORKBENCH Software requires either 3200 or 5500 (with disk 4) free blocks in the /usr file system. The root (/) file system needs no free blocks. The installation process checks that the required free disk space is available for the installation of the product.

If sufficient disk space is not available, you will need to uninstall (remove) other optional utilities packages (or unwanted files or directories) to make space available to install this product. Uninstall procedures are discussed later.

Contents

The first floppy diskette contains the files needed to use device-independent **troff**, plus a driver and the font tables for the driver. The driver is the Autologic APS-5 typesetter. This diskette requires approximately 1100 blocks of free space in the /usr file system. This diskette contains the files:

```
/usr/bin/daps
/usr/bin/eqn
/usr/bin/grap
√usr/bin/mmt
/usr/bin/mvt
/usr/bin/pic
/usr/bin/tc
/usr/bin/troff
/usr/lib/dwb/grap.defines
/usr/lib/font/devaps/B.add
/usr/lib/font/devaps/B.out
/usr/lib/font/devaps/BI.out
/usr/lib/font/devaps/C.out
```

/usr/lib/font/devaps/CE.out
/usr/lib/font/devaps/CI.out
/usr/lib/font/devaps/CT.add
/usr/lib/font/devaps/CT.out
/usr/lib/font/devaps/CW.add
/usr/lib/font/devaps/CW.out
/usr/lib/font/devaps/CX.add
/usr/lib/font/devaps/CX.out
/usr/lib/font/devaps/DESC.out
/usr/lib/font/devaps/G.out
/usr/lib/font/devaps/GB.add
/usr/lib/font/devaps/GB.out
/usr/lib/font/devaps/GI.add
/usr/lib/font/devaps/GI.out
/usr/lib/font/devaps/GR.add
/usr/lib/font/devaps/GR.out
/usr/lib/font/devaps/GS.add
/usr/lib/font/devaps/GS.out
/usr/lib/font/devaps/H.out
/usr/lib/font/devaps/HB.out
/usr/lib/font/devaps/HI.add
/usr/lib/font/devaps/HI.out
/usr/lib/font/devaps/HK.add
/usr/lib/font/devaps/HK.out
/usr/lib/font/devaps/HL.out
/usr/lib/font/devaps/HM.out
/usr/lib/font/devaps/HX.add
/usr/lib/font/devaps/HX.out
/usr/lib/font/devaps/I.add
/usr/lib/font/devaps/I.out
/usr/lib/font/devaps/MB.out
/usr/lib/font/devaps/MI.out
/usr/lib/font/devaps/MR.out
/usr/lib/font/devaps/MX.out
/usr/lib/font/devaps/PA.out
/usr/lib/font/devaps/PB.out
/usr/lib/font/devaps/PI.out
/usr/lib/font/devaps/PO.add
/usr/lib/font/devaps/PO.out
/usr/lib/font/devaps/PX.add
/usr/lib/font/devaps/PX.out

```
/usr/lib/font/devaps/R.add
/usr/lib/font/devaps/R.out
/usr/lib/font/devaps/S.add
/usr/lib/font/devaps/S.out
/usr/lib/font/devaps/S1.add
/usr/lib/font/devaps/S1.out
/usr/lib/font/devaps/SC.add
/usr/lib/font/devaps/SC.out
/usr/lib/font/devaps/SM.add
/usr/lib/font/devaps/SM.out
/usr/lib/font/devaps/TB.out
/usr/lib/font/devaps/TX.add
/usr/lib/font/devaps/TX.out
/usr/lib/font/devaps/version
/usr/options/dwb.name
/usr/pub/apseqnchar
/usr/pub/cateqnchar
/usr/pub/eqnchar
/usr/lib/readme/dwb
```

The second floppy disk contains all the files needed to use **nroff**. This includes **neqn** and **mm**. The files contained on this floppy disk require approximately 750 blocks of free space in the /usr file system. This diskette contains the following files:

```
/usr/bin/checkmm
/usr/bin/checkmm1
/usr/bin/col
/usr/bin/macref
/usr/bin/mm
/usr/bin/neqn
/usr/bin/nroff
/usr/lib/nterm/tab.2631
/usr/lib/nterm/tab.2631-c
/usr/lib/nterm/tab.2631-e
/usr/lib/nterm/tab.300
/usr/lib/nterm/tab.300-12
/usr/lib/nterm/tab.300S
/usr/lib/nterm/tab.300S-12
/usr/lib/nterm/tab.300s
/usr/lib/nterm/tab.300s-12
/usr/lib/nterm/tab.37
```

```
/usr/lib/nterm/tab.382
/usr/lib/nterm/tab.4000A
/usr/lib/nterm/tab.4000a
/usr/lib/nterm/tab.450
/usr/lib/nterm/tab.450-12
/usr/lib/nterm/tab.832
/usr/lib/nterm/tab.8510
/usr/lib/nterm/tab.X
/usr/lib/nterm/tab.lp
/usr/lib/nterm/tab.tn300
/usr/pub/terminals
```

The third floppy diskette contains files that are used by both **nroff** and **troff**, plus files upon which both **nroff** and **troff** depend. The files contained on this diskette require 1300 blocks of free space in the **/usr** file system. This diskette contains the following files:

```
/usr/bin/diffmk
/usr/bin/hyphen
/usr/bin/ndx
/usr/bin/ptx
/usr/bin/subj
/usr/bin/tbl
/usr/lib/dwb/deroff
/usr/lib/dwb/ndexer
/usr/lib/dwb/ndxformat
/usr/lib/dwb/pages
/usr/lib/dwb/parts
/usr/lib/dwb/samples/eqn.stats
/usr/lib/dwb/samples/mm.letter
/usr/lib/dwb/samples/mm.report
/usr/lib/dwb/samples/mm.sales
/usr/lib/dwb/samples/nroff.letter
/usr/lib/dwb/samples/pic.forms
/usr/lib/dwb/samples/tbl.bridges
/usr/lib/dwb/samples/tbl.language
/usr/lib/dwb/samples/tbl.pres
/usr/lib/dwb/samples/troff.ad
/usr/lib/dwb/samples/troff.aeneid
/usr/lib/dwb/samples/troff.fonts
/usr/lib/dwb/samples/troff.sizes
/usr/lib/dwb/sbj1
```

/usr/lib/dwb/sbj2
/usr/lib/dwb/sbj3
/usr/lib/dwb/sbjprep
/usr/lib/dwb/style1
/usr/lib/dwb/style2
/usr/lib/dwb/style3
/usr/lib/eign
/usr/lib/macros/an
/usr/lib/macros/mmn
/usr/lib/macros/mmt
/usr/lib/macros/ptx
/usr/lib/macros/strings.mm
/usr/lib/macros/vmca
/usr/lib/tmac/tmac.an
/usr/lib/tmac/tmac.m
/usr/lib/tmac/tmac.ptx
/usr/lib/tmac/tmac.v

The fourth diskette contains the driver, font tables, and raster tables for the Imagen IMPRINT-10 laser printer. The files contained on this diskette require 2350 blocks of free space in the /usr file system. This disk is to be used with **troff** and contains the following files:

/usr/bin/di10
/usr/lib/font/devi10/B.out
/usr/lib/font/devi10/CW.out
/usr/lib/font/devi10/DESC.out
/usr/lib/font/devi10/H.out
/usr/lib/font/devi10/HI.out
/usr/lib/font/devi10/HK.out
/usr/lib/font/devi10/I.out
/usr/lib/font/devi10/PA.out
/usr/lib/font/devi10/PB.out
/usr/lib/font/devi10/PI.out
/usr/lib/font/devi10/PO.out
/usr/lib/font/devi10/R.out
/usr/lib/font/devi10/S.out
/usr/lib/font/devi10/rasti10/B.10
/usr/lib/font/devi10/rasti10/B.12
/usr/lib/font/devi10/rasti10/B.14
/usr/lib/font/devi10/rasti10/B.16
/usr/lib/font/devi10/rasti10/B.6

/usr/lib/font/devi10/rasti10/B.8
/usr/lib/font/devi10/rasti10/B.9
/usr/lib/font/devi10/rasti10/BI.10
/usr/lib/font/devi10/rasti10/BI.12
/usr/lib/font/devi10/rasti10/BI.6
/usr/lib/font/devi10/rasti10/BI.8
/usr/lib/font/devi10/rasti10/CW.10
/usr/lib/font/devi10/rasti10/CW.11
/usr/lib/font/devi10/rasti10/CW.12
/usr/lib/font/devi10/rasti10/CW.16
/usr/lib/font/devi10/rasti10/CW.6
/usr/lib/font/devi10/rasti10/CW.8
/usr/lib/font/devi10/rasti10/CW.9
/usr/lib/font/devi10/rasti10/H.10
/usr/lib/font/devi10/rasti10/H.12
/usr/lib/font/devi10/rasti10/H.14
/usr/lib/font/devi10/rasti10/H.16
/usr/lib/font/devi10/rasti10/H.18
/usr/lib/font/devi10/rasti10/H.6
/usr/lib/font/devi10/rasti10/H.8
/usr/lib/font/devi10/rasti10/H.9
/usr/lib/font/devi10/rasti10/HB.10
/usr/lib/font/devi10/rasti10/HB.14
/usr/lib/font/devi10/rasti10/HB.9
/usr/lib/font/devi10/rasti10/HI.10
/usr/lib/font/devi10/rasti10/HI.12
/usr/lib/font/devi10/rasti10/HI.14
/usr/lib/font/devi10/rasti10/HI.16
/usr/lib/font/devi10/rasti10/HI.18
/usr/lib/font/devi10/rasti10/HI.6
/usr/lib/font/devi10/rasti10/HI.8
/usr/lib/font/devi10/rasti10/HI.9
/usr/lib/font/devi10/rasti10/HK.10
/usr/lib/font/devi10/rasti10/HK.12
/usr/lib/font/devi10/rasti10/HK.14
/usr/lib/font/devi10/rasti10/HK.16
/usr/lib/font/devi10/rasti10/HK.18
/usr/lib/font/devi10/rasti10/HK.6
/usr/lib/font/devi10/rasti10/HK.8
/usr/lib/font/devi10/rasti10/HK.9
/usr/lib/font/devi10/rasti10/I.10

/usr/lib/font/devi10/rasti10/I.12
/usr/lib/font/devi10/rasti10/I.14
/usr/lib/font/devi10/rasti10/I.16
/usr/lib/font/devi10/rasti10/I.6
/usr/lib/font/devi10/rasti10/I.8
/usr/lib/font/devi10/rasti10/I.9
/usr/lib/font/devi10/rasti10/PA.10
/usr/lib/font/devi10/rasti10/PA.12
/usr/lib/font/devi10/rasti10/PA.14
/usr/lib/font/devi10/rasti10/PA.6
/usr/lib/font/devi10/rasti10/PA.8
/usr/lib/font/devi10/rasti10/PB.10
/usr/lib/font/devi10/rasti10/PB.12
/ucr/lib/font/devi10/rasti10/PB.14
/usr/lib/font/devi10/rasti10/PB.6
/usr/lib/font/devi10/rasti10/PB.8
/usr/lib/font/devi10/rasti10/PI.10
/usr/lib/font/devi10/rasti10/PI.12
/usr/lib/font/devi10/rasti10/PI.14
/usr/lib/font/devi10/rasti10/PI.6
/usr/lib/font/devi10/rasti10/PI.8
/usr/lib/font/devi10/rasti10/PO.10
/usr/lib/font/devi10/rasti10/PO.11
/usr/lib/font/devi10/rasti10/PO.12
/usr/lib/font/devi10/rasti10/PO.16
/usr/lib/font/devi10/rasti10/PO.6
/usr/lib/font/devi10/rasti10/PO.8
/usr/lib/font/devi10/rasti10/PO.9
/usr/lib/font/devi10/rasti10/PX.10
/usr/lib/font/devi10/rasti10/PX.12
/usr/lib/font/devi10/rasti10/PX.6
/usr/lib/font/devi10/rasti10/PX.8
/usr/lib/font/devi10/rasti10/R.10
/usr/lib/font/devi10/rasti10/R.12
/usr/lib/font/devi10/rasti10/R.14
/usr/lib/font/devi10/rasti10/R.16
/usr/lib/font/devi10/rasti10/R.6
/usr/lib/font/devi10/rasti10/R.8
/usr/lib/font/devi10/rasti10/R.9
/usr/lib/font/devi10/rasti10/RASTERLIST
/usr/lib/font/devi10/rasti10/S.10

```
/usr/lib/font/devi10/rasti10/S.12
/usr/lib/font/devi10/rasti10/S.14
/usr/lib/font/devi10/rasti10/S.16
/usr/lib/font/devi10/rasti10/S.18
/usr/lib/font/devi10/rasti10/S.24
/usr/lib/font/devi10/rasti10/S.6
/usr/lib/font/devi10/rasti10/S.8
/usr/lib/font/devi10/rasti10/S.9
/usr/lib/font/devi10/rasti10/devaps/B.out
/usr/lib/font/devi10/rasti10/devaps/BI.out
/usr/lib/font/devi10/rasti10/devaps/C.out
/usr/lib/font/devi10/rasti10/devaps/CE.out
/usr/lib/font/devi10/rasti10/devaps/CI.out
/usr/lib/font/devi10/rasti10/devaps/CT.out
/usr/lib/font/devi10/rasti10/devaps/CW.out
/usr/lib/font/devi10/rasti10/devaps/DESC.out
/usr/lib/font/devi10/rasti10/devaps/G.out
/usr/lib/font/devi10/rasti10/devaps/GB.out
/usr/lib/font/devi10/rasti10/devaps/GI.out
/usr/lib/font/devi10/rasti10/devaps/GR.out
/usr/lib/font/devi10/rasti10/devaps/GS.out
/usr/lib/font/devi10/rasti10/devaps/H.out
/usr/lib/font/devi10/rasti10/devaps/HB.out
/usr/lib/font/devi10/rasti10/devaps/HI.out
/usr/lib/font/devi10/rasti10/devaps/I.out
/usr/lib/font/devi10/rasti10/devaps/MB.out
/usr/lib/font/devi10/rasti10/devaps/MI.out
/usr/lib/font/devi10/rasti10/devaps/MR.out
/usr/lib/font/devi10/rasti10/devaps/MX.out
/usr/lib/font/devi10/rasti10/devaps/PA.out
/usr/lib/font/devi10/rasti10/devaps/PB.out
/usr/lib/font/devi10/rasti10/devaps/PI.out
/usr/lib/font/devi10/rasti10/devaps/PO.out
/usr/lib/font/devi10/rasti10/devaps/R.out
/usr/lib/font/devi10/rasti10/devaps/S.out
/usr/lib/font/devi10/rasti10/devaps/S1.out
/usr/lib/font/devi10/rasti10/devaps/SC.out
/usr/lib/font/devi10/rasti10/devaps/SM.out
/usr/lib/font/devi10/rasti10/devaps/TB.out
```

Installation Procedure

This section guides you through the installation procedure for DOCUMENTER'S WORKBENCH Software on the 3B2 Computer using the **installpkg** command found in the System Administration Menus system. (Type **sysadm** to invoke the menu.)

The **installpkg** command prints its instructions very quickly. Always read the instructions carefully before you do anything. For example, the system can "hang" if you press <RETURN> before you insert a diskette in the floppy drive.

> NOTE   If this happens, 1) Press the break key. 2) Insert the diskette into the floppy drive. 3) Press <CR>. 4) Start the instructions over. If this does not help, rebooting the system is the only recovery.

Use the standard software installation procedure described in your *3B2 Computer Owner/Operator Manual.*

Removing DOCUMENTER'S WORKBENCH Software from the 3B2 Computer

Use the standard software removal procedure described in your *3B2 Computer Owner/Operator Manual.*

Documents for the DOCUMENTER'S WORK-BENCH Software

Six documents are available, including this document, which provide all the information needed to successfully use the DOCUMENTER'S WORK-BENCH Software.

These documents are as follows:

- *DOCUMENTER'S WORKBENCH Software Release Notes*
  (Select Code 310-007)

- *DOCUMENTER'S WORKBENCH Software Handbook for New Users*
  (Select Code 310-009)

- *DOCUMENTER'S WORKBENCH Software Handbook*
  (Select Code 310-008)

- *DOCUMENTER'S WORKBENCH Software Product Overview*
  (Select Code 310-006)

- *DOCUMENTER'S WORKBENCH Software User's Guide*
  (Select Code 310-004)

- *DOCUMENTER'S WORKBENCH Software Technical Discussion and Reference Manual*
  (Select Code 310-005)

Warnings

An inapplicable error message may appear when the source package for DOCUMENTER'S WORKBENCH Software is installed on 3B20 Computers running early releases of UNIX System V, such as SVR2.0 Version 2. The message

```
sh: u3b2: not found
**** error code 1 (ignored)
```

should be ignored. Building of the source package will in no way be affected.

The terminal description files for **nroff/troff** contained in **usr/lib/nterm** have been converted from compiled C language object code to ASCII files in this release. If you have written any terminal description files of your own, you will need to convert them to ASCII format (see Appendix 4).

Upgrading Release 1.0 to Release 2.0

This section provides information on preserving commands and source for components that have been discontinued for DOCUMENTER'S WORK-BENCH Software Release 2.0. Given below for each feature is a brief description as well as the location of the source code and the object code. Discontinued features are no longer supported.

Changes

DOCUMENTER'S WORKBENCH Software Release 2.0 has a new directory structure. The substructure under /usr/src/cmd/text/troff.d in DOCUMENTER'S WORKBENCH Release 1.0 has been moved to /usr/src/cmd/text/roff.d/troff.d in DOCUMENTER'S WORKBENCH Software Release 2.0 where it cohabits with the new **nroff**. Therefore, any local or discontinued software that existed under /usr/src/cmd/text/troff.d should be moved to a corresponding position under /usr/src/cmd/text/roff.d/troff.d. DOCUMENTER'S WORKBENCH Software Release 2.0 overwrites **roff.d** where **otroff** resided in DOCUMENTER'S WORK-BENCH Release 1.0. To preserve **otroff**, the old **roff.d/*** and **roff.d/fonts.d/*** should be moved to a new name (for example, **Oroff.d**). All makefiles have to be modified to make the components that have been discontinued.

The following DOCUMENTER'S WORKBENCH Software Release 1.0 features are not included in DOCUMENTER'S WORKBENCH Software Release 2.0, and are no longer supported:

checkcw: **checkcw** is used with **ocw**. Since **otroff** will not be distributed with DOCUMENTER'S WORKBENCH Software Release 2.0, there is no longer any need for **checkcw**. **checkcw** checks that left and right delimiters, as well as the **.CW/.CN** pairs, are properly balanced.

checkeq: **checkeq** was used with **eqn**. The command **checkmm** provides more extensive checking of proper equation formatting.

dx9700:   **dx9700** prepares **troff** documents for the Xerox 9700 printer. The command will not be distributed with DOCUMENTER'S WORKBENCH Software Release 2.0.

mmlint:	**mmlint** is an **sroff/mm** **nroff/mm** document compatibility checker. Since **sroff/mm** will not be distributed with DOCUMENTER'S WORKBENCH Software Release 2.0, there is no longer a need for **mmlint**.
non-btl.sh:	**non-btl.sh** reinstalls **mm** macros without AT&T Bell Laboratories specific features. This does not have to be saved since AT&T Bell Laboratories specific strings have been moved to a file external to the **mm** macro package called **strings.mm**. **strings.mm** can be modified by the system administrator to meet specific needs. (See the following section, "Defining Memo Headings with **strings.mm**.")
ocw:	**ocw** is a preprocessor for **otroff**. Since **otroff** will not be distributed with DOCUMENTER'S WORKBENCH Software Release 2.0, there is no longer any need for **ocw**.
osdd:	The OSDD adapter macro package is a tool used in conjunction with the **mm** macro package to prepare Operations Systems Deliverable Documentation. The command will not be distributed with DOCUMENTER'S WORKBENCH Software Release 2.0.
otc:	**otc** is a postprocessor for **otroff**. Since **otroff** will not be distributed with DOCUMENTER'S WORKBENCH Software Release 2.0, there is no longer any need for **otc**.
otroff:	The **otroff** text formatter is an early version of **troff** that formats text for only one device, the C/A/T phototypesetter. **otroff** will not be distributed with DOCUMENTER'S WORKBENCH Software Release 2.0.
sroff:	**sroff** and its **mm** macro package formats text for printing on typewriter-like devices and line printers, including the Xerox 9700 printer. **sroff** will not be distributed with DOCUMENTER'S WORKBENCH Software Release 2.0.
x9700:	**x9700** prepares **nroff** documents for the Xerox 9700 printer. The command **x9700** will not be distributed with DOCUMENTER'S WORKBENCH Software Release 2.0.

The following table represents what directories and/or files should be saved to preserve source and object code for discontinued components. All source directories are relative to **/usr/src/cmd/text**.

Command/Component	Source	Object or Library Files
checkcw	old.d/checkcw.c	/usr/bin/checkcw
dx9700	troff.d/devX97 troff.d/devX97/X97.tim10p troff.d/devX97/X97.tim12p	/usr/bin/dx9700 /usr/lib/font/devX97.tim10p/* /usr/lib/font/devX97.tim12p/*
mmlint	mmlint.d	/usr/bin/mmlint
ocw	old.d/ocw.c	/usr/bin/ocw
osdd	shells.d/osdd.sh macros.d/osdd.src macros.d/tmac.osd	/usr/bin/osdd /usr/lib/tmac/tmac.osd /usr/lib/macros/osdd
otc	old.d/otc.c	/usr/bin/otc
otroff	roff.d roff.d/fonts.d	/usr/bin/otroff /usr/lib/fonts/*
sroff	sroff.d	/usr/bin/sroff
sroff/mm	sroff.d	/usr/lib/macros/sroff.mm
x9700	x9700.d	/usr/bin/x9700

Defining Memo Headings with strings.mm

The file **strings.mm** is external to and supplements the **mm** macro package. The file contains 26 string definitions enabling the user to specify a company's name, logo, and proprietary information to appear on memos written with the formal memorandum macros. The following is a list of those string definitions:

```
.ds ]S      } string definition for company's logo
.ds }Z      } string definition for company's name
.ds ]M
.ds ]O      }
.ds ]Q
.ds ]R      }   string definitions for company's proprietary markings
.ds ]A
.ds ]F      }
.ds ]G
.ds ]H      }   string definitions for company's proprietary markings
.ds ]I
.ds ]J      }
.ds ]K
.ds ]L      }   string definitions for company's proprietary markings
.ds ]U
.ds ]V      }
.ds ]W
.ds ]X      }   string definitions for company's proprietary markings
.ds ]i
.ds ]j      }
.ds ]k
.ds ]l      }   string definitions for company's proprietary markings
.ds ]m
.ds ]o      }
.ds ]p
.ds ]q      }   string definitions for company's proprietary markings
```

You will notice that there is room for one definition of a company's
logo and one for a company's name. There are 6 sets of definitions for
proprietary markings, however, each set containing 4 definitions. This
variety of definitions for proprietary markings is to allow for the different
levels of security due to different documents. Each set is allowed four lines
since most markings require several lines to state their specific levels of sen-
sitivity. The first set (]M-]R) corresponds to the macro .PM PM1. The second
set (]A-]H) corresponds to the macro .PM PM2. The third set (]I-]L)
corresponds to the macro .PM PM3. The fourth set (]U-]X) corresponds to the
macro .PM PM4. The fifth set (]i-]l) corresponds to the macro .PM PM5. The
sixth set (]m-]q) corresponds to the macro .PM PM6. A sample proprietary
marking might look like this:

```
.ds ]U AT&T BELL LABORATORIES - PROPRIETARY (RESTRICTED)
.ds ]V Solely for authorized persons having a need to know
.ds ]W pursuant to G.E.I. 2.2
.ds ]X
```

Thus, each time you used the macro .PM PM4, the three lines given above would appear, centered, at the bottom of each page.

The formal memorandum macros will not allow both definitions at]S and]Z to appear together. If the logo is defined at]S, the company name at]Z will be ignored. If the logo is not defined, the memo will give the company name only for its letterhead. Should you want both logo and name to appear together, define both at]S. **nroff** will format whatever it is capable of formatting; if a logo is defined at]S that only a typesetter can process, it will not appear in an **nroff**ed memo's letterhead.

Appendix 1: Source Files

The DOCUMENTER'S WORKBENCH Software Release 2.0 source product contains the following files:

```
/usr/src/cmd/text/checkmm.d/checkmm.mk
/usr/src/cmd/text/checkmm.d/chekl.l
/usr/src/cmd/text/checkmm.d/chekl1.l
/usr/src/cmd/text/checkmm.d/chekmain.c
/usr/src/cmd/text/checkmm.d/chekmain1.c
/usr/src/cmd/text/checkmm.d/chekrout.c
/usr/src/cmd/text/checkmm.d/chekrout1.c
/usr/src/cmd/text/eqn.d/apseqnchar
/usr/src/cmd/text/eqn.d/cateqnchar
/usr/src/cmd/text/eqn.d/diacrit.c
/usr/src/cmd/text/eqn.d/e.h
/usr/src/cmd/text/eqn.d/e.y
/usr/src/cmd/text/eqn.d/eqn.mk
/usr/src/cmd/text/eqn.d/eqnbox.c
/usr/src/cmd/text/eqn.d/font.c
/usr/src/cmd/text/eqn.d/fromto.c
/usr/src/cmd/text/eqn.d/funny.c
/usr/src/cmd/text/eqn.d/glob.c
/usr/src/cmd/text/eqn.d/integral.c
/usr/src/cmd/text/eqn.d/io.c
/usr/src/cmd/text/eqn.d/lex.c
/usr/src/cmd/text/eqn.d/lookup.c
/usr/src/cmd/text/eqn.d/main.c
/usr/src/cmd/text/eqn.d/mark.c
/usr/src/cmd/text/eqn.d/matrix.c
/usr/src/cmd/text/eqn.d/move.c
/usr/src/cmd/text/eqn.d/over.c
/usr/src/cmd/text/eqn.d/paren.c
/usr/src/cmd/text/eqn.d/pile.c
/usr/src/cmd/text/eqn.d/shift.c
/usr/src/cmd/text/eqn.d/size.c
/usr/src/cmd/text/eqn.d/sqrt.c
/usr/src/cmd/text/eqn.d/text.c
/usr/src/cmd/text/diffmk.sh
/usr/src/cmd/text/grap.d/README
/usr/src/cmd/text/grap.d/coord.c
```

/usr/src/cmd/text/grap.d/for.c
/usr/src/cmd/text/grap.d/frame.c
/usr/src/cmd/text/grap.d/grap.defines
/usr/src/cmd/text/grap.d/grap.h
/usr/src/cmd/text/grap.d/grap.mk
/usr/src/cmd/text/grap.d/grap.y
/usr/src/cmd/text/grap.d/grapl.l
/usr/src/cmd/text/grap.d/input.c
/usr/src/cmd/text/grap.d/label.c
/usr/src/cmd/text/grap.d/main.c
/usr/src/cmd/text/grap.d/misc.c
/usr/src/cmd/text/grap.d/plot.c
/usr/src/cmd/text/grap.d/print.c
/usr/src/cmd/text/grap.d/ticks.c
/usr/src/cmd/text/macref.d/macref.c
/usr/src/cmd/text/macref.d/macref.mk
/usr/src/cmd/text/macref.d/macrform.c
/usr/src/cmd/text/macref.d/macrstat.c
/usr/src/cmd/text/macref.d/macrtoc.c
/usr/src/cmd/text/macref.d/main.c
/usr/src/cmd/text/macref.d/match.c
/usr/src/cmd/text/hyphen.c
/usr/src/cmd/text/macros.d/an.src
/usr/src/cmd/text/macros.d/macros.mk
/usr/src/cmd/text/macros.d/macrunch
/usr/src/cmd/text/macros.d/mmn.src
/usr/src/cmd/text/macros.d/mmt.src
/usr/src/cmd/text/macros.d/tmac.an
/usr/src/cmd/text/macros.d/tmac.m
/usr/src/cmd/text/macros.d/ptx.src
/usr/src/cmd/text/macros.d/strings.mm.src
/usr/src/cmd/text/macros.d/tmac.ptx
/usr/src/cmd/text/macros.d/tmac.v
/usr/src/cmd/text/macros.d/vmca.src
/usr/src/cmd/text/neqn.d/diacrit.c
/usr/src/cmd/text/neqn.d/e.h
/usr/src/cmd/text/neqn.d/e.y
/usr/src/cmd/text/neqn.d/eqnbox.c
/usr/src/cmd/text/neqn.d/font.c
/usr/src/cmd/text/neqn.d/fromto.c
/usr/src/cmd/text/neqn.d/funny.c

/usr/src/cmd/text/neqn.d/glob.c
/usr/src/cmd/text/neqn.d/integral.c
/usr/src/cmd/text/neqn.d/io.c
/usr/src/cmd/text/neqn.d/lex.c
/usr/src/cmd/text/neqn.d/lookup.c
/usr/src/cmd/text/neqn.d/mark.c
/usr/src/cmd/text/neqn.d/matrix.c
/usr/src/cmd/text/neqn.d/move.c
/usr/src/cmd/text/neqn.d/neqn.mk
/usr/src/cmd/text/neqn.d/over.c
/usr/src/cmd/text/neqn.d/paren.c
/usr/src/cmd/text/neqn.d/pile.c
/usr/src/cmd/text/neqn.d/shift.c
/usr/src/cmd/text/neqn.d/size.c
/usr/src/cmd/text/neqn.d/sqrt.c
/usr/src/cmd/text/neqn.d/text.c
/usr/src/cmd/text/pic.d/PS-PEmacros
/usr/src/cmd/text/pic.d/README
/usr/src/cmd/text/pic.d/arcgen.c
/usr/src/cmd/text/pic.d/blockgen.c
/usr/src/cmd/text/pic.d/boxgen.c
/usr/src/cmd/text/pic.d/circgen.c
/usr/src/cmd/text/pic.d/for.c
/usr/src/cmd/text/pic.d/input.c
/usr/src/cmd/text/pic.d/linegen.c
/usr/src/cmd/text/pic.d/main.c
/usr/src/cmd/text/pic.d/misc.c
/usr/src/cmd/text/pic.d/movegen.c
/usr/src/cmd/text/pic.d/pic.h
/usr/src/cmd/text/pic.d/pic.mk
/usr/src/cmd/text/pic.d/picl.l
/usr/src/cmd/text/pic.d/picy.y
/usr/src/cmd/text/pic.d/pltroff.c
/usr/src/cmd/text/pic.d/print.c
/usr/src/cmd/text/pic.d/symtab.c
/usr/src/cmd/text/pic.d/textgen.c
/usr/src/cmd/text/ptx.d/eign.sh
/usr/src/cmd/text/ptx.d/ptx.c
/usr/src/cmd/text/ptx.d/ptx.mk
/usr/src/cmd/text/roff.d/nroff.d/terms.d/README
/usr/src/cmd/text/roff.d/nroff.d/terms.d/a.2631

```
/usr/src/cmd/text/roff.d/nroff.d/terms.d/a.2631-c
/usr/src/cmd/text/roff.d/nroff.d/terms.d/a.2631-e
/usr/src/cmd/text/roff.d/nroff.d/terms.d/a.300
/usr/src/cmd/text/roff.d/nroff.d/terms.d/a.300-12
/usr/src/cmd/text/roff.d/nroff.d/terms.d/a.300s
/usr/src/cmd/text/roff.d/nroff.d/terms.d/a.300s-12
/usr/src/cmd/text/roff.d/nroff.d/terms.d/a.382
/usr/src/cmd/text/roff.d/nroff.d/terms.d/a.4000a
/usr/src/cmd/text/roff.d/nroff.d/terms.d/a.450
/usr/src/cmd/text/roff.d/nroff.d/terms.d/a.450-12
/usr/src/cmd/text/roff.d/nroff.d/terms.d/a.832
/usr/src/cmd/text/roff.d/nroff.d/terms.d/a.lp
/usr/src/cmd/text/roff.d/nroff.d/terms.d/ab.37
/usr/src/cmd/text/roff.d/nroff.d/terms.d/ab.8510
/usr/src/cmd/text/roff.d/nroff.d/terms.d/ab.X
/usr/src/cmd/text/roff.d/nroff.d/terms.d/ab.tn300
/usr/src/cmd/text/roff.d/nroff.d/terms.d/b.300
/usr/src/cmd/text/roff.d/nroff.d/terms.d/b.lp
/usr/src/cmd/text/roff.d/nroff.d/terms.d/convert.sh
/usr/src/cmd/text/roff.d/nroff.d/terms.d/template
/usr/src/cmd/text/roff.d/nroff.d/terms.d/terms.mk
/usr/src/cmd/text/roff.d/nroff.d/n10.c
/usr/src/cmd/text/roff.d/nroff.d/n6.c
/usr/src/cmd/text/roff.d/nroff.d/nroff.mk
/usr/src/cmd/text/roff.d/nroff.d/tw.h
/usr/src/cmd/text/roff.d/ext.h
/usr/src/cmd/text/roff.d/hytab.c
/usr/src/cmd/text/roff.d/n1.c
/usr/src/cmd/text/roff.d/n2.c
/usr/src/cmd/text/roff.d/n3.c
/usr/src/cmd/text/roff.d/n4.c
/usr/src/cmd/text/roff.d/n5.c
/usr/src/cmd/text/roff.d/n7.c
/usr/src/cmd/text/roff.d/n8.c
/usr/src/cmd/text/roff.d/n9.c
/usr/src/cmd/text/roff.d/ni.c
/usr/src/cmd/text/roff.d/nii.c
/usr/src/cmd/text/roff.d/troff.d/devaps/charlib/LH.36
/usr/src/cmd/text/roff.d/troff.d/devaps/charlib/LV.36
/usr/src/cmd/text/roff.d/troff.d/devaps/charlib/README
/usr/src/cmd/text/roff.d/troff.d/devaps/B
```

/usr/src/cmd/text/roff.d/troff.d/devaps/BI
/usr/src/cmd/text/roff.d/troff.d/devaps/C
/usr/src/cmd/text/roff.d/troff.d/devaps/CE
/usr/src/cmd/text/roff.d/troff.d/devaps/CI
/usr/src/cmd/text/roff.d/troff.d/devaps/CT
/usr/src/cmd/text/roff.d/troff.d/devaps/CW
/usr/src/cmd/text/roff.d/troff.d/devaps/CX
/usr/src/cmd/text/roff.d/troff.d/devaps/DESC
/usr/src/cmd/text/roff.d/troff.d/devaps/G
/usr/src/cmd/text/roff.d/troff.d/devaps/GB
/usr/src/cmd/text/roff.d/troff.d/devaps/GI
/usr/src/cmd/text/roff.d/troff.d/devaps/GR
/usr/src/cmd/text/roff.d/troff.d/devaps/GS
/usr/src/cmd/text/roff.d/troff.d/devaps/H
/usr/src/cmd/text/roff.d/troff.d/devaps/HB
/usr/src/cmd/text/roff.d/troff.d/devaps/HI
/usr/src/cmd/text/roff.d/troff.d/devaps/HK
/usr/src/cmd/text/roff.d/troff.d/devaps/HL
/usr/src/cmd/text/roff.d/troff.d/devaps/HX
/usr/src/cmd/text/roff.d/troff.d/devaps/I
/usr/src/cmd/text/roff.d/troff.d/devaps/LINKFILE
/usr/src/cmd/text/roff.d/troff.d/devaps/MB
/usr/src/cmd/text/roff.d/troff.d/devaps/MI
/usr/src/cmd/text/roff.d/troff.d/devaps/MR
/usr/src/cmd/text/roff.d/troff.d/devaps/MX
/usr/src/cmd/text/roff.d/troff.d/devaps/PA
/usr/src/cmd/text/roff.d/troff.d/devaps/PB
/usr/src/cmd/text/roff.d/troff.d/devaps/PI
/usr/src/cmd/text/roff.d/troff.d/devaps/PO
/usr/src/cmd/text/roff.d/troff.d/devaps/PX
/usr/src/cmd/text/roff.d/troff.d/devaps/R
/usr/src/cmd/text/roff.d/troff.d/devaps/README
/usr/src/cmd/text/roff.d/troff.d/devaps/S
/usr/src/cmd/text/roff.d/troff.d/devaps/S1
/usr/src/cmd/text/roff.d/troff.d/devaps/SC
/usr/src/cmd/text/roff.d/troff.d/devaps/SM
/usr/src/cmd/text/roff.d/troff.d/devaps/TB
/usr/src/cmd/text/roff.d/troff.d/devaps/TX
/usr/src/cmd/text/roff.d/troff.d/devaps/aps.h
/usr/src/cmd/text/roff.d/troff.d/devaps/build.c
/usr/src/cmd/text/roff.d/troff.d/devaps/daps.c

```
/usr/src/cmd/text/roff.d/troff.d/devaps/daps.g
/usr/src/cmd/text/roff.d/troff.d/devaps/daps.h
/usr/src/cmd/text/roff.d/troff.d/devaps/devaps.mk
/usr/src/cmd/text/roff.d/troff.d/devaps/makedev.c
/usr/src/cmd/text/roff.d/troff.d/devaps/version
/usr/src/cmd/text/roff.d/troff.d/README
/usr/src/cmd/text/roff.d/troff.d/dev.h
/usr/src/cmd/text/roff.d/troff.d/devi10/rasti10/aps-i10/B
/usr/src/cmd/text/roff.d/troff.d/devi10/rasti10/aps-i10/B.S
/usr/src/cmd/text/roff.d/troff.d/devi10/rasti10/aps-i10/B.bld
/usr/src/cmd/text/roff.d/troff.d/devi10/rasti10/aps-i10/BI
/usr/src/cmd/text/roff.d/troff.d/devi10/rasti10/aps-i10/BI.S
/usr/src/cmd/text/roff.d/troff.d/devi10/rasti10/aps-i10/BI.bld
/usr/src/cmd/text/roff.d/troff.d/devi10/rasti10/aps-i10/C
/usr/src/cmd/text/roff.d/troff.d/devi10/rasti10/aps-i10/C.S
/usr/src/cmd/text/roff.d/troff.d/devi10/rasti10/aps-i10/C.bld
/usr/src/cmd/text/roff.d/troff.d/devi10/rasti10/aps-i10/CE
/usr/src/cmd/text/roff.d/troff.d/devi10/rasti10/aps-i10/CE.S
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/usr/src/cmd/text/tbl.d/t1.c
/usr/src/cmd/text/tbl.d/t2.c
/usr/src/cmd/text/tbl.d/t3.c
/usr/src/cmd/text/tbl.d/t4.c
/usr/src/cmd/text/tbl.d/t5.c
/usr/src/cmd/text/tbl.d/t6.c

```
/usr/src/cmd/text/tbl.d/t7.c
/usr/src/cmd/text/tbl.d/t8.c
/usr/src/cmd/text/tbl.d/t9.c
/usr/src/cmd/text/tbl.d/tb.c
/usr/src/cmd/text/tbl.d/tbl.mk
/usr/src/cmd/text/tbl.d/tc.c
/usr/src/cmd/text/tbl.d/te.c
/usr/src/cmd/text/tbl.d/tf.c
/usr/src/cmd/text/tbl.d/tg.c
/usr/src/cmd/text/tbl.d/ti.c
/usr/src/cmd/text/tbl.d/tm.c
/usr/src/cmd/text/tbl.d/tr.c
/usr/src/cmd/text/tbl.d/ts.c
/usr/src/cmd/text/tbl.d/tt.c
/usr/src/cmd/text/tbl.d/tu.c
/usr/src/cmd/text/tbl.d/tv.c
/usr/src/cmd/text/shells.d/eqn.stats
/usr/src/cmd/text/shells.d/mm.letter
/usr/src/cmd/text/shells.d/mm.report
/u9r/src/cmd/text/shells.d/mm.sales
/usr/src/cmd/text/shells.d/mm.sh
/usr/src/cmd/text/shells.d/mmt.sh
/usr/src/cmd/text/shells.d/nroff.letter
/usr/src/cmd/text/shells.d/pic.forms
/usr/src/cmd/text/shells.d/shells.mk
/usr/src/cmd/text/shells.d/tbl.bridges
/usr/src/cmd/text/shells.d/tbl.language
/usr/src/cmd/text/shells.d/tbl.pres
/usr/src/cmd/text/shells.d/terminals
/usr/src/cmd/text/shells.d/troff.ad
/usr/src/cmd/text/shells.d/troff.aeneid
/usr/src/cmd/text/shells.d/troff.fonts
/usr/src/cmd/text/shells.d/troff.sizes
/usr/src/cmd/text/text.mk
/usr/src/cmd/col.c
```

Appendix 2: Manual Pages

The catable manual entries included with all DOCUMENTER'S WORK-
BENCH Software source products and the 3B5 Computer and the 3B15 Com-
puter binary products are the following files:

/usr/catman/p_man/man5/eqnchar.5.z
/usr/catman/p_man/man5/font.5.z
/usr/catman/p_man/man5/man.5.z
/usr/catman/p_man/man5/mm.5.z
/usr/catman/p_man/man5/mptx.5.z
/usr/catman/p_man/man5/mv.5.z
/usr/catman/p_man/man5/nterm.5.z
/usr/catman/p_man/man5/troff.5.z
/usr/catman/u_man/man1/checkmm.1.z
/usr/catman/u_man/man1/daps.1.z
/usr/catman/u_man/man1/di10.1.z
/usr/catman/u_man/man1/diffmk.1.z
/usr/catman/u_man/man1/eqn.1.z
/usr/catman/u_man/man1/grap.1.z
/usr/catman/u_man/man1/hyphen.1.z
/usr/catman/u_man/man1/macref.1.z
/usr/catman/u_man/man1/mm.1.z
/usr/catman/u_man/man1/mmt.1.z
/usr/catman/u_man/man1/mvt.1.z
/usr/catman/u_man/man1/ndx.1.z
/usr/catman/u_man/man1/neqn.1.z
/usr/catman/u_man/man1/nroff.1.z
/usr/catman/u_man/man1/pic.1.z
/usr/catman/u_man/man1/ptx.1.z
/usr/catman/u_man/man1/subj.1.z
/usr/catman/u_man/man1/tbl.1.z
/usr/catman/u_man/man1/tc.1.z
/usr/catman/u_man/man1/troff.1.z

To create your own manual pages for hardcopy or for a local on-line
facility of catable manual pages, see *DOCUMENTER'S WORKBENCH
Software Technical Discussion and Reference Manual* under the heading
man(5).

To build a local on-line facility, you would use the UNIX system commands **pack** and **pcat** in addition to the appropriate DOCUMENTER'S WORKBENCH commands. After processing your pages with **nroff** (and **neqn** and **tbl**, if need be), compress the formatted files with **pack** for efficient storage. The resulting directory of local manual pages can be displayed on terminal screens using **pcat**.

troff and its associated preprocessors would be inappropriate for building an on-line manual page facility since few terminals are capable of displaying **troff** output.

Appendix 3: Executable Files

The 3B5 Computer binary product and the 3B15 Computer binary product contain the following executable files:

/usr/bin/checkmm
/usr/bin/checkmm1
/usr/bin/col
/usr/bin/daps
/usr/bin/di10
/usr/bin/diffmk
/usr/bin/eqn
/usr/bin/grap
/usr/bin/hyphen
/usr/bin/macref
/usr/bin/mm
/usr/bin/mmt
/usr/bin/mvt
/usr/bin/ndx
/usr/bin/neqn
/usr/bin/nroff
/usr/bin/pic
/usr/bin/ptx
/usr/bin/subj
/usr/bin/tbl
/usr/bin/tc
/usr/bin/troff
/usr/lib/dwb/deroff
/usr/lib/dwb/grap.defines
/usr/lib/dwb/ndexer
/usr/lib/dwb/ndxformat
/usr/lib/dwb/pages
/usr/lib/dwb/parts
/usr/lib/dwb/samples/eqn.stats
/usr/lib/dwb/samples/mm.letter
/usr/lib/dwb/samples/mm.report
/usr/lib/dwb/samples/mm.sales
/usr/lib/dwb/samples/nroff.letter
/usr/lib/dwb/samples/pic.forms
/usr/lib/dwb/samples/tbl.bridges
/usr/lib/dwb/samples/tbl.language

/usr/lib/dwb/samples/tbl.pres
/usr/lib/dwb/samples/troff.ad
/usr/lib/dwb/samples/troff.aeneid
/usr/lib/dwb/samples/troff.fonts
/usr/lib/dwb/samples/troff.sizes
/usr/lib/dwb/sbj1
/usr/lib/dwb/sbj2
/usr/lib/dwb/sbj3
/usr/lib/dwb/sbjprep
/usr/lib/dwb/style1
/usr/lib/dwb/style2
/usr/lib/dwb/style3
/usr/lib/eign
/usr/lib/font/devaps/B.add
/usr/lib/font/devaps/B.out
/usr/lib/font/devaps/BI.out
/usr/lib/font/devaps/C.out
/usr/lib/font/devaps/CE.out
/usr/lib/font/devaps/CI.out
/usr/lib/font/devaps/CT.add
/usr/lib/font/devaps/CT.out
/usr/lib/font/devaps/CW.add
/usr/lib/font/devaps/CW.out
/usr/lib/font/devaps/CX.add
/usr/lib/font/devaps/CX.out
/usr/lib/font/devaps/DESC.out
/usr/lib/font/devaps/G.out
/usr/lib/font/devaps/GB.add
/usr/lib/font/devaps/GB.out
/usr/lib/font/devaps/GI.add
/usr/lib/font/devaps/GI.out
/usr/lib/font/devaps/GR.add
/usr/lib/font/devaps/GR.out
/usr/lib/font/devaps/GS.add
/usr/lib/font/devaps/GS.out
/usr/lib/font/devaps/H.out
/usr/lib/font/devaps/HB.out
/usr/lib/font/devaps/HI.add
/usr/lib/font/devaps/HI.out
/usr/lib/font/devaps/HK.add
/usr/lib/font/devaps/HK.out

/usr/lib/font/devaps/HL.out
/usr/lib/font/devaps/HM.out
/usr/lib/font/devaps/HX.add
/usr/lib/font/devaps/HX.out
/usr/lib/font/devaps/I.add
/usr/lib/font/devaps/I.out
/usr/lib/font/devaps/MB.out
/usr/lib/font/devaps/MI.out
/usr/lib/font/devaps/MR.out
/usr/lib/font/devaps/MX.out
/usr/lib/font/devaps/PA.out
/usr/lib/font/devaps/PB.out
/usr/lib/font/devaps/PI.out
/usr/lib/font/devaps/PO.add
/usr/lib/font/devaps/PO.out
/usr/lib/font/devaps/PX.add
/usr/lib/font/devaps/PX.out
/usr/lib/font/devaps/R.add
/usr/lib/font/devaps/R.out
/usr/lib/font/devaps/S.add
/usr/lib/font/devaps/S.out
/usr/lib/font/devaps/S1.add
/usr/lib/font/devaps/S1.out
/usr/lib/font/devaps/SC.add
/usr/lib/font/devaps/SC.out
/usr/lib/font/devaps/SM.add
/usr/lib/font/devaps/SM.out
/usr/lib/font/devaps/TB.out
/usr/lib/font/devaps/TX.add
/usr/lib/font/devaps/TX.out
/usr/lib/font/devaps/version
/usr/lib/font/devi10/B.out
/usr/lib/font/devi10/CW.out
/usr/lib/font/devi10/DESC.out
/usr/lib/font/devi10/G.out
/usr/lib/font/devi10/GI.out
/usr/lib/font/devi10/H.out
/usr/lib/font/devi10/HB.out
/usr/lib/font/devi10/HI.out
/usr/lib/font/devi10/HK.out
/usr/lib/font/devi10/HM.out

/usr/lib/font/devi10/I.out
/usr/lib/font/devi10/PA.out
/usr/lib/font/devi10/PB.out
/usr/lib/font/devi10/PI.out
/usr/lib/font/devi10/PO.out
/usr/lib/font/devi10/R.out
/usr/lib/font/devi10/S.out
/usr/lib/font/devi10/rasti10/B.10
/usr/lib/font/devi10/rasti10/B.12
/usr/lib/font/devi10/rasti10/B.14
/usr/lib/font/devi10/rasti10/B.16
/usr/lib/font/devi10/rasti10/B.6
/usr/lib/font/devi10/rasti10/B.8
/usr/lib/font/devi10/rasti10/B.9
/usr/lib/font/devi10/rasti10/BI.10
/usr/lib/font/devi10/rasti10/BI.12
/usr/lib/font/devi10/rasti10/BI.6
/usr/lib/font/devi10/rasti10/BI.8
/usr/lib/font/devi10/rasti10/CW.10
/usr/lib/font/devi10/rasti10/CW.11
/usr/lib/font/devi10/rasti10/CW.12
/usr/lib/font/devi10/rasti10/CW.16
/usr/lib/font/devi10/rasti10/CW.6
/usr/lib/font/devi10/rasti10/CW.8
/usr/lib/font/devi10/rasti10/CW.9
/usr/lib/font/devi10/rasti10/H.10
/usr/lib/font/devi10/rasti10/H.12
/usr/lib/font/devi10/rasti10/H.14
/usr/lib/font/devi10/rasti10/H.16
/usr/lib/font/devi10/rasti10/H.18
/usr/lib/font/devi10/rasti10/H.6
/usr/lib/font/devi10/rasti10/H.8
/usr/lib/font/devi10/rasti10/H.9
/usr/lib/font/devi10/rasti10/HB.10
/usr/lib/font/devi10/rasti10/HB.14
/usr/lib/font/devi10/rasti10/HB.9
/usr/lib/font/devi10/rasti10/HI.10
/usr/lib/font/devi10/rasti10/HI.12
/usr/lib/font/devi10/rasti10/HI.14
/usr/lib/font/devi10/rasti10/HI.16
/usr/lib/font/devi10/rasti10/HI.18

```
/usr/lib/font/devi10/rasti10/HI.6
/usr/lib/font/devi10/rasti10/HI.8
/usr/lib/font/devi10/rasti10/HI.9
/usr/lib/font/devi10/rasti10/HK.10
/usr/lib/font/devi10/rasti10/HK.12
/usr/lib/font/devi10/rasti10/HK.14
/usr/lib/font/devi10/rasti10/HK.16
/usr/lib/font/devi10/rasti10/HK.18
/usr/lib/font/devi10/rasti10/HK.6
/usr/lib/font/devi10/rasti10/HK.8
/usr/lib/font/devi10/rasti10/HK.9
/usr/lib/font/devi10/rasti10/I.10
/usr/lib/font/devi10/rasti10/I.12
/usr/lib/font/devi10/rasti10/I.14
/usr/lib/font/devi10/rasti10/I.16
/usr/lib/font/devi10/rasti10/I.6
/usr/lib/font/devi10/rasti10/I.8
/usr/lib/font/devi10/rasti10/I.9
/usr/lib/font/devi10/rasti10/PA.10
/usr/lib/font/devi10/rasti10/PA.12
/usr/lib/font/devi10/rasti10/PA.14
/usr/lib/font/devi10/rasti10/PA.6
/usr/lib/font/devi10/rasti10/PA.8
/usr/lib/font/devi10/rasti10/PB.10
/usr/lib/font/devi10/rasti10/PB.12
/usr/lib/font/devi10/rasti10/PB.14
/usr/lib/font/devi10/rasti10/PB.6
/usr/lib/font/devi10/rasti10/PB.8
/usr/lib/font/devi10/rasti10/PI.10
/usr/lib/font/devi10/rasti10/PI.12
/usr/lib/font/devi10/rasti10/PI.14
/usr/lib/font/devi10/rasti10/PI.6
/usr/lib/font/devi10/rasti10/PI.8
/usr/lib/font/devi10/rasti10/PO.10
/usr/lib/font/devi10/rasti10/PO.11
/usr/lib/font/devi10/rasti10/PO.12
/usr/lib/font/devi10/rasti10/PO.16
/usr/lib/font/devi10/rasti10/PO.6
/usr/lib/font/devi10/rasti10/PO.8
/usr/lib/font/devi10/rasti10/PO.9
/usr/lib/font/devi10/rasti10/PX.10
```

/usr/lib/font/devi10/rasti10/PX.12
/usr/lib/font/devi10/rasti10/PX.6
/usr/lib/font/devi10/rasti10/PX.8
/usr/lib/font/devi10/rasti10/R.10
/usr/lib/font/devi10/rasti10/R.12
/usr/lib/font/devi10/rasti10/R.14
/usr/lib/font/devi10/rasti10/R.16
/usr/lib/font/devi10/rasti10/R.6
/usr/lib/font/devi10/rasti10/R.8
/usr/lib/font/devi10/rasti10/R.9
/usr/lib/font/devi10/rasti10/RASTERLIST
/usr/lib/font/devi10/rasti10/S.10
/usr/lib/font/devi10/rasti10/S.12
/usr/lib/font/devi10/rasti10/S.14
/usr/lib/font/devi10/rasti10/S.16
/usr/lib/font/devi10/rasti10/S.18
/usr/lib/font/devi10/rasti10/S.24
/usr/lib/font/devi10/rasti10/S.6
/usr/lib/font/devi10/rasti10/S.8
/usr/lib/font/devi10/rasti10/S.9
/usr/lib/font/devi10/rasti10/devaps/B.out
/usr/lib/font/devi10/rasti10/devaps/BI.out
/usr/lib/font/devi10/rasti10/devaps/C.out
/usr/lib/font/devi10/rasti10/devaps/CE.out
/usr/lib/font/devi10/rasti10/devaps/CI.out
/usr/lib/font/devi10/rasti10/devaps/CT.out
/usr/lib/font/devi10/rasti10/devaps/CW.out
/usr/lib/font/devi10/rasti10/devaps/CX.out
/usr/lib/font/devi10/rasti10/devaps/DESC.out
/usr/lib/font/devi10/rasti10/devaps/G.out
/usr/lib/font/devi10/rasti10/devaps/GB.out
/usr/lib/font/devi10/rasti10/devaps/GI.out
/usr/lib/font/devi10/rasti10/devaps/GR.out
/usr/lib/font/devi10/rasti10/devaps/GS.out
/usr/lib/font/devi10/rasti10/devaps/H.out
/usr/lib/font/devi10/rasti10/devaps/HB.out
/usr/lib/font/devi10/rasti10/devaps/HI.out
/usr/lib/font/devi10/rasti10/devaps/HK.out
/usr/lib/font/devi10/rasti10/devaps/HL.out
/usr/lib/font/devi10/rasti10/devaps/HM.out
/usr/lib/font/devi10/rasti10/devaps/HX.out

/usr/lib/font/devi10/rasti10/devaps/I.out
/usr/lib/font/devi10/rasti10/devaps/MB.out
/usr/lib/font/devi10/rasti10/devaps/MI.out
/usr/lib/font/devi10/rasti10/devaps/MR.out
/usr/lib/font/devi10/rasti10/devaps/MX.out
/usr/lib/font/devi10/rasti10/devaps/PA.out
/usr/lib/font/devi10/rasti10/devaps/PB.out
/usr/lib/font/devi10/rasti10/devaps/PI.out
/usr/lib/font/devi10/rasti10/devaps/PO.out
/usr/lib/font/devi10/rasti10/devaps/PX.out
/usr/lib/font/devi10/rasti10/devaps/R.out
/usr/lib/font/devi10/rasti10/devaps/S.out
/usr/lib/font/devi10/rasti10/devaps/S1.out
/usr/lib/font/devi10/rasti10/devaps/SC.out
/usr/lib/font/devi10/rasti10/devaps/SM.out
/usr/lib/font/devi10/rasti10/devaps/TB.out
/usr/lib/font/devi10/rasti10/devaps/TX.out
/usr/lib/macros/an
/usr/lib/macros/mmn
/usr/lib/macros/mmt
/usr/lib/macros/ptx
/usr/lib/macros/strings.mm
/usr/lib/macros/vmca
/usr/lib/nterm/tab.2631
/usr/lib/nterm/tab.2631-c
/usr/lib/nterm/tab.2631-e
/usr/lib/nterm/tab.300
/usr/lib/nterm/tab.300-12
/usr/lib/nterm/tab.300S
/usr/lib/nterm/tab.300S-12
/usr/lib/nterm/tab.300s
/usr/lib/nterm/tab.300s-12
/usr/lib/nterm/tab.37
/usr/lib/nterm/tab.382
/usr/lib/nterm/tab.4000A
/usr/lib/nterm/tab.4000a
/usr/lib/nterm/tab.450
/usr/lib/nterm/tab.450-12
/usr/lib/nterm/tab.832
/usr/lib/nterm/tab.8510
/usr/lib/nterm/tab.X

/usr/lib/nterm/tab.lp
/usr/lib/nterm/tab.tn300
/usr/lib/tmac/tmac.an
/usr/lib/tmac/tmac.m
/usr/lib/tmac/tmac.ptx
/usr/lib/tmac/tmac.v
/usr/pub/apseqnchar
/usr/pub/cateqnchar
/usr/pub/eqnchar
/usr/pub/terminals
/usr/lib/readme/dwb

Appendix 4: Converting Terminal Description Files to ASCII Format

The terminal description files for **nroff** contained in **/usr/lib/nterm** were compiled C language object code in Release 1.0 and earlier and have been converted to ASCII files in Release 2.0. Any user-defined terminal description files will need to be converted to ASCII format as well. Conversion of a user-defined file should involve minor modifications to the C source file.

The following list describes the terminal tables for **nroff**. (In the description, "white space" means any combination of spaces, tabs, and newlines).

- The first line should contain the name of the terminal (a string with no embedded white space).

- The terminal name is followed by a table of 25 lines (defining the first 25 items in **struct t**, laid out in file **nroff.d/tw.h**), as shown below.

bset	[integer]/*bits that must be set for printing*/
breset	[integer]/*bits that must be reset for printing*/
Hor	[integer]/*size of unit of horizontal motion*/
Vert	[integer]/*size of unit of vertical motion*/
Newline	[integer]/*size of line of vertical motion*/
Char	[integer]/*size of character horizontally*/
Em	[integer]/*size of Em of horizontal motion*/
Halfline	[integer]/*size of half line of vertical motion*/
Adj	[integer]/*horizontal resolution*/
twinit	[string]/*sequence to initialize terminal*/
twrest	[string]/*sequence to restore terminal*/
twnl	[string]/*sequence to print newline*/

hlr   [string]/*sequence for half-line reverse*/

hlf   [string]/*sequence for half-line forward*/

flr   [string]/*sequence for full-line reverse*/

bdon   [string]/*sequence to turn on bold*/

bdoff   [string]/*sequence to turn off bold*/

iton   [string]/*sequence to turn on italic*/

itoff   [string]/*sequence to turn off italic*/

ploton   [string]/*sequence to enter plot mode*/

plotoff   [string]/*sequence to leave plot mode*/

up   [string]/*sequence to move up 1 space in plot mode*/

down   [string]/*sequence to move down 1 space in plot mode*/

right   [string]/*sequence to move right 1 space in plot mode*/

left   [string]/*sequence to move left 1 space in plot mode*/

- This table is fixed format, and the order cannot be changed. Entries should be on separate lines, and they should contain exactly two fields (the comment should be omitted) separated by white space. The first field is the string identifying the value (this is not verified). The second field is the value. The value is either an integer, or a string, as specified above. An integer is a sequence of digits. Integers describing sizes are expressed in units of 1/240 of an inch. A string is a sequence of characters (surrounded by quotes). For non-printable ASCII characters the following escapes hold as in C: \b, \t, \n, \r\, \", and | followed by three octal digits.

- This is followed by a line containing the word "charset," and then by the table of special characters (all the non-ASCII characters that **nroff/troff** knows by two-character names, for example, \(hy and \(ga). The entries in this table can be in any order, and the entries should be restricted to only those characters that can

be printed on the terminal in question. The format of each line (defining one special character) is: the (two-character) name of the special character, followed by white space, followed by the width of the character (in ems), followed by white space, followed by the sequence needed to produce the character. This sequence may be surrounded by quotes. The same escapes hold as for strings above.

The best way to create a terminal table for a device is to take a terminal table for an existing device and modify it. Terminal tables files are found in /usr/lib/nterm.

Appendix 5: Software Notes

The following notes may help you avoid problems or to troubleshoot when problems do occur.

- The **checkmm** command will flag some business letter macros as possible errors, even though a file containing the letter macros will format properly.

- The **checkmm** command will flag as possible errors the macros that produce labeled footnotes, if they occur inside lists. A file containing such a sequence of macros will format properly, however.

- The chapter "The Preprocessor **eqn**" in the *User's Guide* suggests running the **eqn** preprocessor on the **/usr/lib/dwb/samples/eqn.stats** file. If you do this you will get the following warning:

  eqn warning: unquoted troff command

  The file **eqn.stats** will format properly, however.

- A README file is supplied with the binary version of the DOCUMENTER'S WORKBENCH Software for the 3B5 Computer and the 3B2 Computer. This file incorrectly states that there are only three macro packages included in the package, although it correctly names the four packages that are included: **mm, mv, mptx,** and **man**.

- Use of the **mv** macro package inhibits true constant width spacing in the output text. If you need to show constant width spacing in a viewgraph you can simulate it by entering the **troff** request

  .ss 12

  before the text you want to appear in constant width spacing. From that point, standard **troff** inter-word spacing will be used. You can restore the standard **mv** inter-word spacing by entering the request

  .ss 16

  at the point you want it to resume.