

Altos 586/986 Computer System  
XENIX Version 2.5a Run-Time System  
April 30, 1984

Introduction

These diskettes contain the XENIX 2.5a Run-Time System which includes modifications and enhancements made to XENIX since the release of XENIX 2.4. The most important new features are the addition of dump and restor commands to support system backup to cartridge tape, an increase in the swap area size, and an increase in the maximum number of open files to accommodate larger applications running on an Altos 986. Details of these enhancements and other changes are listed below.

Installation Procedure

To install XENIX 2.5 on your system, use the make.hd command and follow the directions in the "Introduction to XENIX" manual.

Update Procedure

To update your system from XENIX 2.4 to XENIX 2.5, use the make.update command and follow the directions in the "Introduction to XENIX" manual.

## Enhancements

1. The dump, restor, dump.hd, and restore.hd commands have been included to support backup to cartridge tape. Refer to the "Introduction to XENIX" manual for details.
2. The XENIX kernel supports a maximum of 50 open files per user and 200 open files per system of which a maximum of 152 can be unique files.
3. The size of the swap area and the maximum number of files on the hard disk (i.e. i-nodes) have been increased to the following values:

hard disk size	swap area size		maximum i-nodes
	megabytes	512-byte blocks	
20 megabytes	1.7	3320	6000
40 megabytes	2.6	5120	10000

If you are updating your system from XENIX 2.4 to 2.5 with make.update, the size of the swap area and number of files will not change; that is, the XENIX 2.4 swap area size and number of files will be retained.

To change the size of the swap area and inodes;

- dump the contents of the hard disk
  - install XENIX 2.5 Run-Time System
  - restor the contents of the hard disk
4. It is now possible to backup to (or restore from) cartridge tape using the Business Shell menu system. Refer to the "Introduction to XENIX" manual for details.
  5. The standard XENIX commands true, sed, and grep, have been added to the Run-Time System for use by the Business Shell menu system. Likewise, cron has been added for use by the date command, and sort and awk have been added to support the "r" and "u" options on the tar command.

## Corrections

1. The pconfig and stty commands now handle 4800 and 19200 baud.
2. The add.hd command now creates a lost+found directory on the second (i.e. the add-on) hard disk. Also, it adds a fsck command to the /etc/rc file so that the file system on the second hard disk is checked whenever the multiuser command is executed. Several confusing messages have also been suppressed.

3. The Business Shell now closes the file /tmp/pwdXXXXX thus avoiding potential errors in subsequent file system checks (i.e. fsck commands).
4. The /etc/termcap file contains entries for many different types of terminals, but only the following 8 terminals have been tested (and will be supported) by Altos Computer Systems for XENIX 2.5:

Altos II	Televideo 910
ADDS Viewpoint	Televideo 912
DEC VT-100	Televideo 925
Wyse 100	Televideo 950

The entries for the other terminals were derived from the termcap file used by the University of California (Berkeley), and they are supplied for information purposes only.

5. The "v" option on the more command now works correctly. This allows vi to be called from more starting at the current line. The vi command is not part of the XENIX Run-Time System, but can be found on the optional XENIX Development System.
6. Some confusing messages have been suppressed in the make.update and update.hd commands.
7. The "u" and "r" options of the tar command now work with cartridge tape. It should be noted that when the tar command is used with the "c" option with cartridge tape, the user should supply at least one file name, so that subsequent "r" and "u" sessions will work properly.
8. The date command now increments the year on the real-time clock on January 1 and allows February 29 during leap years. The system date (i.e. the software clock) is automatically set from the real-time hardware clock at midnight each day.
9. The load.hd command automatically configures the /etc/ttys file for the correct number of serial ports (6 or 10) on the computer. Consequently, it is no longer necessary for the operator to run pconfig or to edit /etc/ttys when installing XENIX on an Altos 986.
10. Pressing the DEL (or RUBOUT) key while pconfig was displaying the help information did not return pconfig to its command mode. This problem has been corrected.

## Notes

1. Altos has tested the following serial printers with the 586/986:

- Epson RX-80 and MX-80
- NEC Spinwriter
- Texas Instruments Omni 800
- Okidata Microline 93

2. When printing on a transparent printer (i.e. a printer connected directly to an Altos II terminal), the line printer spooler (lpr) keeps the terminal locked for one minute after printing the last file.

## Errata

1. In the "Introduction to XENIX Addendum A", Appendix I, page I-3, the switch 1 setting for the Hayes modem for login should be "down" - not "up".

In order for modems to work correctly, the /etc/modem command must be run before the multiuser command is executed. (This can be done automatically by adding the /etc/modem command to the '/etc/rc' file.)