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Introduction

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About This Manual

Welcome to *Administering Agilent 3070 Systems (MS Windows NT and 2000)*. This manual contains information for administering 3070 board test systems running on MS Windows® 2000 Professional and NT operating systems.

Use this manual as a guide for performing general 3070 system administration tasks. This manual does not describe general NT system administration.

Who Should Use This Manual

This manual is intended for anyone who performs system administration for 3070 MS Windows® systems. To perform the tasks described in this manual, you must have Administrator log in privileges on the systems you administer.

You should also have a basic working knowledge of MS Windows® NT or 2000 operating systems and experience in system administration.

Summary of System Administration Tasks

How Many Administrators are Necessary?

Ideally, a system should have one system administrator and a backup. It could be necessary to have one system administrator per shift.

Avoid maintenance conflicts by keeping as few system administrators as necessary.

Required Knowledge

Day-to-day tasks are required to keep a system running efficiently. Depending on the number of 3070 systems and the level of support needed, system administration can be either a part- or full-time job.

A 3070 system administrator should acquire basic knowledge of:

- the 3070 system hardware.
- the Agilent3070 directory structure and file system.
- the 3070 program software.
- the MS Windows® operating system.
- the Windows directory structure and file system.
- utilities for performing administration tasks, such as System Tools, Administrative Tools, and Backup and Recovery Tools.

Responsibilities

The system administrator's responsibilities include managing system installation, setup, configuration, networking, and security.

Be prepared to allow time for the training required to administer 3070 systems. Without adequate training, a system administrator has both the potential to solve problems and to make a system inoperable!

Administration Tasks

The system administrator routinely performs the following tasks:

- Installs and configures computer systems.
- Installs, configures, and connects computers to a network.
- Manages users and user accounts.
- Manages the file system and access permissions.
- Performs incremental and full system backups.
- Creates system recovery tapes (after installing software packages or changing the system's configuration).
- Recovers files from backups.
- Installs and manages peripheral devices.

3070 Software Overview

This section contains:

- **Introduction**, 1-3
- **Capabilities of the MS Windows® 2000 Professional Operating System**, 1-3
- **The Agilent 3070 Directory Structure**, 1-4
- **Advantages of a LAN**, 1-5
- **3070 Program Software**, 1-5

Introduction

XU700 testhead controllers are shipped with:

- The MS Windows® 2000 Professional operating system.
- LAN networking software.
- 3070 applications and programming software that includes languages for board test development and quality reporting.

Optional software features are available. For more information, contact your Agilent sales representative.

Capabilities of the MS Windows® 2000 Professional Operating System

- **File and resource sharing** – With a LAN, you can share files, disk resources, applications,

computer systems, and peripheral devices over a network.

- **Multi-tasking** – Several programs, processes, and tasks can be performed at the same time.
- **System Administration Utilities** – MS Windows® 2000 Professional provides a set of System Tools and Administrative Tools to simplify system administration tasks.

NOTE

The 3070 MS Windows® system permits only single-user log on access to a testhead. Concurrent multi-user log ons are not supported by the operating system.

The Agilent 3070 Directory Structure

Table 1-1 describes the Agilent 3070 directories located under the <value in \$AGILENT3070_ROOT>.

Table 1-1 Agilent3070 directories

Directory:	Directory Contents or Use
autofile	System autfiles
bin	3070 system executable programs
boards	Location for customer board directories.
contrib	User-contributed software (redistributed by Agilent)
dev	Device files and drivers used by the 3070 software
diagnostics	Test head configuration information and diagnostic programs
documentation	3070 user and service documentation
etc	Miscellaneous files
help	Help information
home	Default location for the user's home directories
lib	3070 executable libraries
library	Device libraries for board development
log	Log data
qm	Quality statistics and files used by Agilent Pushbutton Q-Stats

Table 1-1 Agilent3070 directories (continued)

Directory:	Directory Contents or Use
standard	Standard 3070 templates used throughout the system.
tmp	Where 3070 software stores temporary files/logs.
util	Utility files
\$NUTCROOT\usr\lib\X11\ app-defaults\3070	The directory containing X resource files for X applications. \$NUTCROOT is a system variable set during installation of the NutCracker runtime environment. It contains the MKS Toolkit and Korn shell.

CAUTION

NO NOT edit any files in these directories; they are not customer-editable.

Advantages of a LAN

Connecting 3070 systems together on a common LAN allows users to share peripherals and access files remotely. Programmers can edit testplans remotely from their local system without physically transporting the data. Without networking, a testplan file might have to be transferred via tape, then loaded onto the local system for editing.

Centralized storage of applications, testplans, and board data can reduce software maintenance costs and can maximize the integrity of the 3070 software. It can also simplify the process of revision and backup control.

3070 Program Software

Files and Directories

3070 systems come with directories, files, and utilities that are not a part of the MS Windows® operating system.

Test Programming Languages

The 3070 supports several test programming languages to develop board tests, including:

- **Board Test BASIC (BT-BASIC)** is a set of fundamental BASIC statements with many

additional test-oriented statements. BT-BASIC testplans are used to control and manipulate the board test system and to run tests on the circuit boards.

- **Analog Test Language (ATL)** is a set of special statements used to make in-circuit measurements on analog devices.
- **Vector Control Language (VCL)** is a set of statements used to write tests for individual digital devices (in-circuit testing).

Quality Reporting Software

The 3070 program software includes a datalogging feature and Pushbutton Q-STATS Quality Management Software for reporting board test results.

Datalogging automatically gathers test data on circuit boards, including board identification, failing component information, and measurement data on selected components. The logged information is stored in files used by Pushbutton Q-STATS, that generates informative reports which can be used to analyze board production processes.

Table 1-2 Standard 3070 Programs

Program	Use
BT-BASIC	Programming environment for editing and manipulating test programs.
Board Consultant	Data entry tool for defining, viewing, and editing board, device, and topology information.
Fixture Consultant	Graphical interface for viewing and editing fixture attributes such as wiring, probe locations, board placement, and fixture electronics.
IPG Test Consultant	Tool to develop and generate board test programs. Automatically generates test programs and files based on board description and attributes.
Part Description Editor	Graphical interface for defining electrical parts internal to higher level packages such as MCMs or resistor packs.
Pushbutton Debug	Graphical interface for debugging and modifying test programs.
Pushbutton Q-Stats	Quality management software for analyzing and evaluating test quality. Provides failure pareto charts, histograms, and production summaries.

Table 1-2 Standard 3070 Programs (continued)

Program	Use
Boundary-Scan	Graphical interface for testing digital devices that comply with IEEE Standard 1149.1.
Conversion Tool	Tool for converting board test programs and directories for cross-platform compatibility between HP-UX and MS Windows operating systems.
Korn Shell	Shell environment for executing UNIX commands on MS Windows operating systems.
SetUp Editor	Graphical interface for setting up and creating library tests.
Adobe Acrobat	Program for viewing, navigating, and printing PDF documents, including 3070 Documentation.
BootP Server NT	Program for controlling the allocation of IP addresses on the Windows NT platform.
SCO XVision	X windows environment.
TapeWare Administrator	Utility for backing up, restoring, and recovering files and system.
Internet Explorer	Internet browser.
WinZip	Utility for compressing and extracting files in ZIP format.

3070 Hardware Overview

This section provides an overview of 3070 test system hardware.

A complete test system includes a testhead and a testhead controller.

Testhead

The testhead contains hardware required to execute board tests.

Testhead Controller

The testhead controller is a computer that controls the testhead. It is located in a testhead pod.