



AT&T

**386 UNIX[®] System V
Release 3.1**

Documentation Roadmap

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NOTICE

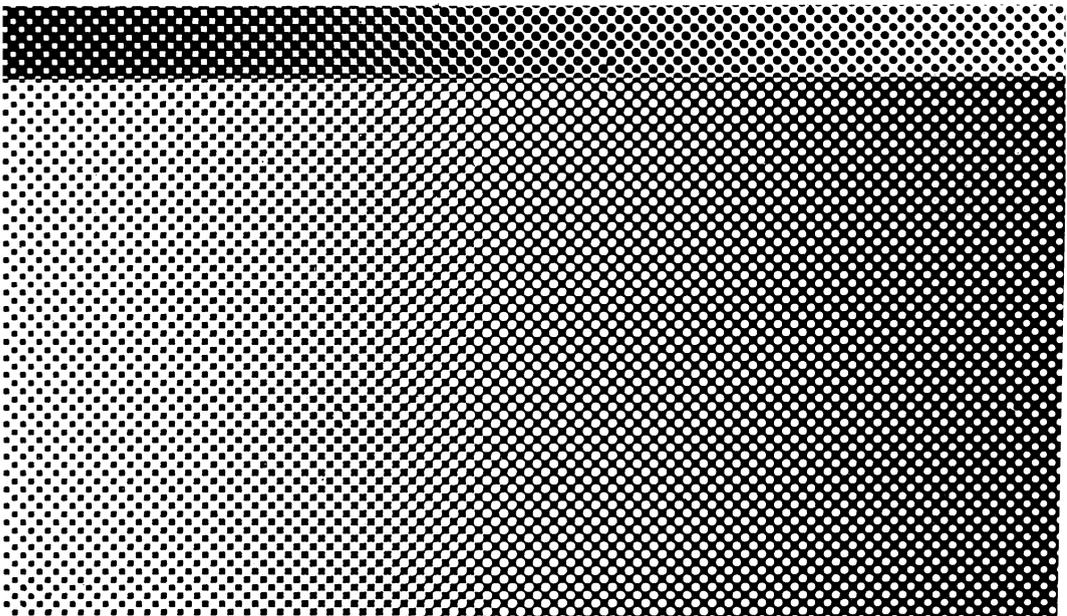
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386 UNIX[®] System V Release 3.1

Documentation Roadmap



Ordering and Service Information

To order documents from the Customer Information Center:

- Within the continental United States, call 1-800-432-6600
- Outside the continental United States, call 1-317-352-8556
- Send mail orders to:

AT&T Customer Information Center
Customer Service Representative
P.O. Box 19901
Indianapolis, Indiana 46219

To sign up for UNIX system or AT&T computer courses:

- Within the continental United States, call 1-800-221-1647
- Outside the continental United States, call 1-609-639-4458

To contact marketing representatives about AT&T computer hardware products and UNIX software products:

- Within the continental United States, call 1-800-372-2447
- Outside the continental United States, call collect 1-215-266-2973 or 1-215-266-2975

To find out about UNIX system source licenses:

- Within the continental United States, except North Carolina, call 1-800-828-UNIX
- In North Carolina and outside the continental United States, call 1-919-279-3666
- Or write to:

Software Licensing
Guilford Center
P.O. Box 25000
Greensboro, NC 27420

Other Sources

The *AT&T Computer Software Catalog* (select code 311-020) lists over 500 software products reviewed or certified for compatibility with AT&T computers.

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Introduction

This *Documentation Roadmap* will help you identify documents associated with your AT&T 386 UNIX System V. It also identifies related documents that will enhance usage and understanding of the UNIX Operating System. The 386 UNIX System V consists of the software, documentation, and, optionally, training and support as defined in the *UNIX System V Release 3.1 Product Overview*. This *Roadmap* contains information about:

- documents delivered with the 386 UNIX System V Foundation set
- documents delivered with the 386 UNIX System V optional documentation sets
- other documents helpful for using 386 UNIX System V.

Most people will use the *Roadmap* in one of the following ways:

- to understand general relationship among the documents
- to identify the documents they need to do a particular task
- to learn about additional documents that might be of interest
- to learn how to order documents.

The *Roadmap* contains a variety of information. It describes the different types of documents available to you. It shows, in a series of diagrams, the relationships among the different documents you need to do various tasks. For each document, it specifies the intended audience and any prerequisite documents or knowledge, and gives a summary of the contents. In addition, it provides sorted lists of documents that make it easy to find a particular document by title, ID number, and by documentation set.

Optional Documentation Sets

The 386 UNIX System V has optional documentation sets. You may want to purchase additional or optional documentation sets for the 386 UNIX System V to complement the software packages as referred to in the *UNIX System V Release 3.1 Product Overview*. These are the optional documentation sets:

- Foundation

Introduction

- Software Development
- ISV-VAR

The Foundation Set is the fundamental 386 UNIX System software and documentation product. It contains the following documents:

- Documentation Roadmap
- Operating System Release Notes
- Operations/System Administration Guide
- Product Overview
- STREAMS Primer
- User's/System Administrator's Reference Manual.

These documents are already contain in the Foundation set software. They can be ordered separately with one 9-digit ordering number (999-300-447).

The Software Development documentation set contains the following documents:

- Network Programmer's Guide
- Programmer's Guide
- Programmer's Reference Manual
- Software Development Set Release Notes
- STREAMS Programmer's Guide.

These software development documents are all associated with one 9-digit ordering number (999-300-446). One set is already contained in the Software Development Set software.

The ISV-VAR documentation set contains the *Intergrated Software Development Guide*. The 9-digit ordering number associated with this guide is 999-300-426.

Ordering Information

To order any documents described in this *Roadmap*, see the information on the page "Ordering and Service Information," following the title page of this document.

To order any software as referred to in your *UNIX System V Release 3.1 Product Overview*, contact your AT&T Sales Representative or authorized dealer.

What's in the Rest of the Roadmap

The remainder of this chapter describes the different types of documents available—guides, reference manuals, manuals, product overviews, and release notes—and conventions used for document titles.

Chapter 2, *Aids for Identifying Documents*, is where you'll find the "maps." A series of diagrams, arranged much like a flowchart, starts with a high-level view of the six major categories of topics. Pointers from that map direct you to others, and each step brings you closer to identifying the document you need while showing you how the documents are related to one another. There's also an alphabetical index. It's useful when you have a specific topic already in mind. It directs you to Chapter 3, where the documents you need are described in greater detail.

Chapter 3, *Document Descriptions*, is organized alphabetically by document title. For each document it gives: the document title, the name of the product described, any prerequisite documents or knowledge, the intended audience, the document ID number (the number you use to order the document), and a summary of the document's contents.

Chapter 4, *Cross References to Documents*, provides three cross-reference tables of the documents, one sorted by document title, one by document ID number, and one by documentation set. For example, you might already know the name of a book you want to order, but not the document ID number, or you might know the document ID number, but not the book to which it refers. This chapter is a quick way to look up this kind of information.

The Glossary defines UNIX system and computer industry terms that are used in the *Roadmap*, although most terms you must know are explained as they are introduced in the text.

What's in the Documents

The titles of the documents follow conventions intended to help you tell, from the title, something about the kind of information you'll find in it. There are six standard types of documents; a definition of each is given on the following page. Many users find most of the information they need in the first two types (guide and reference manual).

guide

A guide contains both conceptual and procedural information; it tells when and why to do something, as well as how to do it. A guide is usually the best introductory text (often including tutorials), yet it is organized so that experienced users can easily skip to the information they need.

reference manual

A reference manual contains complete descriptions (traditionally known as "manual pages") of commands, utilities, system calls, library functions, or system file formats. The assumption in a reference manual is that you already know when and why a task should be done, so it concentrates on telling you what to do. Although these descriptions are complete, authors try to keep them to one page; as a result they sometimes are cryptic. Once you've become familiar with a product, a reference manual is an efficient source of information.

release notes

A release notes describe what has changed in a new release, and known software problems that users should be aware of, and, if available, ways to get around them. It may also contain page replacements for other documents.

manual

A manual describes the hardware that can be used with a 386 UNIX System V, including instructions for installing and operating it. It is complete, detailed, and is usually written for experienced computer users. (A manual is to hardware what a reference manual is to software.)

roadmap

A roadmap helps identify which documents are needed to do particular tasks. It describes how a product's documentation is organized and gives a description of each document.

product overview

A product overview summarizes the standard and optional features of a software product. It highlights aspects of the product that have changed since earlier releases, or that are different from similar products of other vendors. It gives prospective buyers or information systems managers a broad perspective of a system and how it might benefit them.

Conventions for Document Titles

To make them shorter and easier to read, document titles in this book do not show "AT&T," "UNIX System V," or "6386 WGS" even though the official document title may include those words.

For example, the full title is:

UNIX System V Release 3.1
Version 1
Programmer's Reference Manual

In this document, the shorter or abbreviated title is

Programmer's Reference Manual

Aids for Identifying Documents

Figure 2-1 shows six major categories of computer-related topics: Obtaining Background Information, General Use, Administration, Programming, Networking, and Enhancing the System (for those with UNIX system source licenses).

Figures 2-2 through 2-7 show how the documents that discuss these topics are related. Boxes enclose single document titles and related groups of documents. Overlapping boxes show documents that should be used together. Arrows show the order in which documents usually should be read and point to other major categories you might want to examine.

The Alphabetical Index lists topics associated with each of the six major categories. You can look up a topic in the first column and follow that entry across the page to determine the documents that discuss it. The last column tells where you can find a description of the document in Chapter 3.

There are several ways you might use the figures in this chapter. Two possible scenarios are described below.

First scenario: You want to find out how to send mail electronically. Look in the Alphabetical Index for the word "mail." It is among the entries in the Topic column, and lists the *User's/System Administrator's Reference Manual* as a document that explains how to send mail. If you have a copy, you can look up this information. If you don't have one, you can read the description in Chapter 3, and decide whether or not to order it.

Second scenario: You want to help an inexperienced programmer learn about the UNIX system. Of the categories in Figure 2-1, General Use and Programming seem the most relevant. Turning to Figure 2-3, a more detailed look at the General Use category, examine the box labeled "User Documents." It lists the two related documents that new users should read and indicates the order in which they should be read. By looking at Figure 2-3 in this way, you can identify which documents the programmer needs. Figure 2-3 also points to other categories a general user might want to examine (Programming and Networking). Follow the same procedure for the Programming category. For all documents that you identify as possibilities, you can read the descriptions in Chapter 3.

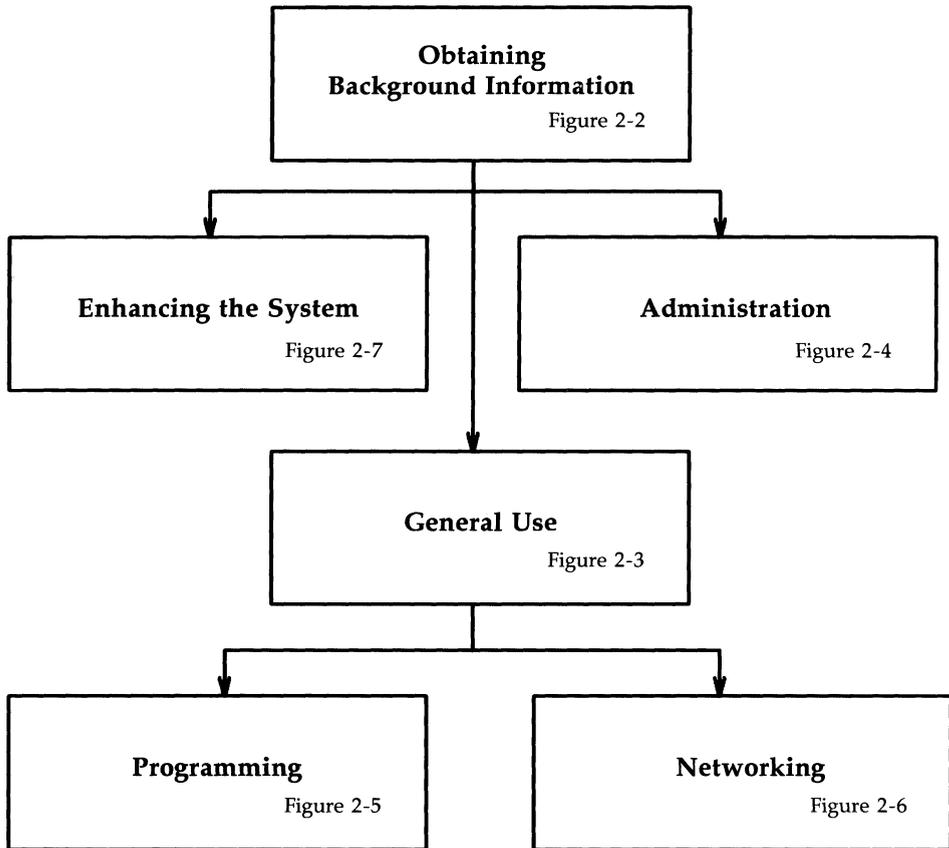


Figure 2-1: The Big Picture: Categories of Tasks

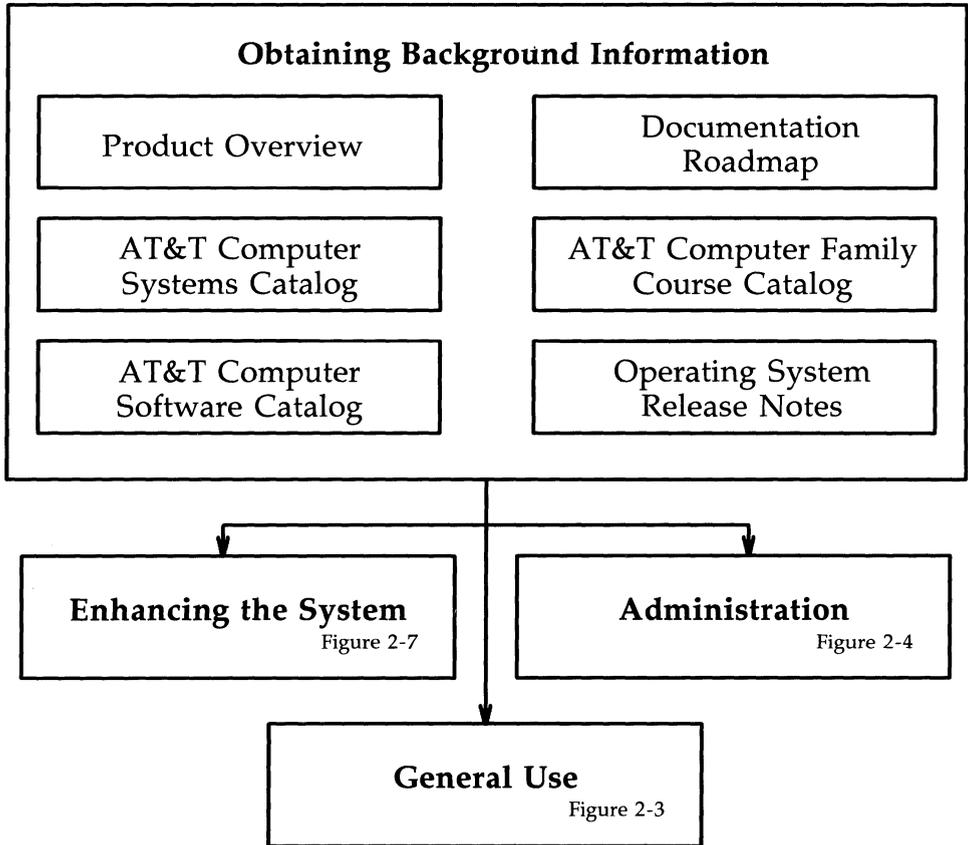


Figure 2-2: Obtaining Background Information

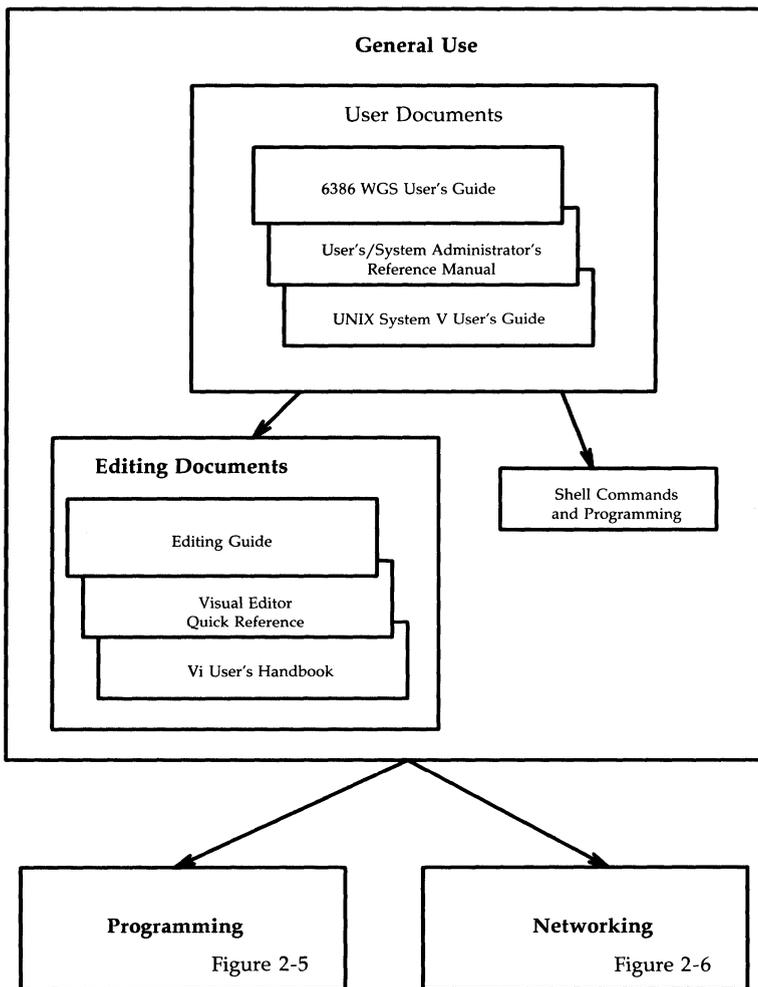


Figure 2-3: General Use

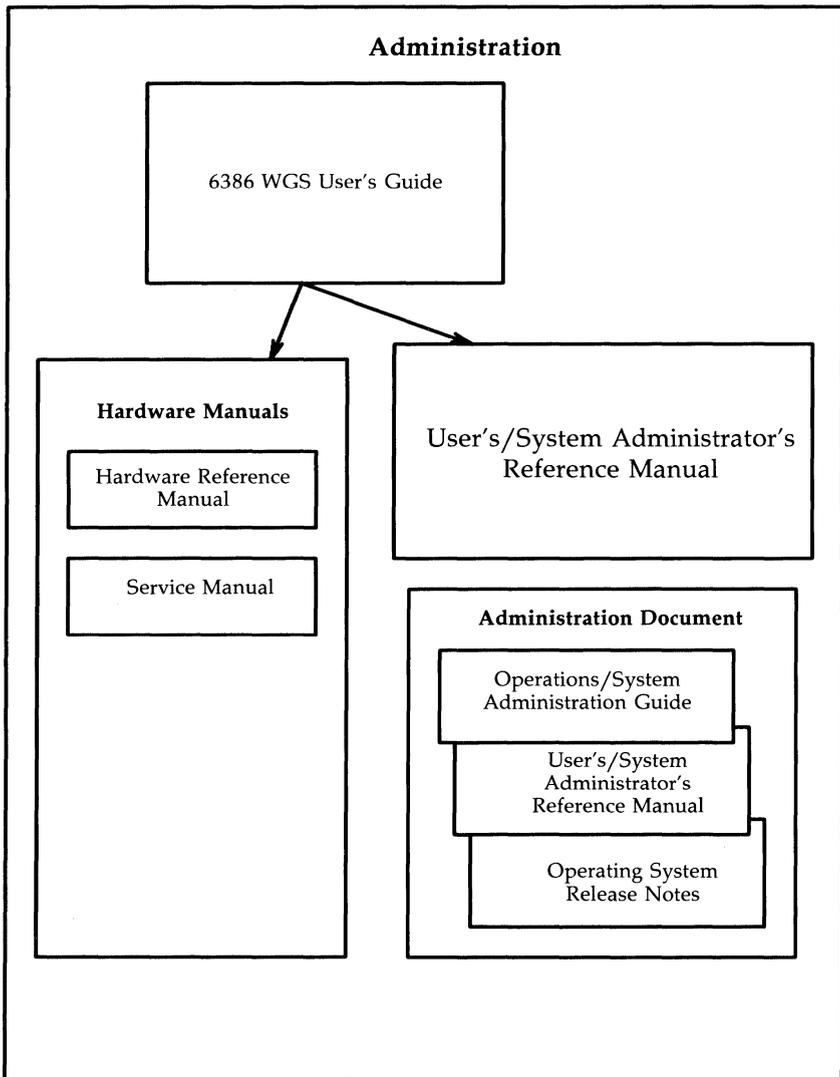


Figure 2-4: Administration

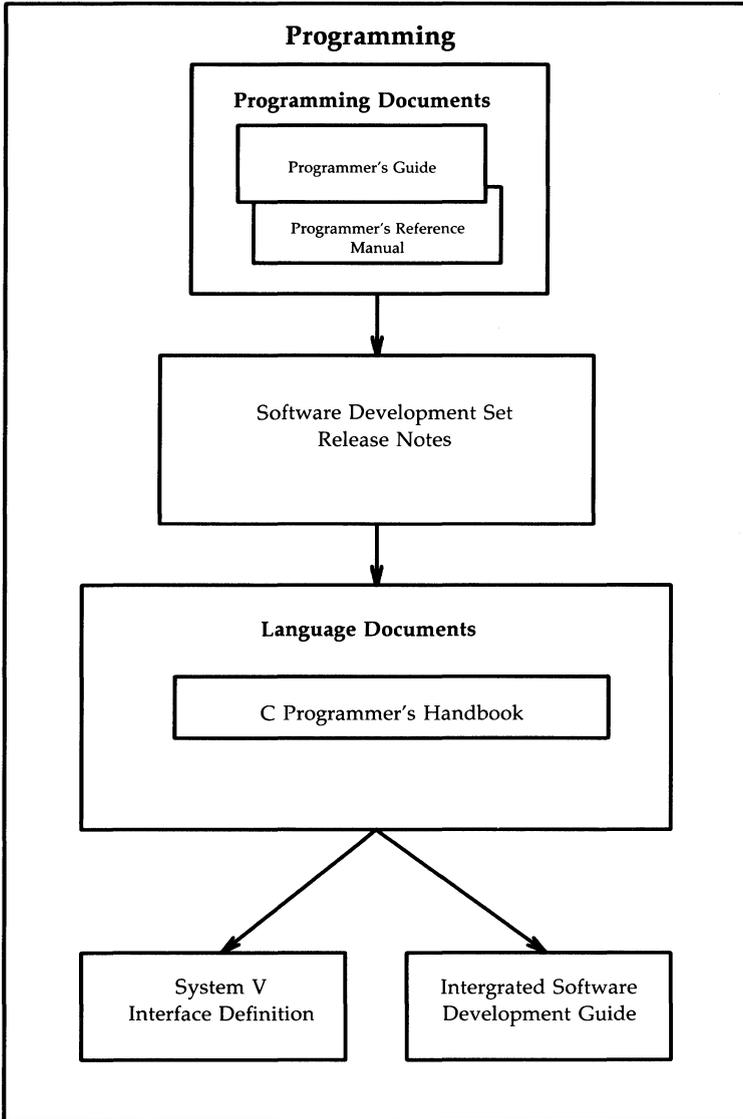


Figure 2-5: Programming

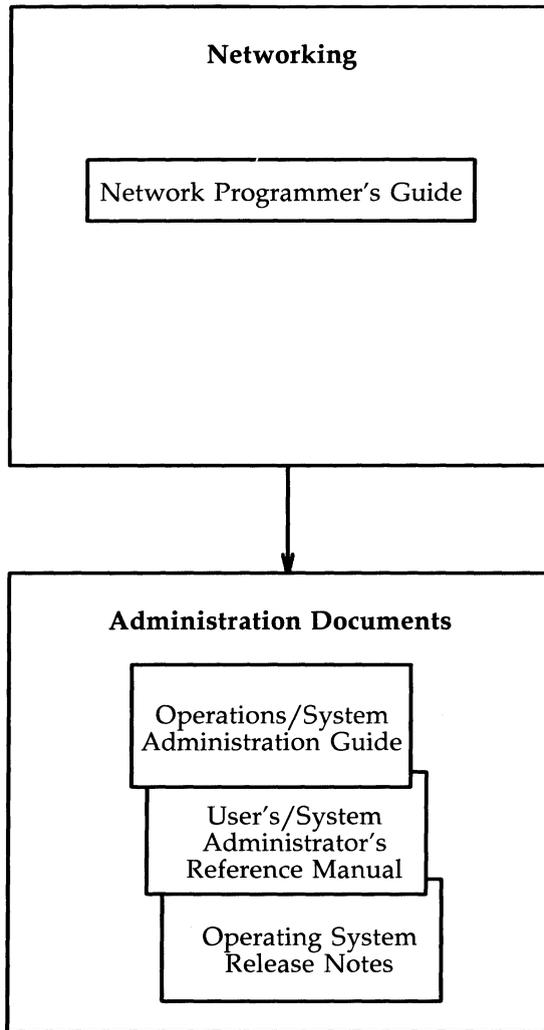


Figure 2-6: Networking

Alphabetical Index

Topic	Document Title	Page in Roadmap
actions to take if the system crashes	Operations/System Administration Guide	3-8
administration, hardware	see "hardware, install and administer "	
administration, network	see "network, administration "	
administrator, responsibilities of	Operations/System Administration Guide	3-8
alphabetize data	UNIX System V User's Guide	3-15
applications, how to order	AT&T Computer Software Catalog	3-3
applications, write and install	System V Interface Definition	3-14
	STREAMS Programmer's Guide	3-13
	Network Programmer's Guide	3-8
	Programmer's Guide	3-9
applications, write for transport interface	Network Programmer's Guide	3-8
architecture, software	Product Overview	3-9
automate routine procedures	User's/System Administrator's Reference Manual	3-16
	Shell Commands and Programming	3-12
	UNIX System V User's Guide	3-15
boot, how to	Operations/System Administration Guide	3-8
	Operating System Release Notes	3-11
C programming	Programmer's Guide	3-9
	C Programmer's Handbook	3-4

Aids for Identifying Documents

Topic	Document Title	Page in Roadmap
circuit boards	Hardware Reference Manual	3-7
command syntax	User's/System Administrator's Reference Manual	3-16
command usage	User's/System Administrator's Reference Manual	3-16
	UNIX System V User's Guide	3-15
compile a program	Programmer's Guide	3-9
	Programmer's Reference Manual	3-10
customer diagnostics	6386 WGS User's Guide	3-2
crash, recovery from	see "system crash, recovery from"	
data, organize	UNIX System V User's Guide	3-15
data, print on paper	see "print data on paper"	
data, save and retrieve	UNIX System V User's Guide	3-15
data, sort	UNIX System V User's Guide	3-15
debugging, device driver	STREAMS Programmer's Guide	3-13
debugging, general	Programmer's Guide	3-9
	User's/System Administrator's Reference Manual	3-16
device driver, design of	STREAMS Programmer's Guide	3-13
diagnostics	6386 WGS User's Guide	3-2
documents, order	Documentation Roadmap	3-6
editors, how to use	Editing Guide	3-6
	Visual Editor Quick Reference	3-17
	vi User's Handbook, The	3-16
	UNIX System V User's Guide	3-15

Aids for Identifying Documents

Topic	Document Title	Page in Roadmap
electronic mail, send and receive	User's/System Administrator's Reference Manual UNIX System V User's Guide	3-16 3-15
encryption	User's/System Administrator's Reference Manual	3-16
execute a job	User's/System Administrator's Reference Manual UNIX System V User's Guide	3-16 3-15
execute a job on another computer	see "remote execution"	
features	see "new release, features of"	
file, how to edit	see "editors, how to use"	
file, security	see "encryption"	
file, store data in	UNIX System V User's Guide	3-15
file system, build and maintain	Operations/System Administration Guide	3-8
file system, mount and unmount	Operations/System Administration Guide	3-8
file, version control	Programmer's Guide	3-9
format of system files	Programmer's Reference Manual	3-10
hardware, install and administer	Operations/System Administration Guide	3-8
hardware, monitor using diagnostics programs	Operations/System Administration Guide	3-8
installation, new release	Operating System Release Notes Operations/System Administration Guide	3-11 3-8
kernel modules, write using STREAMS	STREAMS Programmer's Guide	3-13

Aids for Identifying Documents

Topic	Document Title	Page in Roadmap
learn about the UNIX System	UNIX System V User's Guide	3-15
library functions syntax	Programmer's Reference Manual	3-10
login, how to	User's/System Administrator's Reference Manual	3-16
	UNIX System V User's Guide	3-15
mail, send and receive	User's/System Administrator's Reference Manual	3-16
	UNIX System V User's Guide	3-15
messages, send to other users	see "mail, send and receive"	
module, installation	Service Manual	3-12
mount a file system	Operations/System Administration Guide	3-8
MS-DOS operations	Service Manual	3-12
network, administration	Operations/System Administration Guide	3-8
	User's/System Administrator's Reference Manual	3-16
network, connect to another computer	Operations/System Administration Guide	3-8
	User's/System Administrator's Reference Manual	3-16
	UNIX System V User's Guide	3-15
Network Service Library	Network Programmer's Guide	3-8
new release, features of	Product Overview	3-9
	Operating System Release Notes	3-11
new release, install	Operating System Release Notes	3-11
	Operations/System Administration Guide	3-8
new release, order	Product Overview	3-9
optimize the system	see "system tuning of"	

Topic	Document Title	Page in Roadmap
order applications	AT&T Computer Software Catalog	3-3
order documents	Documentation Roadmap	3-6
order new release	Product Overview	3-9
order software package	AT&T Computer Software Catalog	3-3
optional boards	Hardware Reference Manual	3-7
organize data	UNIX System V User's Guide	3-15
panic error messages	Operations/System Administration Guide	3-8
performance, program	Programmer's Guide UNIX System V User's Guide	3-9 3-15
performance, system	see "system, tuning of"	
peripheral	UNIX System V User's Guide	3-15
portability of UNIX software	System V Interface Definition System V Verification Suite User's Guide	3-14 3-15
power-up diagnostics	6386 WGS User's Guide Service Manual	3-2 3-12
print data on paper	User's/System Administrator's Reference Manual UNIX System V User's Guide	3-16 3-15
program, how to compile	Programmer's Guide Programmer's Reference Manual	3-9 3-10
program, track versions	Programmer's Guide	3-9
programming, in C	Programmer's Guide C Programmer's Handbook	3-9 3-4
programming, in shell	see "shell scripts, how to write"	

Aids for Identifying Documents

Topic	Document Title	Page in Roadmap
programming languages, available on 386 base computer	AT&T Computer Software Catalog	3-3
release	see "new release"	
remote execution	see "network"	
removing and reassembly for main module	Service Manual	3-12
run a job	User's/System Administrator's Reference Manual UNIX System V User's Guide	3-16 3-15
schedule jobs in advance	User's/System Administrator's Reference Manual UNIX System V User's Guide	3-16 3-15
security, file	see "encryption"	
security, system	Operations/System Administration Guide	3-8
send information to another computer	see "network, connect to another computer"	
send information to other users	User's/System Administrator's Reference Manual UNIX System V User's Guide	3-16 3-15
shell, how to use	User's/System Administrator's Reference Manual Shell Commands and Programming UNIX System V User's Guide	3-16 3-12 3-15
shell scripts, how to write	Shell Commands and Programming UNIX System V User's Guide	3-12 3-15

Topic	Document Title	Page in Roadmap
software architecture	Product Overview	3-9
software design	System V Interface Definition	3-14
software package, install	Operations/System Administration Guide	3-8
	Operating System Release Notes	3-11
sort data	UNIX System V User's Guide	3-15
spare parts ordering	Service Manual	3-12
spelling errors, find and fix	User's/System Administrator's Reference Manual	3-16
spooler, lp	see "print data on paper"	
store data in a file	UNIX System V User's Guide	3-15
STREAMS data structures	STREAMS Programmer's Guide	3-13
STREAMS kernel modules, how to write	STREAMS Programmer's Guide	3-13
STREAMS mechanism	STREAMS Primer	3-13
SVID, verify system forms to	System V Verification Suite User's Guide	3-15
syntax of commands	User's/System Administrator's Reference Manual	3-16
syntax of library functions	Programmer's Reference Manual	3-10
syntax of system calls	Programmer's Reference Manual	3-10
system administration, list of responsibilities	Operations/System Administration Guide	3-8

Aids for Identifying Documents

Topic	Document Title	Page in Roadmap
system crash, recovery from	Operations/System Administration Guide	3-8
	User's/System Administrator's Reference Manual	3-16
system, expand	see "system, tuning of"	
system files, format of	Programmer's Reference Manual	3-10
system problems, troubleshoot	see "troubleshoot, system problems"	
system security	see "security, system"	
system test	Service Manual	3-12
system, tuning of	Operations/System Administration Guide	3-8
	User's/System Administrator's Reference Manual	3-16
system usage, monitor	Operations/System Administration Guide	3-8
system, verify conforms to SVID	System V Verification Suite User's Guide	3-15
terminal interface program, how to write	Programmer's Guide	3-9
text editor	see "editors, how to use"	
transport interface routines	Network Programmer's Guide	3-8
transport interface, write applications	Network Programmer's Guide	3-8
transport provider protocol, write interface	Network Programmer's Guide	3-8

Aids for Identifying Documents

Topic	Document Title	Page in Roadmap
troubleshoot, program- ming problems	Programmer's Guide	3-9
	Programmer's Reference Manual	3-10
	6386 WGS User's Guide	3-2
troubleshoot, system problems	Operations/System Administration Guide	3-8
	User's/System Administrator's Reference Manual	3-16
	UNIX System V User's Guide	3-15
tuning the system	see "system, tuning of"	
typing errors, correct	UNIX System V User's Guide	3-15
UNIX software, improve portability of	System V Interface Definition	3-14
	System V Verification Suite User's Guide	3-15
UNIX system, intro- duction to	see "learn about the UNIX System"	
unmount a file system	Operations/System Administration Guide	3-8
verify system conforms to SVID	System V Verification Suite User's Guide	3-15
visual editor	see "editors, how to use"	

Document Descriptions

This chapter contains descriptions of documents that will help you take full advantage of your 386 UNIX System V. The descriptions are presented in alphabetical order by document title. If you do not know a document's title but do know the document ID number, use the cross-reference tables in Chapter 4 to determine the title. Each document description contains entries with the following information:

- document title
- name of the product described
- any necessary prerequisite documents or knowledge
- intended audience for the document
- document ID number
- summary of the document's contents

As mentioned in the section "Conventions for Document Titles" in Chapter 1, references to documents about products whose name includes AT&T, UNIX System V, or 6386 WGS omit that qualifier from the title. In this chapter, the "Document Title" and "Prerequisites" entries in the document description follow this convention. Exceptions to this convention may occur in some instances for clarity's sake. For example, *6386 WGS User's Guide* and *UNIX System V User's Guide* are used to distinguish between the two documents.

To order documents described in this chapter, see the information on the page "Information on AT&T Products and Services," following the title page of this document.

6386 WGS User's Guide

Product Described:	6386 WGS
Prerequisites:	Operating system, application computer peripheral
Audience:	Intermediate to advance user
Document ID Number:	999-300-395

This guide is directed to business professionals, engineers, programmers, and others who will be using the 6368 WGS Processor as a problem-solving tool for the first time. It includes a brief introduction to the system and its major components, and provides the information necessary to install, operate, and expand the computer.

This document also contains the following:

- Go Slow/Go Fast utilities program used to simulate between slow and fast operating speeds for the CPU.
- Customer Diagnostics Diskette, which contains a diagnostic program for checking the modules of your computer, as well as the System SETUP utilities program, essential for setting the configuration for your system.
- Peripheral, troubleshooting, system technical characteristics, servicing, parts, and documentation.

Although no previous programming experience is required to understand the contents of this publication, it is assumed that you have a general familiarity with data processing concepts and terminology.

AT&T Computer Family Course Catalog

Product Described:	AT&T Computer Courses
Prerequisites:	None
Audience:	Users, programmers, administrators, sales and service people
Document ID Number:	300-002

This catalog describes courses available from AT&T for their 3B Computer family and the personal computer family. Some of the topics covered in the courses are an introduction to computer technology, operation and maintenance of hardware, system administration, networking administration, Teletype 5620 DMD terminal programming and text applications, WE 32100 Microsystem architecture and software, using applications software, using editors, writing programs, preparing documents, and sales and marketing.

AT&T Computer Software Catalog

Product Described:	AT&T Computer Software Products
Prerequisites:	None
Audience:	All users
Document ID Number:	311-020

This catalog is an reference on software products that have been reviewed and/or certified for compatibility with AT&T computers running UNIX System V.

The software has been grouped into ten product categories: (Communications, Database Management Systems, Education/Training, General Business Applications, Graphics, Industry/Vertical, Integrated, Spreadsheets, Systems Programming, and Word Processors). The following information is provided for each product: company, compatible AT&T computers, distribution media (usually a diskette and/or 9-track tape), programming language used, hardware and software requirements, customer support, UNIX System V Release number, retail price, and distributor. An appendix illustrates AT&T printer compatibility. Indices provide cross-references to the catalog entries.

AT&T Computer Systems Catalog

Product Described:	AT&T Computer Systems
Prerequisites:	None
Audience:	Users who will be ordering computer systems
Document ID Number:	309-500

This catalog describes computer systems and options, and gives information on configuration and ordering. It has separate sections for the AT&T personal computers, AT&T 3B Computers, and AT&T networking systems. Each section begins with an overview of system hardware and software, memory, input/output, storage, and general cabinet configurations and expansion. Details follow, including listings of components in these categories: system packages, central processing unit (CPU) options, memory options, I/O options, disk options, tape options, networking, printers, terminals, and miscellaneous options.

C Programmer's Handbook

Product Described:	C Programming Language Utilities
Prerequisites:	<i>Programmer's Guide</i>
Audience:	C programmers
Document ID Number:	320-022

This handbook is an introduction and a reference to the C programming language for both beginning and experienced programmers. Topics covered include: syntax, data types, operators and expressions, statements, functions, declarations, the preprocessor, program structure, the I/O library, other libraries, formatted output, formatted input, portable C programs, and the character set.

C Programming Language, The

Product Described:	C Programming Language, The
Prerequisites:	A basic knowledge of programming, and <i>Programmer's Guide</i>
Audience:	C programmers
Document ID Number:	307-136

This book, written by B. Kernighan and D. Ritchie, and published by Prentice-Hall, is shipped with the C Programming Language Utilities package. It is meant to help you learn how to program in C and contains a tutorial introduction for new users. Each major feature of the language is covered in a separate chapter, and there is a reference manual. Examples at the end of each chapter give you practice in effective use of the language and illustrate useful algorithms and principles of good style and sound design.

Cartridge Tape Operation Guide

Product Described:	6386 WGS
Prerequisites:	None
Audience:	Administrator
Document ID Number:	Part of software kit Contact AT&T Sales Representative or authorized dealer

This document contains information dealing with installing and using the cartridge tape utilities, making back-ups, and restoring your files using a tape cartridge.

Documentation Roadmap

Product Described:	386 UNIX System V
Prerequisites:	None
Audience:	All users
Document ID Number:	Part of Foundation Documentation Set (999-300-447) or ordered separately (999-300-427)

The *Roadmap* acquaints you with the documents you can use with your 386 UNIX System V. Illustrations and indices help you decide which document or sequence of documents you need. Short descriptions of each available document, containing document title, ordering number, the name of the product described, necessary prerequisite knowledge, and a summary of the document's contents are given.

Editing Guide

Product Described:	UNIX System V
Prerequisites:	<i>User's/System Administrator's Reference Manual</i>
Audience:	All users
Document ID Number:	307-258

The UNIX system has several different methods for writing and storing text or computer programs into files. This guide gives tutorial introductions to **ed** and **ex** (interactive, line oriented editors), **vi** (a full screen, interactive editor), **sed** (a non-interactive Stream editor), and **bfs** (big file scanner).

Hardware Reference Manual

Product Described:	6386 WGS
Prerequisites:	background in computer architecture and programming
Audience:	field and laboratory engineers, system specialists, OEM
Document ID Number:	999-300-397

This manual contains information on the circuit boards present in the computer, as well as descriptions of optional boards available for use.

In order to use this manual, concepts of computer architecture, programming, and a familiarity with this system are required.

Intergrated Software Development Guide (ISDG)

Product Described:	386 UNIX System V
Prerequisites:	application software, Intel 386 architecture
Audience:	VAR's, ISV's, and IHV's
Document ID Number:	999-300-426

This document specifically addresses the needs of the independent software vendor, the value-added reseller, and system developers. It presents guidelines for device driver development, application interfacing, installation script development, porting, and performance tuning.

Installation Manual for AT&T Terminals

Audience:	All users
Document ID Number:	305-465

This manual tells you how to select a site for your AT&T display terminal, how to select a port, cables, connectors, and wiring and how to install the related software. Each AT&T terminal is described, hardware data sheets for each terminal/computer arrangement are supplied, and necessary equipment for direct and modem connections are described.

Network Programmer's Guide

Product Described: 386 UNIX System V
Prerequisites: *Programmer's Guide* and a background in data communications and networking, including the International Organization for Standardization (ISO) Open Systems Interconnection (OSI) reference model
Audience: Systems programmers
Document ID Number: Part of Software Development Documentation Set (999-300-446)

This guide introduces the AT&T Transport Interface, its capabilities, and its applications. It covers the goals of the transport interface, with discussions of OSI, transport protocols, and STREAMS; the transport interface routines in the Network Services Library; and the key areas of the development of applications that interface to transport protocols (illustrated examples).

Operations/System Administration Guide

Product Described: 386 UNIX System V
Prerequisites: *User's/System Administrator's Reference Manual*
Audience: System administrators
Document ID Number: Part of Foundation Documentation Set (999-300-447)

This document gives clear instructions on how to do administrative tasks. It describes when and why to do these tasks and suggests shell scripts that can help automate some tasks. It also serves as a quick reference for administrative procedures. Information is organized by tasks associated with major subject areas such as the processor (how to get UNIX System V Release 3.1 into operation and keep it going), the file system (how to build and maintain a file system), the user services (things you need to do for other users), the outside world (networking, inter-machine communication), and routine security procedures for UNIX system administration. It includes information about RFS administration.

Product Overview

Product Described:	386 UNIX System V
Prerequisites:	None
Audience:	Current and potential users
Document ID Number:	Part of Foundation Documentation Set (999-300-447) or ordered separately (999-300-428)

This overview describes the software and documents for UNIX System V Release 3.1 as packaged for the 386 Based Computer.

Topics covered include the following: an overview of UNIX System V describing the kernel, shell, and file system; benefits of the UNIX operating system; contents of UNIX System V Release 3.1, including descriptions of each UNIX System V Utilities package; summary of available documentation; and descriptions of some selected additional software products for use with UNIX System V.

Programmer's Guide

Product Described:	386 UNIX System V
Prerequisites:	<i>User's/System Administrator's Reference Manual</i> <i>Programmer's Reference Manual</i>
Audience:	All programmers
Document ID Number:	Part of Software Development Documentation Set (999-300-446)

This is a two-volume document set. The document discusses the UNIX system programming environment as it appears to programmers. It describes relevant utilities (compilers, debuggers, etc.) and presents a generic view of how the UNIX system interfaces with a language (system calls, standard libraries, etc.).

Document Descriptions

This document also defines such UNIX system tools as the C language, the Common Object File Format, and the Link Editor command language. It also includes tutorials on: Shared Libraries, **color curses/terminfo**, File and Record Locking facilities, Inter-Process Communication facilities, **awk** (pattern scanning and processing), **lex** (simple lexical analysis of text), **SCCS** (maintains versions of files automatically), **sdb** (symbolic program debugger), **yacc** (converts a set of rules into tables for use in parsing), **ETI** (Extended Terminal Interface), and **FMLI** (Forms and Menus Language Interpreter). Illustrations typically assume the tools will be used with C language programs.

It also describes the C Programmer's Productivity Tools (CPPT) product which contains two utilities: the **cscope** browser for examining or editing C source files, and the **lprof** profiler for line by line frequency profiling (determining the number of times each line of source code is executed). This document provides instructions for using **cscope** and **lprof**, and detailed examples of using these tools to improve C programs.

Programmer's Reference Manual

Product Described:	386 UNIX System V
Prerequisites:	<i>Programmer's Guide</i>
Audience:	All programmers
Document ID Number:	Part of Software Development Documentation Set (999-300-446)

This manual contains the manual pages that describe the programming features of the UNIX System V features available to users who have the C Programming Language Utilities and Advanced Programming Utilities products. Included are descriptions of commands, system calls, subroutines, libraries, file formats, and miscellaneous information associated with these products. This document describes the UNIX Software Development Set Utilities. It also contains manual pages for libraries that are included in the binary UNIX System V Release 3.1 product, such as **libcurses**, and **libraries**.

Release Notes, Operating System

Product Described: 386 UNIX System V
Audience: System administrators
Document ID Number: Part of Foundation Documentation Set (999-300-447)

This document is intended for customers of UNIX System V Release 3.1. It contains the following: a summary of the new features of UNIX System V Release 3.1 for this release, compatibility information describing last minute changes or corrections to the information on software installation and a list of software work-arounds.

Also, provided is a summary of the networking-related features of this release, including how these features affect current users (compatibility information) and a list of software work-arounds. Network Support Utilities is required if your system has Remote File Sharing, STREAMS Mechanisms and Tools, the Transport Interface, Media-independent uucp, and the listener.

Release Notes, Software Development Set

Product Described: 386 UNIX System V
Prerequisites: None
Audience: Programmers
Document ID Number: Part of Software Development Documentation Set (999-300-446)

This document describes the software features and software notes that are applicable to this release in association with the following:

- C Programming Language Utilities
- C Programming Productivity Tools
- Extended Terminal Interface
- Advanced Programming Language Utilities.

Service Manual

Product Described:	6386 WGS
Prerequisites:	none
Audience:	VAR's, IHV's, field technicians, and customer
Document ID Number:	999-300-396

This manual covers the hardware aspects of the AT&T 6386 WGS Processor, which includes:

- System and Optional module descriptions and installation procedures
- Diagnostic programs executed on power-up
- Removal and reassembly procedures for main modules of the system
- Organization and descriptions of the system test, used to ensure system modules are functioning correctly
- Spare parts ordering information.

Basic information on MS-DOS operations is also included.

Shell Commands and Programming

Product Described:	UNIX System V
Prerequisites:	<i>User's/System Administrator's Reference Manual</i>
Audience:	All users
Document ID Number:	307-260

This document tells how to use the shell command interpreter to communicate with the UNIX system, and the shell programming language to do simple or complex procedures.

For example, the shell command language enables you to redirect output, string commands together so the output of one is used as the input to the next, and automatically generate filenames that contain similar characters. The shell programming language enables you to save a series of routine commands in a file, define variables, perform loops, perform tests, or perform sequential operations, just like a conventional programming language. There are many well-explained examples.

STREAMS Primer

Product Described:	386 UNIX System V
Prerequisites:	<i>Programmer's Guide</i> and a background in data communications and networking
Audience:	Knowledgeable application programmers and system programmers
Document ID Number:	Part of Foundation Documentation Set (999-300-447)

STREAMS is a major building block in the networking services provided by the UNIX system. This primer gives a high-level technical overview including: a summary of the STREAMS mechanism; a description of the applications and benefits of STREAMS; illustrations and definitions of STREAMS terminology; a simple example, discussed from both the applications and systems programmer's points of view; a discussion of the facilities provided by STREAMS, and a comparison of certain features of character input/output device drivers to STREAMS modules and drivers.

STREAMS Programmer's Guide

Product Described:	386 UNIX System V
Prerequisites:	<i>STREAMS Primer</i>
Audience:	Knowledgeable application programmers and system programmers
Document ID Number:	Part of Software Development Documentation Set (999-300-446)

This document is composed of two parts: one for application programmers who use STREAMS modules and one for system programmers who write STREAMS modules.

The first part of this document will provide design and programming information, as well as checklists, for the development and installation of STREAMS applications.

The second part of this document will provide STREAMS module design and programming information. It contains checklist information for the development and installation of STREAMS modules and device drivers.

System V Interface Definition

Product Described:	UNIX System V
Prerequisites:	<i>Programmer's Guide</i>
Audience:	Applications and system programmers
Document ID Number:	307-131

This document specifies an operating system environment where applications can be written to be independent of any particular computer hardware. It is applicable from personal computers up to mainframes. Users who conform to the System V Interface Definition (SVID) can take advantage of changes in technology and still preserve their software investment.

The *SVID* is a Base Interface Definition, plus a series of Extensions. The Base Interface Definition describes the services that all System V operating systems must provide. The extensions to the base are not required; however, when a component is present it must conform to the specified functionality. The emphasis is on defining a common computing environment for applications and users, and not on the internals of the operating system (such as the scheduler and memory manager).

System V Verification Suite Product Overview

Product Described:	System V Verification Suite (SVVS)
Prerequisites:	<i>System V Interface Definition</i>
Audience:	System V operating system developers
Document ID Number:	307-171

This overview describes software features, gives a brief technical description, and lists documents for the System V Verification Suite (SVVS).

SVVS tests that the resources of a System V operating system conform to the *System V Interface Definition* (SVID). In this way, SVVS verifies that source level interfaces are consistent across System V environments. An applications program that only uses components that are available in the SVID should be compatible with and portable to any system that provides the System V interface.

The SVVS tests can be invoked through a test driver. A report generator formats and prints test results. The test driver and report generator are controlled by a user-friendly front end.

System V Verification Suite Release Notes

Product Described: System V Verification Suite (SVVS)
Document ID Number: 307-172

This document describes how to install System V Verification Suite on the 386 UNIX System V. In addition, it gives transition information for owners of earlier product release.

System V Verification Suite User's Guide

Product Described: System V Verification Suite (SVVS)
Prerequisites: *System V Verification Suite Product Overview*
Audience: System V operating system developers
Document ID Number: 307-173

This guide describes the verification tests and what; specifically, the verifier tests, as well as the criteria used for testing and grading the system. The user interface is explained in detail, including the driver, journal, report generator, tests, and machine dependencies. Test results are explained with respect to general and test-specific errors. All manual pages applicable to SVVS are contained in an appendix.

UNIX System V User's Guide

Product Described: UNIX System V
Prerequisites: None
Audience: All users
Select Code: 307-683

This guide introduces a user to UNIX System V, the operating system of the 386 UNIX System V. The guide begins with a general description of the UNIX system, followed by instructions for using a terminal, and instructions for using the file system. Next, it presents tutorials on the three most commonly used tools of the UNIX system: the line editor (**ed**), the screen editor (**vi**), and shell programming (**sh**). Finally, the guide teaches how to communicate with other users of a UNIX system. The reader learns how to exchange messages and files by executing commands such as **mail**, **mailx**, **uuto**, **uupick**, and **uucp**. The guide also includes a glossary and an index.

User's/System Administrator's Reference Manual

Product Described: 386 UNIX System V
Prerequisites: *Operation/System Administration Guide*
Audience: System administrators
Document ID Number: 999-300-424

This document describes the UNIX system commands used by system administrators. When appropriate, diagnostic indications, warnings, examples of use, and where to find related information are given.

An "Introduction" describes how to use the manual, and gives basic information needed to get started – logging in and out, and how to run a program. There is a Permuted Index to the command names, and a description of the commands.

vi User's Handbook, The

Product Described: UNIX System V
Prerequisites: *User's/System Administrator's Reference Manual*
Audience: All users
Document ID Number: 307-138

This short handbook is an introduction and a reference to the **vi** (**visual**) text editor, for both beginning and experienced users. It includes a summary of **vi** commands, tells how to enter and exit the **vi** editor, display text, move the cursor, search for patterns, add changes, delete text, undo changes, copy and move text, manipulate files, set the **vi** environment, and use **vi** macros and shell commands.

Visual Editor Quick Reference

Product Described: UNIX System V
Prerequisites: *User's/System Administrator's Reference Manual*
Audience: Visual editor users
Document ID Number: 307-262

This reference card tells how to enter and leave the **vi** editor, position the cursor, create text, make corrections during text creation, modify text; undo, redo, and retrieve changes; do global searches and changes; manipulate files; escape to the shell; mark and return; do miscellaneous operations; and set options.

Writing Efficient Programs

Product Described: C Programmer's Productivity Tools
Prerequisites: Knowledge of programming principles and
 Programmer's Guide
Audience: Experienced programmers
Document ID Number: 320-004

This document, written by Jon Bentley and published by Prentice-Hall, addresses the problem of efficiency; often crucial to the usefulness of a software system. A set of general rules to achieve efficiency are described and illustrated with fragments of PASCAL code; examples of use in real systems; and in-depth studies of several subroutines. Challenging exercises conclude each chapter. It also discusses issues of maintenance, robustness, and development time. Appendices give details of the example programs used in the text, a summary of the rules, and a short overview of the PASCAL dialect used in the book.

By Document Title

Figure 4-1: Documents Sorted by Document Title

Document Title	Document ID Number
6386 WGS User's Guide	999-300-395
AT&T Computer Family Course Catalog	300-002
AT&T Computer Software Catalog	311-020
AT&T Computer Systems Catalog	309-500
C Programmer's Handbook	320-022
C Programming Language, The	307-136
Cartridge Tape Operation Guide	See Note 1
Documentation Roadmap	999-300-427 (See Note 3) 999-300-447
Editing Guide	307-258
Hardware Reference Manual	999-300-397
Intergrated Software Development Guide	999-300-426
Installation Manual for AT&T Terminals	305-465
Network Programmer's Guide	999-300-446 (See Note 2)
Operations/System Administration Guide	999-300-447 (See Note 2)
Product Overview	999-300-428 (See Note 3) 999-300-447
Programmer's Guide	999-300-446 (See Note 2)
Programmer's Reference Manual	999-300-446 (See Note 2)

By Document Title

Document Title	Document ID Number
Release Notes, Operating System	999-300-447 (See Note 2)
Release Notes, Software Development Set	999-300-446 (See Note 2)
Service Manual	999-300-396
Shell Commands and Programming	307-260
STREAMS Primer	999-300-447 (See Note 2)
STREAMS Programmer's Guide	999-300-446 (See Note 2)
System V Interface Definition	307-131
System V Verification Suite Product Overview	307-171
System V Verification Suite Release Notes	307-172
System V Verification Suite User's Guide	307-173
UNIX System V User's Guide	307-231
User's/System Administrator's Reference Manual	999-300-447 (See Note 2)
vi User's Handbook, The	307-138
Visual Editor Quick Reference	307-262
Writing Efficient Programs	320-004

NOTES

1. This document is only available with the purchase of software.
2. This document is one of several which are available as a whole set.

3. This document can be ordered separately or as part of a whole set. First 9-digit number is used if you want to order separately. Second 9-digit number is used if you want this document as part of the whole set.

By Document ID Number

Figure 4-2: Documents Sorted by Document ID Number

Document ID Number	Document Title
300-002	AT&T Computer Family Course Catalog
305-465	Installation Manual for AT&T Terminals
307-260	Shell Commands and Programming
307-131	System V Interface Definition
307-136	C Programming Language, The
307-138	vi User's Handbook, The
307-171	System V Verification Suite Product Overview
307-172	System V Verification Suite Release Notes
307-173	System V Verification Suite User's Guide
307-231	UNIX System V User's Guide
307-258	Editing Guide
307-262	Visual Editor Quick Reference

Document ID Number	Document Title
309-500	AT&T Computer System Catalog
311-020	AT&T Computer Software Catalog
320-004	Writing Efficient Programs
320-022	C Programmer's Handbook
999-300-395	6386 WGS User's Guide
999-300-396	Service Manual
999-300-397	Hardware Reference Manual
999-300-426	Intergrated Software Development Guide
999-300-427	Documentation Roadmap
999-300-428	Product Overview
999-300-446	Software Development Set which includes: Network Programmer's Guide Programmer's Guide Programmer's Reference Manual Software Development Set Release Notes STREAMS Programmer's Guide
999-300-447	Foundation Set which includes: Documentation Roadmap Operating System Release Notes Operating/System Administration Guide Product Overview STREAMS Primer User's/System Administrator's Reference Manual

By Documentation Sets

Figure 4-3: Documents Sorted by Documentation Sets

Documentation Set: FOUNDATION

Document Title

Documentation Roadmap

Operations/System Administration Guide

Product Overview

Operating System Release Notes

STREAMS Primer

User's/System Administrator's Reference Manual

All Foundation documents are part of a set associated with Document ID number 999-300-447.

Documentation Set: DEVELOPMENT

Document Title

Network Programmer's Guide

Programmer's Guide

Programmer's Reference Manual

Software Development System Release Notes

STREAMS Programmer's Guide

All Software Development documents are part of a set associated with Document ID number 999-300-446

Documentation Set: ISV-VAR's

Document Title	Document ID Number
Intergrated Software Development Guide	999-300-426

Documentation Set: Cartridge Tape

Document Title

Cartridge Tape Operation Guide

This document has no Document ID Number. It can only be obtained with the software.

Glossary

The Glossary defines words and phrases that have become part of the everyday vocabulary of people who use AT&T Computers and the UNIX operating system.

add-on product

A product that AT&T markets for use with the UNIX operating system.

boot

To start the operating system. So called because the kernel must bootstrap itself from secondary storage into memory. No login or process persists across a boot.

command

1. An instruction to the shell, usually to run a program as a child process. 2. By extension, any executable file, especially a utilities program.

device

1. A file that is neither an ordinary text file nor a directory. Tape drives, the null device, and special files are examples. 2. A physical input/output unit.

diagnostic

A diagnostic is a message printed at your terminal that identifies and isolates program errors.

directory

A file that contains files and other directories rather than data or software itself. The organizing principle of the file system, a directory consists of entries that specify further files and constitutes a node of the directory tree.

execute

Informally, to run a program.

file

1. In general, a potential source of input or a destination for output. 2. A directory entry; several directory entries may name the same file.

file system

1. A collection of files that is accessible by some path from the root directory of the file system. 2. The collection of all files on a computer. 3. The part of the kernel that deals with file systems.

kernel

The UNIX system proper; resident code that implements the system calls.

Glossary

- library** An archive of object files from which the link editor may select functions and data as needed.
- operating system** The program that manages the resources of the computer. It takes care of such things as input/output procedures, process scheduling, the file system, and removing this burden from user programs.
- program** 1. An executable file. 2. A process. 3. All the usual meanings.
- shell** 1. The program (called **sh**) that causes other programs to be executed on command; the shell is usually started on a user's behalf when the user logs in. 2. By analogy, any program started upon logging in.
- spool** To collect and serialize output from multiple processes competing for a single output service, such as a printer or automatic calling unit.
- spooler** A program that spools.
- spool area** A directory in which a spooler collects work.
- system calls** 1. The set of system primitive functions through which all system operations are allocated, initiated, monitored, manipulated, and terminated. 2. The system primitives invoked by user processes for system-dependent functions, such as I/O, process creation, etc.
- UNIX system** The name of a family of operating systems such as UNIX System V. (UNIX is not an acronym.) A trademark of AT&T, UNIX should be used as an adjective; for example, "UNIX system," "UNIX software."
- Utilities package** A group of programs that performs related functions; examples of packages are directory and file management, performance measurement, and line printer spooling.

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