DEFENSE COMMUNICATIONS AGENCY

DDN PROTOCOL IMPLEMENTATIONS AND VENDORS GUIDE

FEBRUARY 1989

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19. ABSTRACT (Continue on reverse if necessary and identify by block number)

This guide provides information about implementations and products compatible with the DOD Defense Data Network (DDN) suite of data communication protocols. The first section supplies background information about DDN protocol policy, and about the protocols themselves. Such information includes qualification testing and evaluation procedures, and how to obtain pertinent documentation. The next two sections of the document list software implementations alphabetically by machine type, and hardware implementations alphabetically by company. Information given about products includes their history, documentation, contact person, and distributor. The fourth section describes analysis tools. It includes information about network analysis products, such as protocol and network analyzers. This guide does not specifically endorse or recommend any product.

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It is the intent of the DDN Network Information Center (NIC) to make the DDN Protocol Implementations and Vendors Guide widely available to subscribers of the DDN. The Guide may be obtained in hardcopy or machine-readable form. Hardcopy is available from the NIC for $45.00 ($55.00 overseas) to cover the costs of reproduction and handling. Send check or purchase order to the DDN Network Information Center, SRI International, Room EJ291, 333 Ravenswood Avenue, Menlo Park, CA 94025. Copies are available online to DDN users who have access to the file transfer services, FTP or KERMIT, using pathname NETINFO:VENDORS-GUIDE.DOC. The hardcopy version is published twice a year in February and August.

NOTICE

The DDN Protocol Implementation and Vendors Guide is for informational purposes only. Inclusion of an implementation or product in this Guide does not constitute an endorsement or an official recommendation on the part of the Defense Communications Agency (DCA), the Defense Advanced Research Projects Agency (DARPA), the DDN Network Information Center (NIC), or the Department of Defense (DoD). Omission of any vendor or implementor has no significant implication, other than that the NIC had no information about that product or implementation, or that the information was not available at the time of publication. Anyone planning to use the hardware or software described in this Guide is advised to thoroughly investigate the suitability, quality, costs, available support, and other related details pertaining to any given selection, and to make sure that products or implementations being considered for use on the Defense Data Network (DDN) comply with the official DoD Military Standard (MIL-STD) protocols.
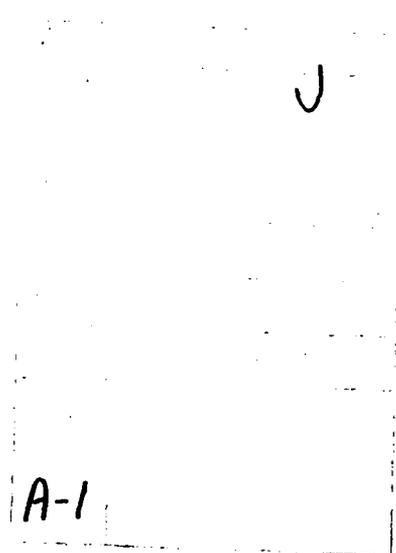
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ACKNOWLEDGMENTS

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INTRODUCTION

This is a guide to implementations and products associated with the DoD Defense Data Network (DDN) suite of data communication protocols, notably TCP/IP and OSI implementations. It is published for informational purposes only by the DDN Network Information Center at SRI International on behalf of the Defense Communications System Data Systems (DCS DS) Office to assist those who wish identify existing implementations or products incorporating the DoD protocols.

The guide has four major sections. Product entries listed in Sections Two through Four are based on information provided by each vendor. For this reason, some entries contain more descriptive material than others.

Section One contains background information about DoD protocols, DDN protocol policy, and qualification testing and evaluation procedures. It also explains how to obtain specific DoD protocol specifications and related documentation.

Sections Two through Four contain the implementation descriptions. Section Two lists software implementations, sorted alphabetically by company machine type. The Digital Equipment Corporation and IBM Corporation sections cover a wide range of machinery software from PC/compatibles to minis and mainframes; each is listed alphabetically within each machine category. A "Multiple Machine Implementations" list completes the Software section.

Section Three contains hardware implementations sorted alphabetically by company machine type. It concludes with a list of multiple machine implementations.

Section Four contains products used as network and protocol analysis tools.

The index at the back of the book can assist in locating particular implementations. It is sorted by operating system, machine type, company name and important keywords such as "X.25," "OSI," and "Gateway."

This document is available to Internet users as a public file on the SRI-NIC.ARPA host (26.0.0.73, 10.0.0.51). The file can be copied via FTP or KERMIT using the pathname: NETINFO:VENDORS-GUIDE.DOC.

NOTE FOR VENDORS:

This document is produced twice a year in hardcopy form. The release dates are FEBRUARY and AUGUST. If you have new product information or corrections to this text we must receive them no later than January 10th and July 10th respectively in order to include them in either edition. The last page of the guide contains a convenient form for mailing in new or revised vendor information. Network users may also send the form via electronic mail to NIC@SRI-NIC.ARPA.

1. BACKGROUND

1.1. The DoD Protocol Suite

In 1982 the Defense Advanced Research Projects Agency (DARPA) Transmission Control Protocol (TCP) and Internet Protocol (IP) were designated official DoD network communication protocols by the Office of the Secretary of Defense (OSD). These protocols are currently in use by the DDN, as is a DoD version of X.25. In late 1987 DoD began its transition to international protocols. (See Section 1.1.3 below.) Subscribers to the DDN need implementations and vendor products that incorporate both the TCP/IP and the OSI-based protocols, and protocols that assist with conversion between the two. This guide provides a list of such implementations and products.

1.1.1. DoD Protocol Selection and Announcement Procedures

Official Military Standard (MIL-STD) protocols are selected through a rigorous review process by the military services and the Defense Communications Agency (DCA). Once selected, they are deposited at the Naval Publications and Forms Center and are announced in the catalogs published by that organization as official military standards. See Section 1.3.1 for guidelines on ordering MIL-STDs.

The Department of Defense and each branch of the military have their own protocol announcement procedures as do non-military government agencies, such as the National Bureau of Standards. Commercial, national, and international standards organizations also have their own review and announcement procedures. See IEEE Communications Magazine, Vol. 23, No. 1, 43-55 (January 1985) for an excellent overview of the standardization practices of the various protocol standardization bodies within and outside of DoD.

1.1.2. OSD Directives

A number of memoranda from the Office of the Secretary of Defense have been issued which are specific policy statements regarding the DoD protocols. These memoranda are available via FTP, KERMIT or SERVICE, the NIC's automatic electronic mail service, from the SRI-NIC.ARPA host computer using the following pathnames:

Host-to-Host Protocols for Data Communication Networks	PROTOCOLS:OSDIR-1.TXT
DoD Policy on Standardization of Host-to-Host Protocols for Data Communications Networks	PROTOCOLS:OSDIR-2.TXT
DDN Implementation	PROTOCOLS:OSDIR-3.TXT
DoD Policy on DDN Protocols	PROTOCOLS:OSDIR-4.TXT
DoD Statement on NRC Report on TP4	PROTOCOLS:OSDIR-5.TXT
Open Systems Interconnection Protocols	PROTOCOLS:OSDIR-7-87.TXT

1.1.3. DoD Plans for the Transition to International Protocols

Vendors and implementors should be aware that the DoD has recently announced that it intends to transition to international protocols, when and if these protocols meet the requirements of the DoD. It is anticipated that any such transition will take place gradually and will not significantly impact the functionality, or the current level of interoperability on the DDN. To assist with this transition, this guide will include transition products as they are developed.

The following is an extract from a memorandum from the office of the Assistant Secretary of Defense for Command, Control, Communications and Intelligence that specifically addresses the Department of Defense plans to transition from the current suite of military standard data communications protocols based on the TCP/IP protocols to the suite of networking protocols based on the international standards. (Available online in its entirety as PROTOCOLS:OSDIR-7-87.TXT from the SRI-NIC.ARPA host computer.)

MEMORANDUM

MEMORANDUM FOR:
        SECRETARIES OF THE MILITARY DEPARTMENTS
        CHAIRMAN, JOINT CHIEFS OF STAFF
        DIRECTORS, DEFENSE AGENCIES

SUBJECT: Open Systems Interconnection Protocols

There has been recent rapid progress in the specification and implementation of computer protocols based on the International Organization for Standardization model for Open Systems Interconnection (OSI). The Government OSI Profile (GOSIP), dated 22 April 1987, contains sufficient information to specify adequately and acquire interoperable vendor implementations of OSI message handling and file transfer capabilities. Therefore, the policy on standardization of host-to-host protocols for data communications, promulgated by USDR&E memo of 23 March 1982, is modified as follows. The OSI message handling and file transfer protocols, together with their underlying protocols as defined in GOSIP, are adopted as experimental co-standards to the DoD protocols which provide similar services (MIL-STDs 1777, 1778, 1780, and 1781). These OSI protocols may be specified in addition to, in lieu of, or as an optional alternative to DoD protocols, in cases where the current DoD protocol applicability statements apply. They are designated as experimental because of the limited operational experience currently available with the OSI protocols and the limited operational, testing, and security environment currently defined in GOSIP. Services and agencies choosing to implement OSI protocols at this time should carefully evaluate these factors and be prepared to deal with the complications which may accompany the introduction of new technology.

It is intended to adopt the OSI protocols as a full co-standard with the DoD protocols when GOSIP is formally approved as a Federal Information Processing Standard. Two years thereafter, the OSI protocols would become the sole mandatory interoperable protocol suite; however, a capability for interoperation with DoD protocols would be provided for the expected life of systems supporting the DoD protocols.

1.1.4. Government OSI Profile (GOSIP)

A Federal Information Processing Standard (FIPS) has been issued by the National Bureau of Standards (NBS) for GOSIP in the Federal Register, V52, Vo. 208, Oct. 28, 1987.

This FIPS proposes a Federal Information Processing Standard for a Government Open Systems Interconnection Profile (GOSIP) and outlines the policy of the Federal government, including the DoD transition from TCP/IP to ISO international protocols.

The GOSIP cites the Implementation Agreements for Open Systems Interconnection Protocols, the Manufacturing Automation Protocol (MAP) and Technical and Office Protocols (TOP) specifications, as well as the numerous federal standards, military standards, and international standards from ISO and CCITT upon which the "Workshop Agreements" are based.

GOSIP supports the Message Handling Systems (MHS) and File Transfer, Access, and Management applications (FTAM). GOSIP also supports interconnection of the following network technologies: CCITT Recommendation X.25; Carrier Sense Multiple Access with Collision Detection (IEEE 802.3); Token Bus (IEEE 802.4); and Token Ring (IEEE 802.5). Additional applications and network technologies will be added to later versions of the GOSIP document or vendor products in which such protocols are embedded.

Once the GOSIP specification is accepted, it is expected to become mandatory after two years for new acquisitions across the entire Federal Government, including DoD. DoD is expected to announce Co-Standard status for the ISO/OSI protocols in the same timeframe. A detailed interoperability and transition plan is under development by DoD for DoD networks.

1.2. The Defense Data Network (DDN)

All equipment attached to the DDN by military subscribers must incorporate, or be compatible with, the DoD internet and transport protocols. In addition, the OSI message handling and file transfer protocols, together with their underlying protocols as defined in GOSIP, have been adopted as experimental co-standards to the DoD protocols.

Potential implementors should be aware that protocol implementations for use in the DoD environment MUST comply with the MIL-STD versions of the protocol specifications. It is also important that the LATEST version of these specifications be used. Most of the protocol documents needed for implementation purposes are included in the DDN Protocol Handbook issued by the DDN Network Information Center. This handbook can serve as a useful reference to DoD protocols; however, implementors using this or any other similar document should always check to see if there are any later protocol or policy changes that apply.

1.2.1. DDN Protocol Qualification Testing

Subscriber interfaces which are to be used on the DDN must be qualified by meeting a series of performance tests. The results of these tests must satisfy a Technical Acceptance Team made up of personnel from the DCS DS, the Defense Communications Engineering Center (DCEC), or other appropriate assignees. The DCS DS has the final approving authority for subscriber interface qualification. Currently, X.25 (up to level 3) is the only protocol being tested. There are plans to test TCP/IP and related application software at DCEC. TCP/IP may be tested by DCA B613 in the future.

1.3. Obtaining Protocol Documentation

1.3.1. Military Standards

Official Military Standards (MIL-STDS) may be ordered from the

Naval Publications and Forms Center, Code 3015
5801 Tabor Avenue
Philadelphia, PA 19120
Phone: (215) 697-3321 (order tape)
(215) 697-4834 (conversation)

1.3.2. RFCs

Requests for Comments (RFCs) are a set of protocol-related technical notes available from the NIC. Network users may obtain online copies from the SRI-NIC.ARPA host using the file transfer services, FTP or KERMIT or SERVICE. Pathnames are of the format RFC:RFCnnn.TXT (where "nnn" is the number of the RFC).

RFCs can also be purchased in hardcopy from the NIC. The prices are as follows:

RFC Index	$5.00 domestic/$8.00 foreign
RFCs	$5.00 domestic/$8.00 foreign (under 100 pp.)
RFCs	$10.00 domestic/$13.00 foreign (100 pp. & over)
	(RFC Nos. 806,809,841,905,909,1000,1013,1045)

An RFC Subscription service is available for $200.00 per year domestic/$230.00 foreign.

1.3.3. DDN Protocol Handbook

The DDN Protocol Handbook is a three-volume reference set containing official DoD network protocols and experimental ARPANET protocols, together with military standards, implementation guidelines, and related background information. Published by the NIC.

NIC Price: $110.00 per set domestic/$175.00 per set foreign

1.3.4. Government OSI Profile (GOSIP)

Network users may obtain online copies from the SRI-NIC.ARPA host via FTP (using the anonymous login convention), KERMIT, or SERVICE by using the following pathnames:

PROTOCOLS:GOSIP-FEDREG.TXT	Federal Register announcement of the FIPS
PROTOCOLS:GOSIP-V1.DOC	The GOSIP Profile
PROTOCOLS:OSDIR-7-87.TXT	The OSD Directive to proceed with policy within the DoD
PROTOCOLS:GOSIP-FIPS-DRAFT.TXT	The GOSIP FIPS draft
PROTOCOLS:NBSOSI-AGREEMENTS.DOC	NBS OSI Implementation Agreements

1.3.9. NIC Document Ordering Information

Documents can be ordered from the NIC by sending a check, money order, or purchase order for the total amount in US dollars, made payable to SRI International. Non-military California residents must add 6.5% sales tax. Cash payments or charge cards are not accepted. For all orders, please include your full name, US mailing address with zip code, telephone number, and network mailbox (if available) and send to:

DDN Network Information Center
SRI International, Room EJ291
333 Ravenswood Avenue
Menlo Park, CA 94025
(800) 235-3155 or (415) 859-3695

Send online requests for an order form to NIC@SRI-NIC.ARPA, or call the NIC at one of the above telephone numbers.

1.3.10. NIC Shipping Information

DOMESTIC (USA and Canada): Orders are shipped via UPS ground service. Please allow 5-10 working days for delivery. Prices include postage.

OVERSEAS: Overseas orders are shipped via "air printed matter". Prices include postage.

SPECIAL: Orders will be shipped via courier services by special arrangement only. If you want an order shipped via one of these methods, please request a document order form from the NIC.

Hardcopy of the GOSIP document and the NBS OSI Implementation Agreements can be ordered from the NIC for $50.00 domestic/$90.00 foreign or from:

National Technical Information Service (NTIS)
U.S. Department of Commerce
5285 Port Royal Road
Springfield, VA 22161
(703) 485-4560 (order desk)

1.3.5. Blacker Front End Interface Control Document

The Blacker Front End Interface Control Document contains the specification for end-to-end data encryption on the DDN. It may be obtained via FTP or KERMIT from the SRI-NIC.ARPA host using pathname NETINFO:BLACKER.DOC and is also reproduced in the DDN Protocol Handbook.

1.3.6. DDN X.25 Host Interface Specification

This document contains the specific options and features of CCITT Recommendation X.25 (1980) and the Federal Information Processing Standard (FIPS) 100/Federal Standard 1041, (July 1983). Published by DCA, December 1983.

NIC Price: $10.00 domestic/$13.00 foreign

1.3.7. DDN Subscriber Interface Guide

The DDN Subscriber Interface Guide describes representative hardware connections to the DDN, and includes guidelines for connecting equipment to the DDN. Published by DCA, July 1983. An update to this document is pending.

NIC Price: $10.00 domestic/$13.00 foreign

1.3.8. DDN Subscriber Security Guide

This guide describes the security architecture of the DDN. Published by DCA, November 1983. An update to this document is pending.

NIC Price: $10.00 domestic/$13.00 foreign

2.2. APPLE COMPUTER, INC.

2.2.1. Apple Computer, Inc.

2.2.1.1. A/UX^{tm}

PRODUCT-OR-PACKAGE-NAME: A/UX^{tm}

DESCRIPTION:

A/UX is software that allows a Macintosh II to function as a network workstation in the Internet. When configured with the Ethertalk Interface Card (M0225), a Macintosh II running A/UX provides DoD Internet protocols, including TCP/IP, FTP, Telnet, SMTP, TFTP, ICMP, and UDP. In addition, A/UX supports BSD network extensions, including rlogin, rcp, remsh, rwho, talk, ruptime, rexec, and bind, and Sun Microsystems extensions, including XDR, RPC and NFS.

DOCUMENTATION:

Complete documentation is available from distributor under Apple Part Number M8044.

MACHINE-TYPE/CPU:

Apple Macintosh II

O/S:

A/UX is Apple's implementation of AT&T System V UNIX^{tm}

IMPLEMENTATION-LANGUAGE:

C and 68020 Assembly

DISTRIBUTOR:

Apple Computer, Inc.
20525 Mariani Avenue
Cupertino, CA 95014
(408) 996-1010

CONTACT:

Apple Customer Relations, (408) 973-2222

ORDERING-PROCEDURE:

Apple Customer Relations will refer inquiries to the appropriate distribution channel.

PROPRIETY-STATUS:

Apple Computer proprietary

INFORMATION-UPDATED:

February 1988

2. SOFTWARE IMPLEMENTATIONS

2.1. ALLIANT COMPUTER SYSTEMS CORP.

2.1.1. Concentrix

PRODUCT-OR-PACKAGE-NAME: Concentrix

DESCRIPTION:

Alliant Concentrix Operating System includes TCP/IP support for Ethernet, Hyperchannel and UltraNet. It also provides users with familiar DoD utilities such as FTP, Telnet and SMTP.

MACHINE-TYPE/CPU:

Alliant FX/Series and Visualization Series

O/S:

UNIX, Concentrix (BSD 4.3 compatible)

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

Alliant Computer Systems Corp.
One Monarch Drive
Littleton, MA 01460

CONTACT:

Daniel Palka, Product Manager, (508) 486-4950

ORDERING-PROCEDURE:

Bundled with Concentrix. Contact Alliant for details.

PROPRIETY-STATUS:

Proprietary to Alliant Computer

INFORMATION-UPDATED:

February 1989

2.2.2. Stanford University

2.2.2.1. SU-Mac/IP

PRODUCT-OR-PACKAGE-NAME: SU-Mac/IP

DESCRIPTION:

Version 3.0 of SU-Mac/IP is Stanford University's TCP/IP protocol package for Apple Computer's MacIntosh. This package includes the following clients: FTP; TELNET; FINGER; WHOIS; POP3 and SMTP. Concurrent sessions (multiple TELNET sessions, one FTP session, and one FINGER/WHOIS session) are allowed. MacIntosh facilities, like scroll-back (up to 512 lines) and cut-&-paste, are also supported. TELNET sessions provide VT100 terminal emulation and may be recorded in a file with the "photo" option. FTP has a friendly user interface with pop-up windows and buttons. Mac/MH, the mail program, provides the functionality of the RAND Mail Handler. Mac/MH uses pop-up windows and a button interface. SU-Mac/IP requires the Kinetics FastPath Appletalk-Ethernet gateway running KIP code. SU-Mac/IP also supports Ethernet-connected MacIntoshes. Next release will support Apple MacTCP, which is the TCP/IP driver implementation by Apple.

DOCUMENTATION:

A manual is provided for users and administrators.

MACHINE-TYPE/CPU:

Apple MacIntosh

O/S:

Apple MacIntosh

IMPLEMENTATION-LANGUAGE:

Macintosh Programmer's Workshop (MPW) Version 2.0 from Apple Inc.

DISTRIBUTOR:

IR/Networking and Communication Systems
115 Pine Hall
Stanford, CA 94305-4122

CONTACT:

Laura Kenny, macip@JESSICA.STANFORD.EDU, (415) 723-3909

ORDERING-PROCEDURE:

Contact Tom Clements at (415) 723-3748 for information and license agreement, available to degree-granting educational institutions and qualifying, non-profit organizations only. Others may be licensed from commercial suppliers.

PROPRIETY-STATUS:

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INFORMATION-UPDATED:

February 1988

2.3. AT&T INFORMATION SYSTEMS

2.3.1. AT&T 3B Series

PRODUCT-OR-PACKAGE-NAME: AT&T Enhanced TCP/IP WIN/3B

DESCRIPTION:

Package includes FTP, SMTP, TFTP, Telnet, rlogin, rwho, rcp (remsh), finger, TCP, UDP, ICMP and IP. Lower level protocols supported are Ethernet and X.25. Berkeley sockets interface and the AT&T Transport Level Interface (TLI) are supported.

DOCUMENTATION:

User Guide, Administrator Guide, Programmer Reference Manual, and Quick Reference Card

MACHINE-TYPE/CPU:

AT&T 3B/300, 3B/310, 3B/400, 3B5, 3B15, 3B20S and 3B20A computers

O/S:

UNIX System V, Release 2

IMPLEMENTATiON-LANGUAGE:

Mostly C (binary distribution)

DISTRIBUTOR:

AT&T Information Systems
1776 On The Green
Morristown, NJ 07960

CONTACT:

AT&T Information Systems, Application Software, (800) 247-1212

ORDERING-PROCEDURE:

Contact above

INFORMATION-UPDATED:

April 1986

2.4. BOLT BERANEK AND NEWMAN INC.

2.4.1. BBN-Gateway Software

PRODUCT-OR-PACKAGE-NAME: BBN-Gateway Software DESCRIPTION:

In an effort to provide improved service in the gateways maintained at BBN, a new gateway implementation written in MACRO-11 instead of BCPL has been developed. The MACRO-11 gateway provides users with internet service that is functionally equivalent to that provided by the current BCPL gateways with the following exceptions:

- Packets with options will be fragmented if necessary.

- ICMP protocol is supported.

- The gateway sends Time Exceeded, Parameter Problem, Echo, Information Request, Destination Unreachable, and Redirect ICMP messages.

- Initially, Source Quench and Timestamp packets will not be supported.

- Class A, B, and C Network Address formats as specified in the September 1981 Internet Protocol Specification (RFC791) are supported.

The gateway contains an internetwork debugger (XNET) that allows the gateway to be examined while it is running. Buffer space is greatly expanded to provide better throughput. ARPANET RFNMs are counted so the gateway will not send more than 8 outstanding messages to an ARPANET host.

IMPLEMENTATION-LANGUAGE:

MACRO-11

CONTACT:

Robert Hinden, (hinden@BBNCCV.ARPA), (617) 873-3757

INFORMATION-UPDATED:

February 1986

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2.5. CRAY RESEARCH, INC.

2.5.1. Cray TCP/IP

PRODUCT-OR-PACKAGE-NAME: UNICOS TCP/IP

DESCRIPTION:

UNICOS TCP/IP is the integrated networking protocol for the Cray operating system UNICOS. This implementation of TCP/IP is based on the Berkeley 4.3BSD tahoe distribution and contains support for the IP, ICMP, TCP, UDP, and SMTP protocols. Most of the BSD utilities are also supported, including telnet, ftp, rcp, rsh, rlogin, rexec, lpr, lpq, lprm, talk, ntalk, netstat, sendmail, finger, and ping. Other supported features including both internet and UNIX domain sockets, subnet address, and the domain name server named and inetd support.

Several performance improvements have been incorporated including both the Berkeley Van Jacobson enhancements and additional improvements made by Cray. The Van Jacobson enhancements are slow start TCP congestion control, round trip time variance estimation, exponential, retransmit timer backoff, dynamic TCP window sizing congestion control, and the fast retransmit algorithm. Cray has added a Cray specific mbuf management scheme plus extensive use of the Cray scalar, vector CPT hardware, and the fast I/O hardware. The combination of these improvements have resulted in TCP transfer rates reaching over 500 hundred megabits per second in software loopback.

The TCP protocols and utilities conform to the Internet RFC specifications, and DOD MIL-STD-1777 and MIL-STD-1778.

In combination with UNICOS TCP/IP, support is also available for SUN client and server NFS, SUN RPC/XDR, a special User and Group id mapping capability, Yellow Pages as an optional method for authenticating user passwords, Lock Manager, and REX. The MIT X-Windows System Version II, Release 3 is also available.

Network media support is provided for the Cray FEI-3 Network Interface for VME based systems, the Cray HSX 100 Megabyte per second High Speed Channel, NSC HYPERChannel A-Series and NSC HYPERChannel DX equipment, CNT LANlord products, and Ethernet thru Cray channel connected gateway devices from NSC and CNT.

DOCUMENTATION:

Complete documentation is available to Cray customers.

MACHINE-TYPE/CPU:

CRAY Y-MP, CRAY X-MP EA, CRAY-2, CRAY X-MP computer systems

O/S:

The UNICOS operating system is derived from the AT&T UNIX System V operating system. UNICOS is also based in part on the Fourth Berkeley Software Distribution under license from The Regents of the University of California.

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

Cray Research, Inc.
608 Second Avenue South
Minneapolis, MN 55402
(612)333-5889

Telex: 4991729

CONTACT:

David D. Thompson, Manager
Networking and Communications Group
Cray Research, Inc.
1440 Northland Drive
Mendota Heights, MN 55120
(612) 681-3232

ORDERING-PROCEDURE:

Contact any Cray Research sales office.

PROPRIETY-STATUS:

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UNIX is a registered trademark of AT&T.

Ethernet is registered trademark of Xerox Corporation. HYPERChannel and HYPERChannel DX are registered trademarks of Network Systems Corporation. LANlord is a trademark of Computer Network Technology, Inc.

INFORMATION-UPDATED:

February 1989

2.6. DATA GENERAL

2.6.1. Claflin & Clayton

2.6.1.1. 4100 RDOS TCP/IP

PRODUCT-OR-PACKAGE-NAME: 4100 RDOS TCP/IP

DESCRIPTION:

The 4100 Protocols allow Data General RDOS systems to communicate using TCP/IP over Ethernet. Client TELNET, SMTP Mail, Client FTP and Server FTP applications are provided.

DOCUMENTATION:

Available from vendor

MACHINE-TYPE/CPU:

Data General NOVA, DESKTOP, ECLIPSE, and ECLIPSE/MV systems

O/S:

Mapped RDOS

DISTRIBUTOR:

Claflin & Clayton, Inc.
117 Maynard Street
Northboro, MA 01532

CONTACT:

Heather Claflin, (508) 393-7979

ORDERING-PROCEDURE:

Contact distributor

PROPRIETY-STATUS:

Product of Claflin & Clayton, Inc.

INFORMATION-UPDATED:

August 1988

2.6.1.2. 4200 AOS TCP/IP

PRODUCT-OR-PACKAGE-NAME: 4200 AOS TCP/IP

DESCRIPTION:

The 4200 Protocols allow Data General RDOS systems to communicate using TCP/IP over Ethernet. Client TELNET, Server TELNET, SMTP Mail, Client FTP and Server FTP applications, as well as an applications level TCP interface are provided.

DOCUMENTATION:

Available from vendor

MACHINE-TYPE/CPU:

Data General DESKTOP and ECLIPSE systems

O/S:

AOS

DISTRIBUTOR:

Claflin & Clayton, Inc.
117 Maynard Street
Northboro, MA 01532

CONTACT:

Heather Claflin, (508) 393-7979

ORDERING-PROCEDURE:

Contact distributor

PROPRIETY-STATUS:

Product of Claflin & Clayton, Inc.

INFORMATION-UPDATED:

August 1988

2.6.1.3. 4300 AOS/VS TCP/IP

PRODUCT-OR-PACKAGE-NAME: 4300 AOS/VS TCP/IP

DESCRIPTION:

The 4300 Protocols allow Data General RDOS systems to communicate using TCP/IP over Ethernet. Client TELNET, Server TELNET, SMTP Mail, Client FTP and Server FTP applications, as well as an applications level TCP interface are provided.

DOCUMENTATION:

Available from vendor

MACHINE-TYPE/CPU:

Data ECLIPSE/MV systems

O/S:

AOS/VS

DISTRIBUTOR:

Claflin & Clayton, Inc.
117 Maynard Street
Northboro, MA 01532

CONTACT:

Heather Claflin, (508) 393-7979

ORDERING-PROCEDURE:

Contact distributor

PROPRIETY-STATUS:

Product of Claflin & Clayton, Inc.

INFORMATION-UPDATED:

August 1988

2.6.2. Data General

2.6.2.1. DG/TCP/IP (AOS/VS)

PRODUCT-OR-PACKAGE-NAME: DG/TCP/IP (AOS/VS)

DESCRIPTION:

Data General provides the DoD community with the DoD Internet protocol suite, including TCP, IP, and higher level protocols, SMTP, FTP and TELNET. Implementations include IEEE 802.3 for LAN access and a DCA Standard certified X.25 interface for DDN access.

DOCUMENTATION:

Complete documentation is available to Data General customers.

MACHINE-TYPE/CPU:

MV product line, including TEMPEST models

O/S:

AOS/VS

DISTRIBUTOR:

Data General
Data General Sales Force
4400 Computer Drive
Westborough, MA 01580

CONTACT:

John Williams
Data General
62 Alexander Drive
Research Triangle, NC 27709
(919) 549-8421

ORDERING PROCEDURE:

Contact any Data General Sales Office

PROPRIETY-STATUS:

Product of Data General Corporation

DDN-QUALIFIED:

Yes

INFORMATION-UPDATED:

July 1987

2.6.2.2. Data General AOS/VS XODIAC Transport Service (XTS)

PRODUCT-OR-PACKAGE-NAME: AOS/VS XODIAC Transport Service (XTS)

DESCRIPTION:

XTS is a generalized transport server based on the CCITT X.25 protocol. It supports wide-area point-to-point, multipoint and packet data networks as well as IEEE 802.3 local area networks. XTS provides transport services to Data General's XODIAC product line, which include file transfer, virtual terminal and system call deflection capabilities. XTS also supports Data General's office automation product, CEO as well as provides a programming interface to its X.25 service for the development and support of user and third-party networked applications.

DOCUMENTATION:

Documentation includes how to control and manage the system, how to use the network as a user, and how to program the network.

MACHINE-TYPE/CPU:

Any MV class machine

O/S:

AOS/VS rev. 7 or later

IMPLEMENTATION-LANGUAGE:

A mixture of Assembly language, PL/1 and C

DISTRIBUTOR:

Data General
4400 Computer Drive
Westboro, MA 01580

CONTACT:

Product Marketing Division

ORDERING-PROCEDURE:

XTS may be ordered through any Data General sales office or representative.

PROPRIETY-STATUS:

Data General Proprietary

DDN-QUALIFIED:

XTS Revision 5.25 is DDN certified.

INFORMATION-UPDATED:

February 1988

2.6.2.3. DG/TCP/IP (DG/UX)

PRODUCT-OR-PACKAGE-NAME: DG/TCP/IP (DG/UX)

DESCRIPTION:

Data General provides the DoD community with the DoD Internet protocol suite, including TCP, IP, and higher level protocols FTP, SMTP, and TELNET. Implementations include Ethernet for LAN access and a DCA Standard certified X.25 interface for DDN access.

DOCUMENTATION:

Complete documentation is available to Data General customers.

MACHINE-TYPE/CPU:

MV product line, including TEMPEST models

O/S:

DG/UX

DISTRIBUTOR:

Data General Corporation
Data General Sales Force
4400 Computer Drive
Westborough, MA 01580

CONTACT:

John Williams
Data General
62 Alexander Drive
Research Triangle, NC 27709
(919) 549-8421

ORDERING-PROCEDURE:

Contact any Data General Sales Office

PROPRIETY-STATUS:

Product of Data General Corporation

DDN-QUALIFIED:

Yes

INFORMATION-UPDATED:

July 1987

2.7. DATAPOINT CORPORATION

2.7.1. Datapoint WAN-X.25

PRODUCT-OR-PACKAGE-NAME: Wide Area Networking - X.25

DESCRIPTION:

Wide Area Networking - X.25 (WAN-X.25) is a communications product designed according to the Open Systems Interconnection (OSI) model. WAN-X.25 uses CCITT X.25 as the transport mechanism for Datapoint-to-Datapoint communications. Datapoint provides a set of software products to utilize the WAN-X.25 services, and a program interface for COBOL, DATABUS, DASL, and Assembler routines.

WAN-X.25 can operate on Packet Switched Data Networks (PSDN), Circuit Switched Telephone Networks (CSTN), Point-to-Point Private/Leased lines, and Circuit Switched Data Networks (CSDN). WAN-X.25 is certified to work on most public data networks world-wide.

WAN-X.25 has been certified by the DDN Program Management Office (PMO) as a DCAC-370-P195-(XX) compliant X.25 product, and is fully qualified to run on the DDN Network.

DOCUMENTATION:

RMS Wide Area Networking X.25 User's Guide, edition 3

MACHINE-TYPE/CPU:

Datapoint 86xx, or 88xx

O/S:

Resource Management System (RMS)

IMPLEMENTATION-LANGUAGE:

Assembler and Datapoint Advanced Systems Language

DISTRIBUTOR:

Datapoint Corporation
9725 Datapoint Drive
San Antonio, TX 78284

CONTACT:

David Hendon, (512) 699-5141

ORDERING-PROCEDURE:

Submit order through your local Datapoint representative; contact your local Datapoint representative for pricing information.

PROPRIETY-STATUS:

Product of Datapoint Corporation

DDN-QUALIFIED:

Yes

INFORMATION-UPDATED:

July 1987

2.8. DIGITAL EQUIPMENT CORPORATION

2.8.1. DEC-10/DECSYSTEM-20

2.8.1.1. BBN TOPS-20

PRODUCT-OR-PACKAGE-NAME: BBN-TOPS-20

DESCRIPTION:

The TOPS20 Internetworking software supports multiple networks, multiple interfaces on a single network, and multiple protocol suites. Included in the standard distribution are an interface to 1822 nets via an AN20, an interface to a network front-end via a DTE20, and the DARPA protocol suite (DEC is developing an Ethernet interface).

The DARPA IP, ICMP, TCP, Server TELNET protocols are included within the TOPS20 monitor; other protocols are implemented as user application processes. The IP module supports a routing cache maintained via ICMP redirect NET and HOST messages. It performs fragmentation and reassembly, implements all options and can forward traffic between any of the host's interfaces. Applications may interface to the IP layer using User Queues.

All ICMP messages are supported; error messages may be sent by any of the protocol layers; higher layers are notified when a message is received concerning one of their packets. Messages can be sent by applications using the User Queue facility.

Applications can interface to TCP either as a read/write file or via multiple buffers. The TCP layer supports IP routing options, ICMP destination unreachable, source quench, and redirects which specify a type-of-service, and the segment size option. Support for preemption, precedence, and security options is delegated to the application. Telnet supports options and subnegotiations.

There is extensive inter-layer flow control, error reporting, and monitoring. Utilities are available to provide information, list monitoring data, and perform diagnostics.

DEC has distributed a prior version of this implementation as part of its standard TOPS20-AN monitor; the current version is currently being transferred to DEC.

DOCUMENTATION:

User's Manual including Site Configuration Guide

MACHINE-TYPE/CPU:

DEC KL10

O/S:

TOPS20-AN, Release 5

IMPLEMENTATION-LANGUAGE:

Macro

DISTRIBUTOR:

    Bolt Beranek and Newman Inc.
    10 Moulton Street
    Cambridge, MA 02238

CONTACT:

Charles Lynn, (CLynn@BBN.COM), (617) 873-3367

ORDERING-PROCEDURE:

The latest software release should soon be available as part of the standard DEC TOPS20-AN monitor. Until the transfer process has been completed, the software is available via FTP over the internet, or by sending a magtape to:

    Bolt Beranek and Newman Inc.
    10 Moulton Street
    Cambridge, MA 02238
    Attn: Charles Lynn

A return mailing label should be included. Also required is a TOPS-20 Source License and the TOPS-20 monitor sources, as the implementation includes source-level changes to the standard DEC monitor.

PROPRIETY-STATUS:

Public domain

INFORMATION-UPDATED:

February 1988

2.8.1.2. Digital Equipment Corporation TOPS-20

PRODUCT-OR-PACKAGE-NAME: TOPS-20AN

DESCRIPTION:

Based on the DARPA sponsored TCP/IP implementation for TOPS-20 with major modifications. The BBN TCP/IP software was merged into the standard supported TOPS-20, and a different JSYS interface was implemented that utilized the existing TOPS-20 I/O JSYSs by adding a logical device for TCP. Supports: the 1822 interface, DEC NI20 Ethernet interface and the DEC CI20 computer interconnect.

DOCUMENTATION:

Hardware manuals, print sets, diagnostics write-up and descriptions in the TOPS-20 software notebooks

MACHINE-TYPE/CPU:

DEC KL10E or KL10R

O/S:

TOPS-20, Release 7.0

IMPLEMENTATION-LANGUAGE:

PDP10/TOPS-20 assembler

DISTRIBUTOR:

Digital Equipment Corporation
200 Forest St.
Marlboro, MA 01752

CONTACT:

Michael Raspuzzi, (Raspuzzi@TOPS20.DEC.COM), Mail Stop MRO1-2/L14, (508) 467-2346)

ORDERING-PROCEDURE:

See your local DEC salesman.

PROPRIETY-STATUS:

Licensed by DEC

INFORMATION-UPDATED:

August 1988

2.8.1.3. MIT ITS

DESCRIPTION:

This is a TCP/IP implementation that runs under the MIT Incompatible Timesharing System (ITS) on DEC-10/20 machines (KA, KS or KL), written by Ken Harrenstien of SRI International under contract to MIT. Includes Telnet, FTP and SMTP. Bug reports and interest group is BUG-TCP@AI.AI.MIT.EDU.

DOCUMENTATION:

Available from contact

MACHINE-TYPE/CPU:

DEC-10/20 (KA, KS and KL)

O/S:

ITS

IMPLEMENTATION-LANGUAGE:

MIDAS(PDP-10)

DISTRIBUTOR:

MIT, Cambridge, MA

CONTACT:

Alan Bawden, (Alan@AI.AI.MIT.EDU)
Massachusetts Institute of Technology
Artificial Intelligence Laboratory
Room NE43-723
545 Technology Square
Cambridge, MA 02139
(617) 253-8843

John Wroclawski, (JTW@AI.AI.MIT.EDU)
Massachusetts Institute of Technology
Artificial Intelligence Laboratory
Room NE43-743
545 Technology Square
Cambridge, MA 02139
(617) 253-7885

ORDERING-PROCEDURE:

Appropriate files can be FTPed across the network; contact Alan@AI.AI.MIT.EDU or JTW@AI.AI.MIT.EDU for more information.

PROPRIETY-STATUS:

MIT-proprietary software

INFORMATION-UPDATED:

January 1988

2.8.1.4. Panda TOPS-20 EGP

PRODUCT-OR-PACKAGE-NAME: EGP-20

DESCRIPTION:

EGP-20 is a subset implementation of the Exterior Gateway Protocol (EGP) which allows a DECSYSTEM-20 to be used as an IP gateway. TOPS-20 provides a "dumb gateway" facility; however, all new gateways are required to negotiate EGP to announce their availability to their neighbor gateways.

DOCUMENTATION:

Online included with package

MACHINE-TYPE/CPU:

DECSYSTEM-20

O/S:

TOPS-20 version 5.3 or later

IMPLEMENTATION-LANGUAGE:

MACRO-20 (DECSYSTEM-20 assembly language)

DISTRIBUTOR:

PANDA PROGRAMMING
P.O. BOX 2652
SEATTLE, WA 9811-2652

CONTACT:

Mark Crispin, (MRC@PANDA.COM), (206) 953-6769

ORDERING-PROCEDURE:

Call for pricing and ordering information.

PROPRIETY-STATUS:

Panda Programming propriety

INFORMATION-UPDATED:

February 1989

2.8.1.5. Panda TOPS-20 Mail

PRODUCT-OR-PACKAGE-NAME: MM-20

DESCRIPTION:

MM-20 is an electronic mailsystem for the DECSYSTEM-20 family. MM-20 incorporates mail reading, mail queueing, mailbox/mailing lists, SMTP (DoD Internet mail transport protocol), "sends", and external queue management tools. MM-20 supports the following protocols: DoD Internet TCP/IP/SMTP, DECnet using SMTP, Chaos, and Pup. A facility also exists for adding additional delivery routines (e.g. mailing over asynchronous TTY lines). Domains are supported, including MX records.

The MM-20 package also includes the TOPS-20 server for the Interactive Mail Access protocol described in RFC 1064 and the portable C client IMAP.

DOCUMENTATION:

Online included with package

MACHINE-TYPE/CPU:

DECSYSTEM-20 except for the IMAP client which is CPU-independent

O/S:

TOPS-20 version 4 or later (version 5.3 or later is required for TCP/IP support, MIT domain resolver is required for domain support)

The IMAP client is O/S-independent, and has been tested on TOPS-20, BSD Unix, and the Apple Macintosh

IMPLEMENTATION-LANGUAGE:

MACRO-20 (DECSYSTEM-20 assembly language) and C

DISTRIBUTOR:

PANDA PROGRAMMING
P.O. Box 2652
Seattle, WA 9811-2652

CONTACT:

Mark Crispin, (MRC@PANDA.COM), (206) 953-6769

ORDERING-PROCEDURE:

MM-20 is available for a nominal charge to cover media and shipping costs; call for current information.

PROPRIETY-STATUS:

Public Domain

INFORMATION-UPDATED:

February 1989

2.8.1.6. Panda TOPS-20 NETSRV

PRODUCT-OR-PACKAGE-NAME: NETSRV

DESCRIPTION:

NETSRV is a multi-process listener and server for a number of the major Internet service protocols. It replaces such programs as FTSCTT and SMTPSV. NETSRV is based on a similar program for the old NCP protocols.

DOCUMENTATION:

Online included with package

MACHINE-TYPE/CPU:

DECSYSTEM-20

O/S:

TOPS-20 version 5.3 or later

IMPLEMENTATION-LANGUAGE:

MACRO-20 (DECSYSTEM-20 assembly language)

DISTRIBUTOR:

PANDA PROGRAMMING
P.O. Box 2652
Seattle, WA 9811-2652

CONTACT:

Mark Crispin, (MRC@PANDA.COM), (206) 953-6769

ORDERING-PROCEDURE:

Bundled as part of the "PANDA MODIFICATIONS TO TOPS-20"; call for separate ordering information.

PROPRIETY-STATUS:

Panda Programming propriety

INFORMATION-UPDATED:

February 1989

2.8.1.7. Panda Modifications to TOPS-20

PRODUCT-OR-PACKAGE-NAME: PANDA MODIFICATIONS TO TOPS-20

DESCRIPTION:

The PANDA MODIFICATIONS TO TOPS-20 consists of a set of extensions and bug fixes to TOPS-20. These include many of the public domain extensions to TOPS-20 published on the "ARPANET TOPS-20 list" and many extensions unique to the PANDA MODIFICATIONS including facilities to operate TOPS-20 in networking configurations not supported by DEC.

The PANDA MODIFICATIONS TO TOPS-20 are distributed as a set of REDIT-format change files and therefore are only available to sites with a valid DEC TOPS-20 source license.

DOCUMENTATION:

Online included with package

MACHINE-TYPE/CPU:

DECSYSTEM-20

O/S:

TOPS-20 version 5.4; TOPS-20 version 6.1

IMPLEMENTATION-LANGUAGE:

MACRO-20 (DECSYSTEM-20 assembly language)

DISTRIBUTOR:

PANDA PROGRAMMING
P.O. Box 2652
Seattle, WA 9811-2652

CONTACT:

Mark Crispin, (MRC@PANDA.COM), (206) 953-6769

ORDERING-PROCEDURE:

Call for pricing and ordering information.

PROPRIETY-STATUS:

Panda Programming propriety

INFORMATION-UPDATED:

February 1989

2.8.1.8. Panda TOPS-20 Telnet

PRODUCT-OR-PACKAGE-NAME: TELNET-20

DESCRIPTION:

TELNET-20 implements the user half of the Internet TELNET protocol. It also supports Chaos, Pup, and DECnet protocols.

DOCUMENTATION:

Online included with package

MACHINE-TYPE/CPU:

DECSYSTEM-20

O/S:

TOPS-20 version 5.3 or later

IMPLEMENTATION-LANGUAGE:

MACRO-20 (DECSYSTEM-20 assembly language)

DISTRIBUTOR:

PANDA PROGRAMMING
P.O. Box 2652
Seattle, WA 9811-2652

CONTACT:

Mark Crispin, (MRC@PANDA.COM), (206) 953-6769

ORDERING-PROCEDURE:

Bundled as part of the "PANDA MODIFICATIONS TO TOPS-20"; an earlier version is distributed by DEC.

PROPRIETY-STATUS:

Panda Programming propriety

INFORMATION-UPDATED:

February 1989

2.8.1.9. SRI International NFS-20

PRODUCT-OR-PACKAGE-NAME: NFS-20

DESCRIPTION:

NFS-20 is a subset implementation of an NFS server for TOPS-20. It includes UDP, XDR and RPC libraries and utility and statistics programs.

DOCUMENTATION:

Online included with package

MACHINE-TYPE/CPU:

DECSYSTEM-20

O/S:

TOPS-20 version 5.3 or better

IMPLEMENTATION-LANGUAGE:

MIDAS (assembler)

DISTRIBUTOR:

Mark Lottor
SRI International
333 Ravenswood Ave
Menlo Park, CA 94025

CONTACT:

Mark Lottor, (MKL@SRI-NIC.ARPA), (415) 859-2652

ORDERING-PROCEDURE:

NFS-20 is free. Call for info on how to get a copy.

PROPRIETY-STATUS:

Public domain

INFORMATION-UPDATED:

February 1988

2.8.2. PDP-11/LSI-11

2.8.2.1. BRL Gateway Software

PRODUCT-OR-PACKAGE-NAME: BRL Gateway Software

DESCRIPTION:

The BRL Gateway is a total redesign. None of the original MIT code was used. The gateway runs as a set of tasks on a simple multiprocessing operating system called LOS. Both LOS and the gateway code as described here were entirely designed and written by Ron Natalie.

This is an IP gateway with EGP support. The gateway will run on most PDP-11 series processors, but is designed to be portable to other machines that have C compilers. Currently supported are DEC PCL-11/B, ACC LH/DH-11, Network Systems HYPERchannel, Proteon Ring, Interlan NI1010, and serial lines.

All gateway functions and features of the IP and ICMP protocols are supported with the following exceptions. The ICMP timestamp packet is not implemented and ICMP source quench messages are ignored. IP timestamp and routing options are supported. The Exterior Gateway Protocol is supported as described in RFC904. Deviations from the specification are made to optimize the performance as a stub system from the existing core networks. The gateway also uses its own UDP based debug and monitoring protocol. GGP echo packets are also answered. Network Time Protocol (NTP) is also supported.

In addition, the gateway provides Virtual-Host service. TCP connections to be dynamically directed to an active host on the BRLNET. This allows the host "BRL" to appear to always be up for mail purposes.

The original BRL gateway was an early version of the MIT-C gateway modified to know about class B and C addresses and to work with the previously mentioned network interfaces. With the advent of EGP, higher network traffic, and greater routing intelligence, the modified MIT gateway became ineffective.

DOCUMENTATION:

Included in the distribution

MACHINE-TYPE/CPU:

Any PDP-11 processor that has memory management. The machines currently in use are a PDP-11/23, 24, 34, 44, 70 and LSI-11/23. A console terminal interface and a clock are required, as well as any network interfaces. The built-in line frequency clock on the LSI-11 processors may be used in lieu of an additional clock.

O/S:

LOS (the Little Operating System) is a small message-passing, multitasking operating system written for the implementation of the gateway, but is also being planned for use in real-time and file server applications. The Gateway code runs in the hardware user mode, while LOS itself runs in kernel mode. Interrupts are serviced in real-time by the user code.

IMPLEMENTATION-LANGUAGE:

With the exception of small parts of the operating system and some bit manipulation routines, which are written in assembler, both LOS and the Gateway code are written in the C language.

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DISTRIBUTOR:

    U.S. Army Ballistic Research Laboratory
    ATTN: SLCBR-SE-C/ R. Natalie
    APG, MD 21005-5066

CONTACT:

    Ron Natalie, (ron@brl.arpa), (301) 278-6678 or above address

ORDERING-PROCEDURE:

    Send mail to ron@brl.arpa for more information

PROPRIETY-STATUS:

    Both LOS and the Gateway are the property of the Department of the Army. They are available for public
    use at no charge. They may be distributed with commercial products with slight restrictions.

INFORMATION-UPDATED:

    October 1986

2.8.2.2. Claflin & Clayton 8000 Series RSX TCP/IP

PRODUCT-OR-PACKAGE-NAME: 8000 Series RSX TCP/IP

DESCRIPTION:

The 8000 Series RSX packages allow DEC PDP-11/LSI-11 systems running the RSX-11M, RSX-11M+ or RSX-11S operating systems to communicate using TCP/IP over Ethernet. Client TELNET, Server TELNET, SMTP Mail, Client FTP and Server FTP applications, as well as a QIO applications level TCP interface are provided. The 8000 series packages include UNIBUS (hex) or Q-bus (quad) intelligent Ethernet controllers with on-board transport and network level software, 16-bit 80186 microprocessor and 512K bytes of memory.

DOCUMENTATION:

Available from vendor

MACHINE-TYPE/CPU:

PDP/LSI-11/23, /24, /34, /44, /73, /84

O/S:

RSX-11M(V4.0+), RSX11M(v2.1+) and RSX11S

DISTRIBUTOR:

Claflin & Clayton Inc.
117 Maynard Street
Northboro, MA 01532

CONTACT:

Heather Claflin, (508) 393-7979

ORDERING-PROCEDURE:

Contact distributor

PROPRIETY-STATUS:

Product of Claflin & Clayton, Inc.

INFORMATION-UPDATED:

August 1988

2.8.2.3. Claflin & Clayton 8000 Series RT-11 TCP/IP

PRODUCT-OR-PACKAGE-NAME: 8000 Series RT-11 TCP/IP

DESCRIPTION:

The 8000 Series RT-11 packages allow DEC PDP-11/LSI-11 systems running the RT-11, or TSX-Plus operating systems to communicate using TCP/IP over Ethernet. Client TELNET, SMTP Mail, Client FTP and Server FTP applications are provided. The 8000 series packages include UNIBUS (hex) or Q-bus (quad) intelligent Ethernet controllers with on-board transport and network level software, 16-bit 80186 microprocessor and 512K bytes of memory.

DOCUMENTATION:

Available from vendor

MACHINE-TYPE/CPU:

PDP/LSI-11/23, /24, /34, /44, /73, /84

O/S:

RT-11 and TSX-Plus

DISTRIBUTOR:

> Claflin & Clayton Inc.
> 117 Maynard Street
> Northboro, MA 01532

CONTACT:

Heather Claflin, (508) 393-7979

ORDERING-PROCEDURE:

Contact distributor

PROPRIETY-STATUS:

Product of Claflin & Clayton, Inc.

INFORMATION-UPDATED:

August 1988

2.8.2.4. Process Software FTP-IAS

PRODUCT-OR-PACKAGE-NAME: FTP-IAS

DESCRIPTION:

FTP-IAS is a complete, low-cost TCP/IP networking software product designed exclusively for DEC's IAS operating system environment. FTP-IAS implements the FTP, TCP, IP, and ARP protocols. FTP-IAS supports multiple simultaneous users, as well as both client (user) and server FTP protocols.

FTP-IAS is organized into a common File Transfer Server and a separate File Transfer Utility for each user. The File Transfer Server is operated as a stand-alone task, and each File Transfer Utility connects to the Server via queued message communications. User-written subroutines can be linked with the Server and called upon file transfer notification to effect local control on the IAS system.

Because FTP-IAS is designed to take advantage of the PDP-11 architecture and the IAS operating system, it operates efficiently with low CPU overhead and minimum memory resources. FTP-IAS works with standard DEC Ethernet controllers, and it includes all needed software components for installation and user-operation.

DOCUMENTATION:

Fully documented; FTP-IAS is supplied with a User's Guide. An on-line HELP facility is also provided.

MACHINE-TYPE/CPU:

Any DEC PDP-11 or MicroPDP-11 supporting IAS

O/S:

IAS

IMPLEMENTATION-LANGUAGE:

All modules are in MACRO-11.

DISTRIBUTOR:

Process Software Corporation
35 Montague Road
P.O. Box 746
Amherst, MA 01002

CONTACT:

Process Software Corporation, (413) 549-6994, Telex 517891

ORDERING-PROCEDURE:

Contact Process Software Corporation Sales Department.

PROPRIETY-STATUS:

A product of Process Software Corporation

INFORMATION-UPDATED:

January 1988

2.8.2.5. Process Software FTP-RSX

PRODUCT-OR-PACKAGE-NAME: FTP-RSX

DESCRIPTION:

FTP-RSX is a highly efficient, low cost TCP/IP networking software product designed exclusively for DEC'S RSX-11 operating system environment. FTP-RSX implements the FTP, TCP, IP, and ARP protocols. FTP-RSX supports multiple simultaneous users, with each user operating multiple simultaneous FTP or TCP connections. Both client (user) and server FTP protocols are provided.

Because FTP-RSX is designed to take advantage of the PDP-11 architecture and the RSX-11 operating system, it operates efficiently with low CPU overhead and minimum memory resources. The TCP and IP protocol layers (together with ARP) are implemented within an RSX I/O driver and ACP (Ancillary Control Processor) running in kernel mode.

FTP-RSX is easy to install and operate, and it supports account and password protection and full UIC-based file protection, preventing unauthorized file access from remote users. FTP-RSX also supports application programmers with a set of library routines that can establish FTP connections and transfer files with remote hosts.

FTP-RSX works with all standard DEC Ethernet controllers, and it includes all needed software components for installation, user-operation, TCP programmed I/O, network monitoring and management, and system administration. A companion product, called TELNET-RSX, is also available.

DOCUMENTATION:

Fully documented; FTP-RSX is supplied with a User's Guide. A complete on-line HELP facility is also provided.

MACHINE-TYPE/CPU:

Any DEC PDP-11 or MicroPDP-11

O/S:

RSX-11M-Plus, RSX-11M, or MicroRSX

IMPLEMENTATION-LANGUAGE:

System-level modules are in MACRO-11. Application-level modules use several DEC HLLs.

DISTRIBUTOR:

Process Software Corporation
35 Montague Road
P.O. Box 746
Amherst, MA 01002

CONTACT:

Process Software Corporation, (413) 549-6994, Telex 517891

ORDERING-PROCEDURE:

Contact Process Software Corporation Sales Department.

PROPRIETY-STATUS:

A product of Process Software Corporation

INFORMATION-UPDATED:

January 1988

2.8.2.6. Process Software TELNET-RSX

PRODUCT-OR-PACKAGE-NAME: TELNET-RSX

DESCRIPTION:

TELNET-RSX is a highly efficient, low cost TCP/IP networking software product designed exclusively for DEC'S RSX-11 operating system environment. TELNET-RSX implements the TELNET, TCP, IP, and ARP protocols. TELNET-RSX supports multiple simultaneous users, with client (user) TELNET protocol support.

Because TELNET-RSX is designed to take advantage of the PDP-11 architecture and the RSX-11 operating system, it operates efficiently with low CPU overhead and minimum memory resources. The TCP and IP protocol layers (together with ARP) are implemented within an RSX I/O driver and ACP (Ancillary Control Processor) running in kernel mode.

TELNET-RSX is easy to install and operate, and it works with all standard DEC Ethernet controllers. TELNET-RSX includes all needed software components for installation, user-operation, TCP programmed I/O, network monitoring and management, and systems administration. A companion product, called FTP-RSX, is also available.

DOCUMENTATION:

Fully documented; TELNET-RSX is supplied with a User's Guide. An on-line HELP facility is also provided.

MACHINE-TYPE/CPU:

Any DEC PDP-11 or MicroPDP-11

O/S:

RSX-11M-Plus, RSX-11M, or MicroRSX

IMPLEMENTATION-LANGUAGE:

System-level modules are in MACRO-11. Application-level modules use several DEC HLLs.

DISTRIBUTOR:

Process Software Corporation
35 Montague Road
P.O. Box 746
Amherst, MA 01002

CONTACT:

Process Software Corporation, (413) 549-6994, Telex 517891

ORDERING-PROCEDURE:

Contact Process Software Corporation Sales Department.

PROPRIETY-STATUS:

A product of Process Software Corporation

INFORMATION-UPDATED:

January 1988

2.8.2.7. Process Software FTP-RT

PRODUCT-OR-PACKAGE-NAME: FTP-RT

DESCRIPTION:

FTP-RT is a highly efficient, low cost TCP/IP networking software product designed exclusively for DEC'S RT-11 operating system environment. FTP-RT implements the FTP, TCP, IP, and ARP protocols. FTP-RT supports both client (user) and server FTP protocols using separate utility programs.

FTP-RT supports application programmers with a set of library subroutines that can establish FTP connections and transfer files with remote hosts. For memory restrictive environments, these subroutines can be arranged into overlay regions and a small root section.

Because FTP-RT is designed to take advantage of the PDP-11 architecture and the RT-11 operating system, it provides high thruput with low CPU overhead and minimum memory resources. The FTP-RT utility programs and library subroutines can run on either the SJ, FB, or XM monitor, and they can also run as virtual jobs in extended memory.

FTP-RT is a field-proven product that is easy to install and operate. FTP-RT works with all standard DEC Ethernet controllers, and it includes all needed software components for installation and user-operation, including Ethernet I/O drivers for the SJ and FB monitors. Several companion products, called TCPIP-RT and TELNET-RT, are also available.

DOCUMENTATION:

Fully documented; FTP-RT is supplied with a User's Guide. An on-line HELP facility is also provided.

MACHINE-TYPE/CPU:

Any DEC PDP-11 or MicroPDP-11

O/S:

RT-11 (either SJ, FB, or XM)

IMPLEMENTATION-LANGUAGE:

All modules are in MACRO-11.

DISTRIBUTOR:

Process Software Corporation
35 Montague Road
P.O. Box 746
Amherst, MA 01002

CONTACT:

Process Software Corporation, (413) 549-6994, Telex 517891

ORDERING-PROCEDURE:

Contact Process Software Corporation Sales Department.

PROPRIETY-STATUS:

A product of Process Software Corporation

INFORMATION-UPDATED:

January 1988

2.8.2.8. Process Software TELNET-RT

PRODUCT-OR-PACKAGE-NAME: TELNET-RT

DESCRIPTION:

TELNET-RT is a highly efficient, low cost TCP/IP networking software product designed exclusively for DEC'S RT-11 operating system environment. TELNET-RT implements the TELNET, TCP, IP, and ARP protocols. TELNET-RT supports both client (user) and server TELNET protocols with a user-run utility program.

TELNET-RT supports application programmers with a set of library subroutines that can establish TELNET connections with remote hosts. For memory restrictive environments, these subroutines can be arranged into overlay regions and a small root section.

Because TELNET-RT is designed to take advantage of the PDP-11 architecture and the RT-11 operating system, it provides high thruput with low CPU overhead and minimum memory resources. The TELNET-RT utility programs and library subroutines can run on either the SJ, FB, or XM monitor, and they can also run as virtual jobs in extended memory.

TELNET-RT is a field-proven product that is easy to install and operate. TELNET-RT works with all standard DEC Ethernet controllers, and it includes all needed software components for installation and user-operation, including Ethernet I/O drivers for the SJ and FB monitors. Several companion products, called FTP-RT and TCPIP-RT, are also available.

DOCUMENTATION:

Fully documented; TELNET-RT is supplied with a User's Guide. An on-line HELP facility is also provided.

MACHINE-TYPE/CPU:

Any DEC PDP-11 or MicroPDP-11

O/S:

RT-11 (either SJ, FB, or XM)

IMPLEMENTATION-LANGUAGE:

All modules are in MACRO-11.

DISTRIBUTOR:

Process Software Corporation
35 Montague Road
P.O. Box 746
Amherst, MA 01002

CONTACT:

Process Software Corporation, (413) 549-6994, Telex 517891

ORDERING-PROCEDURE:

Contact Process Software Corporation Sales Department.

PROPRIETY-STATUS:

A product of Process Software Corporation

INFORMATION-UPDATED:

January 1988

2.8.2.9. Process Software TCPIP-RT

PRODUCT-OR-PACKAGE-NAME: TCPIP-RT

DESCRIPTION:

TCPIP-RT is a highly efficient, low cost TCP/IP networking software product designed exclusively for DEC'S RT-11 operating system environment. TCPIP-RT implements the TCP, IP, and ARP protocols. TCPIP-RT supports high-speed process-to-process communications with a library of subroutines that can establish and maintain TCP connections with remote hosts.

Application programmers can use the subroutines in TCPIP-RT to open active or passive TCP connections, send data, receive data, close or abort connections, and read status information. The subroutines are callable from any DEC high-level language. For memory restrictive environments, the subroutines can be arranged into overlay regions and a small root section.

Because TCPIP-RT is designed to take advantage of the PDP-11 architecture and the RT-11 operating system, it provides high thruput with low CPU overhead and minimum memory resources. The TCPIP-RT utility programs and library subroutines can run on either the SJ, FB, or XM monitor, and they can also run within a virtual job in extended memory.

TCPIP-RT is a field-proven product that is easy to install and operate. TCPIP-RT works with all standard DEC Ethernet controllers, and it includes all needed software components for installation and user-operation, including Ethernet I/O drivers for the SJ and FB monitors. Several companion products, called FTP-RT and TELNET-RT, are also available.

DOCUMENTATION:

Fully documented; TCPIP-RT is supplied with a User's Guide. An on-line HELP facility is also provided.

MACHINE-TYPE/CPU:

Any DEC PDP-11 or MicroPDP-11

O/S:

RT-11 (either SJ, FB, or XM)

IMPLEMENTATION-LANGUAGE:

All modules are in MACRO-11.

DISTRIBUTOR:

Process Software Corporation
35 Montague Road
P.O. Box 746
Amherst, MA 01002

CONTACT:

Process Software Corporation, (413) 549-6994, Telex 517891

ORDERING-PROCEDURE:

Contact Process Software Corporation Sales Department.

PROPRIETY-STATUS:

A product of Process Software Corporation

INFORMATION-UPDATED:

January 1988

2.8.2.10. Process Software FTP-TSX

PRODUCT-OR-PACKAGE-NAME: FTP-TSX

DESCRIPTION:

FTP-TSX is a complete, low-cost TCP/IP networking software product designed exclusively for the TSX-Plus operating system environment. FTP-RSX implements the FTP, TCP, IP, and ARP protocols. FTP-TSX supports multiple simultaneous users, as well as both client (user) and server FTP protocols.

FTP-TSX is organized into a common File Transfer Server and a Separate File Transfer Utility for each user. The File Transfer Server is operated as a detached job, and each File Transfer Utility connects to the Server via the TSX-Plus message communications facility.

Because FTP-TSX is designed to take advantage of the PDP-11 architecture and the TSX-Plus operating system, it provides good thruput with low CPU overhead and minimum memory resources. A debugging module is also provided to optionally display detailed communications information that can help isolate problems and eliminate network communications failures.

FTP-TSX is a field-proven product that is easy to install and operate. FTP-TSX works with all standard DEC Ethernet controllers, and it includes all needed software components for installation and user-operation.

DOCUMENTATION:

Fully documented; FTP-TSX is supplied with a User's Guide. An on-line HELP facility is also provided.

MACHINE-TYPE/CPU:

Any DEC PDP-11 or MicroPDP-11

O/S:

TSX-Plus

IMPLEMENTATION-LANGUAGE:

All modules are in MACRO-11.

DISTRIBUTOR:

Process Software Corporation
35 Montague Road
P.O. Box 746
Amherst, MA 01002

CONTACT:

Process Software Corporation, (413) 549-6994, Telex 517891

ORDERING-PROCEDURE:

Contact Process Software Corporation Sales Department.

PROPRIETY-STATUS:

A product of Process Software Corporation

INFORMATION-UPDATED:

January 1988

2.8.2.11. Proteon, Inc. Venix/11

PRODUCT-OR-PACKAGE-NAME: Venix/11 TCP/IP

DESCRIPTION:

This is based on the "UNIX V6" implementation available from the MIT Laboratory for Computer Science. [Editor's Note: The MIT UNIX V6 implementation is no longer available.] It has been ported to a V7 UNIX system, in particular VenturCom's Venix/11 V2.0.

As little of the processing as possible takes place in the kernel, to minimize the code space required. It fits comfortably on I&D machines, but is almost hopeless on the smaller machines. The kernel includes a ProNET device driver, IP fragment reassembly, IP header processing, local-net header processing, and simple routing. The rest of the IP processing, and all of the UDP and TCP functions, are in user libraries. The pseudo-teletype driver is also in the kernel, and is used by Server TELNET.

User programs handle ICMP processing; User and Server TELNET, SMTP, TFTP, Finger, and Discard. There are User programs for Nicname and Hostname. IEN-116 nameservers are used by all programs, and an IEN-116 nameserver is also provided. A minimal domain name resolver is included. The TCP used is very simple, not very fast, and lies about windows. No FTP is available, nor is one planned.

DOCUMENTATION:

There is a full set of manual pages, and some internals documentation. The kernel code is well commented.

MACHINE-TYPE/CPU:

PDP-11/44, 45, 70, 73, 84

O/S:

Venix/11 V2.0, should be simple to port to other V7 UNIX systems.

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

Proteon, Inc.
Two Technology Drive
Westborough, MA 01581-5008

CONTACT:

John Shriver, (jas@PROTEON.COM), (617) 898-2800

ORDERING-PROCEDURE:

Available as source code on an as-is where-is basis, via FTP

PROPRIETY-STATUS:

Improvements are proprietary to Proteon.

INFORMATION-UPDATED:

February 1988

2.8.2.12. U. of Delaware DCN/Fuzzball System

PRODUCT-OR-PACKAGE-NAME: DCN/Fuzzball System for the PDP11

DESCRIPTION:

The Fuzzball Internet software system was developed with DARPA sponsorship beginning in 1978 and continuing to the present. It runs in a sizable number of PDP11s and LSI-11s with varying configurations and has been used extensively for testing, evaluation and experimentation with other implementations. The system is designed to be used with the DCnet local network protocols as described in RFC-891 and the Fuzzball operating system for a multi-media internet workstation (also called a Fuzzball), which operates using emulation techniques to support the DEC RT-11 operating system and application programs. However, the system has also been used on other networks, including ARPAnet and SATNET, and with other operating systems, including RSX-11. An RSX-11 based version incorporating only the IP/TCP modules is presently used to support the INTELPOST electronic-mail network. The system has been used for the last two years to support the NSFNET Backbone Network.

The software system consists of a package of MACRO-11 and C modules structured into levels corresponding to local-net, IP, TCP and application levels, with user interfaces at each level. The local-net level supports several communication devices, including synchronous and asynchronous serial lines, 16-bit parallel links, Ethernet and 1822 interfaces. Hosts using these devices have been connected to ARPAnet IMPs, Satellite IMPs, BBN Internet Gateways, SRI Port Expanders and to standard Ethernets, DECnets and X.25 public networks, as well as several DCnet local networks. The system supports subnets as described in RFC-950, as well as network-level type-of-service routing, local-level dynamic routing and extensive time-synchronization and error-reporting functions, including drivers for several types of radio clocks. Ethernet support includes the Address Resolution Protocol (ARP) with a dynamic cache suitable for multiple-gateway and multiple-net cables.

The IP level conforms to the RFC-791 specification, including fragmentation, reassembly and the source-route option. A full set of ICMP features compatible with RFC-792 includes error-reporting, timestamp, redirect and source-quench messages. Robustness and fairness is maintained with selective-preemption, congestion-control and precedence-queueing features. Internet gateway (routing and non-routing) facilities conforming to the Exterior Gateway Protocol (EGP) RFC-904 specification can be included on an optional basis.

The TCP level conforms to the RFC-793 specification, including PUSH, URGENT and options. Its structure is based on circular buffers for reassembly and retransmission, with repacketizing on each retransmission. Retransmission timeouts are dynamically determined using measured roundtrip delays, as adjusted for backoff. Data flow into the network is controlled by measured network bandwidth, and adjusted by source-quench information. Features are included to avoid excessive segment fragmentation and retransmission into zero windows. The user interface level provides error and URGENT notification, as well as a means to set outgoing IP/TCP options.

A raw-datagram interface is available for non-TCP protocols such as UDP (RFC-768). It includes internal congestion and fairness controls, multiple-connection management and timestamping. Protocols above UDP supported in the present system include Network Time Protocol (RFC-958), Time Server (RFC-868), Name Server (IEN-116), Domain Name Server (RFC-883), Trivial File-Transfer Protocol (RFC-783) and Statistics Server (RFC-996). Other raw-datagram services include XNET (IEN-158), Exterior Gateway Protocol (RFC-904), PING (ICMP Echo utility) and several experimental services.

A number of user-level protocol modules above TCP have been built and tested with other internet hosts, including TELNET (RFC-854), File Transfer Protocol (RFC-959), Simple Mail Transfer Protocol (RFC-821), Multi-Media Mail Protocol (RFC-759) and various other file-transfer, debugging and control/monitoring protocols. A network-spooling system can be used to move files between DCnet hosts and is compatible with Unix systems.

Code sizes and speeds depend greatly on the system configuration and features selected. A typical 30K-word LSI-11/2 single-user configuration with all features selected and including the operating system, device drivers and all buffers and control blocks, leaves 16K-20K words for user-level application

programs and protocol modules. The same service is provided for up to eight individually relocated users in a 128K-word LSI-11/23 configuration and up to 32 users in a 1024K-word LSI-11/73 configuration. A diskless version can be configured for stand-alone gateway applications. Disk-to-disk FTP transfers across a DMA interprocessor link between LSI-11/73s operate in the range 80-100 Kbps with 576-octet packets. The 256K-word LSI-11/73 NSFnet gateway supports up to three 56-Kbps lines and an Ethernet controller, while the 124K-word PDP11/34 INTELPOST system supports two 56-Kbps lines and a number of lower-speed lines. Typical throughputs range from 100 to 400 packets per second, depending on processor and interface type.

For additional information see: Mills, D.L. The Fuzzball. Proc. ACM SIGCOMM 88 Symposium, Palo Alto CA, August 1988.

DOCUMENTATION:

Summary description and help-information files

MACHINE-TYPE/CPU:

PDP-11 and LSI-11 (all models)

O/S:

Self-contained

IMPLEMENTATION-LANGUAGE:

MACRO-11 and C

DISTRIBUTOR:

Electrical Engineering Department
University of Delaware
Newark, DE 19716

CONTACT:

David L. Mills, (mills@udel.edu), (302) 451-8247

ORDERING-PROCEDURE:

Contact above

PROPRIETY-STATUS:

DARPA permission required to distribute sources and/or binaries. Use of DEC RT-11 system software requires license; however, this software is not necessary for network protocols or application programs.

INFORMATION-UPDATED:

August 1988

2.8.2.13. USENIX Association 2.10 BSD

PRODUCT-OR-PACKAGE-NAME: UNIX 2.10 BSD

DESCRIPTION:
DESCRIPTION:

2.10 BSD TCP/IP is a fairly complete port of 4.3 BSD and includes the 4.3 BSD TCP/IP, with minor exceptions, and a few programs eliminated due to address space considerations. It provides support for TCP, IP, ICMP, and UDP with user and server programs for Telnet, FTP, TFTP and SMTP. Hardware supported includes 10M bit/s Ethernet (5 different controllers), 3M bit/s Ethernet, and SLIP. The 2.10 BSD TCP/IP runs in supervisor mode. Drivers for Proteon ProNET and ACC and DEC/CSS IMP Interfaces are provided, although some work will be required to integrate them into the system. 2.10 BSD only runs on split I/D machines; it could probably be made to run on non-split I/D PDP-11's, although such a system could not include networking.

DOCUMENTATION:

Online documentation of user programs, system call interfaces, changes from 4.2 BSD, etc.; "Networking Implementation Notes, 4.3BSD Edition"

MACHINE-TYPE/CPU:

PDP-11/44, 11/53, 11/70, 11/73, 11/83, 11/84

O/S:

UNIX 2.10BSD

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

USENIX Association
P.O. Box 2299
Berkeley, CA 94710

CONTACT:

Peter H. Salus, (usenix!office@ucbvax.berkeley.edu), (415) 528-8649

For technical information: Keith Bostic, (bostic%okeeffe@ucbvax.berkeley.edu), (415) 642-4948

ORDERING-PROCEDURE:

Contact Distribution Coordinator for information packet.

PROPRIETY-STATUS:

Requires a 2.9BSD license agreement or an AT&T V7, System III, or System V license agreement

INFORMATION-UPDATED:

August 1988

2.8.3. VAX FAMILY

2.8.3.1. 3Com Corporation V/IP

PRODUCT-OR-PACKAGE-NAME: V/IP for DEC/VMS

DESCRIPTION:

> 3Com provides V/IP, a software communications product that supports Telnet, FTP, and SMTP for DEC VAX computers running the VMS operating system. SMTP support is fully integrated with VMS Mail on the DEC VAX systems. V/IP uses standard DEC Ethernet interface hardware and drivers, which can simultaneously be used to run DECnet, and runs lower level protocols in a kernel-level process. The V/IP product is integrated with 3Com network management capabilities, including network audit trail. 3Com sells and supports the V/IP product directly in the U.S. and international markets.

DOCUMENTATION:

> One complete set of documentation is provided with the product; additional documentation may be purchased.

MACHINE-TYPE/CPU:

> DEC MicroVAX and VAX computers

IMPLEMENTATION-LANGUAGE:

> Assembly and C

DISTRIBUTOR:

> 3Com Corporation
> 3165 Kifer Road
> Santa Clara, CA 95052-8145

CONTACT:

> **Rene Shimada, (408) 970-1102**

ORDERING-PROCEDURE:

> Contact local sales office or Lorraine Valenti

PROPRIETY-STATUS:

> 3Com Corporation Proprietary

DDN-QUALIFIED:

> Yes

INFORMATION-UPDATED:

> August 1988

2.8.3.2. BBN UNIX

PRODUCT-OR-PACKAGE-NAME: TCP for BSD VAX-11s

DESCRIPTION:

BBN has developed an implementation of TCP/IP for DEC's VAX^{TM} family of processors, that runs under the Berkeley 4.2 BSD and 4.3 BSD versions of UNIX^{TM}. The development effort was funded by DARPA. The software includes support for TCP, UDP, ICMP and IP.

The software is available directly fr)m BBN. The software is distributed on a 1600 bpi tar tape.

MACHINE-TYPE/CPU:

DEC VAX-11 series

O/S:

UNIX 4.2 and 4.3 BSD

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR: .

BBN

CONTACT:

Robert Harvey, (617) 873-3411

ORDERING-PROCEDURE:

See contact above

PROPRIETY-STATUS:

Requires a source license from U.C. Berkeley

INFORMATION-UPDATED:

January 1988

2.8.3.3. CSNET CIC DIALUP IP for UNIX

PRODUCT-OR-PACKAGE-NAME: DIALUP IP for UNIX

DESCRIPTION:

The DIALUP IP effort is supported at BBN by CSNET for distribution to CSNET sites. The package allows sites to send IP datagram over dialup phone lines; the code automatically takes care of establishing and disconnecting phone calls as IP traffic or as users dictate. A modem and a serial port on the host computer are required.

DOCUMENTATION:

Complete manual available if CSNET subscriber

MACHINE-TYPE/CPU:

Sun 3 systems
Any VAX-11 or MicroVAX processor

O/S:

Berkeley UNIX 4.2 BSD Berkeley UNIX 4.3 BSD ULTRIX 1.2 ULTRIX 2.0 SUNOS 3.n

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

CSNET CIC
Bolt Beranek and Newman Inc.
10 Moulton Street
Cambridge, MA 02238
(CIC@CSNET-SH.ARPA)
(617) 873-2777

CONTACT:

Leo Lanzillo, (LEO@SH.CS.NET), (617) 873-3982

ORDERING-PROCEDURE:

Contact CIC (see above under DISTRIBUTOR)

PROPRIETY-STATUS:

For CSNET users only

INFORMATION-UPDATED:

February 1989

2.8.3.4. CSNET CIC X.25 for UNIX 4.3 BSD and ULTRIX 2.0

PRODUCT-OR-PACKAGE-NAME: X.25 for UNIX 4.3 BSD and ULTRIX 2.0

DESCRIPTION:

The IP/X.25 effort is supported at BBN by CSNET for distribution to CSNET sites. It is based on the TCP/IP implementation from Berkeley for 4.2 BSD. A device driver was added which allows IP datagrams to be sent over X.25 virtual circuits, and permits the host to serve as an X.29 PAD. An Interactive Systems INcard or an Advanced Computer Consultants (ACC) 6250/5250 is required.

DOCUMENTATION:

Complete manual available if CSNET subscriber

MACHINE-TYPE/CPU:

Any VAX-11 processor with a UNIBUS or MicroVAX with QBUS

O/S:

Berkeley UNIX 4.2 BSD Berkeley UNIX 4.3 BSD ULTRIX 1.2 ULTRIX 2.0

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

> CSNET CIC
> Bolt Beranek and Newman Inc.
> 10 Moulton Street
> Cambridge, MA 02238
> (CIC@CSNET-SH.ARPA)
> (617) 873-2777

CONTACT:

Leo Lanzillo, (LEO@SH.CS.NET), (617) 873-3982

ORDERING-PROCEDURE:

Contact CIC (see above under DISTRIBUTOR)

PROPRIETY-STATUS:

For CSNET users only

INFORMATION-UPDATED:

February 1989

2.8.3.5. v Digital Equipment Corporation ULTRIX-32

PRODUCT-OR-PACKAGE-NAME: The ULTRIX-32 System

DESCRIPTION:

The ULTRIX-32 System, Version 1.2 is a native UNIX operating system for DECs VAX hardware. The system is derived from the 4th Berkeley Software Distribution, 4.2 BSD developed by the Computer Systems Research Group of the Department of Electrical Engineering and Computer Science at the University of California at Berkeley. 4.2 BSD is an augmented version of AT&T Bell Laboratories UNIX 32V system for VAX hardware. The Berkeley enhancements to UNIX 32V include the addition of support for the VAX virtual architecture and a set of functional additions to the basic AT&T Bell Labs UNIX product, notably TCP/IP. In addition, the ULTRIX-32 system now incorporates AT&T System V Interface Definition (SVID) source code compatibility as defined by Section 2 (Base System) and Section 3 (Kernel Extensions) of the SVID. Finally, selected kernel enhancements from 4.3 BSD are also included.

Along with functionality of the Berkeley system, DEC has added the following features to the ULTRIX-32 Version 1.2 product:

- New system and device support

- New networking features

- New commands and programming languages

- New reliability and maintainability features

- Wide range of Support Service options

- Improved technical documentation including System Management Guidelines

- Installation and configuration without source code

- UNIX sub-licensing for object code directly from DEC

- System V source code compatibility

- 4.3 Kernel Enhancements

The network support includes the standard UNIX uucp facility as well as Ethernet support using TCP/IP and UDP/IP. Options include the DEC NSP network protocol (via DECnet-ULTRIX). All protocols can operate on a single Eu. met physical link concurrently. ULTRIX-32 now also supports Internet subnet routing functionality. Finally, ULTRIX-32 will allow users on ULTRIX-11 Version 3.0 systems who use local TCP/IP support to pass through into a DECnet-ULTRIX network. This support facilitates file transfer, remote execution and remote login capabilities.

DOCUMENTATION:

Extensive documentation available

MACHINE-TYPE/CPU:

VAX-11 family

O/S:

UNIX System V, UNIX 4.2 BSD

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

Local DEC Sales office

INFORMATION-UPDATED:

December 1986

2.8.3.6. Excelan MicroVMS

PRODUCT-OR-PACKAGE-NAME: EXOS 8044 TCP/IP Net Software for MicroVAX/MicroVMS

DESCRIPTION:

Excelan's EXOS 8044 implements DoD TCP/IP protocols to connect DEC MicroVAX IIs running MicroVMS to Ethernet networks. EXOS 8044 is a front-end TCP/IP implementation that operates in conjunction with an EXOS 203 Intelligent Ethernet Controller for Q-bus. The TCP/IP protocols (TCP, IP, UDP, ICMP, ARP) and Telnet/rlogin servers run on the controller and the user applications (FTP, Telnet, SMTP, rsh) run on the MicroVAX. EXOS 8044 user applications also include QIO programming library and network administration utilities.

DOCUMENTATION:

EXOS 8044 TCP/IP Network Software for MicroVAX/MicroVMS Systems Reference Manual

MACHINE-TYPE/CPU:

DEC MicroVAX II in conjunction with EXOS 203 Intelligent Ethernet Controller

O/S:

MicroVMS (v4.1 - v4.5)

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

Inside Sales
Excelan, Inc.
2180 Fortune Drive
San Jose, CA 95131
(408) 434-2300

Europe:
Excelan
Weir Bank
Bray-on-Thames, N. Maidenhead
Berkshire SL6 2ED England
Telephone: 0628-34281
Telex: 847591

CONTACT:

Inside Sales (408) 434-2300, 1-800-EXCELAN, 1-800-521-3526 (inside CA)

ORDERING-PROCEDURE:

Contact Inside Sales

INFORMATION-UPDATED:

August 1987

2.8.3.7. Excelan VMS

PRODUCT-OR-PACKAGE-NAME: LAN Service for VMS

DESCRIPTION:

Excelan's LAN Service for VMS implements DoD TCP/IP protocols to connect DEC VAXs running VMS to Ethernet networks. LAN Service for VMS is a front-end TCF/IP implementation that operates in conjunction with an EXOS 204 Intelligent Ethernet Controller for UNIBUS. The TCP/IP protocols (TCP, IP, UDP, ICMP, ARP) and Telnet/rlogin servers run on the controller and the user applications (FTP, Telnet, SMTP, rsh) run on the VAX. LAN Service for VMS user applications also include QIO programming library and network administration utilities.

Optionally, LAN Service NFS is available for LAN Service for Micro VMS customers. LAN Service NFS is a VMS server implementation of Sun Microsystems' Network File System (NFS) optimized for use with VAX/VMS systems that employ Excelan's LAN Service for VMS.

LAN Service NFS permits users of Sun Workstations, PCs, and other systems running NFS-compatible client software to have transparent access to the resources (such as files, host-attached printers and other peripheral devices) of a VAX/VMS host.

Some of the exclusive features of this product are:

*Sun NFS compatibility
*Automatic file format conversion
*Powerful server management utilities

DOCUMENTATION:

LAN Service for VMS TCP/IP Network Software Installation and Administration Guide, Programming Guide, Networks Applications Users Guide

MACHINE-TYPE/CPU:

DEC VAX-11 7XX, 8600, 8200 in conjunction with EXOS 204 Intelligent Ethernet Controller or Exos 304

O/S:

VMS (v4.4-v4.7 and v5.0)

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

Inside Sales
Excelan, Inc.
2180 Fortune Drive
San Jose, CA 95131
(408) 434-2300

Europe:
Excelan Europe Ltd.
Intec 2, Suite 17
Wade Road
Basingstoke
Hampshire RG24 One, England

CONTACT:

Inside Sales (408) 434-2300, 1-800-EXCELAN

ORDERING-PROCEDURE:

Contact Inside Sales

INFORMATION-UPDATED:

February, 1989

2.8.3.8. Network Research Corporation FUSION for X.25

PRODUCT-OR-PACKAGE-NAME: FUSION Network Software (FNS) X.25

DESCRIPTION:

FNS X.25 is an option to FUSION Network Software TCP/IP for VAX/VMS systems. It enables users to tie into DDN X.25 and public data networks, like TELENET and TYMNET, via TCP/IP Network. It supports Intelligent Communications Processors (ICP) from Simpact Associates.

DOCUMENTATION:

FNS X.25 User and Installation Manual

MACHINE-TYPE/CPU:

VAX 11/7XX, VAX 8XXX, MicroVAX II, 2000, 3000

O/S:

VAX/VMS, MicroVMS

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

Headquarters:

Network Research Corporation
2380 N. Rose Ave.
Oxnard, CA 93030

Sales Offices:

Northeast District:	(201) 358-1066
Southwest District:	(805) 485-2700
Northwest District:	(408) 248-2121
Southeast District:	(703) 648-1503

CONTACT:

Jean Sylwanowicz, Inside Sales Manager, (805) 485-2700, FAX: 805-485-8204, TELEX: 297579 NRCO UR

ORDERING-PROCEDURE:

Contact Sales Office

PROPRIETY-STATUS:

Developed by Network Research Corporation

DDN-QUALIFIED:

Simpact controllers are DDN-Qualified

INFORMATION-UPDATED:

February 1989

2.8.3.9. Network Research Corporation FUSION for VMS

PRODUCT-OR-PACKAGE-NAME: FUSION Network Software for VMS

DESCRIPTION:

Network software providing interoperability in multi-vendor networks. Supports industry standard protocols TCP/IP, XNS, and NFS. Provides file transfer, remote execution and remote terminal (Telnet), network management. Interoperates with UNIX 4.2 BSD socket calls. Compatible with standard DECnet controllers, DMR-11, DMV-11, Excelan, Talon Technology, and 3Com. (See also entry for FUSION IBM-PC).

DOCUMENTATION:

User manuals for VMS, Programmers Reference Manual, Network Administrator Manual, Installation Manual

MACHINE-TYPE/CPU:

VAX 11/7XX, VAX 8XXX, VAX 6XXX, MicroVAX II, 2000, 3XXX, VAXstation II, 2000, 3XXX

O/S:

VMS 4.X, 5.0, MicroVMS

IMPLEMENTATION-LANGUAGE:

C, runs on system's native C compiler

DISTRIBUTOR:

Network Research Corporation
2380 N. Rose Ave.
Oxnard, CA 93030

Headquarters:
San Francisco: (408) 248-2121
Los Angeles: (805) 485-2700 (headquarters office)
New Jersey: (201) 358-1066
Virginia: (703) 648-1523

Manufacturer's Sales Representatives:
Remteck, Inc.
Dallas, TX: (800) 527-0961, (214)387-2855

Burland Associates
Tempe, AZ: (602) 894-5564

Advanced Data Marketing
Parket, CO: (303) 841-4903

CONTACT:

Jean Sylwanowicz, Inside Sales Manager, (805) 485-2700, (800) 541-9508 (Outside CA), FAX: 805-485-8204

ORDERING-PROCEDURE:

Contact Sales Office

PROPRIETY-STATUS:

Developed by Network Research Corporation

INFORMATION-UPDATED:

February 1988

2.8.3.10. Network Solutions OPEN-Link for VAX/VMS

PRODUCT-OR-PACKAGE-NAME: OPEN-Link for VAX/VMS

DESCRIPTION:

OPEN-Link is a series of communications software and hardware products which meet the Defense Communications Agency MIL-STDs for the Defense Data Network, for use on any of the DDN networks, such as ARPANET, MILNET, etc. These products also conform to the conventions of the UNIX 4.2 BSD implementation of these protocols for use with the many popular UNIX based graphic workstations.

OPEN-Link supplies TCP/IP communication protocol software products, an Application Programming Interface to TCP functions for PASCAL, C and Assembly, and the MIL-STD applications File Transfer (FTP), Virtual Terminal (TELNET), and Simple Mail Transfer (SMTP).

OPEN-Link for VAX and MicroVAX VMS systems support Ethernet and DDN X.25 communications links. Ethernet attachment is through DEUNA, DELUA, DEBNT, or DEQNA controller boards. DDN X.25 attachment is through a "standard" certified ACC board (ACC 6250 or 5250). DDN LHDH attachment is also supported through the ACC LHDH controller. The X.25 connection can also be made certifiable to certain commercial X.25 networks such as GTE TELENET, TYMNET and others.

OPEN-Link software can concurrently operate with DECNET in a single VAX or MicroVAX system sharing a single DEUNA or DEQNA board Ethernet connection. This enables a low cost bridge function to operate between the two Ethernet networks.

Similarly, OPEN-Link supports both an X.25 and Ethernet connection in the same system, enabling operation of a LAN to Wide Area Network bridge function.

DOCUMENTATION:

A full set of documentation is available.

MACHINE-TYPE/CPU:

DEC VAX-11, MicroVAX, 8000 series

O/S:

VMS 4.X

IMPLEMENTATION-LANGUAGE:

C and PASCAL

DISTRIBUTOR:

Network Solutions
Products Group
8229 Boone Blvd., 7th floor
Vienna, VA 22180

CONTACT:

Gwen Savanillas, (703) 749-0150

ORDERING-PROCEDURE:

Submit purchase order to above address; see above contact for pricing

PROPRIETY-STATUS:

Product of Network Solutions

INFORMATION-UPDATED:

August 1988

2.8.3.11. Process Software FTP-VMS

PRODUCT-OR-PACKAGE-NAME: FTP-VMS

DESCRIPTION:

FTP-VMS is a high performance, low cost TCP/IP networking software product designed exclusively for the VAX/VMS environment. FTP-VMS implements the FTP, UDP, TCP, IP, ARP, and ICMP protocols. FTP-VMS supports any number of simultaneous users with any number of simultaneous FTP, UDP, TCP, or IP connections, limited only by available VAX system resources. Both client (user) and server FTP protocols are provided.

Because FTP-VMS is designed to take advantage of the VAX architecture and the VMS operating system, it provides high thruput with low CPU overhead and minimum memory resources. The UDP, TCP, and IP protocol layers (together with ARP and ICMP) are implemented as true VMS I/O drivers running in kernel mode, linked via DEC's fast driver interface. FTP-VMS has been shown to operate faster than several software and hardware implementations.

FTP-VMS is easy to install and operate, and it uses DEC's recommended VMSINSTAL procedure for automatic user installation. FTP-VMS also supports full file protection (both ACL and UIC) exactly as DECnet does, preventing unauthorized file access from remote users.

FTP-VMS works with all standard DEC Ethernet controllers, and it includes all needed software components for installation, user-operation, TCP, UPD, and IP programmed I/O, network monitoring and management, and system administration. FTP-VMS can optionally share Ethernet controllers concurrently with DECnet, LAT, and LAVC. FTP-VMS also works with several companion products, called TELNET-VMS and SMTP-VMS, to form a complete DoD TCP/IP protocol suite.

DOCUMENTATION:

Fully documented; FTP-VMS is supplied with a User's Guide and a Reference Manual. A complete on-line HELP facility is also provided.

MACHINE-TYPE/CPU:

Any DEC VAX or MicroVAX, including the VAXstation 2000 series

O/S:

VMS or MicroVMS

IMPLEMENTATION-LANGUAGE:

System-level modules are in MACRO-32. Application-level modules use several DEC HLLs.

DISTRIBUTOR:

Process Software Corporation
35 Montague Road
P.O. Box 746
Amherst, MA 01002

CONTACT:

Process Software Corporation, (413) 549-6994, Telex 517891

ORDERING-PROCEDURE:

Contact Process Software Corporation Sales Department.

PROPRIETY-STATUS:

A product of Process Software Corporation

INFORMATION-UPDATED:

January 1988

2.8.3.12. Process Software TELNET-VMS

PRODUCT-OR-PACKAGE-NAME: TELNET-VMS

DESCRIPTION:

TELNET-VMS is a high performance, low cost TCP/IP networking software product designed exclusively for the VAX/VMS environment. TELNET-VMS implements the TELNET, UDP, TCP, IP, ARP, and ICMP protocols. TELNET-VMS supports any number of simultaneous users with any number of simultaneous TELNET, UDP, TCP, or IP connections, limited only by available VAX system resources. Both client (user) and server TELNET protocols are provided.

Because TELNET-VMS is designed to take advantage of the VAX architecture and the VMS operating system, it provides high thruput with low CPU overhead and minimum memory resources. The UDP, TCP, and IP protocol layers (together with ARP and ICMP) are implemented as true VMS I/O drivers running in kernel mode, linked via DEC's fast driver interface. TELNET-VMS has been shown to operate faster than several software and hardware implementations.

TELNET-VMS is easy to install and operate, and it also uses DEC's recommended VMSINSTAL procedure for automatic user installation. TELNET-VMS supports application programmers with a set of library routines that can establish and maintain TELNET connections with remote hosts.

TELNET-VMS works with all standard DEC Ethernet controllers, and it includes all needed software components for installation, user-operation, TCP, UPD, and IP programmed I/O, network monitoring and management, and system administration. TELNET-VMS can optionally share Ethernet controllers concurrently with DECnet, LAT, and LAVC. TELNET-VMS also works with several companion products, called FTP-VMS and SMTP-VMS, to form a complete DoD TCP/IP protocol suite.

DOCUMENTATION:

Fully documented; TELNET-VMS is supplied with a User's Guide and a Reference Manual. A complete on-line HELP facility is also provided.

MACHINE-TYPE/CPU:

Any DEC VAX or MicroVAX, including the VAXstation 2000 series

O/S:

VMS or MicroVMS

IMPLEMENTATION-LANGUAGE:

System-level modules are in MACRO-32. Application-level modules use several DEC HLLs.

DISTRIBUTOR:

Process Software Corporation
35 Montague Road
P.O. Box 746
Amherst, MA 01002

CONTACT:

Process Software Corporation, (413) 549-6994, Telex 517891

ORDERING-PROCEDURE:

Contact Process Software Corporation Sales Department.

PROPRIETY-STATUS:

A product of Process Software Corporation

INFORMATION-UPDATED:

January 1988

2.8.3.13. Proteon, Inc. ULTRIX-32 Device Driver for ProNET networks

PRODUCT-OR-PACKAGE-NAME: ULTRIX-32 Device Driver for ProNET networks

DESCRIPTION:

The ProNET-10 and ProNET-80 Token Ring networks offer advantages of speed, distance, and media flexibility over the Ethernet supported by the Digital VAX and MicroVAX computers. The ULTRIX-32 device drivers connect the ProNET-10 and ProNET-80 boards to ULTRIX's TCP/IP code, allowing all the the existing software (including NFS in Version 2.0) to operate over ProNET.

There are ProNET boards for the UNIBUS and Q-Bus VAX processors. The p5205 device driver supports the p1000 ProNET-10 UNIBUS System or the p1080 ProNET-80 UNIBUS System on VAX processors. MicroVAX-I and MicroVAX-II processors use the p1100 ProNET-10 Q-Bus System or the p1180 ProNET-80 Q-bus System.

DOCUMENTATION:

Includes full hardware/software installation manual

MACHINE-TYPE/CPU:

Any VAX or MicroVAX with UNIBUS or Q-Bus

O/S:

ULTRIX-32 Version 1.2, 2.0, or higher

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

Proteon, Inc.
Two Technology Drive
Westborough, MA 01581-5008

CONTACT:

Mick Scully, (mcs@proteon.com), (617) 898-2800

PROPRIETY-STATUS:

Licensed code of Proteon, Inc.

INFORMATION-UPDATED:

February 1988

2.8.3.14. SRI MultiNet

PRODUCT-OR-PACKAGE-NAME: MultiNet

DESCRIPTION:

MultiNet is a VAX/VMS kernel resident Multi-Protocol network environment currently supporting the TCP/IP family of protocols, the Xerox NS (XNS) protocol, the Xerox PUP protocol and the CHAOSnet protocol. The TCP/IP and XNS protocol modules are derived from the Berkeley UNIX 4.3 BSD system. The CHAOSnet protocol is supported on both 10Mb Ethernet and 3Mb CHAOSnet hardware.

A full suite of user/server programs are provided for all the protocol families. In particular, the TCP/IP family (TCP, UDP, ICMP and IP) provides programs for FTP, SMTP, TFTP, TELNET, FINGER, Domain Name Service, Gateway Service (EGP, RIP and HELLO), Network Time (NTP), SUN Remote Procedure Call (RPC), SUN Network File System (NFS) and many other minor application protocols.

This product supports the full range of VAX processors running VAX/VMS version 4.4 or greater, including VMS version 5. All DEC ethernet interfaces (eg. DEUNA, DEQUNA, DEBNT) are supported and can be shared with other VMS protocols (eg. DECnet, LAT and LAVC). Other network interfaces supported are:

- 10Mb Ethernet: Interlan NI1010 and NP100, 3Com and Excelan EXOS 204

- Xerox 3Mb Ethernet

- ACC LH-DH (1822)

- ACC HDH (1822-J)

- ACC ACP6250 and ACP5250 X.25

- DEC DMR-11/DMC-11

- NSC Hyperchannel

- Proteon ProNET Ring

- Ungermann-Bass (Using DR11-W Unibus interface)

- DEC CSS PCL-11B Parallel Communications Interface

- CHAOS 3Mb Interface

- IP over DECnet links

- DECnet over IP

DOCUMENTATION:

Installation Manual and Domain Nameserver operations Guide

MACHINE-TYPE/CPU:

DEC VAX and MicroVAX

O/S:

VAX/VMS Version 4.4 or greater including VAX/VMS Version 5.0

IMPLEMENTATION-LANGUAGE:

"C" - compiled using the GNU "C" compiler for VAX/VMS (supplied as part of the distribution)

DISTRIBUTOR:

SRI International
333 Ravenswood Avenue, AA135
Menlo Park, CA 94025

CONTACT:

Desiree Champagne, (Desiree@WARBUCKS.AI.SRI.COM), (415) 859-6083

ORDERING-PROCEDURE:

Contact above for licensing information. Available with support from TGV Inc.

PROPRIETY-STATUS:

SRI International and TGV Inc.

DDN-QUALIFIED:

yes (using ACC ACP6250 or ACP5250 X.25 interface)

INFORMATION-UPDATED:

August 1988

2.8.3.15. TGV Multinet

PRODUCT-OR-PACKAGE-NAME: Multinet

DESCRIPTION:

MultiNet is a VAX/VMS kernel resident Multi-Protocol network environment currently supporting the TCP/IP family of protocols, the Xerox NS (XNS) protocol, the Xerox PUP protocol and the CHAOSnet protocol. The TCP/IP and XNS protocol modules are derived from the Berkeley UNIX 4.3 BSD system. The CHAOSnet protocol is supported on both 10Mb Ethernet and 3Mb CHAOSnet hardware.

A full suite of user/server programs are provided for all the protocol families. In particular, the TCP/IP family (TCP, UDP, ICMP and IP) provides programs for FTP, SMTP, TFTP, TELNET, FINGER, Domain Name Service, Gateway Service (EGP, RIP and HELLO), Network Time (NTP), SUN Remote Procedure Call (RPC), SUN Network File System (NFS) and many other minor application protocols.

This product supports the full range of VAX processors running VAX/VMS version 4.4 or greater, including VMS version 5. All DEC ethernet interfaces (eg. DEUNA, DEQUNA, DEBNT) are supported and can be shared with other VMS protocols (eg. DECnet, LAT and LAVC). Other network interfaces supported are:

- 10Mb Ethernet: Interlan NI1010 and NP100, 3Com and Excelan EXOS 204

- Xerox 3Mb Ethernet

- ACC LH-DH (1822)

- ACC HDH (1822-J)

- ACC ACP6250 and ACP5250 X.25

- DEC DMR-11/DMC-11

- NSC Hyperchannel

- Proteon ProNET Ring

- Ungermann-Bass (Using DR11-W Unibus interface)

- DEC CSS PCL-11B Parallel Communications Interface

- CHAOS 3Mb Interface

- IP over DECnet links

- DECnet over IP

DOCUMENTATION:

Installation Manual and Domain Nameserver operations Guide

MACHINE-TYPE/CPU:

DEC VAX and MicroVAX

O/S:

VAX/VMS Version 4.4 or greater including VAX/VMS Version 5.0

IMPLEMENTATION-LANGUAGE:

"C" - compiled using the GNU "C" compiler for VAX/VMS

(supplied as part of the distribution)

DISTRIBUTOR:

> TGV Inc.
> 15139 Old Ranch Road
> Los Gatos, CA 95030

CONTACT:

Kenneth Adelman, (Adelman@WARBUCKS.AI.SRI.COM), (415) 859-4419

ORDERING-PROCEDURE:

Contact above for licensing information. Available with support from TGV Inc.

PROPRIETY-STATUS:

SRI International and TGV Inc.

DDN-QUALIFIED:

yes (using ACC ACP6250 or ACP5250 X.25 interface)

INFORMATION-UPDATED:

August 1988

2.8.3.16. U.C. Berkeley UNIX 4.3 BSD

PRODUCT-OR-PACKAGE-NAME: UNIX 4.3 BSD

DESCRIPTION:

This implementation was developed by the Computer Systems Research Group of the University of California at Berkeley as part of a number of research projects. It is a revision of 4.2 BSD, which in turn was based on the BBN TCP/IP implementation for the VAX. It provides support for TCP, IP, ICMP, and UDP with user and server programs for Telnet, FTP, TFTP and SMTP. Hardware supported includes ACC and DEC/CSS IMP Interfaces, 10M bit/s Ethernet (5 different controllers), 3M bit/s Ethernet, and Proteon ProNET.

DOCUMENTATION:

Online documentation of user programs, system call interfaces, changes from 4.2 BSD, etc.; "Networking Implementation Notes, 4.3BSD Edition"

MACHINE-TYPE/CPU:

VAX-8600, 8650, 11/785, 11/780, 11/750, 11/730; MicroVAX II

O/S:

UNIX 4.3BSD

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

Computer Systems Research Group
Computer Science Division
University of California
Berkeley, CA 94720

CONTACT:

Pauline Schwartz, Distribution Coordinator,
(Pauline@UCBARPA.BERKELEY.EDU), (415) 642-7780

ORDERING-PROCEDURE:

Contact Distribution Coordinator for information packet.

PROPRIETY-STATUS:

Requires a 4.3BSD license agreement (included) and AT&T UNIX/32V, System III, or System V UNIX source code licence.

NOTE: The procedure for 4.2 BSD licensees to acquire 4.3 BSD consists of an Addendum to the 4.2 BSD Berkeley License Agreement, plus Site Information and Equipment List Forms and the required payment. If there has been any change with AT&T, copies of that documentation must also be included, e.g., name change, or updating of the AT&T UNIX Software Agreement.

INFORMATION-UPDATED:

February 1988

2.8.3.17. U. of Texas, Austin CYGNUS

PRODUCT-OR-PACKAGE-NAME: Cyber TCP/IP, CYGNUS, NIP

DESCRIPTION:

CYGNUS is a central processor program which implements TCP, UDP, and IP. NIP is a peripheral processor program which acts as the network device driver for CYGNUS. Communication with the rest of the Internet is accomplished using a Cyber channel adapter which connects the Cyber with a VAX 11/780 system. The VAX acts as a front-end processor for the Cyber: ARP is implemented there and standard Ethernet hardware is used to physically connect to the network. This implementation is now available for general release.

DOCUMENTATION:

No published documentation currently exists; internal documentation is available.

MACHINE-TYPE/CPU:

Cyber 170/750 with VAX 11/780 as front-end

O/S:

UT2D (University of Texas Dual Dinosaur)

IMPLEMENTATION-LANGUAGE:

Cyber assembly language for CYGNUS and NIP (COMPASS)

DISTRIBUTOR:

Com 21, Computation Center
The University of Texas at Austin
Austin, TX 78712

CONTACT:

Dan Reynolds, (dan@EMX.UTEXAS.EDU), (512) 471-3241 ext 223

ORDERING-PROCEDURE:

Contact the person above for specifics

PROPRIETY-STATUS:

Copyright 1986, The University of Texas System Board of Regents

INFORMATION-UPDATED:

August 1988

2.8.3.18. UNIQ System V

PRODUCT-OR-PACKAGE-NAME: PASSAGE TCP/IP

DESCRIPTION:

PASSAGE TCP/IP is a complete implementation of TCP/IP that allows a UNIX System V (5.2.2) or UNIQ V.3 to participate as a routing or nonrouting (end) host over a wide spectrum of communication systems ranging from hard-wired connections to packet-switched or circuit-switched networks. It communicates with adjacent hosts over synchronous communication lines, Ethernet, LANs, and standard 1822 interface to an IMP. Features include TCP/IP, ICMP, Telnet, FTP, UDP, SMTP, and popular 4 BSD UNIX R-utilities. Product is available in source or binary form.

DOCUMENTATION:

Included in package

MACHINE-TYPE/CPU:

Digital VAX Processors

O/S:

UNIX System V (5.2.2) or UNIQ System V.3

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

UNIQ Digital Technologies
28 S. Water St.
Batavia, Ill 60510
(312) 879-1008

CONTACT:

Sales department (see above)

ORDERING-PROCEDURE:

Contact distributor

PROPRIETY-STATUS:

PASSAGE is a product of UNIQ Digital Technologies.

INFORMATION-UPDATED:

January 1988

2.8.3.19. Wollongong MicroVMS

PRODUCT-OR-PACKAGE-NAME: WIN/TCP for MicroVAX

DESCRIPTION:

This TCP/IP implementation includes Telnet (remote login), FTP (file transfer), SMTP (Mail) Netstat, Finger, TFTP. Supports the DEC DESVA, DEQNA and DELQA Ethernet Controllers, Proteon ProNET, and NSC HYPERchannel for LANs and the ACC 5250 X.25 interface for DDN access.

DOCUMENTATION:

Installation Guide, Programmer's Guide, WINS TCP/IP Primer, Reference Guide, Administrator's Guide, and User's Guide provided.

MACHINE-TYPE/CPU:

DEC MicroVAX 2000, MicroVAX I and II, and MicroVAX 3000

O/S:

Micro VMS 4.0 or greater

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

The Wollongong Group
1129 San Antonio Road
Palo Alto, CA 94303

CONTACT:

Kurt Kruger, Wollongong Marketing, (415) 962-7200

ORDERING-PROCEDURE:

Available with support from The Wollongong Group

PROPRIETY-STATUS:

Wollongong

INFORMATION-UPDATED:

January 1988

2.8.3.20. Wollongong VMS

PRODUCT-OR-PACKAGE-NAME: WIN/TCP for VAX

DESCRIPTION:

This TCP/IP implementation includes Telnet (remote login), FTP (file transfer), SMTP (Mail) Netstat, Finger, TFTP. Supports the following network interfaces:

- ACC 6250 X.25

- ACC LH-DH (1822 interface)

- ACC HDH (1822-J)

- DEC DEUNA, DELUA, DEBNT, and DEBNA Ethernet Controllers

- NSC HYPERchannel

- Proteon ProNET

- Interlan Ethernet Controller

- DEC DMR-11

DOCUMENTATION:

Installation Guide, Programmer's Guide, WINS TCP/IP Primer, Reference Guide and User's Guide provided.

MACHINE-TYPE/CPU:

All VAX 700 and 8000 series

O/S:

VMS 4.4 and greater

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

The Wollongong Group
1129 San Antonio Road
Palo Alto, CA 94303

CONTACT:

Kurt Kruger, Wollongong Marketing, (415) 962-7200

ORDERING-PROCEDURE:

Available with support from The Wollongong Group

PROPRIETY-STATUS:

Wollongong

INFORMATION-UPDATED:

January 1988

2.9. ELXSI, INC.

2.9.1. ELXSI Fusion TCP/IP

PRODUCT-OR-PACKAGE-NAME: ELXSI Fusion TCP/IP

DESCRIPTION:

Implementation of FTP and Telnet for ELXSI machines running release 10 or later. Also included are packet-monitoring and statistics utilities. Later releases will include networking libraries.

DOCUMENTATION:

Manuals and on-line documentation

MACHINE-TYPE/CPU:

ELXSI 6400

O/S:

Embos, Enix System V, Enix 4.2

IMPLEMENTATION-LANGUAGE:

C and Pascal

DISTRIBUTOR:

ELXSI Inc.
2334 Lundy Place
San Jose, CA 95131

CONTACT:

Hank Taylor, (408) 942-0900, ext. 5805

ORDERING-PROCEDURE:

Through sales representatives

PROPRIETY-STATUS:

Source and object code for sale

INFORMATION-UPDATED:

February 1988

2.10. EXCELAN

2.10.1. LAN Service for Micro VMS

PRODUCT-OR-PACKAGE-NAME: LAN Service for Micro VMS

DESCRIPTION:

Excelan's LAN Service for Micro VMS implements DoD TCP/IP protocols to connect DEC MicroVAX IIs running MicroVMS to Ethernet networks. LAN Service for Micro VMS is a front-end TCP/IP implementation that operates in conjunction with an EXOS 203 Intelligent Ethernet Controller for Q-bus. The TCP/IP protocols (TCP, IP, UDP, ICMP, ARP) and Telnet/rlogin servers run on the controller, and the user applications (FTP, Telnet, SMTP, rsh) run on the MicroVAX. LAN Service for Micro VMS user applications also include QIO programming library and network administration utilities.

Optionally, LAN Service NFS is available for LAN Service for Micro VMS customers. LAN Service NFS is a VMS server implementation of SUN Microsystems' Network File System (NFS) optimized for use with VAX/VMS systems that employ Excelan's LAN Service for Micro VMS.

LAN Service NFS permits users of SUN Workstations, PCs, and other systems running NFS-compatible client software to have transparent access to the resources (such as files, host-attached printers and other peripheral devices) of a VAX/VMS host.

Some of the exclusive features of this product are: SUN NFS compatibility, automatic file format conversion, and powerful server management utilties.

DOCUMENTATION:

LAN Service for Micro VMSTCP/IP Network Software 1. Installation and Administration Guide 2. Programming Guide 3. Applications Users Guide

MACHINE-TYPE/CPU:

DEC Micro VAX II and Micro VAX III-3500 only in conjunction with EXOS 203 Intelligent Ethernet Controller (an adaptor kit is necessary).

O/S:

MicroVMS v4.4-4.7 & v5.0

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

Inside Sales:
Excelan, Inc.
2180 Fortune Drive
San Jose, CA 95131
(408)434-2300

Europe: Excelan Europe Ltd.
Intec 2, Suite 17 Wade Road
Basingstoke Hampshire RG24 One, England

CONTACT:

Inside Sales (408) 434-2300, 1-800-EXCELAN

ORDERING-PROCEDURE:

    Contact Inside Sales

INFORMATION-UPDATED:

    February 1989

2.10.2. LAN WorkPlace for DOS

PRODUCT-OR-PACKAGE-NAME: LAN WorkPlace for DOS

DESCRIPTION:

The LAN WorkPlace^{tm} for PC DOS provides a personal computer running DOS with the ability to directly and concurrently connect to any TCP/IP device on an Ethernet LAN. The modularity of its design enables users to customize functionality. Once the EXOS Intelligent Ethernet Controller and TCP/IP transport system are installed, any combination of applications and network interfaces can be used. The TCP/IP includes FTP and TELNET applications, as well as VT-220, VT-100, VT-52, IBM-ANSI terminal emulations, third party networking terminal emulation programs are supported, and a set of UNIX System V utilities. It allows PCs to communicate directly and concurrently with dissimilar computers supporting standard TCP/IP protocols (such as hosts and CAD workstations.)

In addition, the Driver for Advanced NetWare allows the user to access Advanced NetWare 286.20a, 2.11 or SFT Netware 286.2.1 servers and it can be concurrently connected to TCP/IP hosts.

With the NETBIOS interface, users can run NETBIOS applications on top of TCP/ IP protocols and communicate with other PCs, servers, and hosts. The LAN WorkPlace Socket Library can be used to develop networking applications. With either of these two packages, users can run both NETBIOS applications and TCP/ IP applications concurrently, on the same PC. The software is shipped on floppy disks. Installation and diagnostics software is also provided.

DOCUMENTATION:

TCP/IP Transport System User's Guide
Host-Access Applications User's Guide
NETBIOS API User's Guide
Socket Library API User's Guide
HostShare Resource Sharing Application User's Guide
HostShare Resource Sharing Application Network Manager's Guide
Drivers for Advanced Netware 286 User's Guide

MACHINE-TYPE/CPU:

IBM PS/2 compatibles in conjunction with EXOS 215T Intelligent Ethernet Controller for PS/2 Bus

O/S:

DOS (v3.x)

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

Inside Sales: Excelan, Inc.
2180 Fortune Drive
San Jose, CA 95131
(408) 434-2300

Europe: Excelan Europe Ltd.
Intec 2, Suite 17, Wade Road
Basingstoke, Hampshire RG24 One, England

CONTACT:

Inside Sales (408) 434 2300, 1 (800) EXCELAN

ORDERING-PROCEDURE:

Contact Inside Sales

INFORMATION-UPDATED:

February 1989

2.10.3. MULTINET host-based TCP/IP

PRODUCT-OR-PACKAGE-NAME: EXCELAN MULTINET host-based TCP/IP

DESCRIPTION:

Excelan's MultiNet addresses the needs of VAX users who need host-based TCP/ IP solution.

VAXstation 2000 users require a host-based implementation when connecting their workstations. Host-based connection is also the logical alternative for network-bound users, or for those interested in running multiple network media and/or protocol stacks.

With MultiNet and LAN service for VMS, Excelan is the first vendor to offer both host and front-end-based TCP/IP for VMS.

Excelan MultiNet includes the standard suite of networking applications -- TELNET, FTP, and SMTP -- it also supports third-party programming through QIO (Queue Input/Output) interface compatibility and through a 4.3 BSD-compatible socket programming interface.

Excelan MultiNet is hardware-independent. It supports Ethernet adapters from DEC, Excelan, or other third-party vendors. It also supports the X.25 standard and many others.

Excelan MultiNet also includes Domain Name Service as an aid to network management; the capacity to run DECnet over IP, and IP over DECnet; rsh for remote command execution; and EGP, RIP, and HELLO routing protocols.

MACHINE-TYPE/CPU:

DEC VAX, MICROVAX

O/S:

VMS

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

Inside Sales
Excelan, Inc.
2180 Fortune Drive
San Jose, CA 95131

CONTACT:

Inside Sales: (408) 434-2300, 1 (800) EXCELAN

ORDERING-PROCEDURE:

Contact Inside Sales

PROPRIETY-STATUS:

MULTINET is a trademark of TGV, Inc., licensed to Excelan, Inc.

INFORMATION-UPDATED:

February 1989

2.10.4. TCP/IP Network Software for XENIX-based IBM-PC ATs

PRODUCT-OR-PACKAGE-NAME: TCP/IP Network Software for XENIX-based IBM-PC ATs

DESCRIPTION:

Excelan's LAN WorkPlace for Xenix 286 implements DoD TCP/IP protocols to connect XENIX-based 80286-based ATs to Ethernet networks. LAN WorkPlace for Xenix 286 is a front-end TCP/IP implementation that operates in conjunction with an EXOS 205T/E Intelligent Ethernet Controller for PCbus. The TCP/IP protocols (TCP, IP, UDP, ICMP, ARP) and Telnet/rlogin servers run on the EXOS 205T/E controller and the user applications (FTP, Telnet, SMTP, ud, R-utilities, and RFC-compliant NETBIOS, which provides networking services for Xenix Net) run on the XENIX PC AT. Excelan's LAN WorkPlace for Xenix applications also include C program socket library and network administration utilities.

DOCUMENTATION:

LAN WorkPlace for Xenix 286 Reference Manual

MACHINE-TYPE/CPU:

IBM PC/AT in conjunction with an EXOS 205T/E Ethernet Controller for PC Bus

O/S:

SCO System V Rel:2.2 (286 Release)

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

Inside Sales: Excelan Inc.
2180 Fortune Dr.
San Jose, CA 95131
(408)434-2300

Europe:
Excelan Europe Ltd.
Intec 2, Suite 17, Wade Road
Basinstoke, Hampshire RG24 One, England

CONTACT:

Inside Sales (408) 434 2300 1 (800) EXCELAN

ORDERING-PROCEDURE:

Contact Inside sales

INFORMATION-UPDATED:

February 1989

2.11. GIGAMOS SYSTEMS

2.11.1. GigaMos TCP/IP

PRODUCT-OR-PACKAGE-NAME: GigaMos TCP/IP

DESCRIPTION:

An Excelan-Exos-101/200 series network front-end processor residing on the Multibus of a GigaMos-Lambda family multi-processor computer provides TCP and UDP services to the application programs TELNET, FTP, IMAGEN and others. The applications are integrated into the generic device, pathname, filesystem, or network systems of the operating system, wherever applicable for transparent and automatic usage. The UNIX operating system support provided by Excelan for the front-end is also available and runs concurrently on a 68010 processor.

DOCUMENTATION:

Available from vendor

MACHINE-TYPE/CPU:

GigaMos Lambda under the ZetaLisp-Plus operating system concurrently with a 68010 under the UNIX operating system

O/S:

ZetaLisp-Plus Release 2.0 or later, UNIX System V

IMPLEMENTATION-LANGUAGE:

Lisp, C

DISTRIBUTOR:

GigaMos Systems
650 Suffolk Street
Lowell, MA 01854

CONTACT:

Sandy Stewart, Manufacturing Process Engineer, (617) 458-9100

ORDERING-PROCEDURE:

Contact GigaMos Systems

PROPRIETY-STATUS:

Proprietary product of GigaMos Systems

INFORMATION-UPDATED:

February 1988

2.12. GOULD INC.

2.12.1. Gould MPX-32

PRODUCT-OR-PACKAGE-NAME: MPX-32 TCP/IP

DESCRIPTION:

An implementation of the Department of Defense Protocols for Gould CONCEPT/32 machines running the MPX-32 (Release 3.2B or later) Operating System.   This includes IP and TCP. UDP, TFTP, FTP, Telnet and SMTP will be implemented during 1986.

DOCUMENTATION:

Operation and installation procedures are covered by standard Gould, CSD documentation.

MACHINE-TYPE/CPU:

All CONCEPT/32 machines

O/S:

MPX-32 (Release 3.2B or later)

DISTRIBUTOR:

Gould Inc. Computer Systems Division
6901 West Sunrise Boulevard
Ft. Lauderdale, FL 33313-4499

CONTACT:

Don Zwonitser, Product Line Manager - Communications, (305) 587-2900

INFORMATION-UPDATED:

January 1986

2.13. HALLEY SYSTEMS

2.13.1. ConnectVIEW Network Management System

PRODUCT-OR-PACKAGE-NAME: ConnectVIEW Network Management System

DESCRIPTION:

ConnectVIEW Network Management System provides management and control of Halley System's ConnectLAN 100 BROUTERs and intelligent H-series broadband modems. The ConnectVIEW provides a user friendly graphical interface using Microsoft WINDOWS and database management for control and management of network elements. Some of the functions provided by the ConnectVIEW are: Real-time display of network, network planning, configuration management, fault management, network management, and system management.

DOCUMENTATION:

ConnectVIEW Installation and Operations Manual

MACHINE-TYPE/CPU:

IBM PC, IBM PS/2, IBM compatible

O/S:

DOS (requires Microsoft WINDOWS)

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

Halley Systems
2730 Orchard Parkway
San Jose, CA 95134

CONTACT:

Vasant Acharya, Product Manager, (408) 432 2600 (FAX: 408 943 1601)

ORDERING-PROCEDURE:

ConnectVIEW NMS Software SET1 - Modem Manager
ConnectVIEW NMS Software SET2 - BROUTER Manager

PROPRIETY-STATUS:

ConnectVIEW NMS is a Halley System, Inc. proprietary product

INFORMATION-UPDATED:

February 1989

2.14. HARRIS CORPORATION

2.14.1. Harris X.25 with TCP/IP

PRODUCT-OR-PACKAGE-NAME: X.25 with TCP/IP Protocols (DDN)

DESCRIPTION:

The Harris X.25 with DDN products provides the necessary software and hardware to connect to the Defense Data Network (DDN).

The following DoD protocols are supported:

- Transmission Control Protocol MIL STD 1778 - The Internet TCP protocol is the transport protocol supported for the DoD network.

- Internet Protocol (IP) MIL STD 1777 - IP is an internetwork protocol that provides datagram service, a virtual network service, and an error reporting service to transport layer protocols.

- Internet Control Message Protocol - ICMP provides information useful to the higher layer (TCP) in recovering from network failures.

- File Transfer Protocol - The File Transfer utility program uses the TCP/IP protocols to provide reliable and efficient file transfer between two Internet hosts.

- Telnet - Virtual Terminal - Telnet allows users to sign on and execute applications on any host on the Internet.   The Telnet protocol handles the conversions necessary for terminal-to-host compatibility.

- Simple Mail Transfer Protocol - SMTP supports electronic message transfer over the DDN network and relies on the provisions of the protocol for the exchange of messages between dissimilar mail application programs.

DOCUMENTATION:

For Harris H-Series Systems:

- Harris TCP/IP Manager's Guide (0868011-100)

- Harris TCP/IP User's Guide (0868012-100)

For HCX systems:

- HCX/UX Networking Reference Manual (0890118-201)

For MCX systems:

- Internet User's Guide

- Internet Programmers Guide

MACHINE-TYPE/CPU:

Harris H-Series systems, HCX systems, and MCX systems

O/S:

Harris H-Series: VOS 5.1 or later

HCX: HCX/UX 2.4 or later

MCX: HS/UX 3.0 or later

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

Harris Computer Systems Division
Local Harris Sales Office

CONTACT:

Joseph Fedak
Harris Computer Systems Division
2101 W. Cypress Creek Road
Fort Lauderdale, FL 33309
(305) 974-1700

ORDERING-PROCEDURE:

Contact Joseph Fedak or your local Harris Sales Office.

PROPRIETY-STATUS:

Proprietary product of Harris Computer Systems Division

DDN-QUALIFIED:

Yes for H-Series and MCX; Spring 1988 for HCX

INFORMATION-UPDATED:

January 1988

2.15. HEWLETT-PACKARD COMPANY

2.15.1. HP-9000 Series 300

PRODUCT-OR-PACKAGE-NAME: Hewlett-Packard NS-ARPA SERVICES/300

DESCRIPTION:

NS-ARPA SERVICES/300 is a local area networking software product for the Hewlett-Packard 9000 Series 300 HP-UX systems. It supports multi-vendor connectivity via ARPA and Berkeley network services, including 4.2 BSD sockets, TELNET, FTP, SMTP/sendmail, rlogin, rcp, and rexec. The product includes LAN diagnostic tools and troubleshooting information for finding problems on the network. Also included in the product are HP Network Services, including transparent remote file access and network file transfer. HP Network Services are used for communication between HP systems as well as VAX/VMS systems.

DOCUMENTATION:

A User's Guide and Node Manager's Guide are provided with the product. Among other topics, these include expanded tutorial sections on Berkeley sockets and sendmail.

MACHINE-TYPE/CPU:

HP9000 Series 300 (68010/68020 based systems)

O/S:

HP UX - Release 5.1 or later

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

Hewlett-Packard Company
P.O. Box 10301
Palo Alto, CA 94303-0890
(415) 857-1501

CONTACT:

Local HP Sales Office

ORDERING-PROCEDURE:

Contact your local HP Sales Office; order product numbers:
50952C - Media and Manuals
50952L - License-to-use

PROPRIETY-STATUS:

Proprietary product of Hewlett-Packard

INFORMATION-UPDATED:

February 1988

2.15.2. HP-9000 Series 800

PRODUCT-OR-PACKAGE-NAME: Hewlett-Packard ARPA SERVICES/800

DESCRIPTION:

ARPA SERVICES/800 is a local area networking software product for the Hewlett-Packard 9000 Series 800 HP-UX systems. It supports multi-vendor connectivity via ARPA and Berkeley network services, including 4.2 BSD sockets, TELNET, FTP, SMTP/sendmail, rlogin, rcp, and rexec. The product includes LAN diagnostic tools and troubleshooting information for finding problems on the network.

DOCUMENTATION:

A User's Guide and Node Manager's Guide are provided with the product. Among other topics, these include expanded tutorial sections on Berkeley sockets and sendmail.

MACHINE-TYPE/CPU:

HP9000 Series 800, Model 840

O/S:

HP-UX

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

Hewlett-Packard Company
P.O. Box 10301
Palo Alto, CA 94303-0890
(415) 857-1501

CONTACT:

Local HP Sales Office

ORDERING-PROCEDURE:

Contact your local HP Sales Office; order product number:

	ARPA Services	LAN 9000/Link
Model 825	50981 A/R	91786A
Model 840	50980 A/R	98194A
Model 850	50982 A/R	91788A

PROPRIETY-STATUS:

Proprietary product of Hewlett-Packard

INFORMATION-UPDATED:

February 1988

2.16. HONEYWELL INFORMATION SYSTEMS

2.16.1. Honeywell DDN6

PRODUCT-OR-PACKAGE-NAME: DDN6

DESCRIPTION:

The Honeywell DDN6 provides the necessary software, hardware and technical support services for connecting a DPS 6 computer system to the Defense Data Network.

Sixty-four simultaneous sessions are multiplexed over one HDLC link between the Communications Server/1 DDN (CS/1-DDN) and DPS 6. This product currently supports TELNET, SMTP and FTP functionalities. A list of hardware and software components follows:

- LCU1026 CS/1-DDN Communications Server; 68000 based micro-processor with 684 KB RAM; V.35 high speed physical interface.

- CS/1-DDN EXEC Executive software on CS/1-DDN Communications Server hardware; includes TCP/IP, Honeywell Service Access Protocol (SAP), HDLC-LAP-B, and Federal Standards 1041/FIPS 100 certified X.25.

- SS-6 Virtual Terminal Interface, Honeywell SAP, and HDLC-LAP-B facilities on the DPS 6.

- SMTP-6 Simple Mail Transfer Protocol Facility for the DPS 6.

- FTP-6 File Transfer Protocol Facility for the DPS 6.

- TEL-6 TELNET (Virtual Terminal) Facility for the DPS 6.

TELNET (Virtual Terminal) software supports asynchronous terminals. In addition, application development tools such as Virtual Network Interface (VNI) are available to allow for customizing application packages to run under MOD 400 over the DDN.

DOCUMENTATION:

Operator's Guide and Installation Manual for the CS/1-DDN; Software release bulletins, which provide installation instructions, as well as user's guides are provided for TELNET, SMTP and FTP; Application Programmer's Guide for the Virtual Network Interface (VNI) routines.

MACHINE-TYPE/CPU:

Honeywell DPS6 Family of mini computers: 6/42, 6/45, 6/70, 6/75, 6/85, 6/95, or 6/98

O/S:

GCOS 6 Mod 400, Release 3.1 Update 3 or later

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

   Honeywell Information Systems
   Federal Systems Divisions
   7900 West Park Drive
   McLean, VA 22102

CONTACT:

   Dana Crabill, (703) 827-3132 or Ricki Vick, (703) 827-3894

ORDERING-PROCEDURE:

   Contact Dana Crabill or local HIS Sales Office

PROPRIETY-STATUS:

   Proprietary Product of Honeywell Information Systems

DDN-QUALIFIED:

   Yes

INFORMATION-UPDATED:

   February 1988

2.16.2. Honeywell DDN8

PRODUCT-OR-PACKAGE-NAME: DDN8

DESCRIPTION:

The Honeywell DDN8 provides the necessary software, hardware and technical support services for connecting a DPS 8 computer system to the Defense Data Network.

Sixty-four simultaneous sessions are multiplexed over one HDLC link between the Communications Server/1 DDN (CS/1-DDN) and DPS 8/DATANET 8 (DN 8). This DDN8 currently supports TELNET, SMTP and FTP functionalities. A list of hardware and software components follows:

- LCU1026 CS/1-DDN Communications Server; 68000 based micro-processor with 684 KB RAM; V.35 high speed physical interface.

- CS/1-DDN EXEC Executive software on CS/1-DDN Communications Server hardware; includes TCP/IP, Honeywell Service Access Protocol (SAP), HDLC-LAP-B, and Federal Standards 1041/FIPS 100 certified X.25.

- SS-8 Virtual Terminal Interface, Honeywell SAP, and HDLC-LAP-B facilities on the DPS 8.

- SS-DN Standard Service software for the DN 8.

- SMTP-8 Simple Mail Transfer Protocol Facility for the DPS 8.

- FTP-8 File Transfer Protocol Facility for the DPS 8.

- TEL-DN TELNET (Virtual Terminal) Facility for the DN 8.

TELNET (Virtual Terminal) software supports asynchronous terminals. In addition, application development tools such as Virtual Network Interface (VNI) are available to allow for customizing application packages to run under GCOS 8 over the DDN.

DOCUMENTATION:

Operator's Guide and Installation Manual for the CS/1-DDN; Software release bulletins, which provide installation instructions, as well as user's guides are provided for TELNET, SMTP and FTP; Application Programmer's Guide for the Virtual Network Interface (VNI) routines.

MACHINE-TYPE/CPU:

Honeywell DPS8, DPS 88 and DPS 90 Family of Large Scale Computers; DATANET 8 FEP is required.

O/S:

GCOS 8 SR2300 or later; Distributed Network Supervisor (DNS) 200, Update 6 or later

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

Honeywell Information Systems
Federal Systems Divisions
7900 West Park Drive
McLean, VA 22102

CONTACT:

Dana Crabill, (703) 827-3132 or Ricki Vick, (703) 827-3894

ORDERING-PROCEDURE:

Contact Dana Crabill or local HIS Sales Office

PROPRIETY-STATUS:

Proprietary Product of Honeywell Information Systems

DDN-QUALIFIED:

Yes

INFORMATION-UPDATED:

February 1988

2.16.3. Honeywell MULTICS TCP/IP Facility

PRODUCT-OR-PACKAGE-NAME: MULTICS TCP/IP Facility

DESCRIPTION:

The Multics implementation includes TCP/IP as well as Telnet, FTP, and SMTP. Support is also available for Finger, Discard, Echo, Time, and ICMP.

DOCUMENTATION:

Online help file supplied

MACHINE-TYPE/CPU:

Honeywell Level 68, DPS8M

O/S:

Multics MR 10.0 and beyond

IMPLEMENTATION-LANGUAGE:

PL/1

DISTRIBUTOR:

Honeywell Information Systems
Federal Systems Division
7900 Westpark Drive
McLean, VA 22102

CONTACT:

Dana Crabill, (703) 827-3132

ORDERING-PROCEDURE:

Contact Dana Crabill

PROPRIETY-STATUS:

Honeywell product

INFORMATION-UPDATED:

February 1988

2.17. IBM/COMPATIBLES

2.17.1. PC/COMPATIBLES

2.17.1.1. Amateur Radio IBM-PC

PRODUCT-OR-PACKAGE-NAME: KA9Q/NET

DESCRIPTION:

This package provides the Internet protocols on the IBM PC running MS-DOS. It was designed primarily for amateur packet radio use. Except where otherwise noted, it was designed and written by Phil Karn, KA9Q (karn@louie.udel.edu).

The following protocols are included:

1. SMTP client and server. The server does not support aliasing or forwarding; all recipients must be local. A standalone command for sending mail is included in the distribution; it was written by Bdale Garbee, N3EUA (bdale%winfree.uucp@flash.bellcore.com).

2. FTP client and server. Image and ASCII types are supported. There is no access control as yet on the server (this is difficult to do under MS-DOS).

3. Telnet client and "server". The client understands the ECHO option. The "server" merely allows for keyboard-to-keyboard chatting, since MS-DOS isn't a timesharing system.

4. TCP echo and discard servers.

5. TCP. Multiple connections are supported. A lot of work has gone into tuning the implementation for operation over a VERY bad path, namely the amateur packet radio channel.

6. UDP.

7. IP/ICMP. At present only manually specified default and host-specific routing table entries are supported ("fully connected subnets" do not as yet exist in amateur packet radio). Most of the useful IP and ICMP options are supported.

8. Ethernet/ARP, for the 3-Com 3C-500 controller.

9. SLIP, compatible with Rick Adam's driver under Berkeley UNIX. The PC's regular asynchronous adapter ports are used.

10. AX.25/ARP, a special serial line mode for operation atop the amateur packet radio link level protocol AX.25. IP datagrams are encapsulated in AX.25 UI (connectionless) frames. ARP resolves IP addresses into AX.25 callsigns. The resulting packets are sent out the asynch port in SLIP-style framing to a TNC (Terminal Node Controller) which reformats them in HDLC and does the actual transmission. "KISS TNC" code by Mike Chepponis, K3MC (chepponis@xx.lcs.mit.edu) for the TAPR TNC-2 is included in the distribution.

There is as yet no support for domain names; hosts are specified by their IP addresses. Internally, the package is structured as a simple commutator loop with extensive use of upcalls between adjacent layers. Additional applications are fairly easy to add if they are structured as event-driven state machines.

DOCUMENTATION:

Several text files (user's guide, programming reference, etc) are included in the distribution.

MACHINE-TYPE/CPU:

IBM PC, PC/XT, PC/AT and compatibles, with either a 3-Com 3C-500 (for Ethernet) or the standard 8250 IBM serial I/O ports (for SLIP and KISS/AX.25). The code has been successfully ported to other processors, including big-endian machines such as the 68000.

O/S:

MS-DOS

IMPLEMENTATION-LANGUAGE:

Almost all C; minimal 8088 assembler

DISTRIBUTOR:

Complete sources, objects and documentation is available.

ARPA: by anonymous ftp from louie.udel.edu (10.0.0.96) as /pub/net.tar.Z. This is a compressed UNIX tar archive.

non-ARPA: on two 5.25" DSDD MS-DOS floppies by sending $5 for costs to:

Brian Lloyd, WB6RQN
19200 Tilford Way
Germantown, MD 20874

CONTACT:

Phil Karn, KA9Q
Internet: karn@louie.udel.edu
US Snail: 25-B Hillcrest Rd
Warren, NJ 07060

PROPRIETY-STATUS:

While I have copyrighted this code, I grant blanket permission for free NONCOMMERCIAL, NONGOVERNMENTAL copying and use. Amateur radio and educational use is particularly encouraged.

INFORMATION-UPDATED:

February 1987

2.17.1.2. Beame IBM-PC

PRODUCT-OR-PACKAGE-NAME: BW?TEL/BWKTEL, BWCOM, BWFTP, BWNETBIOS,
                         BWSOCKETS and related products.

DESCRIPTION:

BW?TEL provides a VT102/VT52 emulator that runs (TELNET) TCP/IP protocol on ethernet. True VT102 emulation is provided, with speed a major consideration. TFTP and Kermit/Xmodem file transfer is included.

BWCOM allows most serial terminal emulators to run (TELNET) TCP/IP on an ethernet network. The program simulates a Hayes modem through the serial port.

BWFTP is a thorough implementation of the FTP protocol. Many other standard networking programs are available through the socket level interface.

BWNETBIOS conforms to RFC1001/1002 for NetBios over TCP/IP.

BWSOCKETS is a set of "C" routines which implement a sockets compatible interface to the Terminate and Stay Resident TCP/UDP/IP code. Many standard network programs have been made to run on the PC without ANY changes to the source. Direct calling to the TSR routines is also provided. The source for the socket routines also includes many utility routines not available from PC based "C" compilers.

DOCUMENTATION:

A set of documentation is available.

MACHINE-TYPE/CPU:

IBM-PC and TI/PC and true compatibles

O/S:

MS-DOS or PC-DOS Version 2.0 and above

IMPLEMENTATION-LANGUAGE:

8086 Assembler and C

DISTRIBUTOR:

Beame & Whiteside Software Ltd.
259 Fiddler's Green Road
Ancaster, Ontario, Canada
L9G 1W9

CONTACT:

Lisa Beame, (416) 648-6556

ORDERING-PROCEDURE:

Submit purchase order to above address; see above contact for pricing.

PROPRIETY-STATUS:

Product of Beame & Whiteside Software Ltd.

INFORMATION-UPDATED:

January 1988

2.17.1.3. CMU IBM-PC

PRODUCT-OR-PACKAGE-NAME: CMU PC/IP

DESCRIPTION:

CMU PC/IP is a version of MIT PC/IP (see MIT IBM-PC) that can be compiled using standard MS-DOS compilers available from the Microsoft Corporation. The original PC/IP code was developed using a cross-compiler on a VAX running UNIX. Using a PC native compiler makes development easier.

DOCUMENTATION:

User and programmer manuals available with source via FTP

MACHINE-TYPE/CPU:

IBM-PC family and other hardware-compatibles, such as Compaq

O/S:

DOS 2.0, 2.1, 3.0, or 3.1

IMPLEMENTATION-LANGUAGE:

C: Microsoft Corp. C Compiler Version 3.00 or higher

Assembler: Microsoft Corp. Macro Assembler Version 3.00 or higher

DISTRIBUTOR:

Available via anonymous FTP, see ORDERING-PROCEDURE

CONTACT:

Drew D. Perkins, (Drew.Perkins@andrew.cmu.edu)
Carnegie Mellon University
4910 Forbes Avenue
Pittsburgh, PA 15213
(412) 268-6628

ORDERING-PROCEDURE:

To get the CMU Microsoft C version of the PCIP package from the arpanet, connect to host "te.cc.cmu.edu" with FTP (no quotes when you really type it). This machine is a TOPS20 system. Login in as user "anonymous", password "guest". Next, use the "cd" command to change your working directory to "pk:<pcip>". Now if you do a "dir" command you will get a listing of all the necessary files. First, "get" the files "readme" and "install.bat" in netascii mode. The rest of the files must be retrieved in binary/octet mode. On a UNIX system use the command "tenex" to tell TOPS20 to use a local byte size of 8 bits. Now retrieve the files "tarread.exe", "root.tar", "include.tar", "srcdev.tar", "srclib.tar" and "srccmd.tar". The file "doc.tar" is also available if you want the scribe documentation.

Alternatively, you can now retrieve the files via anonymous FTP from host "lancaster.andrew.cmu.edu". This host is not yet in the NIC tables, but should be resolvable via the domain name system. It's IP address is "128.2.13.21". This machine is a 4.2 bsd UNIX system. After you log in, use the "cd" command to change your working directory to "pub". You will have to retrieve the same set of files as above.

Once you have these on your local machine, use TFTP or some other file transfer program to get them to your PC. Put the files under a subdirectory such as c:\pcip. Make sure you do the transfers in the proper mode (octet or ascii, as above). The file "readme" explains what you have, and how to proceed farther. We would appreciate it if you would avoid transfers during prime-time hours.

PROPRIETY-STATUS:

Copyright by MIT and CMU with blanket permission to copy, modify, and redistribute, so long as credit is given.

INFORMATION-UPDATED:

March 1987

2.17.1.4. Excelan EXOS 8011 - TCP/IP for XENIX-based IBM-PC ATs

PRODUCT-OR-PACKAGE-NAME: EXOS 8011 TCP/IP Network Software for XENIX-based
IBM-PC ATs

DESCRIPTION:

Excelan's EXOS 8011 implements DoD TCP/IP protocols to connect XENIX-based IBM-PC ATs to Ethernet networks. EXOS 8011 is a front-end TCP/IP implementation that operates in conjunction with an EXOS 205 Intelligent Ethernet Controller for PCbus. The TCP/IP protocols (TCP, IP, UDP, ICMP, ARP) and Telnet/rlogin servers run on the EXOS 205 controller and the user applications (FTP, Telnet, ud, and R-utilities) run on the XENIX PC AT. EXOS 8011 applications also include C program socket library and network administration utilities.

DOCUMENTATION:

EXOS 8011 TCP/IP Network Software for IBM PC ATs running XENIX Reference Manual

MACHINE-TYPE/CPU:

IBM-PC AT in conjunction with an EXOS 205 Intelligent Ethernet Controller for PCbus

O/S:

IBM XENIX 2.0 or SCO XENIX V (v2.1.3, v2.2)

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

Inside Sales:
Excelan, Inc.
2180 Fortune Drive
San Jose, CA 95131
(408) 434-2300

Europe:
Excelan
Weir Bank
Bray-on-Thames, N. Maidenhead
Berkshire SL6 2ED England
Telephone: 0628-34281
Telex: 847591

CONTACT:

Inside Sales (408) 434-2300, 1-800-EXCELAN, 1-800-521-3526 (inside CA)

ORDERING-PROCEDURE:

Contact Inside Sales

INFORMATION-UPDATED:

August 1987

2.17.1.5. Excelan LAN WorkPlace for PCs Running Unix System V.3

PRODUCT-OR-PACKAGE-NAME: LAN WorkPlace for PCs Running Unix System V.3

DESCRIPTION:

    Excelan's LAN WorkPlace for PCs Running Unix System V.3 implements DoD TCP/IP protocols to connect 386-based PCs running UNIX 5.3 to Ethernet networks. LAN WorkPlace for PCs Running Unix System V.3 is a front-end TCP/IP implementation that operates in conjunction with an EXOS 205T Intelligent Ethernet controller for PC-Bus. The TCP/IP protocols (TCP, IP, UDP, ICMP, ARP) and Telnet/rlogin servers run on the controller, and the user applications (FTP, Telnet, ud, R-utilities) run on the 386-based PC. LAN WorkPlace for PCs Running Unix System V.3 user applications also include C program socket library and network administration utilities.

DOCUMENTATION:

    EXOS 8014 TCP/IP Network Software for 386-based PCs running UNIX 5.3 Reference Manual

MACHINE-TYPE/CPU:

    Intel 80386

O/S:

    UNIX 5.3

IMPLEMENTATION-LANGUAGE:

    C

DISTRIBUTOR:

        Inside Sales:
        Excelan, Inc.
        2180 Fortune Drive
        San Jose, CA 95131
        (408) 434-2300

        Europe:
        Excelan Europe Ltd.
        Intec 2, Suite 17
        Wade Road
        Basingstoke
        Hampshire RG24 One, England

CONTACT:

    Inside Sales (408) 434-2300, 1-800-EXCELAN

ORDERING-PROCEDURE:

    Contact Inside Sales

INFORMATION-UPDATED:

    February 1989

2.17.1.6. Excelan EXOS 8051 - TCP/IP for DOS Systems

PRODUCT-OR-PACKAGE-NAME: EXOS 8051 TCP/IP Network Software for DOS Systems

DESCRIPTION:

Excelan's EXOS 8051 implements DoD TCP/IP protocols, to connect IBM-PC/XT/AT/compatible computers running DOS to Ethernet networks. EXOS 8051 is a front-end TCP/IP implementation that operates in conjunction with an EXOS 205 Intelligent Ethernet Controller for PCbus. The TCP/IP protocols (TCP, IP, UDP, ICMP, ARP) run on the controller and the user applications (FTP, Telnet, VT100 emulation) run on the PC. EXOS 8051 user applications also include an optional C program socket library and network administration utilities.

DOCUMENTATION:

EXOS 8051 TCP/IP Network Software for PC-DOS Systems Reference Manual

MACHINE-TYPE/CPU:

IBM-PC/XT/AT/compatibles in conjunction with an EXOS 205 Intelligent Ethernet Controller for PCbus

O/S:

DOS (v2.x - v3.x)

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

Inside Sales:
Excelan, Inc.
2180 Fortune Drive
San Jose, CA 95131
(408) 434-2300

Europe:
Excelan
Weir Bank
Bray-on-Thames, N. Maidenhead
Berkshire SL6 2ED England
Telephone: 0628-34281
Telex: 847591

CONTACT:

Inside Sales (408) 434-2300, 1-800-EXCELAN, 1-800-521-3526 (inside CA)

ORDERING-PROCEDURE:

Contact Inside Sales

INFORMATION-UPDATED:

August 1987

2.17.1.7. Excelan EXOS 8052 - NETBIOS-TCP/IP Software for DOS Systems

PRODUCT-OR-PACKAGE-NAME: EXOS 8052 NETBIOS-TCP/IP Software for DOS Systems

DESCRIPTION:

Excelan's EXOS 8052 implements a standard IBM NETBIOS session layer interface and DoD TCP/IP protocols for DOS computers. EXOS 8052 executes in conjunction with an EXOS 205 Intelligent Ethernet Controller for PCbus. This DOS solution allows the running, without modification, of all PC network applications designed for IBM's NETBIOS interface. EXOS 8052 is a front-end TCP/IP implementation in that the TCP/IP protocols run on the controller and the NETBIOS layer runs on the PC.

DOCUMENTATION:

EXOS 8052 NETBIOS-TCP/IP Network Software for PC-DOS Systems

MACHINE-TYPE/CPU:

IBM-PC/XT/AT/compatible in conjunction with EXOS 205 Intelligent Ethernet Controller for PCbus

O/S:

DOS 3.1 or later

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

Inside Sales:
Excelan, Inc.
2180 Fortune Drive
San Jose, CA 95131
(408) 434-2300

Europe:
Excelan
Weir Bank
Bray-on-Thames, N. Maidenhead
Berkshire SL6 2ED England
Telephone: 0628-34281
Telex: 847591

CONTACT:

Inside Sales (408) 434-2300, 1-800-EXCELAN, 1-800-521-3526 (inside CA)

ORDERING-PROCEDURE:

Contact Inside Sales

INFORMATION-UPDATED:

August 1987

2.17.1.8. FTP Software PC/TCP

PRODUCT-OR-PACKAGE-NAME: PC/TCP

DESCRIPTION:

PC/TCP is a TCP/IP implementation for the IBM PC and compatibles. It includes Telnet (with terminal emulation for vt100, vt220, h19, and IBM 3270), tar, finger, whois, mail, ping, the Berkeley UNIX protocols (rlogin,rexec, rsh, rcp, lpr), client and server ftp, tftp, and smtp, and a number of other protocols. PC/TCP also supports IEN 116 host name resolution, the domain name protocol, and local 4BSD-format host tables. PC/TCP includes a Berkeley sockets programming interface and supports multiple network connections. Drivers are available for a wide range of network interfaces, including those manufactured by Allied Telesis, BICC, DEC, Excelan, IBM, Intel, Interlan, Localnet, MCA, National Semiconductor, Novell, Proteon, Scope, 3Com, Tiara, TRW, Ungermann Bass, Univation and Western Digital. PC/TCP is fully compatible with Banyan VINES.

DOCUMENTATION:

PC/TCP comes with installation notes, a user's guide, and a command reference. The Programming Libraries, Development Kit, and source code come with a programmer's manual.

MACHINE-TYPE/CPU:

WANG, AT&T 63000, NCR, IBM PC, IBM PS/2, IBM PC/XT, IBM PC/AT, IBM compatible, Compaq, TI BusinessPro, and other compatibles

O/S:

MS-DOS and PC-DOS versions 2.X and 3.X

IMPLEMENTATION-LANGUAGE:

Microsoft C 5.1

DISTRIBUTOR:

FTP Software, Inc.
P.O. Box 150
Kendall Square Branch
Boston, MA 02142
Telex: 981970
Fax: (617) 864-3943

CONTACT:

Roger Greene, Vice President, Sales and Marketing, (617) 868-4878, Telex: 981970

ORDERING-PROCEDURE:

Contact FTP Software for a current PC/TCP price list. Quantity, government, and academic discounts and site licenses are available.

Source licenses and vendor agreements are available.

PROPRIETY-STATUS:

PC/TCP is proprietary to FTP Software, Inc.

INFORMATION-UPDATED:

February 1989

2.17.1.9. FTP Software LANWatch

PRODUCT-OR-PACKAGE-NAME: LANWatch

DESCRIPTION:

LANWatch is a software local area network analyzer for the IBM PC and compatibles. LANWatch has two modes: Display Mode, which captures and displays packets in real time, and Examine Mode, which allows the user to scroll back through stored packets and inspect them in greater detail. LANWatch retains a buffer of 254 packets at any given time, and can store more to disk. LANWatch recognizes a variety of protocols, and can be programmed to recognize additional protocol types. Symbolic filters to selectively examine IP family and other types of packets are included. Additional filters can be written and added. LANWatch is available for a variety of network interface cards, including the 3COM 3C500, 3C501, and 3C505, Interlan NI5010 and NI5210, Western Digital WD8003, BICC 4100 ISOLAN, Excelan EXOS205/EXOS205T, and Proteon ProNET-4 and ProNET-10.

DOCUMENTATION:

LANWatch comes with an installation guide, a user's guide, and a programmer's guide.

MACHINE-TYPE/CPU:

WANG, NCR, IBM PC, IBM PC/XT, IBM PC/AT, IBM PS/2, AT&T 63000, Compaq, TI BusinessPro, and other compatibles

O/S:

MS-DOS and PC-DOS versions 2.x and 3.x

IMPLEMENTATION-LANGUAGE:

Microsoft C

DISTRIBUTOR:

FTP Software, Inc.
P.O. Box 150
Kendall Square Branch
Boston, MA 02142
Telex: 981970
Fax: (617) 864-3943

CONTACT:

Roger Greene, Vice President, Sales and Marketing, (617) 868-4878, Telex: 981970

ORDERING-PROCEDURE:

Contact FTP Software for a current LANWatch price list. Quantity, government, and academic discounts and site licenses are available.

Source licenses and vendor agreements are available.

PROPRIETY-STATUS:

LANWatch is proprietary to FTP Software, Inc.

INFORMATION-UPDATED:

February 1989

2.17.1.10. IBM Corporation IBM-PC RT

PRODUCT-OR-PACKAGE-NAME: IBM RT/PC Advanced Executive (AIX)

DESCRIPTION:

Operating system for the IBM RT/PC supporting TCP/IP

DOCUMENTATION:

IBM Program Announcement 286-259 6/16/86

MACHINE-TYPE/CPU:

IBM RT/PC

O/S:

AIX

DISTRIBUTOR:

1. IBM Marketing
2. IBM Authorized VAR's
3. Authorized Personal Computer Dealers

CONTACT:

IBM Marketing Rep

ORDERING-PROCEDURE:

Contact one of the above

PROPRIETY-STATUS:

AIX is an IBM Proprietary product

INFORMATION-UPDATED:

December 1986

2.17.1.11. IBM Corporation TCP for PS/2

PRODUCT-OR-PACKAGE-NAME: IBM TCP for PS/2

DESCRIPTION:

IBM TCP for PS/2 Release 1 has a DOS user interface that provides access to the File Transfer Protocol (FTP), Trivial File Transfer Protocol (TFTP), Post Office Protocol (POP2), and TELNET facilities over Ethernet, IBM Token-Ring, or IBM PC network.

TFTP client/server and FTP client support is provided to allow you to transfer both ASCII and image files to/from a remote system, using the same command syntax as the UNIX FTP or TFTP commands.

SMTP client and POP2 allow you to transfer mails from/to a remote system on an IP network.

TELNET allows a user to remotely log on to another IP system, either in 3270 screen mode or in line mode with Heath H-19 emulation.

A Remote Execution Daemon client is provided to allow you to initiate execution of VM EXECs, as well as the CP and CMS commands.

DOCUMENTATION:

IBM TCP for the PC Command Reference and Installation Manual (GC09-1214),
IBM TCP for the PS/2 Command Reference Manual (SC09-1270)

MACHINE-TYPE/CPU:

IBM PC, AT, PC/XT, or PS/2

O/S:

DOS

IMPLEMENTATION-LANGUAGE:

IBM C and Assembler

DISTRIBUTOR:

IBM Corporation

CONTACT:

Local IBM sales representatives

ORDERING-PROCEDURE:

Local IBM sales representatives

DDN-QUALIFIED:

Yes

INFORMATION-UPDATED:

August 1988

2.17.1.12. MIT IBM-PC

PRODUCT-OR-PACKAGE-NAME: PC/IP

DESCRIPTION:

This product has a set of PC-DOS commands that allow the IBM-PC to be a client of several TCP/IP-based network services, and to be used for network monitoring and maintenance. The TCP, UDP, and IP layers are designed with specific tailoring to the requirements of their known customers, user Telnet and user/server tftp. Drivers have been implemented for the 3COM Etherlink card, the Interlan Ethernet card, and the Proteon ProNET card. This package is the outgrowth of an MIT research project exploring networking of small personal computers.

DOCUMENTATION:

User's manual with object; Programmer's guide with source

MACHINE-TYPE/CPU:

IBM-PC family and other hardware-compatibles, such as Compaq

O/S:

DOS 2.0, 2.1, 3.0, or 3.1

IMPLEMENTATION-LANGUAGE:

C: Portable C cross-compiler operating under VAX UNIX, and A86 (Cross-assembler operating under VAX UNIX)

DISTRIBUTOR:

M.I.T. Microcomputer Center
Room 11-209
77 Massachusetts Ave
Cambridge, MA 02139
(617) 253-6325

The above distributor can provide the original source programs for PC/IP, last updated in March, 1986. Other versions, more recent updates, and derivative versions are available from Carnegie-Mellon University, IBM Corporation, Sun Microsystems, FTP Software, The Wollongong Group, and Proteon, Incorporated. Some of those other versions are described in separate entries in this guide.

CONTACT:

For research purposes only:
Prof. Jerome H. Saltzer, (Saltzer@Athena.MIT.EDU)
MIT/Laboratory for Computer Science
545 Technology Square
Cambridge, MA 02139
(617) 253-6016

ORDERING-PROCEDURE:

Contact distributors

PROPRIETY-STATUS:

Copyright by MIT with blanket permission to copy, modify, and redistribute, so long as credit is given

INFORMATION-UPDATED:

February 1989

2.17.1.13. Microport Systems, Inc. System V/AT Complete 286

PRODUCT-OR-PACKAGE-NAME: System V/AT Complete 286

DESCRIPTION:

Microport System V/AT is the price and performance choice: complete, AT&T certified UNIX operating system for the AT with full DOS compatibility. The system includes 3 modules: runtime, software development and text preparation systems, and is licensed for 2 users. An unlimited user license is available for an extra charge. Most popular UNIX applications are available for the System V/AT, including DOSMerge 286, which allows DOS and System V/AT to run simultaneously without partitioning the hard disk. This is the only genuine UNIX operating system for 80286 AT machines.

Networking can be achieved by adding TCP/IP software and Ethernet controller boards to the system; network access is available to all users of a given machine, including the system console and remote terminals.

Note: System modules are available separately. Minimum RAM is 1 MB; 2.5 MB is recommended.

DOCUMENTATION:

Available with purchase

MACHINE-TYPE/CPU:

Most 80286 AT clones

O/S:

UNIX

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

Microport Systems, Inc.
110 Victor Square
Scotts Valley, CA 95066

CONTACT:

Microport Systems, Inc., (800) 722-8649

ORDERING-PROCEDURE:

Call Microport Systems for information.

PROPRIETY-STATUS:

Microport Systems

INFORMATION-UPDATED:

February 1988

2.17.1.14. Microport Systems, Inc. System V/386 Complete

PRODUCT-OR-PACKAGE-NAME: System V/386 Complete

DESCRIPTION:

This is AT&T certified UNIX V.3 for 386 processors. It is a fast, sophisticated system with many extensions and utilities such as Korn shell, an emacs editior, superfast C compiler and more. It provides streams, virtual memory, full 32-bit processing, and is fully compatible with DOS. The system is licensed for 2 users; an Unlimited User license is available at an extra charge. A variety of optional packages, such as DOSMerge 386, network extensions (TCP/IP, NFS and RFS), high performance compilers and applications are also available. Further, applications written for System V/AT 286 are fully upward compatible.

Networking can be achieved by adding TCP/IP software and Ethernet controller boards to the system; network access is available to all users of a given machine, including the system console and remote terminals.

DOCUMENTATION:

Available with purchase

MACHINE-TYPE/CPU:

Most 80386 AT clones

O/S:

UNIX

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

Microport Systems, Inc.
110 Victor Square
Scotts Valley, CA 95066

CONTACT:

Microport Systems, Inc., (800) 722-8649

ORDERING-PROCEDURE:

Call Microport Systems for information.

PROPRIETY-STATUS:

Microport Systems

INFORMATION-UPDATED:

February 1988

2.17.1.15. Network Research Corporation FUSION IBM-PC, PS/2

PRODUCT-OR-PACKAGE-NAME: FUSION Network Software

DESCRIPTION:

FUSION Network Software provides interoperability in multi- vendor environments. Supports industry standard protocols, TCP/IP XNS, NFS, and NetBIOS on PC's. Provides file transfer (FTP/send,recv), virtual terminal (Telnet), network management. Berkeley 4.2 compatible socket- library interface available for user created networking applications. Compatible with network controllers from 3Com, Western Digital, and Micom/Interlan.

DOCUMENTATION:

User manuals, Network Administrators Manual, Programmers Reference Manual, Installation manuals

MACHINE-TYPE/CPU:

8088 (IBM-PC and compatibles), 8086, 80186, 80286, 80386

O/S:

MS-DOS, Venix, SCO Xenix

IMPLEMENTATION-LANGUAGE:

C, Socket library interface compatible with Lattice, Microsoft, or Borland Turbo C

DISTRIBUTOR:

Headquarters

Network Research Corporation
2380 N. Rose Avenue
Oxnard, CA 93030

Direct Sales:
San Francisco: (408) 248-2121
Los Angeles: (805) 485-2700
New Jersey: (201) 358-1066
Reston: (703)648-1503

Manufacturer's Sales Representatives:
Remtek, Inc.
Dallas, TX: (800)527-0961, (214)387-2855

Burland Associates:
Tempe, AZ: (602)894-5564

Advanced Data Marketing:
Parker, CO: (303)841-4903

CONTACT:

Jean Sylwanowicz, Inside Sales Manager, (805) 485-2700, (800) 541-9508 (Outside CA)

ORDERING-PROCEDURE:

Contact Sales Office

PROPRIETY-STATUS:

Developed by Network Research Corporation

INFORMATION-UPDATED:

February 1988

2.17.1.16. Proteon IBM-PC

PRODUCT-OR-PACKAGE-NAME: MS-DOS TCP/IP for ProNET-4 and ProNET-10

DESCRIPTION:

These packages allow IBM PC's or compatibles with a ProNET-4 or ProNET-10 interface to use the TCP/IP protocols. The package includes FTP, Telnet, TFTP, SMTP, and the Berkeley r-series commands (rlogin, rcp, rsh, rexec, lpr).

The p5233 supports the p1340 ProNET-4 IBM PC interface or the p1344 ProNET-4 IBM AT interface. The p5231 supports the p1300 ProNET-10 IBM PC interface. The p5232 provides programming libraries for the ProNET-4 and ProNET-10 versions.

DOCUMENTATION:

Includes full software installation and user's manual

MACHINE-TYPE/CPU:

IBM-PC, IBM AT, and true compatibles

O/S:

MS-DOS and PC-DOS versions 2.x and 3.x

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

Proteon, Inc.
Two Technology Drive
Westborough, MA 01581-5008

CONTACT:

Mick Scully, (mcs@proteon.com), (617) 898-2800

PROPRIETY-STATUS:

Proprietary code; source available from vendor

INFORMATION-UPDATED:

February 1988

2.17.1.17. SCO TCP/IP

PRODUCT-OR-PACKAGE-NAME: SCO-TCP-IP

DESCRIPTION:

SCO TCP/IP is a software product for SCO XENIX System V that provides high-performance Ethernet network connections to a wide variety of operating systems and computers. Even with heterogeneous networks, composed of dissimilar hardware and operating systems, users can quickly and easily log in to and transfer files to and from remote machines.

SCO TCP/IP is the networking foundation for SCO NFS and SCO's X Window System products. Through its Socket Library Interface, it can be used to support CAD, CAE, and database applications. SCO TCP/IP supports popular 3Com and Western Digital LAN cards, and includes Serial Line Interface Protocol (SLIP) drivers for asynchronous gateway or bridge support. An optional SCO TCP/IP Development System provides a BSD 4.3 standard socket library.

DOCUMENTATION:

Release Notes, User's Guide, User's Reference, Administrator's Guide Administrator's Reference

MACHINE-TYPE/CPU:

Industry Standard (AT) 80386 computers, or compatible computers

O/S:

SCO XENIX System V 386

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

The Santa Cruz Operation, Inc.
400 Encinal Street
P.O. Box 1900
Santa Cruz, CA 95061

CONTACT:

Telemarketing Department (800) 626 UNIX (408) 425 7222

PROPRIETY-STATUS:

SCO TCP/IP was developed by Lachman Associates based on LACHMAN SYSTEM V STREAMS TCP, a joint development of Lachman Associates and Convergent Technologies. LACHMAN is a trademark of Lachman Associates, Inc. XENIX is a registered trademark of Microsoft Corporation. Ethernet is a trademark of Xerox Corporation. NFS is a trademark of Sun Microsystems, Inc. Santa Cruz Operation, SCO and the SCO logo are trademarks of The Santa Cruz Operation, Inc.

INFORMATION-UPDATED:

February 1989

2.17.1.18. SCO XENIX-NET

PRODUCT-OR-PACKAGE-NAME: SCO XENIX-NET

DESCRIPTION:

SCO XENIX-NET is a local area network for computers running XENIX that allows easy integration of

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multiple XENIX Systems, or mixed PC-DOS, MS-DOS and XENIX systems. As a "resource sharing" system, it lets a group of computers share peripherals, such as printers and mass storage devices, permitting users to share information files stored on hard disk based computers working as file servers. SCO XENIX-NET provides SMB protocol-based distributed file system support, and requires NETBIOS session-layer facilities provided by a network transport subsystem such as Excelan's 8011-04 or 8011-05 packages.

DOCUMENTATION:

Release Notes, User Guides, Administration Guide, Installation Guide

MACHINE-TYPE/CPU:

IBM PC AT and compatibles

O/S:

SCO XENIX

DISTRIBUTOR:

The Santa Cruz Operation, Inc.
400 Encinal Street
PO Box 1900
Santa Cruz, CA 95061
(408) 425-7222, (800) 626-UNIX

CONTACT:

Telemarketing Department

ORDERING-PROCEDURE:

Call either of the above numbers.

PROPRIETY-STATUS:

Proprietary version of MS-Networks for XENIX

INFORMATION-UPDATED:

January 1988

2.17.1.19. Sirius Systems, Inc. Internet-PC

PRODUCT-OR-PACKAGE-NAME: Internet-PC

DESCRIPTION:

A full implementation of TCP/IP for the IBM-PC and compatible computer systems. This package includes the following link level drivers: IEEE 802.3 (Ethernet using 3Com 3C501, 3C503, and 3C523 controllers), SLIP, and AX.25 (packet radio). Full IP/ICMP is provided and can serve as both host and gateway.

The standard applications FTP and TELNET are provided. Both host and client operations are fully supported allowing the PC to be a fully functional host on the internet. This package is also unique in that it supports multiple concurrent TELNET and FTP sessions.

Internet-PC includes extensive packet tracing facilities. For this reason Internet-PC is quite useful for troubleshooting TCP/IP based networks.

Support and update service may be separately purchased. On-site training and installation services are also available.

DOCUMENTATION:

An installation and user's manual including tutorial is provided with each copy of the software. Additional copies of the documentation may be purchased separately.

MACHINE-TYPE/CPU:

All IBM-PC/XT/AT or PS/2 compatible computer systems

O/S:

MS-DOS or PC-DOS version 2.11 or later

IMPLEMENTATION-LANGUAGE:

C and Assembler

DISTRIBUTOR:

Sirius Systems, Inc.
Box 2202
Petersburg, VA 23804

CONTACT:

David Hansen

ORDERING-PROCEDURE:

Contact Sirius Systems

PROPRIETY-STATUS:

Sirius Systems, Inc.

INFORMATION-UPDATED:

February 1989

2.17.1.20. Stanford IBM PC

PRODUCT-OR-PACKAGE-NAME: SU-PC/IP

DESCRIPTION:

Version 3.0 of SU-PC/IP, Stanford University's TCP/IP protocol package for IBM PC family of computers, is based on driver-level implementation of TCP/IP/UDP. The package includes the following clients: FTP; TELNET; FINGER; WHOIS; LPR; POP3; SMTP; RARP ;and BOOTP. Both IEN116 and domain name resolvers are supported. The TELNET program supports multiple TELNET sessions and 1 FTP session. PC/MH, the mail program, provides a RAND Mail Handler type of interface and allows users to select the editor of their choice for composing mail. Currently, drivers are available for 3Com 3C500/3C501, 3C503, and 3C523 (for microchannel) EtherLink cards; and Western Digital's WD8003E Ethernet card. Additional applications, including TN3270, Ping, and Netwatch are planned for the next release.

DOCUMENTATION:

A manual is provided for users and administrators.

MACHINE-TYPE/MACHINE-TYPE/CPU:

All IBM-PC/XT/AT or PS/2 compatible computer systems.

O/S:

MS-DOS or PC-DOS version 2.11 or later.

IMPLEMENTATION-LANGUAGE:

Microsoft C Compiler Version 5.00 Microsoft Macro Assembler Version 4.00 Microsoft Overlay Linker Version 3.61

ORDERING-PROCEDURE:

Contact Laura Kenny, (415)723-3909 or pcip@jessica.stanford.edu.

PROPRIETY-STATUS:

Copyright (c) 1988 by the Board of Trustees of the Leland Stanford Junior University and licensed to organizational users only

INFORMATION-UPDATED:

February 1989

2.17.1.21. Sun Microsystems IBM-PC (PC-NFS 3.0)

PRODUCT-OR-PACKAGE-NAME: Sun Microsystems PC-NFS 3.0
                                        PC-NFS Programmer's Toolkit 1.0
                                        PC-NFS LifeLine Mail and Backup 1.0

DESCRIPTION:

PC-NFS is a client implementation of the Sun Microsystems' ONC (Open Network Computing) architecture for the IBM PC, PC-XT, AT, PS/2, AT&T 6300, Compaq 386 and compatible systems. It includes client NFS (Network File System) support, network printer redirection, and client Telnet, FTP, rsh and rcp services. Applications developed with the PC-NFS Programmer's Toolkit (see below) can also be run. PC-NFS implements ARP, RARP, IP, UDP, TCP, RPC/XDR and YP (Sun Yellow Pages) protocols. Name resolution can be via local host files or YP; when YP is used in conjuction with RARP and RFC950 ICMP subnet mask acquisition, no configuration information need be stored on the PC. Drivers are available for the 3Com 3C500/3C501/3C503/3C505, as well as the 3C523 MicroChannel board; the Ungermann-Bass NIC and NIU; the Western Digital WD8003E, and the Micom- Interlan NI5010. Hard-wired and dial-up serial IP (SLIP) is also supported.

The PC-NFS Programmer's Toolkit provides a near-emulation of the SunOS network programming interface, including BSD-style TCP and UDP sockets, RPC/XDR, YP and network database library routines. Applications developed with the Toolkit can run on any PC running PC-NFS 2.0 or higher.

PC-NFS LifeLine is an application package developed with the Programmer's Toolkit. It provides electronic mail and network backup services. The email subsystem integrates a multiwindow User Agent with SMTP and POP2 Transfer Agent capability. RFC822 messages can be received via POP2 (using the server developed by Bob Braden at ISI and enhanced by Ron Broersma at NOSC San Diego) or by an SMTP server daemon. Mail is sent via SMTP. A queueing system allows the user to read and compose mail while the (typically portable) PC is not connected to the network. The network backup facility utilizes the Berkeley Unix "rcmd" mechanism to store and retrieve file hierarchies on a server disk or tape in "tar" format for maximum portability.

DOCUMENTATION:

PC-NFS and PC-NFS LifeLine each come with a User's Manual. The PC-NFS Programmer's Toolkit comes with a Reference Manual. Hardware/software packages include a hardware installation manual.

MACHINE-TYPE/CPU:

IBM PC, PC-XT, PC-AT and PS/2; AT&T 6300; Compaq 286 and 386 Deskpro; other compatibles

O/S:

MS-DOS and PC-DOS 3.x

IMPLEMENTATION-LANGUAGE:

Microsoft Assembler and Microsoft C
The Programmer's Toolkit requires the use of Microsoft C 4.0.

DISTRIBUTOR:

Sun Microsystems, Inc.
2550 Garcia Avenue
Mountain View, CA 94043
(415) 960-1300

CONTACT:

PC-NFS Telemarketing at 1-800-334-SUNM, or any Sun sales office

ORDERING-PROCEDURE:

The software is available with or without documentation, and right-to-copy licensing is available. Hardware/software packages (PC-NFS software plus an Ethernet adaptor) are also available. Contact PC-NFS Telemarketing for current pricing.

PROPRIETY-STATUS:

PC-NFS, PC-NFS LifeLine and the PC-NFS Programmer's Toolkit are proprietary products of Sun Microsystems, Inc.

INFORMATION-UPDATED:

February 1988

2.17.1.22. Ungermann-Bass IBM-PC Name Service

PRODUCT-OR-PACKAGE-NAME: Net/One TCP Name Service

DESCRIPTION:

The TCP-PC Name Service is an optional component of the TCP-PC base product described in this guide. The TCP-PC Name Service serves as an assistant in locating remote resources for both PC Networking and PC to host access from Net/One TCP products. For PC networks the Net/One TCP Name Service extends the reach of PC Networking across subnetworks and to multiple networks. An additional benefit of the Name Service is the reduction of broadcast traffic in large PC network configurations. As an assistant in PC to host access centralized administration of the information maintained in UNIX /etc/host files.

DOCUMENTATION:

A Net/One TCP Name Service Guide is included with the product. It is intended for a site network administrator and sophisticated users who require detailed knowledge of installation and operation of the Name Service product.

MACHINE-TYPE/CPU:

IBM-PC/XT/AT

O/S:

MS-DOS

IMPLEMENTATION-LANGUAGE:

Assembler and C

DISTRIBUTOR:

Ungermann-Bass, Inc.
3900 Freedom Circle
Santa Clara, CA 95052
(408) 496-0111

CONTACT:

Any Ungermann-Bass sales office. For nearest office you may contact:

Jenny Wan, (Jenny%ub.com@relay.cs.net), (408) 496-0111

ORDERING-PROCEDURE:

An Ungermann-Bass Marketing Representative will be assigned to meet your ordering requirements.

PROPRIETY-STATUS:

Hardware and software are proprietary to Ungermann-Bass, Inc. TCP-PC is a trademark of Ungermann-Bass, Inc. UNIX is a registered trademark of AT&T.

INFORMATION-UPDATED:

February 1988

2.17.1.23. Unisys Corporation NET-PC

PRODUCT-OR-PACKAGE-NAME: NET-PC

DESCRIPTION:

The Unisys NET-PC product supports communication with other Unisys systems and equipment of other vendors by employing DDN Protocols over an IEEE 802.3 local area network using Ethernet compatible frames. The ARP, IP ICMP, TCP, UDP, Telnet, and FTP protocols are implemented.

DOCUMENTATION:

Available from Unisys Corporation

MACHINE-TYPE/CPU:

PC/HT, PC/IT, PC Micro IT, PW^2

O/S:

MSDOS Release 3.0 or higher

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

Unisys Corporation
P.O. Box 500
Blue Bell, PA 19424

CONTACT:

Steve Semen, (215) 542-6457

ORDERING-PROCEDURE:

See the local Unisys sales representative.

PROPRIETY-STATUS:

Property of Unisys Corporation

INFORMATION-UPDATED:

February 1989

2.17.1.24. The Wollongong Group IBM-PC

PRODUCT-OR-PACKAGE-NAME: WIN/PC

DESCRIPTION:

This TCP/IP implementation includes Telnet (remote login), FTP (file transfer), TFTP (trivial file transfer), Network Statistics Utilities. Supports the 3COM Ethernet Controller.

DOCUMENTATION:

Installation Guide and Users Manual

MACHINE-TYPE/CPU:

IBM-PC, XT, AT, and IBM compatibles

O/S:

PC-DOS (MS-DOS) 2.0 and greater

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

The Wollongong Group
1129 San Antonio Road
Palo Alto, CA 94303

CONTACT:

Sue Trombetta, Wollongong Marketing, (415) 962-7200

ORDERING-PROCEDURE:

Available with support from The Wollongong Group

PROPRIETY-STATUS:

Wollongong

INFORMATION-UPDATED:

January 1988

2.17.1.25. The Wollongong Group (WIN/386)

PRODUCT-OR-PACKAGE-NAME: WIN/386

DESCRIPTION:

STREAMS based TCP/IP, Telnet, FTP, SMTP, R-Series for 80386 based computers running UNIX System V.

DOCUMENTATION:

User's Guide, Administrator's Guide, Installation Guide, Programmer's Reference Manual

MACHINE-TYPE/CPU:

Any 80386 based PC

O/S:

UNIX System V Release 3 (from SCO, Interactive, or Microport)

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

The Wollongong Group
1129 San Antonio Road
Palo Alto, CA 94303

CONTACT:

Michael Ezerski, (415) 962-7200

ORDERING-PROCEDURE:

Contact Above

PROPRIETY-STATUS:

Wollongong

INFORMATION-UPDATED:

February 1988

2.17.2. IBM MAINFRAMES

2.17.2.1. ACC ACCES/MVS

PRODUCT-OR-PACKAGE-NAME: ACCES/MVS

DESCRIPTION:

The ACCES/MVS software program is a full-service communication sub-system for the DoD Internet protocols, which execute on an IBM type mainframe under the MVS operating system. ACCES/MVS includes all Internet-specific protocol code which when combined with ACC's ACS 9305 or ACS 9310 provides a full-service host interface to the DDN or to a Ethernet local area network. Services supported include client and server SMTP, client and server FTP, client and server Telnet, TCP and IP, ICMP and UDP. ACCES/MVS can be installed under either MVS/SP or MVS/XA with no operating system modification. Interprocess communication is accomplished with ACF/VTAM.

DOCUMENTATION:

Fully documented vendor product; descriptive literature available

MACHINE-TYPE/CPU:

IBM-370, 43xx, 30xx, and any IBM compatible machine

O/S:

MVS/SP or MVS/XA with ACF/VTAM

DISTRIBUTOR:

ACC (Advanced Computer Communications)
720 Santa Barbara Street
Santa Barbara, CA 93101

CONTACT:

Technical Marketing: Jim Thrower, IBM Product Manager, (805) 963-9431

ORDERING-PROCEDURE:

Vendor product; contact sales department

PROPRIETY-STATUS:

Proprietary product of ACC

INFORMATION-UPDATED:

August 1986

2.17.2.2. ADVINTECH MVS HFS

PRODUCT-OR-PACKAGE-NAME: HFS

DESCRIPTION:

ADVINTECH corporation builds and supports products that extend the Defense Data Network (DDN). The ADVINTECH TAC, FEP and HFS interconnect IBM 3270 or compatible SNA/SDLC or BSC terminal controllers and devices to IBM or PCM MVS-VTAM computer systems on the DDN providing native mode terminal operation (3270 Data Stream) with the host and the full suite of Department of Defense (DoD) protocols. ADVINTECH also provides products that connect IEEE 802.3 Local Area Networks with IBM MVS systems and the DDN. These products are TCP/IP based and fully interoperable.

Host Full Service (HFS) software runs on an IBM computer that utilizes the IBM MVS operating system and the ACF/VTAM communications access method. HFS provides the TCP/IP (thru Service Access Protocol Interface (SAPI)), Telnet NVT, FTP and SMTP protocols needed for the host computer to deliver a "Full-Service" DDN offering. HFS also provides support services for ADVINTECH's TAC and FEP in the form of the software downline loading, statistics gathering capability, and remote maintenance commands.

HFS Product Summary:

The DoD upper layer protocols adhere to a User-Server structure where (in each of the three upper layer protocols, Telnet NVT, FTP and SMTP). The User process, usually in one computer, initiates a dialog (following the upper layer protocol) with a Server process, usually in another computer. By following the conventions defined in each upper layer protocol these User-Server process pairs accomplish their data communications tasks. Telnet Network Virtual Terminal (NVT) allows a terminal user in one system to have terminal-to-host dialog with another system regardless of the real terminal attributes. File Transfer Protocol (FTP) allows files to be transferred between two computer systems. Simple Mail Transfer Protocol (SMTP) transfers mail to and from user mailboxes (on files) on cooperating systems.

Within IBM's MVS operating system, under TSO (Time-Sharing Options), ADVINTECH's HFS software provides Telnet NVT User, FTP User and SMTP User processes as TSO commands. This permits interactive users on one MVS computer system to directly utilize these DDN Full Service capabilities in communication with other DDN Full Service host computers. Within the HFS subsystem, ADVINTECH's HFS software provides the Telnet NVT Server, FTP Server and SMTP Server processes so users on other DDN Full Service computer systems can communicate with this MVS host using these higher level communications services. ADVINTECH's TAC provides a Telnet NVT User process so terminals attached to the TAC can utilize the higher level protocol to communicate with DDN Full Service hosts regardless of the manufacturer.

HFS uses the Service Access Protocol (SAP) via two dedicated VTAM 3270 SNA sessions between the FEP3270 and HFS for data paths in support of these server facilities in the host. One data path is for inbound ADVINTECH DDN traffic and one data path is outbound for ADVINTECH DDN traffic.

This basic structure allows the TCP/IP control to be resident in the FEP, yet the session startup/shutdown and data I/O is available in the host. Once in the host at that level, the higher level protocols are implemented.

HFS also contains DDN data communication support for MVS application programs through dialog with the HFS subsystem as a sequential file (VSAM ESDS, BSAM or QSAM). This I/O capability is accomplished through the use of the MVS SubSystem Interface (SSI). The HFS subsystem, using the SSI in concert with its Job Control Language (JCL) exit and I/O reaction capabilities, builds and responds to the key control block parameters. The session establishment parameters are placed on the Job Control Language (JCL) statements using the **SUBSYS=** capabilities.

This combination allows these file access methods (VSAM ESDS, BSAM and QSAM) to accomplish their open, close, read, write (e.g. GET, PUT, CHECK) functions without any modifications. The HFS subsystem allows the I/O to be transmitted as DDN TCP/IP sessions across the DDN. The HFS subsystem and the user interface are built on IBM-supported interfaces without modifications to MVS. The application programming interface (API) uses standard file access methods.

DOCUMENTATION:

HFS Reference manual

MACHINE-TYPE/CPU:

No CPU Requirement. HFS runs on IBM MVS Operating System based on the 370 architecture, including all the 3000 series and 4000 series and their plug compatible counterparts.

O/S:

MVS

IMPLEMENTATION-LANGUAGE:

Predominantly C, some Assembly

DISTRIBUTOR:

ADVINTECH Corporation
5185 MacArthur Blvd., N.W.
Washington, D.C. 20016

CONTACT:

Sales Department, (202) 895-4150, (800) 638-9296, Fax# (202) 966-3650

ORDERING-PROCEDURE:

Call for details.

PROPRIETY-STATUS:

All Products Proprietary

INFORMATION-UPDATED:

February 1988

2.17.2.3. Fibronics KNET TCP/MVS

PRODUCT OR PACKAGE NAME: KNET TCP/MVS

DESCRIPTION:

KNET TCP/MVS is a TCP/IP-based network software package supporting the Ethernet local area network and all SNA supported links. KNET conforms to the ISO/OSI Reference Model for layered network architecture and runs as a started task under the control of MVS. (See also, "Fibronics K200" and/or "Fibronics K310" described in the Hardware Section of this document).

Services supported include client and server TELNET, client and server FTP, and client and server TFTP. An application interface to TCP virtual circuits and UDP datagram circuits is also available. In addition, the following small servers are available for UDP: time, discard, echo, name, and quote of the day. Support for TCP echo and discard services is also provided. Telnet access to all MVS services is provided via 3270 emulation. Telnet access support for "TN3270 mode" is also provided. Support is provided under FTP for both binary mode and for NETASCII. Automatic data conversion to/from ASCII to EBCDIC is supported. No modification of MVS is required.

DOCUMENTATION:

Available from vendor

MACHINE-TYPE/CPU:

IBM 370 class or equivalent

O/S:

MVS/SP Release 1.3 or later, operating system with VTAM

IMPLEMENTATION-LANGUAGE:

Assembler and C

DISTRIBUTOR:

Fibronics International, Inc.
Communications Way
Hyannis, MA 02601-1892

CONTACT:

Inside Sales, (617) 778-0700

PROPRIETY-STATUS:

Source code is not available for purchase.

INFORMATION-UPDATED:

February 1988

2.17.2.4. Fibronics KNET TCP/VM

PRODUCT-OR-PACKAGE-NAME: KNET TCP/VM

DESCRIPTION:

KNET TCP/VM is a TCP/IP-based network software package supporting the Ethernet local-area network, Bisync and CTCA links.   KNET conforms to the ISO/OSI Reference Model for layered network architecture and runs as an application on the mainframe. (See also "Fibronics K200" and/or "Fibronics K310" described in the Hardware Section of this document).

Services supported include client and server Telnet, client and server FTP, client and server SMTP (interfaced to VM NOTE), and client and server TFTP. An application interface to TCP virtual circuits and UDP datagram circuits is also available. In addition, the following small servers are available for UDP: time, discard, echo, name, and quote of the day. Support for TCP echo and discard services is also provided. Telnet access to all VM services is provided via 3270 emulation. Support is provided under FTP for both binary mode and for NETASCII. Automatic data conversion to/from ASCII to EBCDIC is supported. No modification of VM/SP is required. All services run either under CMS or as a guest operating system under CP. SMTP option is available.

DOCUMENTATION:

Available from vendor

MACHINE-TYPE/CPU:

IBM 370 class or equivalent

O/S:

VM/SP Rel 3 or later

IMPLEMENTATION-LANGUAGE:

Assembler and C

DISTRIBUTOR:

Fibronics International, Inc.
Communications Way
Hyannis, MA 02601-1892

CONTACT:

Inside Sales, (617) 778-0700

PROPRIETY-STATUS:

Source code is not available for purchase

INFORMATION-UPDATED:

February 1988

2.17.2.5. Fibronics K325

PRODUCT-OR-PACKAGE-NAME: Fibronics K325

DESCRIPTION:

The K325 allows an IBM mainframe to be attached to the DDN network. Services provided are: FTP, Telnet, SMTP, and TFTP. The IBM OS VM is currently supported.

DOCUMENTATION:

Available from vendor

MACHINE-TYPE/CPU:

IBM 370 class

O/S:

VM/SP Release 3 or later

DISTRIBUTOR:

Fibronics International, Inc.
Communications Way
Hyannis, MA 02601-1892

CONTACT:

Inside Sales, (617) 778-0700

PROPRIETY-STATUS:

Fibronics Product

DDN-QUALIFIED:

Expected Mid 1988

INFORMATION-UPDATED:

February 1988

2.17.2.6. IBM Corporation VM

PRODUCT-OR-PACKAGE-NAME: IBM TCP/IP for VM

DESCRIPTION:

IBM offers the TCP/IP protocol family products on its VM and DOS operating systems for the interoperability of IBM systems with multivendor systems on TCP/IP networks interconnected via Ethernet or IEEE 802.3 LAN, X.25 network, HYPERchannel (4), IBM Token-Ring network, or IBM PC network, or SNA(LU-0/VTAM).

Currently supported DARPA protocols are TELNET, FTP, TFTP, SMTP, TCP, UDP, IP, ICMP, ARP, etc. as well as Network File System (NFS) (1), X Window System (3), Domain name server and resolver, and Remote execution daemon.

The NFS feature provides VM systems a network file server capability for AIX 2.2, UNIX (2) and other systems that have the NFS 3.2 client function installed.

The X Window System feature provides VM systems an X Window System client capability for AIX 2.2, UNIX (2) and other systems that have the X Window System (V X.11) server program running.

1. Trademark of Sun Microsystems Inc.
2. Registered trademark of American Telephone and Telegraph
3. Trademark of Massachusetts Institute of Technology
4. HYPERchannel is a trademark of Network Systems Corporation

IBM TCP/IP for VM Release 1.2 has a CMS user interface that provides access to the File Transfer Protocol (FTP), Trivial File Transfer Protocol (TFTP), Simple Mail Transfer Protocol (SMTP), and TELNET facilities.

File Transfer Protocol:

FTP client and server support is provided to allow you to transfer both ASCII and image files to/from a remote system, using the same command syntax as the UNIX FTP commands.

Simple Mail Transfer Protocol:

SMTP client and server allows you to transfer mails from/to a remote system on an IP network.

The PROFS Extended Mail Product Offering (5798-FBJ) allows you to send/receive electronic mail to/from other users on IP networks as well as on RSCS networks using NOTE or SENDFILE command.

TELNET:

TELNET allows a user to remotely log on to another IP system, either in 3270 screen mode or in line mode.

Network File System:

The Network File System (NFS) feature provides file server support for the NFS 3.2 protocols developed by Sun Microsystems Inc. This support enables the VM system to act as a file server for vendor systems that have the NFS 3.2 client function installed. NFS has been implemented on the IBM AIX systems as well as many other vendor's systems.

Remote Procedure Call:

The Remote Procedure Call (RPC) makes remote procedures appear as if they were local. Both the NFS and RPC protocols adhere to the External Data Representation (XDR) specification, which allow the protocols to be independent of machine internal formats.

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RPC is implemented as a library of procedures that interface the customer's program with the communications services provided by TCP/IP.

Socket Interface:

The feature is modeled after Berkely Unix C-Socket interface and allows end users to program directly to the TCP, UDP, or IP boundaries either in C or Pascal language.

9370 X.25 Communications Subsystem:

A driver is provided to support connection of the IBM TCP/IP for VM program offering to an X.25 network or the Defense Data Network using the 9370 X.25 Communications Subsystem.

Domain Name Server and Resolver:

The Resolver provides an automatic mapping between host names and Internet addresses in networks using domain naming. The Domain Name Server feature enables VM to provide name services to the Resolvers and other name servers in a network.

Remote Execution Daemon:

A Remote Execution Daemon (server) (REXECD) is provided to allow remote execution of VM EXECs, as well as the CP and CMS commands. Systems with the Remote Execution (REXEC) client function installed may execute the VM EXECs from the remote system. IBM AIX/RT and IBM TCP for the PS/2 are two programs that have the client REXEC function available.

X Window System (Version X.11):

The CMS X Window System provides consistent user interfaces to X Window System client applications running on heterogeneous systems for access, display and manipulation of multiple remote and local applications in multiple windows. The CMS X Window System Application Program Interface (API) allows the development of code which is portable across operating systems and displays.

DOCUMENTATION:

IBM TCP/IP for VM Installation and Maintenance Manual (GC09-1203)
IBM TCP/IP for VM Programmer's Manual (GC09-1206)
IBM TCP/IP for VM Command Reference Manual (GC09-1204)
IBM TCP/IP for VM NFS and RPC Manual (SC09-1274)

IBM Series/1 Network Interface Manual (GC09-1207)
IBM LAN Channel Support Program User's Manual (SC30-3458)
IBM 7170 DACU Manual (SC09-1208)

MACHINE-TYPE/CPU:

IBM S/370, 43xx, 309x, or 9370 machines

O/S:

VM/SP

IMPLEMENTATION-LANGUAGE:

IBM Pascal and assembler

DISTRIBUTOR:

IBM Corporation

CONTACT:

Local IBM sales representatives

ORDERING-PROCEDURE:

Contact Local IBM Sales Representatives

DDN-QUALIFIED:

Yes

INFORMATION-UPDATED:

August 1988

2.17.2.7. Mitek Systems TELNET/FTP CLIENTS, FTP SERVER and FTP BATCH

PRODUCT-OR-PACKAGE-NAME: TELNET/FTP CLIENTS, FTP SERVER and FTP BATCH
ENHANCEMENT FOR MVS

DESCRIPTION:

Mitek's TELNET/FTP Clients are IBM host software options that execute as TSO commands. Since both applications reside under TSO, the standard IBM environment is preserved. Communication is provided to the IBM systems through VTAM. Mitek's SNA Network Server attaches to the IBM host as an IBM PU type 2 device and provides the SNA to TCP/IP network interface.

Mitek's TSO TELNET Client application allows a 3270 terminal to emulate a line-mode terminal on the TCP/IP network. In this mode, the 3270 terminal has access to all applications on any of the TCP/IP network processors or other gateways such as DDN that support TELNET terminals. The TELNET Client application is accessible from any terminal on the SNA network.

With Mitek's TSO FTP Client application, files can be transferred to or from any processor on the TCP/IP network. Any 3270 on the SNA network, any terminal using Mitek's PS 3270 emulation on the TCP/IP network, or any terminal using Mitek's TELNET Server can initiate the FTP File Transfer. The FTP File Transfer feature had options for source or binary code transmission and for insertion or stripping of carriage returns.

Like the FTP Client, the FTP Batch enhancement under MVS is used to transfer files to or from any processor on a TCP/IP network. However, FTP Batch allows the user to sequentially transfer numerous files automatically, rather than interactively transfer one file at a time.

Mitek's FTP Server resides on the IBM host and carries out file transfer requests from Ethernet hosts.

DOCUMENTATION:

Available from vendor

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

Mitek Systems Corp.
2033 Chennault Drive
Suite 100
Carrollton, TX 75006

CONTACT:

Cleve Graves, (214) 490-4090

ORDERING-PROCEDURE:

Available from vendor

PROPRIETY-STATUS:

Proprietary product of Mitek Systems Corp.

INFORMATION-UPDATED:

August 1988

2.17.2.8. Mitek Systems TELNET Server Version 2

PRODUCT-OR-PACKAGE-NAME: TELNET Server Version 2

DESCRIPTION:

TELNET Server Version 2 is an optional software feature available for Mitek Systems' SNA Network Server Models M2030 and M2130. This option permits terminals or systems on a TCP/IP network which support a TELNET client to connect to the SNA Network Server and use the full-screen SNA 3270 emulation in the Server to access IBM mainframes or midrange systems on an SNA Network. TELNET Server Version 2 emulates an IBM 3278 Model 2.

Most importantly, TELNET Server Version 2 allows asynchronous applications on the IBM mainframe to access asynchronous terminals on a TCP/IP network. The product provides high-speed graphics passthru from IBM mainframes to any asynchronous terminal or workstation.

TELNET Server Version 2 supports Tektronix CX graphics applications on the IBM host, which means that any user who is operating a computer running TCP/IP and a telnet client with a terminal capable of interpreting Tektronix graphics can have access to the graphics applications on the IBM mainframe. Telnet Server Version 2 high-speed graphics passthru can operate under either MVS or VM. Telnet Server Version 2 also supports TN3270.

DOCUMENTATION:

Available from vendor

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

Mitek Systems Corp.
2033 Chennault Drive
Suite 100
Carrollton, TX 75006

CONTACT:

Cleve Graves, (214) 490-4090

ORDERING-PROCEDURE:

Available from vendor

PROPRIETY-STATUS:

Proprietary product of Mitek Systems Corp.

INFORMATION-UPDATED:

August 1988

2.17.2.9. Mitek Systems Control Program Full Screen Option

PRODUCT-OR-PACKAGE-NAME: Control Program Full Screen Option

DESCRIPTION:

Up until now, in order to have full screen access to aysnchronous networks or computer systems, you neede to have an asynchronous terminal installed alongside your IBM 3270-type terminal.

Not any more.

With Mitek's Control Program Full Screen software (MCP/FS), you can allow your IBM 3270 to connect to asychronous systems on the Ethernet Network, whenever you choose.

Mitek's MCP/FS is the software innovation that enables any IBM 3270 terminal to have full screen access to asychronous computer applications on an Ethernet Network. When Mitek's MCP/FS software is installed, the asychronous system residing on the Ethernet Network sees your IBM 3270 as if it were an asynchronous ASCII terminal.

MCP/FS resides on IBM systems which run the VM and MVS operating systems as well as VTAM. MCP/FS also supports the TN3270 Client.

DOCUMENTATION:

Available from vendor

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

Mitck Systems Corp.
2033 Chennault Drive
Suite 100
Carrollton, TX 75006

CONTACT:

Cleve Graves, (214) 490-4090

ORDERING-PROCEDURE:

Available from vendor

PROPRIETY-STATUS:

Proprietary product of Mitek Systems Corp.

INFORMATION-UPDATED:

August 1988

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2.17.2.10. Network Solutions OPEN-Link for IBM/MVS

PRODUCT-OR-PACKAGE-NAME: OPEN-Link for IBM/MVS

DESCRIPTION:

Network Solutions, Inc. provides the DoD Community with OPEN-Link, a fully integrated DDN and Ethernet interface solution that provides the DoD Internet protocols (TCP/IP, FTP, TELNET and SMTP) and technical support services for IBM host computers running the MVS operating system. Additional features include a programmatic interface to FTP, interfaces to standard MVS security packages, and support for 3270 full screen terminal emulation over TELNET. The interface solution is composed of OPEN-Link host resident software, pre-installation site survey, installation, integration support, maintenance, technical services and a 90 day warranty. OPEN-Link is hardware independent and is currently working with ACC, Comten, IBM Series/1 hardware interfaces. All of these provide the user with a DCA fully qualified X.25 interface. Ethernet support is provided by the channel-attached OL/1220 Ethernet LAN controller.

DOCUMENTATION:

One full set of documentation is provided with the product; additional documentation may be purchased.

MACHINE-TYPE/CPU:

IBM S/370, 43xx, 303x, 308x, 309x and PCMs

O/S:

MVS/SP version 1 with ACF/VTAM Release 1.3

IMPLEMENTATION-LANGUAGE:

Assembly

DISTRIBUTOR:

Network Solutions
Products Group
8229 Boone Blvd., 7th floor
Vienna, VA 22180

CONTACT:

Technical: Gwen Savanillas, (703) 749-0150

ORDERING-PROCEDURE:

Submit purchase order to above address; see above contact for pricing.

PROPRIETY-STATUS:

Network Solutions proprietary

DDN-QUALIFIED:

Yes

INFORMATION-UPDATED:

August 1988

2.17.2.11. SIMPC Master

PRODUCT-OR-PACKAGE-NAME: SIMPC MASTER

DESCRIPTION:

SIMPC MASTER and its host component, SIMXFER, provides standardized 3270 full-screen host access for PCs. File transfer is available for CMS, TSO, CICS, and directly under VTAM. Multiple data communication paths including LANs, dialup, X.25, coax boards, and protocol converters are supported. A powerful command script language, with over 150 English-like commands, simplifies and automates procedures.

DOCUMENTATION:

Documentation is provided as per license size

MACHINE-TYPE/CPU:

IBM PCs and compatibles, including laptops

O/S:

Operates in the VM, MVS/VTAM and GCS/VTAM environments

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

Simware Inc.
20 Colonnade Road
Ottawa, Ontario
K2E7M6

CONTACT:

Bruce Laforest (613) 727-1779

ORDERING-PROCEDURE:

Submit purchase order to above address

PROPRIETY-STATUS:

Simware Inc.

INFORMATION-UPDATED:

February 1989

2.17.2.12. Simware Inc. SIM3278/TCPIP

PRODUCT-OR-PACKAGE-NAME: SIM3278/TCPIP

DESCRIPTION:

SIM3278/TCPIP works with IBM's TCP/IP for VM program product providing efficient 3270 terminal emulation for ASCII terminals in the TCP/IP network, without any restrictions on the operating system or network protocol.

DOCUMENTATION:

One full set of documentation is provided with the product.

MACHINE-TYPE/CPU:

IBM S/370, 43XX, 30XX

O/S:

IBM VM/SP release 3 or later; IBM's TCP/IP for VM release 1.1 or later (5798-FAL) program product and its prerequisite hardware interfaces to the TCP/IP network

IMPLEMENTATION-LANGUAGE:

Assembler

DISTRIBUTOR:

Simware Inc.
20 Colonnade Rd.
Ottawa, Ontario
Canada
K2E 7M6

CONTACT:

Bruce Laforest, (613) 727-1779

ORDERING-PROCEDURE:

Submit purchase order to above address

PROPRIETY-STATUS:

Simware Inc.

INFORMATION-UPDATED:

February 1989

2.17.2.13. Simware Inc. SIM3278

PRODUCT-OR-PACKAGE-NAME: SIM3278

DESCRIPTION:

SIM3278 is a host based protocol conversion software package which provides remote PC and ASCII terminal users with full-screen 3270 access to VM, MVS/VTAM & GCS/VTAM applications over cost-effective dialup, X.25 & DDN networks.

DOCUMENTATION:

One full set of documentation is provided with the product.

MACHINE-TYPE/CPU:

IBM S/370, 43XX, 30XX and plug compatible such as Amdahl and NAS

O/S:

Operates in the VM, MVS/VTAM and GCS/VTAM environments

IMPLEMENTATION-LANGUAGE:

Assembler

DISTRIBUTOR:

Simware Inc.
20 Colonnade Road
Ottawa, Ontario
K2E 7M6

CONTACT:

Bruce Laforest, (613) 727-1779

ORDERING-PROCEDURE:

Submit purchase order to above address

PROPRIETY-STATUS:

Simware Inc.

INFORMATION-UPDATED:

February 1989

2.17.2.14. Simware Inc. SIM/DIALOUT

PRODUCT-OR-PACKAGE-NAME: SIM/DIALOUT

DESCRIPTION:

SIM/DIALOUT is a host based ACF/VTAM application program which provides reverse protocol conversion allowing SNA3270 terminals and PC's emulating 3270 terminals to access X.25 resources, electronic mail systems, online databases and NON-SNA processors.

DOCUMENTATION:

One complete set of documentation including "User Guide" and "Installation Guide" is provided with the product.

MACHINE-TYPE/CPU:

IBM S/370, 43XX, 30XX and plug compatibles such as Amdahl and NAS

O/S:

Operates in MVS and VM/GCS environments

IMPLEMENTATION-LANGUAGE:

370 Assembler

DISTRIBUTOR:

Simware Inc.
20 Collonade Rd.
Ottawa, Ontario
Canada, K2E 7M6

CONTACT:

Bruce Laforest, (613) 727-1779 (Simware), Debbie Alston, (301) 489-5115 (Franklin Systems)

ORDERING-PROCEDURE:

Submit purchase order to above address

PROPRIETY-STATUS:

Simware Inc.

INFORMATION-UPDATED:

February 1988

2.17.2.15. SIMXFER

PRODUCT-OR-PACKAGE-NAME: SIMXFER

DESCRIPTION:

SIMXFER and its PC component, SIMPC MASTER, provides error-free file transfer for CMS, TSO, and CICS, directly under VTAM. It supports multiple communication links including coax boards and hardware protocol converters.

DOCUMENTATION:

One full set of documentation is provided with the product.

MACHINE-TYPE/CPU:

IBM S/370, 43XX, 30XX and plug compatible such as Amdahl and NAS

O/S:

Operates in the VM, MVS/VTAM and GCS/VTAM environments

IMPLEMENTATION-LANGUAGE:

Assembler

DISTRIBUTOR:

Simware Inc.
20 Colonnade Road
Ottawa, Ontario
K2E7M6

CONTACT:

Bruce Laforest (613) 727-1779

ORDERING-PROCEDURE:

Submit purchase order to above address

PROPRIETY-STATUS:

Simware Inc.

INFORMATION-UPDATED:

February 1989

2.18. INFORMIX SOFTWARE

2.18.1. Informix-NET, Informix Turbo Net

PRODUCT-OR-PACKAGE-NAME: Informix-NET, Informix Turbo Net

DESCRIPTION:

This product is a network interface module for Informix DBMS products. It provides distributed database, and distributed processing capabilities for Informix RDBMS's.

DOCUMENTATION:

Installation, Users guide included

MACHINE-TYPE/CPU:

DEC/VAX, MICROVAX, SUN, APOLLO, UNISYS, AT&T, NCR, IBM-PC,IBM-PS/2, IBM compatible, Sequent

O/S:

UNIX, SUNOS, DOS, ULTRIX

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

Informix Software
4100 Bohannon Dr.
Menlo Park, CA 94025

CONTACT:

Sherri Osaka, (415) 322-4100 ext 872

ORDERING-PROCEDURE:

Informix-Net, Informix-turbo Net

PROPRIETY-STATUS:

Informix-Net is a proprietary network module for Informix DBMS from Informix software.

INFORMATION-UPDATED:

February 1989

2.19. INTERGRAPH CORPORATION

2.19.1. Intergraph TCP/IP

PRODUCT-OR-PACKAGE-NAME: Intergraph TCP/IP

DESCRIPTION:
This product is a software implementation of TCP/IP which operates through the Intergraph Communications Processor (CP).

DOCUMENTATION:
TCP/IP Users Guide, Document #DSYS096, ordered separately

MACHINE-TYPE/CPU:
Intergraph Clipper-based workstations and servers

O/S:
UNIX, AT&T UNIX System V.3

IMPLEMENTATION-LANGUAGE:
C

DISTRIBUTOR:

Intergraph Corporation
One Madison Industrial Park
Huntsville, AL 35807

CONTACT:
Lee Fulcher, Mgr. Networking and Communications Products Marketing, (205) 772 2000

ORDERING-PROCEDURE:
TCP/IP Intergraph, Part# SS**066

PROPRIETY-STATUS:
NO

INFORMATION-UPDATED:
February 1989

2.20. KINETICS

2.20.1. HostAccess

PRODUCT-OR-PACKAGE-NAME: HostAccess

DESCRIPTION:

HostAccess is a collection of software applications which provide Macintosh users direct access to multiple hosts on an Ethernet network. It includes: TELNET, which allows a Macintosh to log on to a TCP/IP host computer and work interactively using the Macintosh as a VT-100 display terminal; and FTP, a utility that lets users list local and remote directories, and allows transfer of files from one host to another. Any Macintosh equipped with HostAccess gains seamless access to a broad range of dissimilar hosts, servers, workgroups, and peripherals - including other Macintoshes, PCs, VAXes, IBM mainframes, Sun UNIX-based workstations, printers, plotters, and file servers.

DOCUMENTATION:

Installation Guide

MACHINE-TYPE/CPU:

Macintosh II, Macintosh SE, Macintosh Plus

O/S:

Macintosh O/S

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

Kinetics
2540 Camino Diablo
Walnut Creek, CA 94596

CONTACT:

Susan Hanson, Product Manager (415) 947-0998

ORDERING-PROCEDURE:

HostAccess 9870074-00

INFORMATION-UPDATED:

February 1989

2.20.2. K-Spool

PRODUCT-OR-PACKAGE-NAME: K-Spool

DESCRIPTION:

K-Spool is network print spooling software for AppleTalk and UNIX-based computer systems. It runs on UNIX systems and acts as a PostScript printer print spooler for both Macintosh and UNIX users on an EtherTalk network. K-Spool may be used with a variety of hardware configurations. LaserWriters and Macintoshes may be located on a LocalTalk network joined to the Ethernet with a Kinetics FastPath gateway. A PostScript printer may be connected to the UNIX host via Ethernet or RS-232 cabling. In all cases, Macintoshes may be connected directly to the Ethernet with Kinetics direct-connect hardware products. K-Spool includes the Kinetics K-Talk kernel modifications that add AppleTalk protocols to the UNIX operating system.

DOCUMENTATION:

Installation Guide

MACHINE-TYPE/CPU:

DEC VAX, MICROVAX, SUN, Pyramid

O/S:

UNIX, ULTRIX, Pyramid

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

Kinetics
2540 Camino Diablo
Walnut Creek, CA 94596

CONTACT:

Susan Hanson, Product Manager, (415) 947-0998

ORDERING-PROCEDURE:

K-Spool, 170/001100

PROPRIETY-STATUS:

Kinetics Proprietary product

INFORMATION-UPDATED:

February 1989

2.20.3. K-Talk

PRODUCT-OR-PACKAGE-NAME: K-Talk

DESCRIPTION:

K-Talk is a software development platform that enables the development of AppleTalk-based applications for UNIX hosts. K-Talk consists of two parts: user libraries available from Kinetics; and kernel modifications for the UNIX operating system. The user libraries give programmers the ability to write applications based on AppleTalk protocols running on UNIX, and the kernel modifications allow the UNIX Ethernet driver to recognize AppleTalk as a valid protocol type, allowing Macintosh applications to communicate using AppleTalk. UNIX hosts appear as AppleTalk nodes on an Ethernet network. UNIX vendors who have licensed K-Talk include TOPS, Sun Microsystems, Inc., Pyramid Technology, and Integrated Solutions. K-Talk is also available on ULTRIX-based Digital VAXes.

DOCUMENTATION:

Installation Guide

MACHINE-TYPE/CPU:

DEC VAX, Microvax, SUN

O/S:

UNIX, SUNOS, ULTRIX

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

Kinetics
2540 Camino Diablo
Walnut Creek, CA 94596

CONTACT:

Susan Hanson, Product Manager (415) 947-0998

ORDERING-PROCEDURE:

K-Talk

PROPRIETY-STATUS:

Proprietary product of Kinetics

INFORMATION-UPDATED:

February 1989

2.20.4. TCPORT

PRODUCT-OR-PACKAGE-NAME: TCPort

DESCRIPTION:

TCPort software provides a development platform for network applications running on top of TCP/IP. Included in TCPort are drivers for TCP, IP, and UDP, as well as socket libraries for applications development. The socket libraries include a C language run-time programming library and calls that support the device drivers. These calls allow applications to access the network using the 4.3BSD socket model.

DOCUMENTATION:

Installation Guide

MACHINE-TYPE/CPU:

Macintosh II, Macintosh SE, Macintosh Plus, Macintosh IIx

O/S:

Macintosh O/S

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

Kinetics
2540 Camino Diablo
Walnut Creek, CA 94596

CONTACT:

Susan Hanson, Product Manager (415)947-0998

ORDERING-PROCEDURE:

TCPort, 9870075-00

PROPRIETY-STATUS:

Kinetics Proprietary product

INFORMATION-UPDATED:

February 1989

2.21. LACHMAN ASSOCIATES, INC.

2.21.1. Lachman System V STREAMS TCP

PRODUCT-OR-PACKAGE-NAME: Lachman System V STREAMS TCP

DESCRIPTION:

System V STREAMS TCP is a STREAMS-based TCP/IP implementation for System V Release 3. The product is based on the latest 4.3BSD release. All standard protocols and applications are provided. The Berkeley networking environment ("r"-commands, socket interface, and networking library) is also supported. System V STREAMS TCP is provided in source code form based on AT&T System V Release 3.2 and AT&T/Intel System V/386 Release 3.2.

DOCUMENTATION:

Operations Manual, Command Reference Manual, etc., part #'s for manual's (and whether they are included or optional.) Man pages, a user's guide, and an administrator's guide are provided in both printed and source form. Release notes are also provided.

MACHINE-TYPE/CPU:

Any machine running System V Release 3

O/S:

UNIX

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

Lachman Associates, Inc.
1901 N. Naper Blvd.
Naperville, IL 60540

CONTACT:

Paula Andrews, Sales Associate
1-800-LAI-UNIX
...!laidbak!paula

ORDERING-PROCEDURE:

Call Paula Andrews (see above).

PROPRIETY-STATUS:

This product is proprietary to Lachman Associates, Inc.

INFORMATION-UPDATED:

February 1989

2.22. NCR TOWER SYSTEMS

2.22.1. Excelan NCR Tower Software

PRODUCT-OR-PACKAGE-NAME: EXOS 8012-01 TCP/IP Network Software for
NCR Tower Systems

DESCRIPTION:

Excelan's EXOS 8012-01 implements DoD TCP/IP protocols to connect NCR Tower Systems to Ethernet networks. EXOS 8012-01 is a front-end TCP/IP implementation that operates in conjunction with an EXOS 201 or EXOS 301/Intelligent Ethernet Controller for multibus. The TCP/IP protocols (TCP, IP, UDP, ICMP, ARP) and Telnet/rlogin servers run on the controller, and the user applications (FTP, Telnet, ud, finger, SMTP, tftp, and R-utilities) run on the NCR Tower. EXOS 8012-01 user applications also include C program socket library and network administration utilities.

DOCUMENTATION:

EXOS 8012-01 TCP/IP Network Software for NCR Tower Systems Reference Manual

MACHINE-TYPE/CPU:

NCR Tower 4x0 and 6x0

O/S:

Tower OS Rel 1.03.02, Tower XPs OS Rel 3.01.00

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

Please contact your local NCR sales office.

CONTACT:

See above.

ORDERING-PROCEDURE:

Contact Inside Sales

INFORMATION-UPDATED:

February 1989

2.23. NYSERNet, Inc.

2.23.1. SNMP Version 3.0 TCP/IP Management Software

PRODUCT-OR-PACKAGE-NAME: SNMP Version 3.0 TCP/IP Management Software

DESCRIPTION:

NYSERNet's implementation of SNMP Version 3.0 conforms to IAB standards, including RFC's 1067 (SNMP), 1065 (SMI), and 1066 (MIB). This product contains source code for the agent/server and Network Management Station, including 14 fully-supported applications (five with X.11 graphics) and report generation packages to format data for comparing performance statistics and trends analysis.

DOCUMENTATION:

NYSERNet's "SNMP Network Management Station (NMS) and Agent/Server Implementation, Version 3.0"
NYSERNet's "Internet Network Management" brochure
RFC 1052, RFC 1065, RFC 1066, RFC 1067

MACHINE-TYPE/CPU:

SUN, AT&T, IBM PC, IBM PS/2, IBM compatible

O/S:

UNIX, DOS, SUNOS, ULTRIX

IMPLEMENTATION-LANGUAGE:

C and ASN.1

DISTRIBUTOR:

NYSERNet, Inc.
Rensselaer Technology Park
165 Jordan Road
Troy, NY 12180

CONTACT:

John Eldredge (518)283 8860

INFORMATION-UPDATED:

February 1989

2.24. PRIME COMPUTER, INC.

2.24.1. Prime TCP/IP-X.25

PRODUCT-OR-PACKAGE-NAME: PRIME TCP/IP-X.25

DESCRIPTION:

This TCP/IP-based network software package uses X.25 as the ISO model Network Layer. The X.25 protocol has been certified by the DDN.

Services supported include SMTP, client and server FTP, client and server Telnet. In addition, the TCP Daytime, Character Generator, Discard, and Active Users protocol servers and PRIMOS command processors are provided.

DOCUMENTATION:

Use of the generic network systems is documented in standard manuals describing TCP/IP. A Prime computer system installation and mail user guide is also provided.

MACHINE-TYPE/CPU:

PRIME 50-series computers:

> 2x5x, 4050, 4150 (Office packaging)
> 750, 850, 9655, 9750, 9955, 6350, 6550 (Computer room packaging)

O/S:

PRIMOS (Revision 21 or later)

IMPLEMENTATION-LANGUAGE:

FTP, SMTP, Telnet in C; other code in PRIME's SPL, PLP, PMA

DISTRIBUTOR:

> PRIME Computer
> Custom Systems Group
> 492 Old Connecticut Path
> Framingham, MA 01701

CONTACT:

CSG@RELAY.Prime.COM or PRIME Custom Systems Group, (508) 478-8600 ext. 3368

ORDERING-PROCEDURE:

Contact Prime Custom Systems Group

PROPRIETY-STATUS:

Product of PRIME Computer, Inc.

DDN-QUALIFIED:

Yes

INFORMATION-UPDATED:

February 1989

2.24.2. Prime WSI300

PRODUCT-OR-PACKAGE-NAME: WSI300

DESCRIPTION:

WSI300 (Workstation-System Interconnect) is a TCP/IP-based network software package which runs on 802.3/Ethernet Local Area Networks.

Initially, protocols supported include client and server FTP, and server Telnet.

DOCUMENTATION:

Use of the generic network systems is documented in standard manuals describing TCP/IP. A Prime computer system installation and user guide is also provided.

MACHINE-TYPE/CPU:

All PRIME 50-series computers:

2350, 2450 (Tower packaging systems)
2250, 2655 (Office packaging)
9655, 9750, 9755, 9955, 9955II, 6350, 6550, 4050, 4150 (Computer room packaging)

O/S:

PRIMOS (Revision 21.0.1)

DISTRIBUTOR:

All Prime Sales Offices and Subsidiaries, or
PRIME Computer
Prime Park
Natick, Massachusetts 01760

CONTACT:

Katherine Jones, Product Manager, (617) 655-8000

ORDERING-PROCEDURE:

Contact any Prime Sales Office

PROPRIETY-STATUS:

Product of PRIME Computer, Inc.

INFORMATION-UPDATED:

February 1988

2.25. PYRAMID TECHNOLOGY

2.25.1. Pyramid NSP

PRODUCT-OR-PACKAGE-NAME: Pyramid's Networking Software Package (NSP)

DESCRIPTION:

The Pyramid system is based upon the RISC (Reduced Instruction Set Computer) design implementing pipelining and a large number (528) of registers to maximize performance and reduce context switching. The Pyramid system has grown into a family of computer products. They range from the entry level 9805, to the Series 9000-TA symmetric multiprocessor family 9815 through 9845. Pyramid systems support high capacity online storage (up to 48 G bytes) and high performance (40 M bytes/sec.) extend bus I/O interface.

All Pyramid systems offer Pyramids dualPort OSx operating system which supplies users with both UNIX standards (Berkeley 4.3 BSD and AT&T System V, release 3) concurrently. NSP implements the TCP/IP protocols under OSx. These protocol implementations are based upon the 4.3 BSD implementation of the MIL-STD protocols. They include TELNET (remote login), FTP (file transfer), and SMTP (mail). In addition to the standard internet protocols, Pyramid supports the following TCP/IP services: netstat, rcp, rdump, rlogin, rrestore, rsh, ruptime, and rwho.

Pyramid's NSP product is available to implement point-to-point internetwork links over ASCII asynch serial lines at speeds from 1200 bps to 19.2 Kbps. NSP offers full networking support for Ethernet (10 Mbps), and HYPERchannel (50 Mbps). Pyramid's X.25 passed DDN certification in April of 1986. The certification was for standard service at 56 Kbps.

Pyramid has implemented the Network File System (NFS) protocol to allow computer systems, workstations, and personal computers to share file systems across the network. The NFS is implemented on a Remote Procedure Call protocol, and External Data Representation (RPC and XDR) standard, to allow portability across different computer architectures.

DOCUMENTATION:

Available from vendor

MACHINE-TYPE/CPU:

Pyramid WorkCenter, 90x, 98xe, and 98x

O/S:

dualPort OSx, UNIX 4.3 BSD and UNIX System V, release 3

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

Pyramid Technology
1295 Charleston Road
Mountain View, CA 94043
(415) 965-7200

CONTACT:

Pyramid local office or Pyramid Product Marketing

DDN-QUALIFIED:

Yes

INFORMATION-UPDATED:

August 1988

2.26. RIDGE COMPUTERS

2.26.1. Ridge TCP/IP

PRODUCT NAME: Ridge TCP/IP

DESCRIPTION:

This product is based on the 4.2 BSD release which includes Telnet, FTP and the 4.2 programs--rlogin, rcp, rsh, ruptime and rwho. In addition, the CMU packet filter for Ethernet is also part of the release.

DOCUMENTATION:

Available

MACHINE-TYPE/CPU:

Ridge 32

O/S:

ROS 3.3

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

Ridge Computers
2451 Mission College Blvd.
Santa Clara, CA 95054

CONTACT:

Larry Lunetta, Director, Marketing, (408) 262-2199

ORDERING-PROCEDURE:

Call or write for information

INFORMATION-UPDATED:

February 1988

2.27. THE SANTA CRUZ OPERATION, INC.

2.27.1. SCO NFS

PRODUCT-OR-PACKAGE-NAME: SCO NFS

DESCRIPTION:

SCO NFS provides file-sharing connections across a TCP/IP LAN to other Sun-compatible Network File System (NFS) implementations, allowing users on one machine to transparently and directly access files residing on a remote machine. SCO NFS features "client" and "server" functionality, and standard RPC and XDR libraries. Running on top of SCO TCP/IP, SCO NFS is also compatible with other TCP/IP packages that provides BSD standard 4.3 socket library support for the SCO XENIX environment.

DOCUMENTATION:

Release Notes, Installation Guide, User's Guide, User's Reference, Administrator's Guide, Administrator's Reference, RPC/XDR Programmer's Reference

MACHINE-TYPE/CPU:

Industry Standard (AT) 80386 computers, or compatible computers

O/S:

SCO XENIX System V 386

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

The Santa Cruz Operation, Inc.
400 Encinal Street
P.O. Box 1900
Santa Cruz, CA 95061

CONTACT:

Telemarketing Department (800) 626-UNIX (408) 425-7222

PROPRIETY-STATUS:

SCO NFS was developed by Lachman Associates based on LACHMAN SYSTEM V NFS.
LACHMAN is a trademark of Lachman Associates, Inc.
NFS is a trademark of Sun Microsystems, Inc.
XENIX is a registered trademark of Microsoft Corporation
Santa Cruz Operation, SCO and SCO logo are trademarks of The Santa Cruz Operation, Inc.

INFORMATION-UPDATED:

February 1989

2.27.2. SCO Xenix Net

PRODUCT-OR-PACKAGE-NAME: SCO XENIX-NET

DESCRIPTION:

    SCO XENIX-NET is a local area network for computers running XENIX that allows easy integration of multiple XENIX Systems, or mixed PC-DOS, MS-DOS and XENIX systems. As a "resource sharing" system, it lets a group of computers share peripherals, such as printers and mass storage devices, permitting users to share information files stored on hard disk based computers workings file servers. SCO XENIX-NET provides SMB protocol-based distributed file system support, and requires NETBIOS session-layer facilities provided by a network transport subsystem such as Excelan or CMC TCP/IP Ethernet packages.

DOCUMENTATION:

    Release Notes, User's Guides, Administrator's Guide, Installation Guide

MACHINE-TYPE/CPU:

    IBM PC AT and compatibles, IBM PS/2 Model 80 and compatibles

O/S:

    SCO XENIX System V

IMPLEMENTATION-LANGUAGE:

    C

DISTRIBUTOR:

    The Santa Cruz Operation, Inc.
    400 Encinal Street
    P.O. Box 1900
    Santa Cruz, CA 95061

CONTACT:

    Telemarketing Department (800) 626 UNIX (408) 425 7222

ORDERING-PROCEDURE:

    Call Telemarketing Department

PROPRIET: STATUS:

    Proprietary version of MS-Networks for XENIX.
    MS-DOS, PC-DOS and XENIX are registered trademarks of Microsoft Corporation.
    Ethernet is a trademark of Xerox Corporation.
    Santa Cruz Operation, SCO and the SCO logo are trademarks of The Santa Cruz Operation, Inc.

INFORMATION-UPDATED:

    February 1989

2.27.3. SCO Xsight

PRODUCT-OR-PACKAGE-NAME: SCO Xsight

DESCRIPTION:

The SCO Xsight Family of products - SCO Xsight and PS Xsight - provide the industry-standard, high-performance X Window System technology for both SCO XENIX and DOS systems. Both are based on version II of the X Window System, the network-based (Ethernet) graphical windowing system from the Massachusetts Institute of Technology. SCO Xsight brings the windowing power of the X Window System to SCO XENIX Systems while PC Xsight provides this functionality for PCs running MS-DOS.

SCO Xsight enables users to easily invoke, simultaneously monitor, and control multiple concurrent XENIX processes on one or any number of network-controlled systems. With a mouse, standard keyboard, and bit-mapped display, users can create, move, and resize windows at will.

PC Xsight provides SCO Xsight's X Window System capabilities on PCs running MS-DOS. PC Xsight enables DOS PCs with TCP/IP hardware and software to be used as inexpensive network-based servers to XENIX clients running SCO Xsight.

DOCUMENTATION:

Release Notes and Installation Guide, User's Guide (Using the SCO Xsight System), SCO Xsight Client Reference Guide

MACHINE-TYPE/CPU:

SCO Xsight: Industry Standard (AT) 80386 computers, or compatible computers
SCO PC Xsight: Industry Standard 80886, 8088, 80286, or 80386-based computers

O/S:

SCO XENIX System V

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

The Santa Cruz Operation, Inc.
400 Encinal Street
P.O. Box 1900
Santa Cruz, CA 95061

CONTACT:

Telemarketing Department (800) 626-UNIX, (408) 425-7222

PROPRIETY-STATUS:

Xsight and PC Xsight are trademarks of Locus Computing.
X Window System is a trademark of Massachusetts Institute of Technology.
XENIX is a registered trademark of Microsoft Corporation.
Santa Cruz Operation, SCO and the SCO logo are trademarks of The Santa Cruz Operation, Inc.

INFORMATION-UPDATED:

February 1989

2.28. SEQUENT COMPUTER SYSTEMS

2.28.1. Dynix TCP/IP

PRODUCT-OR PACKAGE-NAME: Dynix TCP/IP and Dynix X.25

DESCRIPTION:

Dynix TCP/IP works over Ethernet networks and supports the standard 4.3 bsd r* services along with FTP
and Telnet. Dynix X.25 supports a 1980 X.25 and X.3/28/29 PAD implementation.

DOCUMENTATION:

X.25 Reference Manual and Man pages

MACHINE-TYPE/CPU:

Sequent

O/S:

UNIX

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

Sequent Computer Systems
15450 SW Koll Parkway
Beaverton, OR 97210

CONTACT:

James Fitzgerald (503) 526-4318

ORDERING-PROCEDURE:

Contact Local Sequent Sales Office

PROPRIETY-STATUS:

Sequent's TCP/IP and X.25 products are offered only by Sequent and its agents.

INFORMATION-UPDATED:

February 1989

2.29. SUN MICROSYSTEMS, INC.

2.29.1. Proteon, Inc.

2.29.1.1. Proteon ProNET Device Drivers

PRODUCT-OR-PACKAGE-NAME: Sun Device Drivers for ProNET-10 & 80 networks

DESCRIPTION:

The ProNET-10 and ProNET-80 Token Ring networks offer advantages of speed, distance, and media flexibility over the Ethernet supported by the Sun Microsystems workstations. The Sun device drivers connect the ProNET-10 and ProNET-80 boards to Sun's TCP/IP code, allowing all the the existing software (including NFS) to operate over ProNET.

There are ProNET boards for the Multibus and Sun VMEbus processors. The p5203 device driver is for Multibus Sun-2 processors, and supports the p1200 ProNET-10 Multibus System or the p1280 ProNET-80 Multibus System. The p5204 device driver is for VMEbus Sun-2 and Sun-3 processors, and supports the p1503 ProNET-10 Sun VMEbus System or the p1583 ProNET-80 Sun VMEbus System.

DOCUMENTATION:

Includes full hardware/software installation manual

MACHINE-TYPE/CPU:

Sun-2 or Sun-3

O/S:

SunOS, Version 3.0 or higher

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

Proteon, Inc.
Two Technology Drive
Westborough, MA 01581-5008

CONTACT:

Mick Scully, (mcs@proteon.com), (617) 898-2800

PROPRIETY-STATUS:

Licensed code of Proteon, Inc.

INFORMATION-UPDATED:

February 1988

2.29.2. Sun Microsystems, Inc.

2.29.2.1. Sun SunLink DDN

PRODUCT-OR-PACKAGE-NAME: SunLink DDN

DESCRIPTION:

SunLink DDN is a member of the SunLink product family. The SunLink products implement industry and de-facto standard protocols to provide wide-area and multivendor networking. SunLink DDN includes the host-PSN protocol layers below IP, allowing Suns to provide DDN host services to a multivendor Ethernet network or internetwork which supports the TCP/IP protocol suite. SunLink DDN includes the three major interfaces defined by DoD: DDN Standard X.25, DDN Basic X.25 and 1822 HDH/HDLC. The software runs on Sun-2 or Sun-3 processors with an available local port at speeds up to 19.2 Kbps or on a Sun system equipped with the MCP board for higher speeds.

DOCUMENTATION:

Available from vendor

MACHINE-TYPE/CPU:

Sun-2, Sun-3

O/S:

SunOS (Berkeley 4.2 Bsd and AT&T System V compatible)

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

Sun Microsystems, Inc.
2550 Garcia Avenue
Mountain View, CA 94043

CONTACT:

General Information: (800) 821-4643; In CA: (800) 821-4642

ORDERING-PROCEDURE:

Available from vendor

PROPRIETY-STATUS:

Source code is available for purchase.

DDN-QUALIFIED:

Yes

INFORMATION-UPDATED:

February 1988

2.29.2.2. Sun TCP/IP and Network Services

PRODUCT-OR-PACKAGE-NAME: TCP/IP and Network Services

DESCRIPTION:

Sun Microsystem's native networking architecture includes the 4.2 BSD TCP/IP protocols in conjunction with a 10 Mbit/second Ethernet local area network. In addition to the standard internet protocols, Sun supports the same services as the 4.2 BSD VAX UNIX network software: rlogin, rsh, rwho, ruptime, routed, and rexecd.

Sun's network services let users establish consistent directory and file structures on distinct machines. These network services, such as Network File System (NFS) and Yellow Pages (YP), are based upon Sun's Remote Procedure Call (RPC) protocol and External Data Representation (XDR) standard to allow portability across different computer architectures. NFS allows workstations to share file systems across the network; the YP protocols are used to provide domain-wide distributed administrative databases, such as user names and mail aliases.

DOCUMENTATION:

Available from Vendor

MACHINE-TYPE/CPU:

Sun-2, Sun-3

O/S:

SunOS (Berkeley 4.2 Bsd and AT&T System V compatible)

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

Sun Microsystems, Inc.
2550 Garcia Avenue
Mountain View, CA 94043
(415) 960-1300

CONTACT:

General Information: (800) 821-4643; In CA: (800) 821-4642

ORDERING-PROCEDURE:

Available from vendor

PROPRIETY-STATUS:

Source code is available for purchase.

DDN-QUALIFIED:

Yes

INFORMATION-UPDATED:

February 1988

2.29.2.3. Sun SunLink X.25

PRODUCT-OR-PACKAGE-NAME: SunLink X.25

DESCRIPTION:

SunLink X.25 allows Sun systems to establish virtual circuit connections to remote Sun or non Sun systems via X.25 Public Data Networks for IP/ISO routing and/or virtual terminal (X.29/X.3) applications. SunLink X.25 also contains two levels of programmatic interfaces: an X.25 packet level interface for application-to-application protocols and a HDLC device driver interface for reliable point-to-point protocols without the overhead of the X.25 packet level. The software runs on Sun-2 or Sun-3 processors with an available local port at speeds up to 19.2 Kbps or on a Sun system equipped with the MCP board for higher speeds.

MACHINE-TYPE/CPU:

Sun-2, Sun-3

O/S:

SunOS (Berkeley 4.2 Bsd and AT&T System V compatible)

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

Sun Microsystems, Inc.
2550 Garcia Avenue
Mountain View, CA 94043
(415) 960-1300

CONTACT:

General Information: (800) 821-4643; In CA: (800) 821-4642

ORDERING-PROCEDURE:

Available from vendor

PROPRIETY-STATUS:

Source code is available for purchase.

DDN-QUALIFIED:

Yes

INFORMATION-UPDATED:

February 1988

2.29.2.4. Sun SunLink IR

PRODUCT-OR-PACKAGE-NAME: SunLink IR

DESCRIPTION:

SunLink Internetwork Router permits point-to-point routing links between networks of Sun workstations to create a transparent internetwork. Routing of IP packets by SunLink IR is done dynamically. It supports a variety of serial media such as leased lines, broadband, satellite and PBX circuits allows users to use TCP/IP applications such as telnet, rlogin, ftp, and smtp tranparently between remote machines. The software runs on Sun-2 and Sun-3 systems with an available local port at speeds of up to 19.2 Kbps or on a Sun equipped with an MCP at up to 500 Kbps.

DOCUMENTATION:

Available from vendor

MACHINE-TYPE/CPU:

Sun-2, Sun-3

O/S:

SunOS (Berkeley 4.2 Bsd and AT&T System V compatible)

IMPLEMENTATION-LANGUAGE:

C

DISTRIEUTOR:

Sun Microsystems, Inc.
2550 Garcia Avenue
Mountain View, CA 94043
(415) 960-1300

CONTACT:

General Information: (800) 821-4643; In CA: (800) 821-4642

ORDERING-PROCEDURE:

Available from vendor

PROPRIETY-STATUS:

Source code is available for purchase.

DDN-QUALIFiED:

Yes

INFORMATION-UPDATED:

February 1988

2.29.2.5. Sun SunLink OSI

PRODUCT-OR-PACKAGE-NAME: SunLink OSI

DESCRIPTION:

SunLink OSI conforms to the MAP 2.1/TOP 1.0/NBS Phase I specifications.   On a TOP network, SunLink OSI implements layers 2 through 7 of the OSI model over Sun's integrated Ethernet/802.3 controller; no additional hardware is required.   SunLink OSI also can be used with 802.4 controllers available from various vendors for connection to a MAP network, or over SunLink X.25 for connection to X.25 networks.   SunLink OSI and TCP/IP can run concurrently over 802.3, 802.4, and X.25 networks. SunLink OSI implements both an end system and an intermediate system.   As an end system, SunLink OSI supports FTAM, MAP Network Management, MAP Directory Services, TP4/CLNS, TP0/CONS, and support for 802.3, 802.4, and X.25 networks.   As an intermediate system, SunLink OSI supports routing among 802.3 and 802.4, routing over SunLink X.25, and turnkey support for OSINET.   For programmers, SunLink OSI includes interfaces to LLC, CLNS, TP4 Session BCS, FTAM Phase I, MAP 2.1 CASE, MAP 2.1 Directory Service, and MAP 2.1 Network Management.

DOCUMENTATION:

Available from vendor

MACHINE-TYPE/CPU:

Sun-2, Sun-3

O/S:

SunOS (Berkeley 4.2 Bsd and AT&T System V compatible)

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

Sun Microsystems, Inc.
2550 Garcia Avenue
Mountain View, CA 94043
(415) 960-1300

CONTACT:

General Information: (800) 821-4643; In CA: (800) 821-4642

ORDERING-PROCEDURE:

Available from vendor

PROPRIETY-STATUS:

Source code is available for purchase.

INFORMATION-UPDATED:

February 1988

2.29.2.6. Sun SunLink MHS

PRODUCT-OR-PACKAGE-NAME: SunLink MHS

DESCRIPTION:

SunLink MHS supports local or wide area interchange of electronic messages between Sun systems and other systems that support X.400 messaging conventions. SunLink MHS is a gateway among UNIX mail (SMTP and UUCP) and X.400 that supports bi-directional exchange of messages. It conforms ot the CEN/CENELEC A/3211, CEPT A/311, and NBS profiles. Messages may be sent by (or received from) Sun users or any user that can send messages to Sun mail systems. The messages may address (or originate from) users on other systems, either X.400-native systems or the native mail systems of a vendor that supports an X.400 gateway. Mappings of addresses and other message elements are a superset of RFC 987. *SunLink MHS requires SunLink OSI, and may run over SunLink X.25 for wide area* messaging.

DOCUMENTATION:

Available from vendor

MACHINE-TYPE/CPU:

Sun-2, Sun-3

O/S:

SunOS (Berkeley 4.2 Bsd and AT&T System V compatible)

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

Sun Microsystems, Inc.
2550 Garcia Avenue
Mountain View, CA 94043
(415) 960-1300

CONTACT:

General Information: (800) 821-4643; In CA: (800) 821-4642

ORDERING-PROCEDURE:

Available from vendor

PROPRIETY-STATUS:

Source code is available for purchase.

INFORMATION-UPDATED:

February 1988

2.30. SYMBOLICS, INC.

2.30.1. Symbolics LISP Machine

PRODUCT-OR-PACKAGE-NAME: Symbolics TCP/IP

DESCRIPTION:

An implementation of the Internet protocol family for Symbolics 36xx Machines running release 5.2 or later. This includes IP, ICMP, TCP, and UDP. Higher level protocols supported include Telnet, SUPDUP, FTP, SMTP and TFTP. TCP/IP is completely integrated in the Lisp Machine generic network system and will be used by the system automatically whenever necessary. As of Release 7.2 also provides TCP/IP bridging via serial line.

DOCUMENTATION:

Use of the generic network system is documented in standard manuals and is available online through a keyword lookup system.

MACHINE-TYPE/CPU:

Symbolics Machine (Any)

O/S:

Symbolics Lisp System (Release 5 or later)

IMPLEMENTATION-LANGUAGE:

Lisp Machine LISP

DISTRIBUTOR:

Symbolics, Inc.
4 Cambridge Center
Cambridge, MA 02142

CONTACT:

Local Symbolics sales office or Symbolics, Inc. (Sales), (617) 621-7500

ORDERING-PROCEDURE:

Contact Symbolics Marketing

PROPRIETY-STATUS:

Proprietary product of Symbolics, Inc.

INFORMATION-UPDATED:

January 1988

2.31. SYNTAX SYSTEMS, INC.

2.31.1. SMBserver for TCP/IP Networks

PRODUCT-OR-PACKAGE-NAME: SMBserver for TCP/IP Networks

DESCRIPTION:

This is local area network operating system software providing file, print, name, and interprocess communications service for networked MS-DOS workstations operating with RFC 1001/1002 TCP/IP LAN products.

DOCUMENTATION:

Installation and operations manual is included

MACHINE-TYPE/CPU:

DEC VAX, MICROVAX, SUN, UNISYS, HONEYWELL, AT&T, NCR, IBM PC, IBM PS/2, IBM compatible, IBM RT, Altos, Plexus, Harris MCX, Sequent, Arix

O/S:

UNIX, SUNOS, VMS, ULTRIX

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

SYNTAX SYSTEMS, INC.
1501 West Valley Highway North #104
Auburn, WA 98001

CONTACT:

Roger A. Franklin, President, (206) 833 2525

ORDERING-PROCEDURE:

Call for product catalog

PROPRIETY-STATUS:

Proprietary Syntax product

INFORMATION-UPDATED:

February 1989

2.32. TANDEM COMPUTERS, INCORPORATED

2.32.1. Tandem Guardian/NonStop II

PRODUCT-OR-PACKAGE-NAME: Guardian/NonStop II

DESCRIPTION:

Tandem has developed TCP/IP to run with X.25. Telnet, FTP and SMTP are the upper layer protocols that have been developed.

DOCUMENTATION:

Users manuals are available

MACHINE-TYPE/CPU:

Tandem NonStop II and Txp Processors

O/S:

Guardian

IMPLEMENTATION-LANGUAGE:

TAL

DISTRIBUTOR:

Tandem Computers
19333 Vallco Parkway
Cupertino, CA 95014

CONTACT:

Gale Burnette, (703) 476-3066

ORDERING-PROCEDURE:

Contact Tandem

PROPRIETY-STATUS:

Tandem proprietary product

DDN-QUALIFIED:

Yes

INFORMATION-UPDATED:

February 1988

2.33. UNISYS CORPORATION

2.33.1. Chi Corporation

2.33.1.1. Chi CCP TCP/IP

PRODUCT-OR-PACKAGE-NAME: Chi Communications Processor (CCP) TCP/IP

DESCRIPTION:

TCP/IP is implemented in the CCP for use as a front-end to Unisys/Sperry 1100 series machines. The CCP channel connects to the Unisys/Sperry and also provides, through TCP/IP, connectivity to IBM and DEC hosts. The implementation supports TCP, IP, UDP, FTP, TELNET, SMTP, and ICMP. The data link and physical layer protocols are implemented as specified in IEEE 802.3 (10 Base 5). The CCP interfaces to a TCP/IP network through a Series 3200 Ethernet Controller and Chi's Ethernet driver software. These communicate with the IP layer. A DCA certified X.25 network interface is available for connection to the DDN. The CCP can be configured as a remote concentrator, providing yet another method by which remote terminals can access DDN hosts. Chi also offers technical support for interfacing Unisys/Sperry computing environments to the DDN.

DOCUMENTATION:

Technical manuals provided with product; descriptive literature available

MACHINE-TYPE/CPU:

Versions based on Concurrent Computer's Model 3205 and 3212 processors

O/S:

Chi proprietary, CCP/OS, which communicates with Unisys/Sperry OS 1100

IMPLEMENTATION-LANGUAGE:

C and assembler

DISTRIBUTOR:

> Chi Corporation
> 26055 Emery Road
> Cleveland, OH 44128

CONTACT:

Sales Coordinator, (216) 831-2622

ORDERING-PROCEDURE:

Contact Chi Corporation

PROPRIETY-STATUS:

Proprietary product of Chi Corporation

DDN-QUALIFIED:

Yes

INFORMATION-UPDATED:

January 1988

2.33.2. Unisys Corporation

2.33.2.1. BTOS X.25 Network Gateway

PRODUCT-OR-PACKAGE-NAME: BTOS X.25 Network Gateway

DESCRIPTION:

This product allows B25 family processors and XE520 processors to communicate over Public Data Networks (PDNs) that support CCITT X.25 protocols. A single gateway can serve applications on the local workstation, applications on other workstations within the cluster (a local group of workstations connected via RS-422 or twisted-pair cabling), and applications within remote clusters which communicate via 802.3 LAN or other BTOS networking media. It supports 64 virtual circuits, and max. of 19.2K via RS-232 or 64K via X.21 port (or RS-232 port with V.35 converter). It is based upon 1984 standard CCITT X.25 recommendation, and is certified for use on various PDNs including Telenet, Transpac, Datex-P Austria, Datex-P Germany, Tymnet, etc.

DOCUMENTATION:

Operations and Programming Guide available from Unisys Corporation

MACHINE-TYPE/CPU:

UNISYS B26, B27, B28, B38, B39, and XE 520 Processors

O/S:

BTOS II on B25 family; XEBTOS on XE520

IMPLEMENTATION-LANGUAGE:

PLM

DISTRIBUTOR:

> Unisys Corporation
> Box 500
> Blue Bell, PA 19424

CONTACT:

Ursula Kellman (313) 972-0603

ORDERING-PROCEDURE:

See your local Unisys Sales Representative

PROPRIETY-STATUS:

Property of Unisys Corporation.

INFORMATION-UPDATED:

February 1989

2.33.2.2. DDP-PPC

PRODUCT-OR-PACKAGE-NAME: DDP - PPC

DESCRIPTION:

The Distributed Data Processing - Program to Program Communication (DDP-PPC) product implements the OSI layer 5 - 7 services. The Session layer services include the Basic Activity Subset (BAS) and the Basic Combined Subset (BCS) that are required to operate with the OSI-MHS and OSI-FTAM products. ISO 8822 Presentation layer Services and ISO 8649/2 Association Control Service Elements (ACSE) are also implemented in DDP-PPC. In addition to OSI support, DDP-PPC provides session layer services for TCP/IP and Unisys DCA networks.

DOCUMENTATION:

Available from UNISYS Corporation

MACHINE-TYPE/CPU:

UNISYS 1100/2200 series

O/S:

OS 1100

IMPLEMENTATION-LANGUAGE:

Plus

DISTRIBUTOR:

UNISYS Corporation
P.O. Box 500
Blue Bell, PA 19424-0001

CONTACT:

P. A. Wimpenny, Program Marketing Manager (215) 542 5765

ORDERING-PROCEDURE:

See local UNISYS Sales Representative

PROPRIETY-STATUS:

Property of UNISYS Corporation

INFORMATION-UPDATED:

February 1989

2.33.2.3. OSI-FTAM

PRODUCT-OR-PACKAGE-NAME: OSI-FTAM

DESCRIPTION:

OSI-FTAM is an implementation of the International Standard 8571 for File Transfer, Access and Management. It conforms to the profile defined in the NBS Special Publication 500-150, Stable Implementaion Agreements for OSI Protocols, Version 1, Edition 3, August 1988, and European Prestandard ENV 41 204. OSI-FTAM supports the T1, T2, and M1 profiles as defined in the NBS agreements. It handles the following document types as defined by ISO and NBS: FTAM-1, FTAM-2, FTAM-3, NBS-6 and NBS-7.

DOCUMENTATION:

Available from UNISYS Corporation

MACHINE-TYPE/CPU:

UNISYS 1100/2200 and 5000/6000 Series

O/S:

OS1100 and Unix

IMPLEMENTATION-LANGUAGE:

Plus and C

DISTRIBUTOR:

UNISYS Corporation
P.O. Box 500
Blue Bell, PA 19424-0001

CONTACT:

P. A. Wimpenny, Program Marketing Manager, (215) 542-5765

ORDERING-PROCEDURE:

See the local UNISYS Sales Representative

PROPRIETY-STATUS:

Property of UNISYS Corporation

INFORMATION-UPDATED:

February 1989

2.33.2.4. OSI-MHS

PRODUCT-OR-PACKAGE-NAME: OSI-MHS

DESCRIPTION:

OSI-MHS implements the CCITT X.400 (1984) Series of Recommentations. The product includes support for the Message Transfer Agent (MTA) and the Interpersonal Messaging User Agent (IPM-UA). This implementation conforms to the National Bureau of Standards Stable Implementation Agreements for Open Systems Interconnection Protocols, Version 1, Edition 1, December 1987, and the European Prestandards ENV 41 201 and ENV 41 202. An easy to use menu interface to the IPM-UA is included. Programmatic interfaces are provided to both the MTA and IPM-UA.

DOCUMENTATION:

Available from UNISYS Corporation.

MACHINE-TYPE/CPU:

UNISYS 1100/2200 and 5000/6000 Series

O/S:

OS1100 and Unix

IMPLEMENTATION-LANGUAGE:

Plus and C

DISTRIBUTOR:

UNISYS Corporation
P.O. Box 500
Blue Bell, PA 19424-0001

CONTACT:

P. A. Wimpennny, Program Marketing Manager, (215) 542-5765

ORDERING-PROCEDURE:

See the local UNISYS Sales Representative

PROPRIETY-STATUS:

Property of UNISYS Corporation

INFORMATION-UPDATED:

February 1989

2.33.2.5. Unisys A Series Systems

PRODUCT-OR-PACKAGE-NAME: A Series TCP/IP

DESCRIPTION:

The Unisys A Series TCP/IP product augments the BNA network products by supporting communication with other Unisys systems and other vendor systems employing DDN protocols. DDN software is implemented partly in the mainframe and partly in the CP2000 communications processor. The DDN connections provided are the standard X.25 IMP and other X.25 packet network interfaces at speeds up to 64 Kbps, and IEEE 802.3 local area network interfaces at 10 Mbps. Telnet, FTP, and SMTP protocols and programmatic interfaces to multiple layers are supported above TCP/IP and are integral to BNA Host Services. Several mainframes may access the DDN through the same CP2000 via an IEEE 802.3 LAN, in which case the communications processor supports the EGP protocol. Multiple X.25 connections may be supported by a single CP2000 communications processor. In addition, the CP2000 communications processor can support attachment to an IEEE 802.3 LAN and uses Ethernet compatible frames and the ARP protocol. BNA sessions are supported using the DDN or IEEE 802.3 LAN for transport between BNA nodes.

DOCUMENTATION:

Available from Unisys Corporation

MACHINE-TYPE/CPU:

Unisys A Series A1 through A17

O/S:

A Series MCP Release 3.72 or higher

IMPLEMENTATION-LANGUAGE:

PASCAL

DISTRIBUTOR:

Unisys Corporation
Box 500
Blue Bell, Pennsylvania 19424

CONTACT:

Denise O'Connor, (215) 542-3103

ORDERING-PROCEDURE:

See the local Unisys sales representative.

PROPRIETY-STATUS:

Property of Unisys Corporation

DDN QUALIFIED:

Yes

INFORMATION-UPDATED:

February 1989

2.33.2.6. Unisys 1100 and 2200 Systems

PRODUCT-OR-PACKAGE-NAME: DDN-1100, DCP DDN Gateway

DESCRIPTION:

The Unisys OS1100 TCP/IP products augment the DCA network products by supporting communication with other Unisys systems and other vendor systems employing DDN protocols. DDN software is implemented partly in the mainframe and partly in the Distributed Communications Processor (DCP). The DDN connections provided are the DDN Standard X.25 packet network interfaces at speeds up to 64 Kbps, and IEEE 802.3 local area network interfaces at 10 Mbps. The IP, ICMP, TCP and Telnet protocols are implemented in the DCP. FTP and SMTP protocols and programmatic interfaces to multiple layers are implemented in the mainframe and are integral to Distributed Systems Services (DSS) of OS1100. Multiple DDN X.25 connections may be supported by a single DCP. In addition, the DCP can support attachment to an IEEE 802.3 LAN using Ethernet compatible frames and the ARP protocol. DCA sessions are supported using the DDN or IEEE 802.3 LAN for transport between DCA nodes.

DOCUMENTATION:

Available from Unisys Corporation

MACHINE-TYPE/CPU:

Unisys 1100 and 2200 Series Systems
DCP 10A, DCP 15, DCP 20, DCP 30, DCP 40 and DCP 50

O/S:

OS1100 System Base 3 or higher

IMPLEMENTATION-LANGUAGE:

PLUS for mainframe software; Telcon Assembler for DCPs

DISTRIBUTOR:

Unisys Corporation
P.O. Box 500
Blue Bell, PA 19424

CONTACT:

Denise O'Connor, (215) 542-5935

ORDERING-PROCEDURE:

See the local Unisys sales representatve.

PROPRIETY-STATUS:

Property of Unisys Corporation

DDN-QUALIFIED:

Yes

INFORMATION-UPDATED:

February 1989

2.33.2.7. Unisys DDN5000, DDN6000, DDN7000

PRODUCT-OR-PACKAGE-NAME: DDN5000, DDN6000, DDN7000

DESCRIPTION:

The Unisys DDN5000, DDN6000 and DDN7000 products support communication with other Unisys systems and equipment of other vendors via DDN protocols and R-utilities over a DDN standard X.25 IMP interface at from 19.2 Kbps to 56K bps. The IP, ICMP, TCP, Telnet, FTP and SMTP protocols are implemented along with R-Utilities. Programmatic interfaces, including BSD 4.2 via sockets library, are available to multiple layers. In addition, DDN7000 supports the UDP protocol. Series 5000 systems also support DCA sessions using the DDN for transport between DCA nodes.

DOCUMENTATION:

Available from Unisys Corporation

MACHINE-TYPE/CPU:

5000/20-30-40-50-60-80-90
6000/30-50
7000/40-50

O/S:

UNIX System V, Release 3.0

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

Unisys Corporation
P.O. Box 500
Blue Bell, PA 19424

CONTACT:

Steve Semen, (215) 542-6457

ORDERING-PROCEDURE:

See the local Unisys sales representative.

PROPRIETY-STATUS:

Property of Unisys Corporation

DDN-QUALIFIED:

Yes

INFORMATION-UPDATED:

February 1989

2.33.2.8. Unisys NET5000, NET6000, NET7000

PRODUCT-OR-PACKAGE-NAME: NET5000, NET6000, NET7000

DESCRIPTION:

The Unisys NET5000 and NET7000 products support communication with other Unisys systems and equipment of other vendors via DDN protocols and R-Utilities over IEEE 802.3 local area network, using Ethernet compatible frames.   The ARP, IP, ICMP, TCP, UDP, Telnet, and FTP protocols are implemented. Programmatic interfaces are supported to multiple layers. Series 5000 systems also support DCA sessions simultaneously over the IEEE 802.3 LAN.

DOCUMENTATION:

Available from Unisys Corporation

MACHINE-TYPE/CPU:

5000/20-30-40-50-60-80-90
6000/30-50
7000/40-50

O/S:

UNIX System V, Release 3.0

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

Unisys Corporation
P.O. Box 500
Blue Bell, PA 19424

CONTACT:

Steve Semen, (215) 542-6457

ORDERING-PROCEDURE:

See the local Unisys sales representative.

PROPRIETY-STATUS:

Property of Unisys Corporation

INFORMATION-UPDATED:

February 1989

2.33.2.9. Unisys OSI Products

PRODUCT-OR-PACKAGE-NAME: OSI MESSAGE HANDLING SYSTEM - MAIL MANAGER
     OSI MESSAGE HANDLING SYSTEM - MAIL SERVER
     OSI SESSION
     OSI TRANSPORT - WAN (Wide Area Networks)
     OSI TRANSPORT - LAN (Local Area Networks)

DESCRIPTION:

This suite of products is for the BTOS family of systems based on standards defined for the International Standards Organization (ISO) Open System Interconnection (OSI) reference model.

The Mail Manager provides the MHS user interface for mail origination and receipt (note: the previously available [non-OSI] mail manager may also be used).

The Mail Server implements the 1984 X.400 Recommendations of the CCITT, which provide a store-and-forward multimedia message handling system for multivendor environments.

The Session product provides an OSI Session layer and may be used by OSI Mail, user applications, and/or BTOS network communcations.

OSI Transport-WAN, used in conjunction with the BTOS X.25 Gateway, provides support for X.25 packet-switched data networks.

OSI Transport-LAN supports use of ISO 8802/3 local area networks.

DOCUMENTATION:

Complete set available from UNISYS Corporation (includes Administration, Operation, and Reference documents)

MACHINE-TYPE/CPU:

UNISYS B26, B27, B28, B38, B39, and XE520 Processors

O/S:

BTOS II on B25 family; XEBTOS and XE520

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

UNISYS Corporation
Box 500
Blue Bell, PA 19424

CONTACT:

Ursula Kellman (313) 972-0603

ORDERING-PROCEDURE:

See your local UNISYS sales representative

PROPRIETY-STATUS:

Property of UNISYS Corporation

INFORMATION-UPDATED:
February 1989

2.33.3. University of Maryland

2.33.3.1. U. of Maryland IP/TCP-1100

PRODUCT-OR-PACKAGE-NAME: IP/TCP-1100 -- Current level 2R2Q5

DESCRIPTION:

The University of Maryland Computer Science Center has implemented TCP/IP for the Unisys 1100 Series computer systems. The implementation currently supports IP, ICMP, TCP, server TELNET, server FTP, user and server SMTP, user and server MDQS. The link level connection is via a 40KB synchronous link or Unisys word channel. Direct connection to an Ethernet is under construction. Currently running on at least 3 Internet hosts including UMD2.UMD.EDU.

DOCUMENTATION:

Installation, configuration and operation documentation is provided in both printed and machine readable form. No internals documentation is currently available. Package is distributed in source form.

MACHINE-TYPE/CPU:

Unisys 1100/60 EIS, 1100/70 EIS, 1100/80, 1100/90

O/S:

OS1100 Level 38R5 or later

IMPLEMENTATION-LANGUAGE:

PLUS and MASM

DISTRIBUTOR:

Systems Staff
Computer Science Center
University of Maryland
College Park, MD   20742

CONTACT:

Louis A. Mamakos, (louie@TRANTOR.UMD.EDU),
Michael G. Petry, (petry@TRANTOR.UMD.EDU)
(301) 454-2946

ORDERING-PROCEDURE:

Contact distributors for current procedure.

PROPRIETY-STATUS:

Developed under state of Maryland funding by public institution; available to any requestor

INFORMATION-UPDATED:

March 1986

2.34. VXM Technologies, Inc.

2.34.1. TIM

PRODUCT-OR-PACKAGE-NAME: TIM

DESCRIPTION:

The TIM network application program interface is: 1) an enabling technology which provides rapid distributed application development, 2) machine independent, allowing easy portability of code, 3) a transitional technology which will allow easy migration from TCP/IP to OSI networks, and 4) a toolkit for interactively debugging and exercising applications across heterogeneous systems. Users will be able to simply swap out TIM/TCP and relink their applications with TIM/OSI. The TIM network API lets users get the maximum benefit from TCP-based applications, as well as provides an easy to implement transition strategy from one network type to another.

DOCUMENTATION:

Complete documentation on how to create distributed applications, debugging, setting diagnostics, explanation of compiler problems in DEC VMS and Sun BSD, and their workarounds.

MACHINE-TYPE/CPU:

MIPS 120, Sun, Apollo, PCs, Macintosh, DEC VAX, Silicon Graphics, Multiflow, Mainframe VM, HP 9000 (300 & 900 series)

O/S:

Aegis, Unix V, BSD, RISCOS (MIPS), XENIX, MS DOS, DEC VMS, ULTRIX, Macintosh, VM, MVS

IMPLEMENTATION-LANGUAGE:

C language object modules

DISTRIBUTOR:

VXM Technologies, Inc.
Box 9121 Kenmore Station
Boston, MA 02215-9121
(800) 627 5221
(617)730 8480

INFORMATION-UPDATED:

February 1989

2.35. WANG LABORATORIES, INC.

2.35.1. Wang Laboratories VS-WSNT-DDN-X

PRODUCT-OR-PACKAGE-NAME: VS-WSNT-DDN-X

DESCRIPTION:

Provides the ability to communicate between multiple WANG VS through a DCA fully qualified X.25 basic interface.

WANG Labs: pending announcment and final testing full suite of DDN Protocols (TCP/IP, SMTP, FTP, Telnet)

DOCUMENTATION:

Documentation provided with product

MACHINE-TYPE/CPU:

Complete product family of WANG VS

O/S:

VS 6.40 or greater

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

Wang Laboratories, Inc.
One Industrial Avenue
Lowell, MA 01851

CONTACT:

Martin Brien, (617) 459-5000, (800) 225-0654

ORDERING-PROCEDURE:

Submit purchase order to above address
Product availability through GSA
Authorized ADP Schedule

PROPRIETY-STATUS:

Wang Laboratories, Inc.

DDN-QUALIFIED:

Yes, X.25 BASIC, October 1985

INFORMATION-UPDATED:

February 1988

2.36. XEROX CORPORATION

2.36.1. Xerox XDE

PRODUCT-OR-PACKAGE-NAME: XDE (Xerox Development Environment) 5.0 Desktop

DESCRIPTION:

The TCP/IP package in XDE 5.0 supports the use of the TCP/IP family of networking protocols. It supports the application protocols of FTP, TFTP, SMTP and Telnet and the networking protocols of IP, TCP, UDP and ARP, as outlined by various RFCs. This package also provides for window-based user interfaces to the above application protocols and Mesa language programming interfaces to the above protocols.

DOCUMENTATION:

Programmer level documentation to each of the individual application level protocols as well as network level protocols is given, and also user interface documentation for the tools which use these applications.

MACHINE-TYPE/CPU:

This software is for use on the 8010 and 6085 processors. These are proprietary processors optimized for the running of the Mesa language.

O/S:

Pilot 12.3 operating system (Xerox proprietary)

IMPLEMENTATION-LANGUAGE:

Mesa 12.3

DISTRIBUTOR:

> Xerox Corporation
> 475 Oakmead Parkway
> Sunnyvale, CA 94086

CONTACT:

Local Xerox Sales Representative or XDE Product Marketing, (408) 737-4418

ORDERING-PROCEDURE:

Contact above

PROPRIETY-STATUS:

Product of the Xerox Corporation for 8010 and 6085 workstations

INFORMATION-UPDATED:

February 1989

2.37. SOFTWARE MULTIPLE-MACHINE IMPLEMENTATIONS

2.37.1. ADAX INC.

2.37.1.1. Adax Standard DDN

PRODUCT-OR-PACKAGE-NAME: STANDARD DDN

DESCRIPTION:

STANDARD DDN is a DCA certified interface to the Defense Data Network standard service offering the DDN utilities TELNET, FTP, and SMTP over TCP/IP/X.25. STANDARD DDN also supports the Berkeley communication utilities rsh, rlogin, and rcp over TCP/IP/X.25.

STANDARD DDN runs under the UNIX or Xenix operating system and offers a convenient user interface with local shell escape and quote command.

For the PCbus, STANDARD DDN requires the Adax PC-SDMA communication board offering a jumper selectable RS-232C interface and RS-449/422 interface with data rates up to 1M bit per second.

For Multibus I, STANDARD DDN requires the Adax SSC communication board offering either an RS-232C interface or RS-449/422 interface with data rates up to 1 Mbit per second.

STANDARD DDN runs on the Plexus, Arix, NCR Tower, Counterpoint, and the Unisys 68000 series CPU Multibus I computers.

STANDARD DDN also runs on PC/386 configurations under UNIX or XENIX, including Microport UNIX V.3, SCO XENIX/386, Interactive Systems 386/ix, and Convergent Technologies Server PC.

DOCUMENTATION:

Available from vendor

MACHINE-TYPE/CPU:

Motorola 68000/10/20 Multibus I configurations. Intel 80386 PCbus configurations.

O/S:

UNIX System V.2, V.3; Xenix /386

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

Adax, Inc.
612 Bancroft Way
Berkeley, CA 94710

CONTACT:

Les Wilson, (415) 548-7047

ORDERING-PROCEDURE:

Available from vendor

PROPRIETY-STATUS:

Proprietary product of Adax

DDN-QUALIFIED:

Yes

INFORMATION-UPDATED:

December 1988

2.37.2. BANYAN SYSTEMS, INC.

2.37.2.1. VINES TCP/IP Routing Option

PRODUCT-OR-PACKAGE-NAME: VINES TCP/IP Routing Option

DESCRIPTION:

Banyan Systems Inc. develops and markets VINES -- virtual networking software that allows network resources to appear as transparent extensions to local PCs. VINES integrates multiple communications technologies, including local- and wide-area network, mini and mainframe links. The company also markets high-performance, multi-function network servers which run the VINES network operating system while providing internetwork support for a variety of popular local area networks.

The VINES TCP/IP Routing option allows a Banyan Server (VINES/386, DTS, BNS or CNS) to route IP frames. This enables a single Banyan server or a network of Banyan servers to connect multiple TCP/IP hosts or networks.

This option supports connections between TCP/IP networks and Banyan servers over Ethernet (3Com 3C501 and 3C505, Micom- Interlan NI5010 and NI5210, and Ungermann-Bass NIC), IEEE 802.5 Token Ring (IBM and Proteon ProNET-4), and Proteon ProNET-10.

This option is available with VINES Release 3.0.

Connections between TCP/IP networks and Banyan servers over 3Com 3C603 Token Ring and 3Com 3C503 Ethernet are supported with VINES Release 3.10.

DOCUMENTATION:

The TCP/IP option guide is included.

MACHINE-TYPE/CPU:

80286, 80386, or Banyan proprietary servers: DTS, BNS, CNS

O/S:

UNIX System V optimized for VINES

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

Banyan Systems Inc.
115 Flanders Rd.
Westboro, MA 01581

CONTACT:

Rita Parker, (508) 898-2404

ORDERING-PROCEDURE:

Contact nearest Banyan reseller or call (508) 898-2404

PROPRIETY-STATUS:

Product of Banyan Systems Inc.

INFORMATION-UPDATED:

February 1989

2.37.2.2. VINES TCP/IP Server-to-Server Option

PRODUCT-OR-PACKAGE-NAME: VINES TCP/IP Server-to-Server Option

DESCRIPTION:

Banyan Systems Inc. develops and markets VINES -- virtual networking software that allows network resources to appear as transparent extensions to local PCs. VINES integrates multiple communications technologies, including local- and wide-area network, mini and mainframe links. The company also markets high-performance, multi-function network servers which run the VINES network operating system while providing internetwork support for a variety of popular local area networks.

The VINES TCP/IP Server-to-Server option allows two or more Banyan servers to communicate across a TCP/IP network. IP internetting is available across Ethernet (3Com 3C501 and 3C505, Micom-Interlan NI5010 and NI5210, and Ungermann-Bass NIC), IEEE 802.5 Token Ring (IBM and Proteon ProNet-4), and Proteon ProNET-10 networks.

This option is attractive to customers with access to a TCP/IP backbone who need to connect remote Banyan servers. VINES packets originating from one Banyan server and destined for a remote Banyan server are encapsulated in IP protocol headers to be routed by non-Banyan IP routers through a TCP/IP network.

This option is available with VINES Release 3.0.

DOCUMENTATION:

The TCP/IP option guide is included.

MACHINE-TYPE/CPU:

80286, 80386, or Banyan proprietary servers: DTS, BNS, CNS

O/S:

UNIX System V optimized for VINES

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

Banyan Systems Inc.
115 Flanders Rd.
Westboro, MA 01581

CONTACT:

Rita Parker, (508) 898-2404

ORDERING-PROCEDURE:

Contact nearest Banyan reseller or call (508) 898-2404

PROPRIETY-STATUS:

Product of Banyan Systems Inc.

INFORMATION-UPDATED:

February 1988

2.37.3. COMMUNICATION MACHINERY CORPORATION

2.37.3.1. CMC Internet TCP/IP for Ethernet Node Processors (ENP's)

PRODUCT-OR-PACKAGE-NAME: CMC Internet TCP/IP for Ethernet Node Processors (ENP's)

DESCRIPTION:

Intelligent Ethernet Front End Processors (ENP's) that support the TCP/IP suite of protocols on VME, MULTIBUS, UNIBUS, Q-bus and PC-bus systems in UNIX, VMS, XENIX and DOS environments. TCP, IP, UDP, ARP, ICMP are processed on the ENP and applications including FTP, TELNET, SMTP, RLOGIN, RSH, RCP and Berkeley 4.2 socket libraries run in the host.

DOCUMENTATION:

ENP Technical Binder, ENP User's Binder, Internet User's Guide

MACHINE-TYPE/CPU:

ENP-10 for VMEbus (UNIX)

ENP-30 for MULTIBUS (UNIX)

ENP-40 for UNIBUS (VMS)

ENP-50 for Qbus (MICROVMS)

ENP-66 for PC-bus (DOS, XENIX)

O/S:

UNIX System V, DOS 3.X, VMS, MICROVMS, XENIX

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

Direct Distribution
Communication Machinery Corporation
125 Cremona Drive
Santa Barbara, CA 93117

CONTACT:

CMC Sales, (800) CMC-8023 or (805) 968-4CMC

ORDERING-PROCEDURE:

Contact CMC Sales

PROPRIETY-STATUS:

CMC Proprietary

INFORMATION-UPDATED:

January 1988

2.37.4. COMPUTER NETWORK TECHNOLOGY

2.37.4.1. Computer Network Technology LANlord High Speed Networking System

PRODUCT-OR-PACKAGE-NAME: LANlord High Speed Networking System

DESCRIPTION:

This is a high performance back-end LAN (25 Mb/s) designed to physically, electronically and logically connect mainframe computers and other networking technologies.

Release TWO of LANlord implements TCP/IP protocols on the network, supports FTP applications on the host, and will available 4th quarter 1987.

LINKlord gateways implementing T-1 links between LANlord networks are available now. A LINKlord gateway from Cray to Ethernet using TCP-IP protocols will be available 4th quarter 1987.

MACHINE-TYPE/CPU:

IBM, DEC (all processors interfacing to DEC DR11-W and DRB32)

O/S:

MVS, VMS, UNIX

DISTRIBUTOR:

Computer Network Technology
9440 Science Center Drive
New Hope, MN 55428

CONTACT:

Bob Lutnicki, (800) 638-8324

ORDERING-PROCEDURE:

Call for information

INFORMATION-UPDATED:

August 1987

2.37.5. CONCURRENT COMPUTER CORPORATION

2.37.5.1. Network Solutions OPEN-Link for OS/32

PRODUCT-OR-PACKAGE-NAME: OPEN-Link for OS/32

DESCRIPTION:

OPEN-Link is a series of communications software and hardware products that meet the Defense Communications Agency MIL-STDs in use on the DDN networks, such as ARPANET and MILNET. These products are also interoperable with the UNIX BSD 4.X implementations of these protocols used by many popular UNIX based graphics workstations.

OPEN-Link supplies TCP/IP communication protocol software products, Application Programming Interfaces to the TCP functions for PASCAL, FORTRAN VII, C, and CAL, and the MIL-STD File Transfer (FTP), Virtual Terminal (TELNET) and Simple Mail Transfer (SMTP) applications.

OPEN-Link for Concurrent Computer OS/32 systems uses the Concurrent Computer Ethernet Data Link Controller.

DOCUMENTATION:

A full documentation set is available.

MACHINE-TYPE/CPU:

Concurrent Computer Corporation 3200 Series Systems, including MPS

O/S:

OS/32

IMPLEMENTATION-LANGUAGE:

PASCAL

DISTRIBUTOR:

Network Solutions
Products Group
8229 Boone Blvd., 7th Floor
Vienna, VA 22180

CONTACT:

Gwen Savanillas, (703) 749-0150

ORDERING-PROCEDURE:

Submit purchase order to above address; see above contact for pricing.

PROPRIETY-STATUS:

Product of Network Solutions

INFORMATION-UPDATED:

August 1988

2.37.6. DATA GENERAL

2.37.6.1. Data General Workstation Transport System (WTS)

PRODUCT-OR-PACKAGE-NAME: Data General Workstation Transport System (WTS)

DESCRIPTION:

WTS is an OSI transport system that implements OSI transport, internet, data link and physical layer protocols. It supports IEEE 802.3 local area networks. WTS provides transport services for personal computers as part of Data General's PC*Integration product line, which offers file, print, application, and communication sharing capabilities for PCs utilizing a DG MV/Family minicomputer as a server.

DOCUMENTATION:

Full documentation is provided.

MACHINE-TYPE/CPU:

Data General Dasher 286, DG/One Models 2 and 2T laptops, and IBM PC, XT, and AT

O/S:

DOS rev 3.1 or higher

IMPLEMENTATION-LANGUAGE:

A mixture of Assembly language, PL/1 and C

DISTRIBUTOR:

Data General
4400 Computer Drive
Westboro, MA 01580

CONTACT:

Any local Data General sales office

ORDERING-PROCEDURE:

WTS may be ordered through any Data General sales office or representative.

PROPRIETY-STATUS:

Data General Proprietary

INFORMATION-UPDATED:

February 1988

2.37.7. ISODE

2.37.7.1. The ISO Development Environment (ISODE 4.0)

PRODUCT-OR-PACKAGE-NAME: The ISO Development Environment (ISODE 4.0)

DESCRIPTION:

This software supports the development of certain kinds of ISO/CCITT/ECMA protocols and applications.

Current modules include:

- OSI transport service (TP0 on top of TCP, X.25, and CONS; TP4 for SunLink OSI)

- OSI session, presentation, and association control services

- ASN.1 abstract syntax/transfer notation tools, including:

    - remote operations stub-generator (front-end for remote operations)

    - structure generator (ASN.1 to C)

    - element-parser (basic encoding rules)

- OSI reliable transfer and remote operations services

- OSI DIS file transfer, access and management

ISODE 4.0 consists of final "IS" level implementations with a few exceptions. FTAM is still DIS, and ROSE and RTSE are current to the last circulated drafts (March, 1988). ISODE also contains implementations of the 1984 X.400 versions of ROS and RTS. ISODE is aligned with the U.S. Government OSI Profile (GOSIP).

Fugure modules planned for the next release include:

- OSI message handling system

- OSI directory

- OSI virtual terminal ("telnet" class)

- MHS/SMTP gateway

- FTAM/FTP gateway

Although the ISODE is not "supported" per se, it does have a problem reporting address, Bug-ISODE@TWG.COM.   Bug reports (and fixes) are welcome by the way.   The discussion group ISODE@SRI-NIC.ARPA is used as an open forum on ISODE.   Contact ISODE-Request@SRI-NIC.ARPA to be added to this list.

DOCUMENTATION:

Three volume User's Manual (approx. 800 pages, sources in LaTeX); UNIX manual entries (sources in roff); other miscellaneous documents in LaTeX or SLiTeX format

MACHINE-TYPE/CPU:

Any

O/S:

BSD 4.2 or 4.3 UNIX, AT&T SVR2 or SVR3 UNIX, and various other UNIX-based operating systems. No kernel modifications are required.

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

NORTH AMERICA:
University of Pennsylvania
Department of Computer and Information Science
Moore School
Attn: David J. Farber (ISODE Distribution)
200 South 33rd Street
Philadelphia, PA 19104-6314
USA
+1-215-898-8560

AUSTRALIA, NEW ZEALAND:
CSIRO DIT
Attn: George Michaelson
55 Barry St
Carlton, 3053
Australia
+61-3-347-8644

EUROPE:
Department of Computer Science
Attn: Soren Sorensen
University College
Gower Street
London, WC1E 6BT
UK
+44-1-387-7050 x3680

EUROPE (TAPE ONLY):
EUUG Distributions
c/o Frank Kuiper
Centrum voor Wiskunde en Informatica
Kruislaan 413
1098 SJ Amsterdam
The Netherlands
+31-20-5924056 (or: +31-20-5929333)

CONTACT:

Bug-ISODE@TWG.COM

ORDERING-PROCEDURE:

Send a check or purchase order to one of the distribution facilities listed above. Do not send tapes or envelopes.

North America: $350.00 US Dollars for source and documentation (documentation only is also 350 US Dollars)

Europe: 200 Pounds Sterling for source and documentation (documentation only is also 200 Pounds Sterling)

Europe (tape only):
90 Dutch Guilders for 1600bpi 1/2-inch tape
120 Dutch Guilders for 800bpi 1/2-inch tape
150 Dutch Guilders for Sun 1/4-inch cartridge tape
150 Dutch Guilders for 1/4-inch cartridge (QIC-11)
(EUUG members enclose copy of membership, non-EUUG members add 300 Dutch Guilders)

Australia: 150 dollars Australian for source and documentation (documentation only is also 150 dollars Australian)

FTP: If you can FTP to the DARPA/NSF Internet, you can use anonymous FTP to spam.istc.sri.com [10.2.0.107] and retrieve the file portal/isode-4.tar. This is a 9.25MB tar image. The file portal/isode-4.tar.Z is the tar image after being run through the compress program (approx. 3MB).

NIFTP: If you run NIFTP over the public X.25 or over JANET, and are registered in the NRS at Salford, you can use NIFTP with username "guest" and your own name as password, to access UK.AC.UCL.CS to retrieve the file <SRC>isode-4.tar. This is a 9.25MB tar image. The file <SRC>isode-4.tar.Z is the tar image after being run through the compress program (approx. 3MB).

FTAM on the JANET or PSS: The sources are available by FTAM at UCL over X.25 using JANET (00000511160012) or PSS (23421920030013) with TSEL "256" (ascii encoding). Use the "anon" user-identity, supply any password, and retrieve the file src/isode-4.tar. This is a 9.25MB tar image. The file src/isode-4.tar.Z is the tar image after being run through the compress program (approx. 3MB).

FTAM on the DARPA/NSF Internet: The sources are available by FTAM at SRI over the DARPA/NSF Internet at host spam.istc.sri.com [10.2.0.107] (TCP port 102 selects the ISO transport service) with TSEL 256 (numeric encoding). Use the "anon" user-identity, supply any password, and retrieve the file portal/isode-4.tar. This is a 9.25MB tar image. The file portal/isode-4.tar.Z is the tar image after being run through the compress program (approx. 3MB).

For distributions via FTAM, the file service is provided by the FTAM implementation in ISODE 4.0, which is a DIS implementation with a few pieces of critical information taken from the IS. Note that although this FTAM is a DIS implementation, the rest of the stack (i.e., association control, presentation, and so on) is composed of an IS implementation.

If you wish to use the FTAM implementation in ISODE 3.0, which was a DIS implementation both of FTAM and the rest of the stack, use TSEL 256 instead (ascii encoding at UCL, and numeric encoding at SRI). This older service is temporary and is provided for bootstrap purposes only.

For distributions via either FTAM or FTP, there is an additional file available for retrieval, called isode-ps.tar.Z which is a compressed tar image (2.75MB) containing the entire documentation set in PostScript format.

PROPRIETY-STATUS:

Openly available under a "hold harmless" clause

INFORMATION-UPDATED:

August 1988

2.37.8. MARI ADVANCE MICROELECTRONICS LTD.

2.37.8.1. The Newcastle Connection

PRODUCT-OR-PACKAGE-NAME: The Newcastle Connection

DESCRIPTION:

The Newcastle Connection is a software sub-system that can integrate a number of UNIX computers to provide a fully transparent distributed environment, termed "UNIX-United". It was developed in the Computing Laboratory at the University of Newcastle upon Tyne, England.

Under this arrangement each computer within the system will appear as a directory in a large UNIX file system. Thus, full functionality is provided through a strict adherence to UNIX semantics. There is no need for remote login - the user is able to simply change directory in the standard manner to access the file system of a remote machine (subject to permissions granted).

The Newcastle Connection allows the user to access remote files and execute programs upon the machine in whose file store they are contained. This important feature overcomes the limitations inherent in a number of current Virtual File Systems which involve copying of file systems back to the local file store for processing.

The Newcastle Connection is designed to be Network Independent, and as such has been implemented across a number of media - Ethernet, X.25, RS232, Cambridge Ring, and Omninet.

The Newcastle Connection has been implemented on a number of major machine architectures including:

- Sun Workstation - co-existing with the Sun Network File System

- VAX - running under UNIX 4.2 BSD and UNIX System V

- Perq Workstations - running under PNX

In addition, The Newcastle Connection is available as an In-Kernel implementation for Uniplus+ - based machines. This product, bundled with TCP/IP networking software is available through UniSoft/Root as ROOTnet. This uses the Uniform Datagram Service (UDS) over UDP.

Prices are available on application for Porting and License requirements.

DOCUMENTATION:

Documentation available on-line; supporting information available from MARI Advanced Microelectronics Ltd

MACHINE-TYPE/CPU:

Motorola 68000 Family, National Semiconductor NS32016, PDP-11, VAX-11

O/S:

UNIX System V, UNIX 4.2 BSD, Xenix, Uniplus+, and variants thereof

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

MARI Advanced Microelectronics Ltd.
32 Grainger Park Road
Newcastle upon Tyne
NE4 8RY
UK
+44 (091) 272-2522

Portable Software Inc.
650 Bair Island Road
Suite 204
Redwood City, CA 94063
USA
(415) 367-6264

CONTACT:

Mr. R.J. Campbell, MARI

Mr. K. Clark, PSI

ORDERING-PROCEDURE:

First point of contact for technical appraisal will be MARI.

INFORMATION-UPDATED:

January 1988

2.37.9. MARBLE ASSOCIATES INC.

2.37.9.1. Marble CONNECT

PRODUCT-OR-PACKAGE-NAME: Marble CONNECT

DESCRIPTION:

CONNECT is a small collection of utility programs that run under the various Berkeley releases of UNIX for PDP-11's, VAXen, SUN Workstations, ISI Optima, and so forth. CONNECT creates and monitors a serial line connection for the purpose of maintaining continuous networking over often unreliable serial lines. After establishing the connection (it understands a wide variety of autodialer protocols, and it operates over leased- or hard-wires as well), CONNECT listens for loss-of-carrier and, in the event that the carrier is dropped, it re-establishes the connection ASAP. Currently CONNECT is being used with SLIP and Marble Serial IP to maintain ARPA-Ethernet connections over long distances using normal phone lines.

DOCUMENTATION:

Full documentation is available.

MACHINE-TYPE/CPU:

The program runs on any computers using 4.2 BSD, 4.3 BSD or Marble 2.9 BSD UNIX

O/S:

Berkeley UNIX

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

Marble Associates Inc.
PO Box 786
Cambridge, MA 02238
(617) 259-1250

CONTACT:

Mark Elvy

ORDERING-PROCEDURE:

Call or write (with purchase order)

PROPRIETY-STATUS:

Product of Marble Associates, Inc.

INFORMATION-UPDATED:

January 1988

2.37.10. PROTOCOM DEVICES, INC.

2.37.10.1. BEANSTLK™ Micro-to-Mainframe product

PRODUCT-OR-PACKAGE-NAME: BEANSTLK™ Micro-to-Mainframe product

DESCRIPTION:

BEANSTLK is a terminal emulation product that allows you to link IBM PCs and existing data center mainframes across an X.25 packet switched network. Two versions of BEANSTLK are available: BEANSTLK/SPERRY emulates the Sperry Uniscope UTS20 terminal; BEANSTLK/IBM emulates an IBM 3270 terminal.

BEANSTLK offers cost effective integration of geographically dispersed terminals into an existing data network. BEANSTLK's IBM PC display terminals share databases and communication lines with terminal populations already in place, whcih optimizes PC utilization and avoids the enormous costs of adding equipment to the network.

In addition, BEANSTLK offers built in security with a configurable call password, and the capability to easily define and design a keymap customized to specific needs. With BEANSTLK, the keyboard utility also offers the opporiunity to use either the standard or custom keyboard during terminal emulation.

Deve'opment of additional BEANSTLK versions are available. Call contact for more information.

DOCUMENTATION:

Available on request by contacting below

IMPLEMENTATION-LANGUAGE:

Assembler

DISTRIBUTOR:

Before September 1, 1988	After September 1, 1988
Protocom Devices	Protocom Devices
1666 Bathgate Avenue	25 Rockwood Place
Bronx, N.Y. 10457	Englewood, N.J.
(212) 716-5400	

CONTACT:

Contact above

ORDERING-PROCEDURE:

Submit purchase order to above address; call contact for pricing information

PROPRIETY-STATUS:

Product of Protcom Devices, Inc.

DDN-QUALIFIED:

Yes

INFORMATION-UPDATED:

August 1988

2.37.11. RESEARCH TRIANGLE INSTITUTE

2.37.11.1. Research Triangle Institute FREEDOMNET

PRODUCT-OR-PACKAGE-NAME: FREEDOMNET

DESCRIPTION:

FREEDOMNET is a software subsystem developed by the Research Triangle Institute that can be added to physically interconnected, heterogeneous UNIX-based computers to allow a user to access the resources of all of the computers in the network in a transparent manner. FREEDOMNET hides issues of inter-processor communications and network protocols from the user and is applicable to a wide variety of both local and wide-area networks.

All standard UNIX features are unchanged by FREEDOMNET software in form and meaning, with inter-machine communication taking place as necessary. With FREEDOMNET software, it is possible, for example, for a user to access files and peripheral devices on a remote machine by specifying a directory on a remote machine as being his current working directory, requesting execution of a program on a remote machine, or redirecting input and/or output. These standard UNIX features can be used without the user's conscious concern for the fact that several machines and their peripherals may be involved. FREEDOMNET preserves all UNIX semantics in order to achieve transparency.

Because FREEDOMNET preserves all UNIX semantics, it provides true transparency from the user's point of view. This includes transparency in a heterogeneous environment where differences in machine architecture (and UNIX implementation) must be masked. The FREEDOMNET "stateful" server approach allows for remote device sharing and for remote execution of programs. The fact that the standard UNIX file naming syntax is used to refer to remote files and devices makes FREEDOMNET very easy to learn and use effectively. In addition, existing programs (UNIX commands and user-written applications) can be made "distributable" without modification due to the consistent naming scheme and preservation of all UNIX semantics. FREEDOMNET provides a basis for implementing high-performance, fault tolerant, and secure distributed computing systems.

FREEDOMNET is added to the UNIX kernel much like a standard device driver. No kernel source changes are required. FREEDOMNET uses the User Datagram Protocol (UDP) on Ethernet, but is implemented so as to be independent of network hardware and protocols.

DOCUMENTATION:

Available from Research Triangle Institute

MACHINE-TYPE/CPU:

VAX, Sun, Gould, Masscomp, Convex, Unisys, NCR, Arix, IBM RT PC, Pyramid, ATT, Intel 386.

O/S:

UNIX System V, Releases 2 and 3; 4.2 BSD and 4.3 BSD; 4.3BSD+NFS; Ultrix 2.x; SunOS Release 3.x; Masscomp RTU Release 3.1a; Convex Release 6.x; Gould UTX/32, Release 2.x; IBM AIX Release 2.2; Pyramid OS/x Release 4.4.

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

Research Triangle Institute
3040 Comwallis Road
P.O. Box 12194
Research Triangle Park, N.C. 27709-2194
(919) 541-6000

CONTACT:

Mr. R. Warren, R fI, (rbw@rti.rti.org) or Mr. T. Warren, RTI, (wtw@rti.rti.org), (919) 541-6000

ORDERING-PROCEDURE:

First contact should be with one of the above at RTI.

INFORMATION-UPDATED:

February 1989

2.37.12. SIRIUS SYSTEMS, INC. (CONVERGENT TECHNOLOGIES)

2.37.12.1. Sirius Systems Internet-CT

PRODUCT-OR-PACKAGE-NAME: Internet-CT

DESCRIPTION:

This is a full implementation of TCP/IP for the Convergent Technologies workstation and SRP product lines and its clones. The package includes the following link level drivers: IEEE 802.3 (Ethernet), SLIP, AX.25, and X.25 (Q2 1989).

Full IP/ICMP is provided and can serve as both host and gateway. A set of library routines is provided to permit user-written applications to make use of TCP. FTP, TELNET, and SMTP are provided. Local and remote transport service resource utilization and link level packet tracing are included. An OS specific peer-to-peer networking module (S-Net) is also available. VT-100 support (via CT-102) is also available as an optional TELNET client. A CT-Mail/B-Mail is SMTP gateway (InterMail) is also available.

Support and update service may be separately purchased. On-site training and installation services are also available.

DOCUMENTATION:

An installation and user's manual including tutorial is provided with each copy of the software. Additional copies of the documentation my be purchased separately.

MACHINE-TYPE/CPU:

Convergent Technologies IWS, AWS, NGen (80186, 80286, and 80386 versions), 286i, 386i, and MegaFrame SRP. Unisys B-21, B-22, B-26, B-28, B-38, XE-520

O/S:

CTOS, CTOS-VM, ETOS, BTOS-II

IMPLEMENTATION-LANGUAGE:

C, Assembler

DISTRIBUTOR:

Sirius Systems, Inc.
Box 2202
Petersburg, VA 23804
(804) 733-7944

CONTACT:

David Hansen

ORDERING-PROCEDURE:

Contact Sirius Systems

PROPRIETY-STATUS:

Sirius Systems, Inc.

INFORMATION-UPDATED:

February 1989

2.37.13. THE SOFTWARE GROUP LIMITED

2.37.13.1. The Software Group Limited X.25 Interface Package (XIP)

PRODUCT-OR-PACKAGE-NAME: X.25 Interface Package (XIP)

DESCRIPTION:

XIP is a portable implementation of the CCITT (1980 and 1984) X.25 protocol. It is a full implementation of the protocol, allowing not only full negotiation of per-call facilities, but also configuration via registration packets and operation in a multi-link environment using MLP.

Implementations of XIP have been certified in Europe (DATEX-P, PSS), North Americal (Tymnet, GTE Telenet), and the Far East (KDD).

DOCUMENTATION:

Functional Specification:
Describes the functional characteristics of the protocol implementation.
Porting Guide:
Defines the engineering steps to follow in porting XIP to a new hardware/software environment.
Internals Documentation:
Full description of the protocol implementation: state machines, buffer handling, code flow, process dispatching conditions and utility routines are all covered.

MACHINE-TYPE/CPU:

XIP has been implemented on the following microprocessors: Intel 8086 family, Zilog Z8000, and Motorola 68000 family.

O/S:

Various real-time schedulers

IMPLEMENTATION-LANGUAGE:

C; some assembler for hardware handling

DISTRIBUTOR:

The Software Group Limited
East Atrium, Suite 201
4701 Steeles Avenue West
Toronto, Canada
M9L 1X2
Fax:(416) 747-1471

CONTACT:

Derek Vair, (416) 747-9490, mnetor!lsuc!dvlmarv!tsgfred!derek@uunet.UU.NET (ARPANET), lsuc!dvlmarv!tsgfred!netcom2 (USENET)

ORDERING-PROCEDURE:

Software Technology License

PROPRIETY-STATUS:

Source code proprietary to The Software Group Limited

INFORMATION-UPDATED:

August 1988

2.37.14. SPIDER SYSTEMS LTD.

2.37.14.1. SpiderTCP Streams Implementation

PRODUCT-OR-PACKAGE-NAME: SpiderTCP Streams Implementation

DESCRIPTION:

SpiderTCP is a very high performance TCP/IP protocol running in the UNIX V.3 streams environment and supporting IP, ICMP, TCP, UDP and ARP. The utilities FTP, Telnet, and r-utilities are also supported. In the UNIX environment, these protocols form the basis of the Sun Network file system. The package also offers full gatewaying.

A unique streams emulator is available for any environment.

Also, to aid with testing Spider provides automated Alpha tests.

DOCUMENTATION:

Functional Specification: Implementation and Porting: Alpha test plan and report: Release note.

End-user documentation is provided in hardcopy and machine readable form. Purchasers of the software are able to modify the software to their own requirements.

MACHINE-TYPE/CPU:

New release of software are developed on an AT&T 3B2. However, the software has been ported to the following environments: 286: 386: 6800: Cliper. Spider will consider porting to any environment.

O/S:

UNIX (generally)

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

Spider Systems Limited
65 Bonnington Road
Edinburgh
EH6 5JQ
Scotland, UK

CONTACT:

Mr. Brian Gray or Miss Susan Watson, +44 (031) 554 9424

PROPRIETY-STATUS:

Spider Systems

INFORMATION-UPDATED:

August 1988

2.37.14.2. SpiderX.25 Streams Implementation

PRODUCT-OR-PACKAGE-NAME: SpiderX.25 Streams Implementation

DESCRIPTION:

The world's first streams-based X.25 package. Spider X.25 provides a PAD, X.25 level III and LAPB. Both CCITT 1980 and 1984 specifications are fully supported. Also provided is LLC-2, which allows X.25 (84) to run over Ethernet This is the Pink Book protocol set used by the UK Academic Community. To complete the package is an IP to X.25 raiter module which allows SpiderTCP (Spider's Streams based TCP/IP implementation) to interface with SpiderX.25.

DOCUMENTATION:

Functional Specification: Implementation and Porting; Alpha test plan and report: Release note.

End-user documentation is provided in hardcopy and machine readable form. Purchasers of the software are able to modify the software to their own requirements.

MACHINE-TYPE/CPU:

New release of software are developed on an AT&T 3B2. However, the software has been ported to a number of environments. Spider will consider porting to any environment.

O/S:

UNIX (generally)

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

Spider Systems Limited
65 Bonnington Road
Edinburgh
EH6 5JQ
Scotland, UK

CONTACT:

Mr. Brian Gray or Miss Susan Watson, +44 (031) 554 9424

PROPRIETY-STATUS:

Spider Systems

INFORMATION-UPDATED:

August 1988

2.37.15. SYDNEY DEVELOPMENT CORPORATION

2.37.15.1. Sydney Development SYDCOM X.25 Series

PRODUCT-OR-PACKAGE-NAME: SYDCOM X.25 Series

DESCRIPTION:

Levels 1-3 of X.25. A full featured package includes all options. Supports circuits as well as Fast Select. CCITT compatible. In addition the following PADs can be supplied:

- Async (X.3/X.28/X.29)
- Bisync
- SDLC/QLLC
- With a 3270 protocol converter

This X.25 software is used in LANs, WANs, microcomputers, dataswitches, minicomputers, "black boxes" and modems.

DOCUMENTATION:

Software System Overview, Generic X.25 Porting Guide, Technical Reference Guide, User Guide

MACHINE-TYPE/CPU:

All Intel, Motorola, and Zilog microprocessor based systems.

O/S:

Includes its own O/S

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

Sydney Development Corporation
1385 West 8th Avenue
Vancouver, B.C.
Canada V6H 3V9

CONTACT:

Director, Sales: Robert Simington, (604) 734-8822

ORDERING-PROCEDURE:

Contact Director of Sales

PROPRIETY-STATUS:

Sydney Development Corporation

DDN-QUALIFIED:

Yes

INFORMATION-UPDATED:

February 1988

2.37.15.2. Sydney Development ISONET

PRODUCT-OR-PACKAGE-NAME: ISONET

DESCRIPTION:

An advanced communications package which conforms to all OSI standards, ISONET provides a solid foundation on which to build your application. ISONET includes layers 1-5 of the OSI reference model. It contains a complete session layer which supports all functional units and subsets, including BAS, BCS, and BSS; a complete transport layer supporting all classes, 0 through 4; as well as optional support for X.25, IP (ISO 8473) and LLC (IEEE 802.2). ISONET is designed to be portable. With the protocol code separated from the working environment, only the system dependent part of the code need be modified when porting ISONET to a new operating system.

DOCUMENTATION:

Porting Guide, Programmer's Manual, System Overview

MACHINE-TYPE/CPU:

Stratus, IBM PC, DEC, Unisys

O/S:

VAX/VMS, B2x, MS DOS

IMPLEMENTATION-LANGUAGE:

Pascal or C

DISTRIBUTOR:

Sydney Development Corporation
1385 West 8th Avenue
Vancouver, B.C.
Canada V6H 3V9

CONTACT:

Director, Sales: Robert Simington, (604) 734-8822

ORDERING-PROCEDURE:

Contact Director of Sales

PROPRIETY-STATUS:

Sydney Development Corporation

INFORMATION-UPDATED:

February 1988

2.37.15.3. Sydney Development Messenger 400

PRODUCT-OR-PACKAGE-NAME: Messenger 400

DESCRIPTION:

> Messenger 400 is a multi-vendor communications program based on the CCITT recommendation for electronic messaging, X.400. It is compliant with NBS, CEPT, CEN/CENLEC standards and the OSI reference model. Messenger 400 includes all components of X.400: the Message Transfer Agent, User Agent and Reliable Transfer Service, plus session and transport layers, directory and distribution lists. It is available for use in X.25, DECnet, Bisync, Asynchronous and TCP/IP networks. Gateways have also been developed to such non-X.400 systems as PROFS, UUCP, and ARPAmail as well as having connected to public mail systems worldwide. Messenger 400 goes beyond electronic mail to allow application to application communications with or without human intervention.

DOCUMENTATION:

> User Guide, Administrative Manual, and Technical Reference Guide (with Source Code Only)

MACHINE-TYPE/CPU:

> All Leading Systems including IBM, DEC, Tandem, IBM PCs, PC LANs

O/S:

> VM/CMS, VAX/VMS, VAX Ultrix, Unix System V, Unix 4.2 BSD, Xenix, MS DOS, MS DOS LAN (NetWare), OS/2

IMPLEMENTATION-LANGUAGE:

> C

DISTRIBUTOR:

> Sydney Development Corporation
> 1385 West 8th Avenue
> Vancouver, B.C.
> Canada V6H 3V9

CONTACT:

> **Director, Sales: Robert Simington, (604) 734-8822**

ORDERING-PROCEDURE:

> Contact Director of Sales

PROPRIETY-STATUS:

> Sydney Development Corporation

INFORMATION-UPDATED:

> February 1988

2.37.16. U.C. BERKELEY

2.37.16.1. TN3270

PRODUCT-OR-PACKAGE-NAME: TN3270

DESCRIPTION:

Version 4.1 of tn3270 is now available. Tn3270 emulates an IBM 3278 over TCP/IP.

Significant features to tn3270 are:

- Error messages, in English, overlay a portion of the screen when the user types an erroneous entry (invalid control sequence, attempt to enter data in an "input disallowed" field, etc.).

- Ability to "escape to shell". This, by itself, is mostly useful in a non-BSD system.

- An Application Programming Interface (API). This allows programs, running under Unix, to read and write the 3270 screen, and to send keystrokes (3270) to tn3270. This makes use of the "escape to shell" feature. Included in the distribution is a program which uses the API to receive files sent from the IBM host (we don't supply the IBM side at this point, and the protocol is likely to change in the future).

- Yale ASCII/7171/4994 "transparent" mode is fully implemented. SAS-Graph, for example, supports doing graphics to TEK terminals over this interface. Locally, we use the X windowing system terminal emulator (xterm), which provides some TEK emulation, to display SAS-Graph graphics on our workstations.

- Mset now prints out program function (PF) keys in numerical order.

DOCUMENTATION:

On-line manual pages contained in the distribution

MACHINE-TYPE/CPU:

Any

O/S:

BSD UNIX

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

Campus Software Office, UC Berkeley.

The new version is also availble for anonymous ftp from host arpa.berkeley.edu, in directory pub, in file tn3270.tar or tn3270.tar.Z. The file should be retrieved in "binary" mode. These are large files (700 Kbytes and 300 Kbytes respectively), so requestors should consider ordering the product by mail instead of using ftp.

CONTACT:

Greg Minshall, (minshall@berkeley.edu), (415) 642-0530

ORDERING-PROCEDURE:

Send a check for $100.00 (US), payable to "Regents of the University of California", to:

Campus Software Office
295 Evans Hall
UC Berkeley, CA 94720
USA

Indicate "tn3270" on an accompanying memo.

INFORMATION-UPDATED:
February 1989

2.37.17. UniSoft SYSTEMS

2.37.17.1. UniSoft Systems B-NET

PRODUCT-OR-PACKAGE-NAME: B-NET

DESCRIPTION:

B-NET is an enhanced implementation of 4.3BSD-compatible networking software for UNIX System V, Releases 2 and 3. It provides support for IP, ICMP, TCP, UDP, and ARP with user and server programs for Telnet, FTP, TFTP, and SMTP as well as the normal Berkeley UNIX tools for remote copy, execution, and login.

B-NET is designed to be compatible with RFCs and makes no claim of conformance to Military standards. There follows a table giving the standard to which each protocol (and client/server programs if appropriate) has been implemented:

IP	RFC 791
ICMP	RFC 792
TCP	RFC 793
UDP	RFC 768
ARP	RFC 826
subnet adressing	RFC 950
FTP	RFC 959
SMTP	RFC 821
TELNET	RFC 854
TFTP	IEN 133

DOCUMENTATION:

Documentation includes manual pages for the user programs, system calls, and library interfaces as well as programming and system administration guides.

MACHINE-TYPE/CPU:

Currently supported on the Motorola 68000 family. Ports to other architectures are in progress. Contact our sales and marketing organization for current status (see "Sales/Marketing" in the CONTACT section).

O/S:

UniPlus+ (two versions, based on AT&T UNIX System V, Releases 2 and 3)

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

UniSoft Systems
6121 Hollis Street
Emeryville, CA 94608-2092

In the UK: UniSoft Ltd.
Sales and Marketing Department
Hayne Street
London
EC1A9HH
England

CONTACT:

Sales/Marketing: Sheri Jennings, Manager, Marketing Services, (415) 420-6400
Technical: Carl Smith, Manager, Communications, (415) 420-6400
UK: Joy Nunn or Derek Williams, +44 1 606 7799

ORDERING-PROCEDURE:

Contact our sales and marketing organization for current information (see "Sales/Marketing" in the CONTACT section above.

PROPRIETY-STATUS:

B-NET is a proprietary product of UniSoft Corporation. Portions of the product are derived from source license by AT&T and the Regents of the University of California.

INFORMATION-UPDATED:

February 1988

2.37.18. UNISYS CORPORATION

2.37.18.1. Network Solutions OPEN-Link for Unisys/Sperry OS1100

PRODUCT-OR-PACKAGE-NAME: OPEN-Link for Unisys/Sperry OS1100

DESCRIPTION:

OPEN-Link is a series of communications software and hardware products which meet the Defense Communication Agency MIL-STDs for the Defense Data Network, for use on any of the DDN networks, such as ARPANET, MILNET, etc. These products also conform to the conventions of the UNIX 4.2 BSD implementation of these protocols for use with the many popular UNIX based graphic workstations.

OPEN-Link supplies TCP/IP communication protocol software products, an Application Programming Interface to TCP functions for PASCAL and MASM, and the MIL-STD applications File Transfer (FTP), Virtual Terminal (TELNET), and Simple Mail Transfer (SMTP).

OPEN-link connects the Unisys/Sperry 1100 host to Ethernet or DDN X.25 networks through a channel attached Front End Processor. The X.25 connection can also be made certifiable to certain commercial X.25 networks such as GTE TELENET, TYMNET and others.

DOCUMENTATION:

A full set of documentation is available.

MACHINE-TYPE/CPU:

Unisys/Sperry 11xx

O/S:.

OS/1100

IMPLEMENTATION-LANGUAGE:

PASCAL, MASM, PLUS

DISTRIBUTOR:

Network Solutions, Inc.
Products Groups
8229 Boone Blvd., 7th Floor
Vienna, VA 22180

CONTACT:

Gwen Savanillas, (703) 749-0150

ORDERING-PROCEDURE:

Submit purchase order to above address; see above contact for pricing.

PROPRIETY-STATUS:

Product of Network Solutions

INFORMATION-UPDATED:

August 1988

2.37.19. THE WOLLONGONG GROUP

2.37.19.1. Wollongong WIN/ISO

PRODUCT-OR-PACKAGE-NAME: WIN/ISO

DESCRIPTION:

A full, seven-layer implementation of the ISO protocol stack for STREAMS based UNIX Systems. FTAM is also available as an option.

MACHINE-TYPE/CPU:

AT&T 3B2 computers and 80386 based PCs

O/S:

UNIX System V Release 3 and later

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

The Wollongong Group
1129 San Antonio Road
Palo Alto, CA 94303

CONTACT:

Michael Ezerski, (415) 962-7200

ORDERING-PROCEDURE:

Contact Above

PROPRIETY-STATUS:

Wollongong

INFORMATION-UPDATED:

February 1988

2.37.19.2. Unisys A Series Systems

PRODUCT-OR-PACKAGE-NAME: A Series TCP/IP

DESCRIPTION:

The Unisys A Series TCP/IP product augments the BNA network products by supporting communication with other Unisys systems and other vendor systems employing DDN protocols. DDN software is implemented partly in the mainframe and partly in the CP2000 communications processor. The DDN connections provided are the standard X.25 IMP and other X.25 packet network interfaces at speeds up to 64 Kbps, and IEEE 802.3 local area network interfaces at 10 Mbps. Telnet, FTP, and SMTP protocols and programmatic interfaces to multiple layers are supported above TCP/IP and are integral to BNA Host Services. Several mainframes may access the DDN through the same CP2000 via an IEEE 802.3 LAN, in which case the communications processor supports the EGP protocol. Multiple X.25 connections may be supported by a single CP2000 communications processor. In addition, the CP2000 communications processor can support attachment to an IEEE 802.3 LAN and uses Ethernet compatible frames and the ARP protocol. BNA sessions are supported using the DDN or IEEE 802.3 LAN for transport between BNA nodes.

DOCUMENTATION:

Available from Unisys Corporation

MACHINE-TYPE/CPU:

Unisys A Series A1 through A17

O/S:

A Series MCP Release 3.72 or higher

IMPLEMENTATION-LANGUAGE:

PASCAL

DISTRIBUTOR:

Unisys Corporation
Box 500
Blue Bell, Pennsylvania 19424

CONTACT:

Denise O'Connor, (215) 542-3103

ORDERING-PROCEDURE:

See the local Unisys sales representative.

PROPRIETY-STATUS:

Property of Unisys Corporation

DDN QUALIFIED:

Yes

INFORMATION-UPDATED:

February 1989

2.37.19.3. Unisys 1100 and 2200 Systems

PRODUCT-OR-PACKAGE-NAME: DDN-1100, DCP DDN Gateway

DESCRIPTION:

The Unisys OS1100 TCP/IP products augment the DCA network products by supporting communication with other Unisys systems and other vendor systems employing DDN protocols. DDN software is implemented partly in the mainframe and partly in the Distributed Communications Processor (DCP). The DDN connections provided are the DDN Standard X.25 packet network interfaces at speeds up to 64 Kbps, and IEEE 802.3 local area network interfaces at 10 Mbps. The IP, ICMP, TCP and Telnet protocols are implemented in the DCP. FTP and SMTP protocols and programmatic interfaces to multiple layers are implemented in the mainframe and are integral to Distributed Systems Services (DSS) of OS1100. Multiple DDN X.25 connections may be supported by a single DCP. In addition, the DCP can support attachment to an IEEE 802.3 LAN using Ethernet compatible frames and the ARP protocol. DCA sessions are supported using the DDN or IEEE 802.3 LAN for transport between DCA nodes.

DOCUMENTATION:

Available from Unisys Corporation

MACHINE-TYPE/CPU:

Unisys 1100 and 2200 Series Systems
DCP 10A, DCP 15, DCP 20, DCP 30, DCP 40 and DCP 50

O/S:

OS1100 System Base 3 or higher

IMPLEMENTATION-LANGUAGE:

PLUS for mainframe software; Telcon Assembler for DCPs

DISTRIBUTOR:

Unisys Corporation
P.O. Box 500
Blue Bell, PA 19424

CONTACT:

Denise O'Connor, (215) 542-5935

ORDERING-PROCEDURE:

See the local Unisys sales representatve.

PROPRIETY-STATUS:

Property of Unisys Corporation

DDN-QUALIFIED:

Yes

INFORMATION-UPDATED:

February 1989

2.37.19.4. Unisys DDN5000, DDN6000, DDN7000

PRODUCT-OR-PACKAGE-NAME: DDN5000, DDN6000, DDN7000

DESCRIPTION:

The Unisys DDN5000, DDN6000 and DDN7000 products support communication with other Unisys systems and equipment of other vendors via DDN protocols and R-utilities over a DDN standard X.25 IMP interface at from 19.2 Kbps to 56K bps. The IP, ICMP, TCP, Telnet, FTP and SMTP protocols are implemented along with R-Utilities. Programmatic interfaces, including BSD 4.2 via sockets library, are available to multiple layers. In addition, DDN7000 supports the UDP protocol. Series 5000 systems also support DCA sessions using the DDN for transport between DCA nodes.

DOCUMENTATION:

Available from Unisys Corporation

MACHINE-TYPE/CPU:

5000/20-30-40-50-60-80-90
6000/30-50
7000/40-50

O/S:

UNIX System V, Release 3.0

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

Unisys Corporation
P.O. Box 500
Blue Bell, PA 19424

CONTACT:

Steve Semen, (215) 542-6457

ORDERING-PROCEDURE:

See the local Unisys sales representative.

PROPRIETY-STATUS:

Property of Unisys Corporation

DDN-QUALIFIED:

Yes

INFORMATION-UPDATED:

February 1989

2.37.19.5. Unisys NET5000, NET6000, NET7000

PRODUCT-OR-PACKAGE-NAME: NET5000, NET6000, NET7000

DESCRIPTION:

The Unisys NET5000 and NET7000 products support communication with other Unisys systems and equipment of other vendors via DDN protocols and R-Utilities over IEEE 802.3 local area network, using Ethernet compatible frames.   The ARP, IP, ICMP, TCP, UDP, Telnet, and FTP protocols are implemented. Programmatic interfaces are supported to multiple layers. Series 5000 systems also support DCA sessions simultaneously over the IEEE 802.3 LAN.

DOCUMENTATION:

Available from Unisys Corporation

MACHINE-TYPE/CPU:

5000/20-30-40-50-60-80-90
6000/30-50
7000/40-50

O/S:

UNIX System V, Release 3.0

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

Unisys Corporation
P.O. Box 500
Blue Bell, PA 19424

CONTACT:

Steve Semen, (215) 542-6457

ORDERING-PROCEDURE:

See the local Unisys sales representative.

PROPRIETY-STATUS:

Property of Unisys Corporation

INFORMATION-UPDATED:

February 1989

2.37.20. University of Maryland

2.37.20.1. U. of Maryland IP/TCP-1100

PRODUCT-OR-PACKAGE-NAME: IP/TCP-1100 -- Current level 2R2Q5

DESCRIPTION:

The University of Maryland Computer Science Center has implemented TCP/IP for the Unisys 1100 Series computer systems. The implementation currently supports IP, ICMP, TCP, server TELNET, server FTP, user and server SMTP, user and server MDQS. The link level connection is via a 40KB synchronous link or Unisys word channel. Direct connection to an Ethernet is under construction. Currently running on at least 3 Internet hosts including UMD2.UMD.EDU.

DOCUMENTATION:

Installation, configuration and operation documentation is provided in both printed and machine readable form. No internals documentation is currently available. Package is distributed in source form.

MACHINE-TYPE/CPU:

Unisys 1100/60 EIS, 1100/70 EIS, 1100/80, 1100/90

O/S:

OS1100 Level 38R5 or later

IMPLEMENTATION-LANGUAGE:

PLUS and MASM

DISTRIBUTOR:

Systems Staff
Computer Science Center
University of Maryland
College Park, MD 20742

CONTACT:

Louis A. Mamakos, (louie@TRANTOR.UMD.EDU),
Michael G. Petry, (petry@TRANTOR.UMD.EDU)
(301) 454-2946

ORDERING-PROCEDURE:

Contact distributors for current procedure.

PROPRIETY-STATUS:

Developed under state of Maryland funding by public institution; available to any requestor

INFORMATION-UPDATED:

March 1986

3. HARDWARE IMPLEMENTATIONS

3.1. AT&T TECHNOLOGIES

3.1.1. Advanced Computer Communications

3.1.1.1. ACC ACP 2250

PRODUCT-OR-PACKAGE-NAME: ACP 2250

DESCRIPTION:

This is a full-duplex communication front-end, utilizing 68000 microprocessor technology which attaches a AT&T 3B2 computer to a DDN PSN supporting Standard Mode X.25. The ACC implementation is in conformance at the link level to FED-STD-1041, FIPS PUB 100 and at the packet level to the DDN Host Interface Specification, Dec 1983. By using DMA data transfers directly across the 3B2 I/O bus and off-host protocol processing the ACP 2250 yields dramatic savings in host CPU loading.

When combined with hosts communication utilities such as the WIN/3B TCP/IP software package, the ACP 2250 provides a complete solution for 3B2 communication across the DDN.

DOCUMENTATION:

Fully documented vendor product; descriptive literature available

CPU:

68000 Processor for the ACP 2250. Interfaces directly to the 3B2 INPUT/OUTPUT Bus and will support 3B2/300, 3B2/310, 3B2/400, 3B2500, 3B2700, 3B4000 hosts

O/S:

UNIX System 5, release 3.x ("Streams")

DISTRIBUTOR:

AT&T Information Systems

CONTACT:

Local AT&T Office

ORDERING-PROCEDURE:

Marketed exclusively by AT&T and the AT&T Group of Companies

PROPRIETY-STATUS:

Proprietary product of ACC

DDN-QUALIFIED:

Certified for DDN X.25 Standard Mode at 64Kbps

INFORMATION-UPDATED:

August 1988

3.1.2. ACC ACS 4020

PRODUCT-OR-PACKAGE-NAME: ACS 4020 DDN Transparent Gateway

DESCRIPTION:

The ACS 4020 is a standalone communications system which enables Ethernet hosts supporting the DoD standard Internet Protocol (IP) to communicate with users on the Defense Data Network (DDN), ARPAnet, NSFnet, or compatible networks. The ACS 4020 provides this access in a manner which is transparent to the hosts it is serving, without the need for complex routing protocols.

The ACS 4020 allows all systems attached to the LAN to share a single physical port on the DDN Packet-Switch Node (PSN). In effect, the ACS 4020 is a DDN "port expander" enabling the Ethernet to appear as part of the Internet environment. Multiple ACS 4020's can also be used to provide load-leveling and redundancy over the DDN.

DOCUMENTATION:

Fully documented vendor product; descriptive literature available

CPU:

Multiple 68000 Processors are used to optimize network connectivity.

O/S:

Proprietary Multi-tasking/processing executive

DISTRIBUTOR:

Advanced Computer Communications (ACC)
720 Santa Barbara Street
Santa Barbara, CA 93101

ORDERING-PROCEDURE:

Vendor product--contact sales department

PROPRIETY-STATUS:

Proprietary product of ACC

DDN-QUALIFIED:

Certified for DDN X.25 Standard Mode at 64Kbps

INFORMATION-UPDATED:

August 1988

3.2. APOLLO COMPUTER, INC.

3.2.1. Apollo Domain/COMController

PRODUCT-OR-PACKAGE-NAME: Apollo Domain/COMController

DESCRIPTION:

This is an intelligent hardware controller which mounts in the server processor (DSP80A) or Multibus interfaces on other computational nodes. Includes cable, transceiver and full TCP/IP access protocol.

DOCUMENTATION:

TCP/IP Reference Manual

CPU:

Runs on Apollo DOMAIN systems (68020 based)

O/S:

UNIX 4.2 BSD, System V and AEGIS O/S

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

Apollo Computer, Inc.
4301 Great America Parkway
4th Floor
Santa Clara, CA 95054
(408) 496-2900

CONTACT:

Nearest Apollo Sales Office or (617) 256-6600

ORDERING-PROCEDURE:

Contact nearest Apollo Sales Office or (617) 256-6600

PROPRIETY-STATUS:

Public Domain

INFORMATION-UPDATED:

February 1988

3.3. APPLE COMPUTER, INC.

3.3.1. Frontier Technologies Corporation

PRODUCT-OR-PACKAGE-NAME: MAC II-DDN

DESCRIPTION:

Frontier's DCA Certified X.25 software is implemented to operate in the MAC II Nubus architecture. The user could use only X.25 or X.25 with TCP/IP downloaded to the card. Driver's for different operating systems are provided. The DDN implementation has C2 security features available as options. The hardware consists of an intelligent communications controller with 1/2 M RAM available for X.25 and TCP/IP code. Multitasking is provided on the card. FTP/SMTP/TELNET are available as application programs.

DOCUMENTATION:

Available

CPU:

Apple MAC II

O/S:

Multifinder

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

Frontier Technologies Corporation
3510 North Oakland Avenue
Milwaukee, WI 53211

CONTACT:

Dr. Prakash Ambegaonkar, (414) 964-8689

ORDERING-PROCEDURE:

Contact Frontier Technologies

PROPRIETY-STATUS:

Frontier Technologies

DDN-QUALIFIED:

Yes

INFORMATION-UPDATED:

February 1988

3.4. BICC DATA NETWORKS

3.4.1. ISOLAN

PRODUCT-OR-PACKAGE-NAME: ISOLAN

DESCRIPTION:

BICC Data Networks, with its ISOLAN product line, provides a full range of fiber optic and copper coaxial cable hardware for LAN applications. This includes transceivers, repeaters, fanouts, hubs, bridges and test units. These are all standard 802.3 Ethernet and ISO compliant products.

DOCUMENTATION:

Installation and User manuals are included for all products.

MACHINE-TYPE/CPU:

Product line is transparent to upper layer protocols.

O/S:

Standard 802.3 compliant

IMPLEMENTATION-LANGUAGE:

ISO and 802.3 Ethernet - Maclayer

DISTRIBUTOR:

ANIXTER (415) 352-3100
Graybar (415) 871-7000
GTE Supply (800) 762-7782

CONTACT:

Clive Hallatt (415) 490-8000

ORDERING-PROCEDURE:

ISOLAN products

PROPRIETY-STATUS:

Non-proprietary.

INFORMATION-UPDATED:

February 1989

3.5. COMPUTER NETWORK TECHNOLOGY

3.5.1. LANLord 8000

PRODUCT-OR-PACKAGE-NAME: LANLord 8000

DESCRIPTION:

The LANLord 8000 provides a channel connected IP router for directly connecting IBM, DEC, and Cray CPUs together or to various network media.

MACHINE-TYPE/CPU:

Cray, DEC VAX, MICROVAX, PDP11, SUN, Apollo, IBM 370, Masscomp

O/S:

UNIX, VMS, MVS, VM, UNICOS

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

Computer Network Technology
9440 Science Center Drive
Minneapolis, MN 55428

CONTACT:

Bob Lutnicki, Vice-President Marketing, (800) 638 8324

INFORMATION-UPDATED:

February 1989

3.6. KINETICS

3.6.1. EtherPort IIL

PRODUCT-OR-PACKAGE-NAME: EtherPort IIL

DESCRIPTION:

The Kinetics EtherPort IIL is an internal twisted-pair Ethernet controller board for Macintosh II and Macintosh IIx computers developed in conjunction with SynOptics Communications Inc. Software from Kinetics and third party developers allows the EtherPort-equipped Macintosh II to communicate with a diverse range of Ethernet-based computer systems, including DEC VAXes, UNIX systems, PCs, and terminals.

The EtherPort II supports AppleTalk, TCP/IP, DECnet, and OSI protocols. It has 32K of on-board memory, comes with a built-in transceiver, and connects to LattisNet, the twisted-pair Ethernet developed by SynOptics Communications.

DOCUMENTATION:

Installation Guide

MACHINE-TYPE/CPU:

Macintosh II, Macintosh IIx

O/S:

Macintosh O/S

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

Kinetics
2540 Camino Diablo
Walnut Creek, CA 94596
(415)947-0998

CONTACT:

Tom Cromelin, Product Manager (415) 947-0998

ORDERING-PROCEDURE:

EtherPort IIL, 9900083-00 or E109-2

PROPRIETY-STATUS:

Proprietary product of Kinetics

INFORMATION-UPDATED:

February 1989

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3.6.2. K-Talk

PRODUCT-OR-PACKAGE-NAME: K-Talk

DESCRIPTION:

K-Talk is a software development platform that enables the development of AppleTalk-based applications for UNIX hosts. K-Talk consists of two parts: user libraries available from Kinetics; and kernel modifications for the UNIX operating system. The user libraries give programmers the ability to write applications based on AppleTalk protocols running on UNIX, and the kernel modifications allow the UNIX Ethernet driver to recognize AppleTalk as a valid protocol type, allowing Macintosh applications to communicate using AppleTalk. UNIX hosts appear as AppleTalk nodes on an Ethernet network. UNIX vendors who have licensed K-Talk include TOPS, Sun Microsystems, Inc., Pyramid Technology, and Integrated Solutions. K-Talk is also available on ULTRIX-based Digital VAXes.

DOCUMENTATION:

Installation Guide

MACHINE-TYPE/CPU:

DEC VAX, Microvax, SUN

O/S:

UNIX, SUNOS, ULTRIX

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

Kinetics
2540 Camino Diablo
Walnut Creek, CA 94596

CONTACT:

Susan Hanson, Product Manager (415) 947-0998

ORDERING-PROCEDURE:

K-Talk

PROPRIETY-STATUS:

Proprietary product of Kinetics

INFORMATION-UPDATED:

February 1989

3.7. AYDIN MONITOR SYSTEMS

3.7.1. Mini TAC Model 4200

PRODUCT-OR-PACKAGE-NAME: Network Access Controller (AYNAC) Model 4200

DESCRIPTION:

The Aydin Monitor Systems' Network Access Controller (AYNAC) (trademark of the Aydin Corporation) is one of several models in Aydin's AYNAC product family. It provides a convenient way to interface subscribers terminals to the DDN. Its 16 subscriber ports can be individually configured for any combination of synchronous or asynchronous terminals. The AYNAC's User TELNET, a compatibility protocol, transforms a diversity of asynchronous conventions into a single, standard format. This format is acceptable to all DDN access controllers that support asynchronous hosts and terminals. It includes SNA/SDLC support.

DOCUMENTATION:

Manuals available

CPU:

Multiple (4) 68010 Processors

O/S:

AMOS (Aydin Micro Operating System)

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

Aydin Monitor Systems
502 Office Center Drive
Ft. Washington, PA 19034

CONTACT:

Michael J. Alford, V.P., Marketing, (215) 646-8100

ORDERING-PROCEDURE:

Contact Aydin

PROPRIETY-STATUS:

Contains some proprietary software

DDN-QUALIFIED:

Yes

INFORMATION-UPDATED:

January 1988

3.7.2. TEP Model 4220

PRODUCT-OR-PACKAGE-NAME: Terminal Emulation Processor Model 4220

DESCRIPTION:

Aydin's TEP is the compliment of the Aydin Mini-TAC (AYNAC). The TEP provides a vehicle for interfacing subscriber hosts to the DDN. To a host computer, each port on the TEP looks and acts like a terminal. The TEP's 16 ports can be individually configured for any combination of synchronous or asynchronous hosts. The host needs no additional software or hardware: by emulating the distant terminal, the TEP makes itself and the DDN completely transparent. The TEP's Server TELNET, a compatibility protocol, transforms a diversity of asynchronous conventions into a single, standard format. This format complements the Mini-TAC's (AYNAC) User TELNET. When operating with an IBM host, the TEP emulates an IBM 327x controller. The TEP responds negatively to the host's general poll until receipt of a terminal service request message from a distant Mini-TAC (AYNAC). Only then is an end-to-end connection established. SNA/SDLC support is included.

DOCUMENTATION:

Manuals available

CPU:

Multiple (4) 68010 Processors

O/S:

AMOS (Aydin Micro Operating System)

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

Aydin Monitor Systems
502 Office Center Drive
Ft. Washington, PA 19034

CONTACT:

Michael J. Alford, V.P., Marketing, (215) 646-8100

ORDERING-PROCEDURE:

Contact Aydin

PROPRIETY-STATUS:

Contains some proprietary software

DDN-QUALIFIED:

Yes

INFORMATION-UPDATED:

January 1988

3.8. BOLT BERANEK AND NEWMAN INC.

3.8.1. BBN-C/30

PRODUCT-OR-PACKAGE-NAME: BBN-C/30

DESCRIPTION:

> The Terminal Access Controller (TAC) is a user Telnet host that supports the TCP/IP host-to-host protocols. It runs in a 64K C/30 computer. It supports up to 63 terminal ports, and connects to a network via an 1822 or HDH host interface. The TAC TCP/IP conforms with RFC791 and RFC793 specifications with the following exceptions:

> - IP options are accepted but ignored.
>
> - All TCP options except maximum segment size are not accepted.
>
> - Precedence, security, etc. are ignored. The TAC also supports Packet core, TAC Monitoring, Internet Control Message Protocol (ICMP), and a subset of the Gateway-Gateway protocols.

> For more information on the TAC's design, see IEN-166. All major features have been implemented except Class B and C addressing, IP reassembly, and TCP Urgent handling. These will be done in the near future.

DISTRIBUTOR:

> BBN Communications
> 150 CambridgePark Drive
> Cambridge, MA 02140

CONTACT:

> Phil Suomu, (Psuomu@ccb.bbn.com), (617) 873-2502

INFORMATION-UPDATED:

> January 1988

3.8.2. BBN-C/70

PRODUCT-OR-PACKAGE-NAME: BBN-C/70

DESCRIPTION:

The C/70 processor is a BBN-designed system with a native instruction set oriented toward executing the C language. It supports BBN O/S, a UNIX look-alike. A full, well-debugged, implementation of TCP/IP is provided as part of the kernel. Both user and server Telnet, SMTP, and FTP run as 20-bit user processes.

CPU:

C/70

O/S:

BBN O/S (a UNIX look-alike)

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

BBN Communications Corporation
50 Moulton Street
Cambridge, MA 02238

CONTACT:

Mitchell Tasman, (mtasman@CCT.BBN.COM), (617) 873-2562

INFORMATION-UPDATED:

February 1986

3.9. 3COM CORPORATION

3.9.1. 3Com CS/1

PRODUCT-OR-PACKAGE-NAME: The Communications Server 1 (CS/1)

DESCRIPTION:

    3Com's CS/1 server with TCP/IP software performs the function of a terminal or host server, allowing up to 32 asynchronous devices (e.g., terminals, printers, computers) to access host computers that support TCP/IP and are attached to an Ethernet LAN. The CS/1 also supports the User Datagram Protocol (UDP) and the Ethernet Address Resolution Protocol (ARP). 3Com also offers gateway servers which interface the CS/1 to broadband networks and the IBM SDLC world.

IMPLEMENTATION-LANGUAGE:

    C

DISTRIBUTOR:

        3Com Corporation
        3165 Kifer Road
        Santa Clara, CA 95052-8145

CONTACT:

    Rene Shimada, (408) 970-1102

PROPRIETY-STATUS:

    Product of 3Com Corporation

INFORMATION-UPDATED:

    August 1988

3.9.2. 3Com CS/100

PRODUCT-OR-PACKAGE-NAME: The Communications Server 100 (CS/100)

DESCRIPTION:

3Com's CS/100 server with TCP/IP software performs the function of a terminal or host server, allowing up to 14 asynchronous devices (e.g., terminals, printers, computers) to access host computers that support TCP/IP and are attached to an Ethernet LAN. The CS/100 also supports the User Datagram Protocol (UDP) and the Ethernet Address Resolution Protocol (ARP). 3Com also offers gateway servers which interface the CS/100 to broadband networks and the IBM SDLC world.

IMPLEMENTATION - LANGUAGE:

C

DISTRIBUTOR:

3Com Corporation
3165 Kifer Road
Santa Clara, CA 95052-8145

CONTACT:

Rene Shimada, (408) 970-1102

PROPRIETY-STATUS:

Product of 3Com Corporation

INFORMATION-UPDATED:

August 1988

3.9.3. 3Com GS/3

PRODUCT-OR-PACKAGE-NAME: The Gateway Server 3 (GS/3)

DESCRIPTION:

3Com's GS/3 server with TCP/IP software interconnects physically isolated Ethernet segments over multiple point to-point communication links. It supports up to four synchronous communications lines with data rates up to 64K bps each. As an internetwork router, the GS/3 uses the Internet Protocol (IP) to route packets across networks. It is compatible with 3Com's comprehensive TCP/IP line of communications, gateway, and network control servers.

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

3Com Corporation
3165 Kifer Road
Santa Clara, CA 95052-8145

CONTACT:

Rene Shimada, (408) 970-1102

PROPRIETY-STATUS:

Product of 3Com Corporation

INFORMATION-UPDATED:

August 1988

3.9.4. 3Com GS/6-IP

PRODUCT-OR-PACKAGE-NAME: The Gateway Server 6 (GS/6-IP)

DESCRIPTION:

3Com's GS/6 server with TCP/IP software interconnects an Ethernet segment to the broadband backbone trunk.   As many as 255 Ethernet TCP/IP networks can be supported over a single 6 Mhz broadband channel using GS/6s Carrier Sense Multiple Access (CSMA) mechanism.   As an internetwork router, the GS/6 uses the Internet Protocol (IP) to route packets across networks.   It is compatible with 3Com's comprehensive TCP/IP line of communications, gateway, and network control servers.

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

3Com Corporation
3165 Kifer Road
Santa Clara, CA 95052-8145

CONTACT:

Rene Shimada, (408) 970-1102

PROPRIETY-STATUS:

Product of 3Com Corporation

INFORMATION-UPDATED:

August 1988

3.9.5. 3Com CS/1-SNA

PRODUCT-OR-PACKAGE-NAME: The Communications Server 1-SNA (CS/1-SNA)

DESCRIPTION:

3Com's CS/1-SNA server with TCP/IP software supports one synchronous SDLC port to an IBM communications controller with a maximum of 24 LU-to-LU sessions. It provides a connection service between a wide variety of non-IBM terminals, workstations, and an IBM host running Systems Network Architecture (SNA) protocol. The CS/1-SNA is compatible with 3Com's comprehensive TCP/IP line of communications, gateway, and network control servers.

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

3Com Corporation
3165 Kifer Road
Santa Clara, CA 95052-8145

CONTACT:

Rene Shimada, (408) 970-1102

PROPRIETY-STATUS:

Product of 3Com Corporation

INFORMATION-UPDATED:

August 1988

3.9.6. 3Com NCS/150

PRODUCT-OR-PACKAGE-NAME: The Network Control Server 150 (NCS/150)

DESCRIPTION:

3Com's NCS/150 server with TCP/IP software provides a complete continuous record of all network activity at the session level. It is a network management server that allows configuration control, monitoring, bootloading, and centralized control of local area network resources. The NCS/150 is designed to support up to 40 3Com Communications Servers on a single network or multiple networks interconnected by Gateway Servers.

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

3Com Corporation
3165 Kifer Road
Santa Clara, CA 95052-8145

CONTACT:

Rene Shimada, (408) 970-1102

PROPRIETY-STATUS:

Product of 3Com Corporation

INFORMATION-UPDATED:

August 1988

3.10. CISCO SYSTEMS

3.10.1. cisco Systems Terminal Servers

PRODUCT-OR-PACKAGE-NAME: Terminal Servers

DESCRIPTION:

cisco Terminal Servers support from 16 to 96 RS-232 lines serving any combination of terminals, modems, PC's, serial printers, or RS-232 multiplexor ports. Up to 4 parallel printers may be attached. All standard RS-232 parameters may be configured on a per line basis. Data rates up to 38.4 kilobaud are supported, with autobaud detection from 300 to 19200 baud.

The servers support the TCP/IP and X.25 protocol suites. Telnet, rlogin, and SLIP protocols are supported as are domain style and IEN-116 name lookup services. PAD support is available for connection to X.25 networks. ISO terminal service will be available in Q3 '88.

Terminal Servers are available in 19-inch rack-mountable chassis with four (MSM model) or nine (ASM model) backplane slots. The four slot chassis will support up to 32 RS232 lines.

Ethernet/IEEE 802.3 or synchronous serial attachments at up to T1 speeds are available. All forms of DDN attachment are available, including DDN X.25 Standard and 1822-LH/DH, making the cisco terminal server function as a TAC. A cisco Terminal Server may be attached to any commercial X.25 network for PAD function. A Terminal Server may also act as a protocol translating gateway for Telnet and PAD terminal sessions.

DOCUMENTATION:

Terminal Server Reference Manual

CPU:

MC68000 or MC68020

O/S:

cisco proprietary

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

cisco Systems, Inc.
1360 Willow Road
Menlo Park, CA 94025

CONTACT:

Ms. Eileen Coe, cisco Systems Sales, (415) 326-1941, (800) 553-NETS, or customer-service@mathom.cisco.com

ORDERING-PROCEDURE:

cisco Systems Sales, (415) 326-1941 or (800) 553-NETS

PROPRIETY-STATUS:

cisco Systems

DDN-QUALIFIED:

Yes. X.25 implementation is DCA certified.

INFORMATION-UPDATED:

February 1988

3.10.2. cisco Systems Gateways

PRODUCT-OR-PACKAGE-NAME: cisco Multi-Protocol Gateway Servers

DESCRIPTION:

The cisco family of gateways are multi-protocol routers linking networks of heterogeneous hosts and media. All Gateway Servers are fully compliant with RFC 1009, "Requirements for Internet Gateways". In addition to the Internet Protocol, the cisco Gateway Server will route the DECnet, Chaosnet, and XNS protocols. The supported IP routing protocols are IGRP (cisco proprietary), EGP, RIP, and HELLO. cisco Gateway Servers may also be attached to X.25 networks to pass all the upper-level supported protocols (e.g. IP, DECnet). Upper-level ISO protocol support will be provided with the ISO release; ISO routing protocols will be added as they are defined.

cisco Gateway Servers are available in 19-inch rack-mountable chassis with four (MGS model) or nine (AGS model) backplane slots, in a portable 4-slot suitcase-enclosed chassis (PGS model), or a two-slot nonexpandable unit (CGS model).

Media: Ethernet/IEEE 802.3, 1822-LH/DH, HDH or 1822J, DDN X.25 Standard DTE and DCE, commercial X.25, synchronous serial at 2.4 to 56 kilobit and T1 (1.544 megabit) data rates.

DOCUMENTATION:

Gateway Server Reference Manual

CPU:

MC68000 or MC68020

O/S:

cisco proprietary

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

cisco Systems, Inc.
1360 Willow Road
Menlo Park, CA 94025

CONTACT:

Ms. Eileen Coe, cisco Systems Sales, (415) 326-1941, (800) 553-NETS, or customer-service@mathom.cisco.com

ORDERING-PROCEDURE:

cisco Systems Sales, (415) 326-1941 or (800) 553-NETS

PROPRIETY-STATUS:

cisco Systems

DDN-QUALIFIED:

Yes. X.25 implementation is DCA certified.

INFORMATION-UPDATED:

February 1988

3.11. COMMUNICATION MACHINERY CORPORATION

3.11.1. CMC-DRN-3200

PRODUCT-OR-PACKAGE-NAME: CMC DRN-3200 Ethernet to DDN Gateway

DESCRIPTION:

The CMC DRN-3200 DDN/Ethernet Gateway is a high performance network node which gives Ethernet-TCP/IP users access to the resources of the Defense Data Network (DDN), ARPAnet, or compatible networks. Messages from either DDN or Ethernet are sent to the DRN-3200, which reformats the communication for transmission over the other network. The Exterior Gateway Protocol (EGP) maintains routing tables and communicates with other known gateways to manage routing information. The Internet Protocol uses the routing tables to determine the next stop on the way to the message's final destination.

DOCUMENTATION:

DRN-3200 User's Guide

DISTRIBUTOR:

Communication Machinery Corporation
125 Cremona Drive
Santa Barbara, CA 93117

CONTACT:

Sales Support, (800) CMC-8023 or 805-968-4CMC

ORDERING-PROCEDURE:

Contact CMC

PROPRIETY-STATUS:

CMC Proprietary

DDN-QUALIFIED:

Yes

INFORMATION-UPDATED:

January 1988

3.12. CONVEX COMPUTER CORPORATION

3.12.1. Convex C-1

PRODUCT-OR-PACKAGE-NAME: CONVEX C-1 affordable supercomputer

DESCRIPTION:

The C-1 offers 40 Mflops of processing power in a machine with large real (128 MB) and virtual (2 GB) memory. Software includes vectorizing FORTRAN and C compilers and the UNIX 4.2 BSD operating system. Many standard TCP/IP programs run unchanged on the CONVEX C-1.

DOCUMENTATION:

A full set of documentation is available

CPU:

CONVEX C-1

O/S:

UNIX 4.2 BSD

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

CONVEX Computers
701 Plano Road
Richardson, TX 75081
(214) 952-0200

CONTACT:

Marshall Stallings, (214) 952-0200

ORDERING-PROCEDURE:

Submit purchase order to above address; see above for pricing information.

PROPRIETY-STATUS:

Product of CONVEX Computer Corporation

INFORMATION-UPDATED:

August 1986

3.13. DIGITAL EQUIPMENT CORPORATION

3.13.1. Advanced Computer Communications

3.13.1.1. ACC ACP 6250

PRODUCT-OR-PACKAGE-NAME: ACP 6250

DESCRIPTION:

> This is a full-duplex DMA communication front-end, utilizing 68000 microprocessor technology, which attaches a VAX to a DDN PSN capable of supporting data rates in excess of 64 Kbps. The ACC implementation is in conformance at the link level to FED-STD-1041, FIPS-PUB 100 and at packet level to DDN X.25 Host Interface Specification, December 1983.

DOCUMENTATION:

> Fully documented vendor product; descriptive literature available

CPU:

> 68000 for board, VAX-11 for host

C/S:

> UNIX 4.2 and 4.3 BSD, ULTRIX 1.1 and 1.2, VAX/VMS (supported by The Wollongong Group, Network Solutions, Network Research Corp., and SRI Multinet)

DISTRIBUTOR:

> ACC (Advanced Computer Communications)
> 720 Santa Barbara Street
> Santa Barbara, CA 93101

ORDERING-PROCEDURE:

> Vendor product; contact sales department

PROPRIETY-STATUS:

> Proprietary product of ACC

DDN-QUALIFIED:

> Yes

INFORMATION-UPDATED:

> August 1988

3.13.1.2. ACC ACP 5250

PRODUCT-OR-PACKAGE-NAME: ACP 5250

DESCRIPTION:

This is a full-duplex DMA communication front end, utilizing 68000 microprocessor technology, which attaches a MicroVAX to a DDN PSN, and is capable of supporting data rates in excess of 64 Kbps. The ACC implementation is in conformance at link level to FED-STD-1041, FIPS PUB 100 and at packet level to DDN X.25 Host Interface Specification, Dec. 1983.

DOCUMENTATION:

Fully documented vendor product

CPU:

68000 for board and MicroVAX for host

O/S:

ULTRIX 1.1 and 1.2, and MicroVMS (supported by The Wollongong Group, Network Solutions, Network Research Corp. and SRI Multinet)

DISTRIBUTOR:

ACC (Advanced Computer Communications)
720 Santa Barbara Street
Santa Barbara, CA 93101

ORDERING-PROCEDURE:

Vendor product; contact sales department

PROPRIETY-STATUS:

Proprietary product of ACC

DDN-QUALIFIED:

Yes

INFORMATION-UPDATED:

August 1988

3.13.2. Digital Equipment Corporation

PRODUCT-OR-PACKAGE-NAME: DECnet-ULTRIX and the Internet Gateway

DESCRIPTION:

DECnet-ULTRIX and the Internet Gateway enables communication among different networked Digital systems that use the DNA Phase III/IV protocols. At the same time, users and user programs can communicate with non-Digital systems that use the Internet (TCP/IP-based) protocols. The following capabilities are offered: task-to-task communications, network virtual terminal, remote file transfer, mail.

MACHINE-TYPE/CPU:

DEC/VAX, MICROVAX

O/S:

ULTRIX

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

Digital Equipment Corporation
550 King St.
Littleton, MA

CONTACT:

Audrey Augun, Product Marketing Manager, (603) 884-2695

ORDERING-PROCEDURE:

DECnet-ULTRIX QL-716A-AA

PROPRIETY-STATUS:

DEC proprietary

INFORMATION-UPDATED:

February 1989

3.13.3. MICOM-Interlan

3.13.3.1. MICOM-Interlan TCP/IP

PRODUCT-OR-PACKAGE-NAME: MICOM-Interlan TCP/IP

DESCRIPTION:

This is a DoD TCP/IP implementation compatible the with 4.2 BSD TCP/IP implementation. Currently, a DEC VMS and MICRO VMS implementation is available. Other versions will be announced. This TCP/IP runs on the intelligent NP-series protocol/processors.

DOCUMENTATION:

Library calls, installation, guide to diagnostics, device drivers documentation and utilities are included.

CPU:

DEC VAX family and MicroVAX II; others will be announced in the near future

O/S:

VMS and MicroVMS

IMPLEMENTATION-LANGUAGE:

C-callable library; TCP/IP image in on-board

DISTRIBUTOR:

MICOM-Interlan
155 Swanson Road
Boxboro, MA 01719

CONTACT:

Bob Wells, Product Manager, (408) 986-0890 or LAN Marketing/Sales at 1-800-LAN-TALK

ORDERING-PROCEDURE:

Contact LAN Marketing/Sales for nearest office on 1-800-LAN-TALK

PROPRIETY-STATUS:

MICOM-Interlan

INFORMATION-UPDATED:

February 1988

3.13.3.2. MICOM-Interlan NI1010B

PRODUCT-OR-PACKAGE-NAME: MICOM-Interlan NI1010B

DESCRIPTION:

Link level Ethernet Controller board for Digital Equipment UNIBUS-based systems.

DOCUMENTATION:

User manual, installation instructions and diagnostics are included.

CPU:

UNIBUS-based systems such as VAX-11 and PDP-11

O/S:

TCP/IP software is available from various vendors (including Wollongong and with UNIX 4.2 BSD).

DISTRIBUTOR:

MICOM-Interlan
155 Swanson Road
Boxboro, MA 01719

CONTACT:

Bob Wells, Product Manager, (408) 986-0890 or LAN Marketing/Sales at 1-800-LAN-TALK

ORDERING-PROCEDURE:

Contact LAN Marketing/Sales for nearest sales office on 1-800-LAN-TALK

PROPRIETY-STATUS:

MICOM-Interlan

INFORMATION-UPDATED:

February 1988

3.13.4. Software Kinetics, Ltd.

3.13.4.1. Software Kinetics X.Calibre Plus

PRODUCT-OR-PACKAGE-NAME: X.Calibre Plus

DESCRIPTION:

X.Calibre Plus package includes hardware and software to provide an interface between a host with TCP/IP and X.25 network. In addition, the X.Calibre Plus provides a software interface to ISO Level 1, 2, and 3 as specified in X.25. The software was implemented following the guidelines of RFC877 for the Transmission of IP Datagrams over Public Data Networks and is compliant with the DDN Standard X.25 Service.

The X.Calibre board contains a 68000 processor, up to 1 Mbyte of ram, two serial ports and a WD2511 X.25 Packet Network Interface to control a third serial port to the X.25 network or line.

Host level software support programs include a board loading utility, a network address table loading utility, a status monitoring utility, and device driver code to support Berkeley sockets and direct access to ISO (X.25) board functions. Current host operating systems supported include 4.2 BSD UNIX and DEC ULTRIX. The device driver is delivered in source form while utilities are binaries.

Board level software support includes interface to Levels 1, 2 and 3 of X.25, queue management, virtual circuit management, diagnostics, statistics, Internet to X.25 address resolution and host level interface. Board level software is delivered as binary that is loaded from the host. Diagnostics and test software for board functions is in ROM.

The X.Calibre Plus Package is available for DEC VAX QBUS and UNIBUS.

DOCUMENTATION:

Installation and Configuration Guide, Programming Guide

CPU:

68000 8Mhz CPU on board product

O/S:

4.2 BSD UNIX and DEC ULTRIX for host; custom O/S for board product

IMPLEMENTATION-LANGUAGE:

C Language for host

C Language and small amount of 68000 assembly for board

DISTRIBUTOR:

Software Kinetics Ltd
65 Iber Road
P.O Box 680
Stittsville (Ottawa)
Ontario, Canada
K1A 3G0

CONTACT:

Product Sales, Software Kinetics, (613) 831-0888

ORDERING-PROCEDURE:

Contact above

PROPRIETY-STATUS:

Software Kinetics Proprietary

INFORMATION-UPDATED:

July 1986

3.13.5. The Wollongong Group

3.13.5.1. Wollongong WIN/TCP (DDN) for MicroVAX

PRODUCT-OR-PACKAGE-NAME: WIN/TCP (DDN) for MicroVAX

DESCRIPTION:

This is a complete hardware/software TCP/IP implementation which allows any VAX/VMS host to connect to the DDN. Includes Telnet (remote login), FTP (file transfer), SMTP (Mail) Netstat, Finger, TFTP. Supports the ACC 5250 X.25 interface as well as optional LAN interfaces, including DEC DEQNA and DELQA.

DOCUMENTATION:

Installation Guide, User's Guide, Programmer's Guide, Reference Manual, and the WINS TCP/IP Primer provided

CPU:

All VAX 700 and 8000 series

O/S:

VMS 4.4 and greater

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

The Wollongong Group
1129 San Antonio Road
Palo Alto, CA 94303

CONTACT:

Kurt Kruger, Wollongong Marketing, (415) 962-7200

ORDERING-PROCEDURE:

Available with support from The Wollongong Group

PROPRIETY-STATUS:

Wollongong

DDN-QUALIFIED:

Yes

INFORMATION-UPDATED:

January 1988

3.13.5.2. Wollongong WIN/TCP (DDN) for VAX

PRODUCT-OR-PACKAGE-NAME: WIN/TCP (DDN) for VAX

DESCRIPTION:

This is a complete hardware/software TCP/IP implementation which allows any VAX/VMS host to connect to the DDN. Includes Telnet (remote login), FTP (file transfer), SMTP (Mail) Netstat, Finger, TFTP. Supports the ACC 6250 X.25 (and LH/DH and HDH) interface as well as optional LAN interfaces, including DEC DEUNA, DELUA, DEBNT, and DEBNA.

DOCUMENTATION:

Installation Guide, Programmer's Guide, WINS TCP/IP Primer, Administrator's Guide, and User's Guide provided

CPU:

All VAX 700 and 8000 series

O/S:

VMS 4.4 and greater

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

The Wollongong Group
1129 San Antonio Road
Palo Alto, CA 94303

CONTACT:

Kurt Kruger, Wollongong Marketing, (415) 962-7200

ORDERING-PROCEDURE:

Available with support from The Wollongong Group

PROPRIETY-STATUS:

Wollongong

DDN-QUALIFIED:

Yes

INFORMATION-UPDATED:

January 1988

3.14. ENCORE COMPUTER CORPORATION

3.14.1. Annex-UX

PRODUCT-OR-PACKAGE-NAME: Annex-UX

DESCRIPTION:

The Annex-UX is a terminal server for Ethernet that uses TCP/IP. It has 16 or 32 asynchronous serial ports and one parallel printer port. Each serial port can support an auto-answer modem. Both rlogin and telnet protocols are supported, and each port can have up to three virtual terminal connections. The IP implementation interprets both ICMP redirects and 4.2 route daemon messages.

The Annex-UX has been successfully tested with 4.2 and 4.3bsd UNIX. Also included are IP subnet support, security features, and a editing front end capable of offloading standard Unix machines by handling simple editing operations within the Annex-UX.

DOCUMENTATION:

A two manual set is shipped with each Annex-UX. It consists of a Hardware Installation Guide and a Users Guide. A Network Administrators Guide is available for a nominal charge.

CPU:

National Semiconductor 32016

O/S:

Proprietary

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

Call for local distributor

CONTACT:

Tony Bolton
Encore Computer Corporation
257 Cedar Hill Street
Marlboro, MA 01752
(617) 460-0500

ORDERING-PROCEDURE:

Contact factory

PROPRIETY-STATUS:

Proprietary

INFORMATION-UPDATED:

January 1988

3.15. EXCELAN

3.15.1. EXport 2000 Communications Server

PRODUCT-OR-PACKAGE-NAME: EXport 2000 Communications Server

DESCRIPTION:

The EXport 2000 Communications Server is an eight-port asynchronous multiplexer. It allows connection of terminals, printers, modems, or other devices to an Ethernet network via a standard 25-pin RS-232 connector. EXport 2000 conforms to TCP/IP industry standards, and operates in conjunction with Export Management software to provide access control to the network, resource configuration, Domain Name Service, and software down-line loading. Export Management Software can be configured on an IBM PC/AT running DOS 3.0 or later, VAX/VMS system or a SUN running SUN OS.

DOCUMENTATION:

Export Management Software for DOS/VMS/SUNOS
Export Terminal Users Guide for DOS/VMS/SUNOS
Export Managers Guide for DOS/VMS/SUNOS
Export 2000 Hardware Installation Guide

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

Excelan Europe Ltd.
Intec 2, Suite 17
Wade Road
Basingstoke
Hampshire RG24 One, England

CONTACT:

Inside sales (408) 434-2300, 1 (800) EXCELAN

ORDERING-PROCEDURE:

Model 2000-01 operates at 110-volt power
Model 2000-02 operates at 220-volt power

PROPRIETY-STATUS:

Excelan Proprietary

INFORMATION-UPDATED:

February 1989

3.16. FALCON MICROSYSTEMS, INC.

3.16.1. EtherSC

PRODUCT-OR-PACKAGE-NAME: EtherSC

DESCRIPTION:

The EtherSC is a SCSI Ethernet external controller for the Macintosh II, Macintosh IIx, Macintosh SE, and Macintosh Plus. It provides a direct connection to Ethernet networks from the SCSI port of Macintosh computers. Software from Kinetics and third party developers allows the Ether SC-equipped Macintosh to communicate with a diverse range of Ethernet-based computer systems, including DEC VAXes, UNIX systems, PCs, and terminals.

The EtherSC supports AppleTalk, TCP/IP, DECnet, and OSI protocols. It comes with 64K of memory, and models for both standard and thin-wire Ethernet are available. Besides providing Ethernet connections to Macintoshes, the EtherSC can be used as a standard device driver interface for other products.

DOCUMENTATION:

Installation Guide

MACHINE-TYPE/CPU:

Macintosh Plus, Macintosh SE, Macintosh II, Macintosh IIx

O/S:

Macintosh O/S

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

Falcon Microsystems, Inc.
1801 McCormick Dr.
Landover, MD 20785-5326
(301) 341-0146

CONTACT:

Tom Cromelin, Product Manager (415) 947-0998

ORDERING-PROCEDURE:

Ether SC, 170/000700 (Thin Ethernet) or KSEM-1
Ether SC, 170/000800 (Standard Ethernet) or KSEM-2

PROPRIETY-STATUS:

Propriatery product of Kinetics

DDN-QUALIFIED:

Yes

INFORMATION-UPDATED:

February 1989

3.16.2. Etherport II

The Kinetics EtherPort II is an internal Ethernet controller board for Macintosh II and Macintosh IIx computers. Software from Kinetics and third party developers allows the EtherPort-equipped Macintosh II to communicate with a diverse range of Ethernet-based computer systems, including DEC VAXes, UNIX systems, PCs, and terminals.

The EtherPort II supports AppleTalk, TCP/IP, DECnet, and OSI protocols. It has 32K of on-board memory, comes with a built-in transceiver, and connects to both standard and thin-wire Ethernet. The Macintosh II can be connected to either kind of Ethernet cabling; a switch located on the back of the card selects the type of cabling in use.

DOCUMENTATION:

Installation Guide

MACHINE-TYPE/CPU:

Macintosh II and IIx

O/S:

Macintosh O/S, Macintosh A/UX

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

Falcon Microsystems, Inc.
1801 McCormick Dr.
Landover, MD 20785-5326
(301) 341-0146

CONTACT:

Tom Cromelin, Product Manager (415) 947-0998

ORDERING-PROCEDURE:

EtherPort II, 9900048-00 or E109-1

PROPRIETY-STATUS:

Proprietary product of Kinetics

DDN-QUALIFIED:

Yes

INFORMATION-UPDATED:

February 1989

3.16.3. Etherport-SE

PRODUCT-OR-PACKAGE-NAME: EtherPort SE

DESCRIPTION:

The Kinetics EtherPort SE is an internal Ethernet controller board for Macintosh SE computers. Software from Kinetics and third party developers allows the EtherPort-equipped Macintosh SE to communicate with a diverse range of Ethernet-based computer systems, including DEC VAXes, UNIX systems, PCs, and terminals.

The EtherPort SE supports AppleTalk, TCP/IP, DECnet, and OSI protocols. It has 32K of on-board memory, comes with a built-in transceiver, and connects to both standard and thin-wire Ethernet. The Macintosh SE can be connected to either kind of Ethernet cabling; a switch located on the back of the card selects the type of cabling in use.

DOCUMENTATION:

Installation Guide

MACHINE-TYPE/CPU:

Macintosh SE

O/S:

Macintosh O/S

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

Falcon Microsystems, Inc.
1801 McCormick Dr.
Landover, MD 20785-5326
(301)341-0146

CONTACT:

Tom Cromelin, Product Manager (415) 947-0998

ORDERING-PROCEDURE:

EtherPort SE, 170/000500 or KFRE-1

PROPRIETY-STATUS:

Proprietary product of Kinetics

DDN-QUALIFIED:

Yes

INFORMATION-UPDATED:

February 1989

3.17. FORD AEROSPACE CORPORATION

3.17.1. Ford Multinet Gateway

PRODUCT-OR-PACKAGE-NAME: Ford Multinet Gateway

DESCRIPTION:

The Ford Multinet Gateway development has been sponsored by the USAF Rome Air Development Center as a high performance multilevel secure communications gateway and is currently under evaluation by the Computer Security Center for A1 security status. The Multinet Gateway was designed to interconnect dissimilar networks and protocols using the DoD reference model for layered network architecture. The implementation supports IP, EGP, ICMP, X.25, 1822, HDH (message mode), IEEE 802.3/Ethernet and HDLC. The Multinet Gateway is available with end-to-end encryption. The DDN X.25 interface is certified at 56K BPS by the Defense Communications Agency. The Man-Machine interface includes a terminal and a printer for control and statistics.

Ford Aerospace is presently developing and plans to market an enhanced version of the Advanced Development Model. This new product will be referred to as the MLS-100. It will be functionally equivalent to the present gateway.

DOCUMENTATION:

Manuals and On-line documentation

CPU:

Ford Secure Network Access Processor (Z8000 based)

O/S:

Ford Secure Communications Support System

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

Ford Aerospace Corporation
10550 State Highway 83
Colorado Springs, CO 80921

CONTACT:

Bob Lang, (719) 594-1055
Jim Maucher, (719) 594-1228

ORDERING-PROCEDURE:

Contact distribution center

DDN-QUALIFIED:

Yes

INFORMATION-UPDATED:

February 1989

3.18. GATEWAY COMMUNICATIONS, INC.

3.18.1. G/X.25 Gateway

PRODUCT-OR-PACKAGE-NAME: G/X.25 Gateway

DESCRIPTION:

For any NetBIOS or Netware-based LAN, this product provides a suite of 20 terminal emulators on a workstation to communicate through a X.25 gateway through a PDN or directly to a host at up to 56 KBPS.

DOCUMENTATION:

Full installation and operations documents provided. Online configuration and help as part of package.

MACHINE-TYPE/CPU:

IBM PC, IBM PS/2, IBM compatible

O/S:

DOS, IBM Netbios and Netware Network O.S. for Version 2.X

IMPLEMENTATION-LANGUAGE:

C, MASM

DISTRIBUTOR:

Gateway Communications, Inc.
(800) 367-6555
(714) 553-1555

CONTACT:

Bert Ott, Vice-President Sales, (800)367-6555 (714)553-1555

ORDERING-PROCEDURE:

G/X.25 Gateway (Contact Gateway for ordering details)

PROPRIETY-STATUS·

Proprietary to Gateway. Terminal Emulators proprietary to Crystal Point, Inc.

INFORMATION-UPDATED:

February 1989

3.18.2. G/ETHERNET AND PC-TCP

PRODUCT-OR-PACKAGE-NAME: G/Ethernet and PC-TCP

DESCRIPTION:

G/Ethernet LAN Adaptex calls for PC-Bus (8-bit), AT Bus (16-bit) and Micro- channel Bus (16-bit) with software drivers supporting FTP's PC-TCP product as stand-alone and co-resident with Netware.

DOCUMENTATION:

Installation supplement for G/Ethernet cards. FTP's PC-TCP document.

MACHINE-TYPE/CPU:

IBM PC, IBM PS/2, IBM compatible

O/S:

DOS, Netware 2.X

IMPLEMENTATION-LANGUAGE:

C, MASM

DISTRIBUTOR:

Gateway Communications
(800) 367 6555
(714) 553 1555

CONTACT:

Bert Ott, Vice-President Sales, (800) 367 6555 (714) 553 1555

ORDERING-PROCEDURE:

Contact Gateway Communications for details on G/Ethernet product line.

INFORMATION-UPDATED:

February 1989

3.18.3. G/Remote Bridge and Gateway

PRODUCT-OR-PACKAGE-NAME: G/Remote Bridge and Gateway

DESCRIPTION:

This product contains Software/Hardware to link any Netware-based LAN to one or more distant network LANS using X.25 over direct or DDN facilities at speeds up to 56 kbps. Terminal emulator gateway to hosts may also co-exist on X.25 ports.

DOCUMENTATION:

Full installation and operation documents included in products.

MACHINE-TYPE/CPU:

IBM PC, IBM PS/2, IBM compatible

O/S:

DOS, Netware 2.X

IMPLEMENTATION-LANGUAGE:

C, MASM

DISTRIBUTOR:

Gateway Communications, Inc.
(800) 367-6555
(714) 553-1555

CONTACT:

Bert Ott, Vice-President Sales, (800)367 6555 (714)553 1555

ORDERING-PROCEDURE:

G/Remote Bridge and Gateway (Contact Gateway for ordering details)

PROPRIETY-STATUS:

Proprietary to Gateway, Protions proprietary to Novell, Inc. and Crystal Point, Inc.

INFORMATION-UPDATED:

February 1989

3.19. HALLEY SYSTEMS

3.19.1. ConnectLAN 100 Brouters

PRODUCT-OR-PACKAGE-NAME: ConnectLAN 100 BROUTERS

DESCRIPTION:

ConnectLAN 100 BROUTERS allows interconnection of local and remote Ethernet/ 802.3 LANS via multiple WAN links such as T1, leased telephone lines, microwave links, etc., for an extended LAN topology.   The BROUTERS provide self-learning MAC level bridging (protocol transparency), and intelligent source routing between the BROUTERS. Some of the features provided by the BROUTERS are: Alternate routing, load balancing, load sharing, access security, masking for protocol dependent filtering, compression, etc.

DOCUMENTATION:

ConnectLAN 100 BROUTER Installation and Operations Manual

MACHINE-TYPE/CPU:

ConnectLAN 100 platform

O/S:

DOS

IMPLEMENTATION-LANGUAGE:

C, X, Assembler

DISTRIBUTOR:

Halley Systems
2730 Orchard Parkway
San Jose, CA 95134

CONTACT:

Jack Hughes, Product Manager, (408)432-2600 (FAX: 408-943-1601)

ORDERING-PROCEDURE:

ConnectLAN 100 BROUTER

PROPRIETY-STATUS:

Halley System, Inc. Proprietary product

INFORMATION-UPDATED:

February 1989

3.20. HARRIS COMPUTER SYSTEMS DIVISION

3.20.1. X.25 with TCP/IP Protocols (DDN)

PRODUCT-OR-PACKAGE-NAME: X.25 with TCP/IP Protocols (DDN)

DESCRIPTION:

> The Harris X.25 with DDN products provides the necessary software and hardware to connect to the Defense Data Network (DDN). The following DoD protocols are supported: TCP, IP, ICMP, FTP, Telnet, and SMTP.

DOCUMENTATION:

> Harris H-Series Systems: Harris TCP/IP Manager's Guide (0868011-100)
> Harris TCP/IP User's Guide (0868012-100)
> HCX Systems: HCX/UX Networking Reference Manual (0890118-203)
> MCX systems: Internet User's Guide
> Internet Programmers Guide

MACHINE-TYPE/CPU:

> Harris H-Series systems, HCX systems, and MCX systems

O/S:

> Harris H-Series: VOS 5.1 or later
> HCX:HCX/UX 2.4 or later
> MCX: HS/UX 3.0 or later

IMPLEMENTATION-LANGUAGE:

> C

DISTRIBUTOR:

> Harris Computer Systems Division
> Local Harris Sales Office

CONTACT:

> **Thanh Luu**
> **Harris Computer Systems Division**
> **2101 W. Cypress Creek Road**
> **Ft. Lauderdale, FL 33309**
> **(305) 974-1700**

ORDERING-PROCEDURE:

> Contact Thanh Luu or your local Harris Sales Office.

PROPRIETY-STATUS:

> Proprietary product of Harris Computer Systems Division

DDN-QUALIFIED:

> Yes for H-Series and MCS; Spring 1989 for HCX

INFORMATION-UPDATED:

> February 1989

3.21. HONEYWELL INFORMATION SYSTEMS

3.21.1. Protocom Devices

3.21.1.1. Protocom Devices P-Series PAD - Honeywell VIP/RLP/G115/HDLC/7700/7800

PRODUCT-OR-PACKAGE-NAME: P-Series PAD - Honeywell VIP/RLP/G115/HDLC/7700/7800

DESCRIPTION:

The Protocom P-Series PAD allows you to run Mapper, Demand, Sperrylink and the full range of Honeywell equipment over public and private packet switched networks that support CCITT X.25 1980/1984. The P-Series PAD is standard certified for up to 64 Kbps on all products for DDN. The Protocom P-Series PAD involves the TCP/IP protocol. P-Series PADs can be monitored and configured locally or remotely. Local area networking is supported via a line interface module for all P-Series PADs. The P-Series PADs are available in four versions:

- P250: 10 devices/printers are supported on 1 synchronous port

- P2500: Up to 40 terminals/printers are supported on 4 synchronous ports

- P160: This model consists of a varying number of protocol modules, each of which supports a separate protocol and up to 40 devices. Up to 240 sessions and six different protocols can be realized simultaneously at speeds reaching 56 Kbps. A network allows load sharing and call hunting.

- PC Based: A personal computer based PAD is also available that operates on IBM PC/XT compatibles and allows simultaneous emulation of multiple protocols on the PC Based network. This line of dual-ported interface cards supports up to 40 devices per card at speeds up to 19.2 Kbps. Two network ports are available to support redundancy and load sharing at speeds up to 64 Kbps.

All P-Series PADs offer the following features:

Independently mapped terminal and host addresses permit communication between any terminals and/or printers and any Honeywell application on the network. Three possible connections, two simultaneous user sessions on a single terminal, and host originated calls to shared printers are all supported. TurboMode (Protocoms proprietary data streaming) provides unequalled response time. Configurable user screens, mnemonic addressing and user defined function keys are also available.

DOCUMENTATION:

Available on request by contacting below

CPU:

All Honeywell VIP/RLP/G115/HDLC/7700/7800 and functionally compatible equipment

O/S:

VM, MVS, OS370, IMS

IMPLEMENTATION-LANGUAGE:

Assembler

DISTRIBUTOR:

Before September 1, 1988	After September 1, 1988
Protocom Devices	Protocom Devices
1666 Bathgate Avenue	25 Rockwood Place
Bronx, N.Y. 10457	Englewood, N.J.
(212) 716-5400	

CONTACT:

Contact above

ORDERING-PROCEDURE:

Submit purchase order to above address; call contact for pricing information

PROPRIETY-STATUS:

Product of Protocom Devices, Inc.

DDN-QUALIFIED:

Yes

INFORMATION-UPDATED:

August 1988

3.22. IBM/COMPATIBLES

3.22.1. 3Com Corporation

3.22.1.1. 3Com PCS/1

PRODUCT-OR-PACKAGE-NAME: PCS/1 (Personal Communications System/1)

DESCRIPTION:

3Com offers the PCS/1, a high-performance TCP/IP LAN system for the PC.   The PCS/1 provides TCP/IP, Telnet, FTP, and NetBios over Ethernet, Thin Ethernet, and broadband Local Area Networks for PCs running DOS. LAN support is provided through the 3Com Intelligent LAN Adapter, which features a 68000 microprocessor, 512K bytes of RAM, an 82586 LAN co-processor, and the choice of AT (16-bit) or XT (8-bit) bus interface. Protocol processing is off-loaded to the ILANA, increasing performance and reducing PC memory usage. Telnet features a unique programmatic interface that allows PC terminal emulation products to operate over Telnet, allowing many terminal types to be emulated, including VT100, VT220, VT240, HP, DG, and many others. IBM 3270 PC emulation, offering 3278/3279 emulation and IBM file transfer services, is also available for the PCS/1. PCS/1's NetBios support is compliant with RFC 1001 and 1002. 3Com network management capabilities are integrated into the PCS/1 product, including network audit trail. 3Com sells and supports the PCS/1 directly in the U.S. and international markets.

DOCUMENTATION:

One complete set of documentation is provided with the product; additional documentation may be purchased.

CPU:

IBM PC, XT, XT/286, AT or compatible, including 80386 systems

IMPLEMENTATION-LANGUAGE:

Assembly and C

DISTRIBUTOR:

3Com Corporation
3165 Kifer Road
Santa Clara, CA 95052-8145

CONTACT:

Rene Shimada, (408) 970-1102

ORDERING-PROCEDURE:

Contact local sales office or Lorraine Valenti

PROPRIETY-STATUS:

3Com Corporation Proprietary

INFORMATION-UPDATED:

August 1988

3.22.2. Fibronics International, Inc.

3.22.2.1. Fibronics KNET/PC

PRODUCT-OR-PACKAGE-NAME: KNET/PC

DESCRIPTION:

This product enables the IBM Personal Computer to participate as host on Ethernet or any network using TCP/IP protocols. Supports FTP, Telnet, and SMTP. Requires 128K bytes of memory, one disk drive, mono or color monitor with 80 column display. Compatible with other systems supporting TCP/IP. KNET/PC is a hardware and software TCP/IP implementation.

DOCUMENTATION:

Available from vendor

CPU:

IBM-PC, PC/XT

O/S:

DOS 2.0, 2.1, 3.X

IMPLEMENTATION-LANGUAGE:

C, 8086 Assembler

DISTRIBUTOR:

Fibronics International Inc.
Communications Way
Hyannis, MA 02601-1892

CONTACT:

Inside sales, (617) 778-0700

PROPRIETY-STATUS:

Source code not available for purchase

INFORMATION-UPDATED:

February 1988

3.22.3. Frontier Technologies Corporation

3.22.3.1. Frontier PC/AT-DDN

PRODUCT-OR-PACKAGE-NAME: Frontier PC/AT-DDN

DESCRIPTION:

Frontier Technologies Corporation has introduced a hardware and software package that allows IBM-AT's and compatibles to communicate over DDN. The hardware consists of an intelligent communications controller (AdCom2-I) with 1/2 Megabyte of local RAM and MIL-188-144, Mil-188C interfaces. The X.25 resides in the RAM on board and is executed by the local CPU (80188). The TCP/IP is loaded in the local RAM from the PC. The resident real time operating system (VRTX) allows the highest performance execution of X.25 and TCP/IP. The ADCom2-I also runs 3270 SNA/SDLC, 3270 Bisync, and Async terminal emulations. Implementation of FTP/TELNET/SMTP is done on the PC/AT side. The software is certified by DCA and runs on 386 machines such as Zenith Z386.

DOCUMENTATION:

Available

CPU:

IBM-PC, XT, AT (and compatibles)

O/S:

MS-DOS and Xenix

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

Frontier Technologies Corporation
3510 North Oakland Avenue
Milwaukee, WI 53211

CONTACT:

Dr. Prakash Ambegaonkar, (414) 964-8689

ORDERING-PROCEDURE:

Contact Frontier Technologies

PROPRIETY-STATUS:

Frontier Technologies

DDN-QUALIFIED:

Yes

INFORMATION-UPDATED:

January 1988

3.22.3.2. Frontier PS/2-DDN

PRODUCT-OR-PACKAGE-NAME: PS/2-DDN

DESCRIPTION:

Frontier's DCA Certified X.25 software is implemented to operate in the PS/2 microchannel architecture. The user could use only X.25 or X.25 with TCP/IP downloaded to the card. Driver's for different operating systems are provided. The DDN implementation has C2 security features available as options. The hardware consists of an intelligent communications controller with 1/2M RAM available for X.25 and TCP/IP code. Multitasking is provided on the card. FTP/SMTP/TELNET are available as an application program.

DOCUMENTATION:

Available

CPU:

IBM PS/2

O/S:

DOS, Xenix, AIX, OS/2

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

Frontier Technologies Corporation
3510 North Oakland Avenue
Milwaukee, WI 53211

CONTACT:

Dr. Prakash Ambegaonkar, (414) 964-8689

ORDERING-PROCEDURE:

Contact Frontier Technologies

PROPRIETY-STATUS:

Frontier Technologies

DDN-QUALIFIED:

Yes

INFORMATION-UPDATED:

January 1988

3.22.3.3. Frontier RT-DDN

PRODUCT-OR-PACKAGE-NAME: RT-DDN

DESCRIPTION:

Frontier Technologies Corporation has interfaced a hardware and software package that allows the IBM-RT's to be connected to the DDN. The hardware consists of an intelligent communications controller that executes the DCA certified X.25. The AIX driver is executed by the RT CPU. TCP/IP and FTP/TELNET/SMTP are installed on top of Frontier's DDN driver and are supplied with AIX from IBM. The X.25 code is downloaded to the card.

DOCUMENTATION:

Available

CPU:

IBM-RT

O/S:

AIX

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

Frontier Technologies Corporation
3510 North Oakland Avenue
Milwaukee, WI 53211

CONTACT:

Dr. Prakash Ambegaonkar, (414) 964-8689

ORDERING-PROCEDURE:

Contact Frontier Technologies

PROPRIETY-STATUS:

Frontier Technologies

INFORMATION-UPDATED:

January 1988

3.22.4. MICOM-Interlan

3.22.4.1. MICOM-Interlan NI5010A

PRODUCT-OR-PACKAGE-NAME: MICOM-Interlan NI5010A

DESCRIPTION:

Link level Ethernet Controller board for IBM-PC buses or equivalent.

DOCUMENTATION:

User's manual, installation instructions and diagnostics are included.

CPU:

IBM-PC/XT/AT or compatibles

O/S:

TCP/IP software is available from various vendors (MIT PC/IP) for this product.

DISTRIBUTOR:

MICOM-Interlan
155 Swanson Road
Boxboro, MA 01719

CONTACT:

Bob Wells, Product Manager, (408) 986-0890 or LAN Marketing/Sales at 1-800-LAN-TALK

ORDERING-PROCEDURE:

Contact LAN Marketing/Sales for nearest sales office on 1-800-LAN-TALK

PROPRIETY-STATUS:

MICOM-Interlan

INFORMATION-UPDATED:

February 1988

3.22.5. Proteon, Inc.

3.22.5.1. Proteon ProNET-4 Network

PRODUCT-OR-PACKAGE-NAME: ProNET-4 Network

DESCRIPTION:

The ProNET-4 network is a Token Passing Ring Network compatible with the IEEE 802.5 standard and the IBM Token-Ring Network standard. It operates at 4 megabits/second over the IBM cabling system or telephone cabling.

There are ProNET-4 network interfaces for:

- IBM PC

- IBM AT

- Multibus

- VMEbus

Some of the interfaces are intelligent, incorporating a 68020 processor to perform protocol processing.

TCP/IP implementations will be available for these boards, for a variety of operating systems.

The product line also includes Multi-Station Wire Centers, as well as interfaces supporting fiber optic links.

DOCUMENTATION:

All boards contain installation and programming manuals. Source code of device drivers is available for some boards as programming examples, a program development environment will be available for the intelligent interfaces.

CPU:

Any

O/S:

Any

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

Proteon, Inc.
Two Technology Drive
Westborough, MA 01581-5008

CONTACT:

Mick Scully, (mcs@proteon.com), (617) 898-2800

INFORMATION-UPDATED:

February 1988

3.22.6. The Software Group Limited

3.22.6.1. The Software Group Limited Netcom I

PRODUCT-OR-PACKAGE-NAME: Netcom I

DESCRIPTION:

Netcom I is a PAD (Packet Assembler/Disassembler) for IBM PC console users. It adheres to the X.25, X.3/X.29 protocols for communicating with a remote host, using its own easy-to-use command processor. Consisting of a Serial Controller and software to run it, it provides a multi-session PAD/intelligent terminal at the PC console.

DOCUMENTATION:

User manual supplied with the product covers installation, use and configuration

CPU:

Intel 8086/8, 286, Intel 386: IBM PC series or compatible machine

O/S:

PC-DOS or MS-DOS 2.1 or higher

IMPLEMENTATION-LANGUAGE:

C; Some Intel 8086/8 assembler for hardware handling

DISTRIBUTOR:

The Software Group Limited
East Atrium, Suite 201
4701 Steeles Avenue West
Toronto, Canada
M9L 1X2
Fax: (416) 747-1471

CONTACT:

Derek Vair, (416) 747-9490, mnetor!lsuc!dvlmarv!tsgfred!derek@uunet.UU.NET (ARPANET), lsuc!dvlmarv!tsgfred!netcom2 (USENET)

ORDERING-PROCEDURE:

Purchase order or Volume Purchase Agreement; demonstration/technical trial units available on a case-by-case basis

PROPRIETY-STATUS:

Source code proprietary to The Software Group Limited; technology licenses to use the source code are available.

INFORMATION-UPDATED:

August 1988

3.22.6.2. The Software Group Limited Netcom II

PRODUCT-OR-PACKAGE-NAME: Netcom II

DESCRIPTION:

Netcom II connects 286 or 386-based computers running the SCO Xenix operating system to public packet-switched networks around the world. Netcom II is a complete implementation of the X.25 protocol for AT-bus machines. Netcom II can run under any of the following operating systems: SCO Xenix (286), SCO Xenix (386), Interactive Systems 386/ix, or Microport System V/386. Netcom II can operate as either a packet-mode DTE or DCE, using either the 1980 or 1984 versions of the X.25 protocol.

CONNECT REMOTE USERS A remote user with access to a public data network can make a call to a Xenix host equipped with Netcom II and log in.

CONNECT USERS TO REMOTE HOSTS talkt, The Software Group's Packet Assembler/Disassembler (PAD) program, makes calls to remote hosts under a terminal user's control.

AUTOMATIC FILE TRANSFERS We supply software which allows the UNIX utility uucp to use X.25 Switched Virtual circuits to connect to other uucp hosts.

ELECTRONIC MAIL Using our uucp support, inter-machine electronic mail is simply a matter of identifying the machine (or path to the machine) as well as the username when invoking the mail utility.

OPEN SYSTEMS INTERCONNECTION (OSI) PROTOCOLS X.25 corresponds to the lowest three levels (Physical, Link, and Network) of the Open Systems Interconnection communications architecture. As Netcom II supplies an application interface which gives the programmer full control over Switched Virtual Circuit connections, it greatly reduces the effort required to develop OSI applications.

INCOMING CALL CONTROL A UNIX application can arrange to be informed of each and every call which arrives from the network. The application can choose to clear or accept the call, pass it to another application, or switch it to login.

FACILITY NEGOTIATION PC applications which use our X.25 application programming interface can access, without exception, any and all per-call optional facilities of CCITT X.25 1980 or 1984. In addition, Netcom II supports the additional features added in the 1984 version of the protocol (Multi-Link Support, Registration Packets, and OSI addressing extensions).

TECHNICAL DETAILS: Communications Hardware: 8 MHz Intel 80186, 512K RAM, 64K ROM Multiple Links: two per communications card, up to 8 per system Data Rates: up to 64K bits per second (1 link)

DOCUMENTATION:

User manual supplied with the product covers installation, use and configuration. Source code examples provided illustrate the programmer interface.

CPU:

Intel 286, Intel 386: IBM PC-AT series or compatible machine

O/S:

SCO Xenix 2.1 or 2.2, for either the 286 or 386 processor in native mode, or Interactive Systems 386/ix or Microport System V/AT.

IMPLEMENTATION-LANGUAGE:

C; Some Intel 186 assembler for hardware handling on the communications processor

DISTRIBUTOR:

The Software Group Limited
East Atrium, Suite 201
4701 Steeles Avenue West
Toronto, Canada
M9L 1X2
Fax: (416) 747-1471

CONTACT:

Derek Vair, (416) 747-9490, mnetor!lsuc!dvlmarv!tsgfred!derek@uunet.UU.NET (ARPANET), lsuc!dvlmarv!tsgfred!netcom2 (USENET)

ORDERING-PROCEDURE:

Purchase order or Volume Purchase Agreement

PROPRIETY-STATUS:

Source code proprietary to The Software Group Limited; technology licenses to use the source code are available.

INFORMATION-UPDATED:

August 1988

3.22.7. Ungermann-Bass, Inc.

3.22.7.1. Ungermann-Bass TCP-PC NETBIOS

PRODUCT-OR-PACKAGE-NAME: TCP-PC

DESCRIPTION:

TCP-PC is a combined software and hardware product for a personal computer. TCP-PC integrates both PC Networking and PC to host access into the autonomous personal computer environment. The Ungermann-Bass Personal NIU ^{TM}, an intelligent communications controller, fits in a slot of any IBM compatible PC workstation. The NIU is used for protocol processing without requiring use of workstation resources. UNIX style user applications deliver File Transfer and remote login or Telnet capabilities. These facilities become a part of the extended MS-DOS or PC network environment. This is possible due to the NETBIOS interface that is an integral part of TCP-PC. Through NETBIOS a variety of network operating systems and applications can be supported. Finally a powerful Name Service extends the reach of PC Networking across subnetworks and even to multiple networks. Two optional components, a Name Service and C-Toolkit programmers library further enhance the ability of TCP-PC to enable the PC workstation to participate as an equal in the host-to-host TCP/IP environment.

DOCUMENTATION:

Four documents are available with the product set:

- Net/One TCP-PC Users Guide is appropriate for every PC user.

- Net/One TCP-PC Programmers Reference Manual is useful for technical staff writing to either the C-toolkit procedure library or the NETBIOS/assembler language style interface.

- Net/One TCP-PC Administrator's Guide and TCP Name Service Guide are intended for a site network administrator and sophisticated users who require detailed knowledge of installation and operation of the TCP-PC base and Name Service products.

CPU:

IBM-PC/XT/AT

O/S:

MS-DOS

IMPLEMENTATION-LANGUAGE:

Assembler and C

DISTRIBUTOR:

Ungermann-Bass, Inc.
3900 Freedom Circle
Santa Clara, CA 95052
(408) 496-0111

CONTACT:

West Coast: Jenny Wan, (Jenny%ub.com@relay.cs.net), (408) 496-0111
Or any local Ungermann-Bass sales office

ORDERING-PROCEDURE:

Contact above for information

PROPRIETY-STATUS:

Hardware and software are proprietary to Ungermann-Bass, Inc. TCP-PC is a trademark of Ungermann-Bass, Inc.

INFORMATION-UPDATED:

February 1988

3.22.7.2. Ungermann-Bass TCP-PC C-Toolkit

PRODUCT-OR-PACKAGE-NAME: TCP-PC C-Toolkit

DESCRIPTION:

The TCP-PC C-Toolkit is an optional component of the TCP-PC base product described earlier in this guide.   The C-Toolkit provides "UNIX like" network programmatic access under MS-DOS by implementing all necessary 4.2 BSD procedure calls in compiler specific library modules. Programs can be ported from a Berkeley UNIX environment to MS-DOS with minimal effort. Four types of access are supported. The most common use is the TCP connection oriented interface. A transaction interface is also available at three levels: UDP, IP or raw data link packet formats. Additional advanced features in areas such as receive packet masks are useful in developing advanced applications using the PC as a platform. Separate libraries are available to support popular compilers, and different memory models for each compiler.

The base product is a combined software and hardware product for a personal computer. In addition to software it includes an Ungermann-Bass Personal NIU ^{TM}, an intelligent communications controller, fits in a slot of any IBM compatible PC workstation. The NIU is used for protocol processing without requiring use of workstation resources.

DOCUMENTATION:

The Net/One TCP-PC Programmers Reference Manual is intended for programmers writing to the C-Toolkit interface. In addition it contains information on the NETBIOS/assembler language style interface and other useful information on TCP/IP and the use of the Ungermann-Bass implementation.

CPU:

IBM-PC/XT/AT

O/S:

MS-DOS

IMPLEMENTATION-LANGUAGE:

Assembler and C

DISTRIBUTOR:

Ungermann-Bass, Inc.
3900 Freedom Circle
Santa Clara, CA 95052
(408) 496-0111

CONTACT:

Any Ungermann-Bass sales office. For nearest office you may contact:

Jenny Wan, (Jenny%.com@relay.cs.net), (408) 496-0111

ORDERING-PROCEDURE:

An Ungermann-Bass Marketing Representative will be assigned to meet your ordering requirements.

PROPRIETY-STATUS:

Hardware and software are proprietary to Ungermann-Bass, Inc. TCP-PC is a trademark of Ungermann-Bass, Inc. UNIX is a registered trademark of AT&T.

INFORMATION-UPDATED:

February 1988

3.22.7.3. Ungermann-Bass TCP-PC/XENIX

PRODUCT-OR-PACKAGE-NAME: TCP-PC/XENIX

DESCRIPTION:

TCP-PC/XENIX is a combined software and hardware product for personal computers using the XENIX operating system. It is designed to work in cooperation with XENIX-NET (R) - which is available from the Santa Cruz Operation. SCO XENIX-NET, SCO'S packaged version of Microsoft(R) Networks for XENIX Systems, provides a transparent distributed file system for multiple XENIX and DOS machines on a local-area network. TCP-PC/XENIX and XENIX-NET provide a seamless server and workstation network for MS-DOS based computers. The combination of TCP-PC and SCO XENIX-NET makes available an integrated file system between MS-DOS (R) and XENIX environments. In addition, the extended features of TCP-PC provide internetwork access to users of both operating systems. XENIX-NET version 1.2 supports an interface to the Ungermann-Bass Net/One PC network operating system as well as other products supporting the MS-NET redirector. In addition a NETBIOS interface allows porting of MS-DOS applications directly to the XENIX environment. This will allow communication among a wide variety of applications that can be hosted on XENIX-based systems and MS-DOS based computers when both are equipped with Ungermann-Bass Network Interface Units. An additional feature of TCP-PC/XENIX is that XENIX based stations can take advantage of the powerful Name Service capabilities of Net/One TCP that extends the reach of PC Networking across subnetworks and to multiple networks.

DOCUMENTATION:

XENIX-NET is supplied with a user manual. TCP-PC/XENIX will include a hardware installation manual and software installation instructions.

CPU:

IBM-PC/XT/AT

O/S:

XENIX

IMPLEMENTATION-LANGUAGE:

Assembler and C

DISTRIBUTOR:

Ungermann-Bass, Inc.
3900 Freedom Circle
Santa Clara, CA 95052
(408) 496-0111

The Santa Cruz Operation
PO Box 1900
Santa Cruz, CA 95061
(408) 425-7222

CONTACT:

Any Ungermann-Bass sales office; for nearest office you may contact:

Jenny Wan, (Jenny%ub.com@relay.cs.net), (408) 496-0111
The Santa Cruz Operation, John Harker, (408) 425-7222

ORDERING-PROCEDURE:

Contact above for information

PROPRIETY-STATUS:

Hardware and software are proprietary to Ungermann-Bass, Inc. TCP-PC is a trademark of Ungermann-Bass, Inc. XENIX-NET is a product of the Santa-Cruz Operation. Microsoft, MS and XENIX are registered trademarks of Microsoft Corporation. UNIX is a registered trademark of AT&T.

INFORMATION-UPDATED:

February 1988

3.22.8. Western Digital

3.22.8.1. Western Digital PC/TCP

PRODUCT-OR-PACKAGE-NAME: PC/TCP

DESCRIPTION:

PC/TCP is a collection of programs implementing the DoD standard protocols (TCP/IP, UDP, FTP, Telnet, TFTP, SMTP, and more) for IBM PC's and compatibles. PC/TCP was developed for the WD8003E Ethernet and WD8003S StarLAN local area network communications adapters by FTP Software. PC/TCP offers the user a complete set of the DoD protocols for a PC client. Server capabilities exist for mail and FTP. Optional programs, including an Applications Program Interface and an RFC compliant NETBIOS, are also available as separate packages.

DOCUMENTATION:

A complete set of documentation, including a User manual, Installation Guide, and Command Reference is provided for the user.

CPU:

IBM PC^{TM}, PC-XT^{TM}, PC-AT^{TM}, PS/2^{TM}, Model 25 and 30

O/S:

PC-DOS, MS-DOS

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

Western Digital
2445 McCabe Way
Irvine, CA 92714

CONTACT:

Technical Support, (800) NET-LEADER Ext. 4900

ORDERING-PROCEDURE:

Contact above number for location of office nearest you. Prices available from same. WDC part numbers are WDLAN-TCP1, WDLAN-TCPA, and WDLAN-TCPB.

PROPRIETY-STATUS:

FTP Software, Inc. proprietary

DDN-QUALIFIED:

Yes

INFORMATION-UPDATED:

February 1989

3.23. IBM MAINFRAMES

3.23.1. Advanced Computer Communications

3.23.1.1. ACC IF-370/DDN

PRODUCT-OR-PACKAGE-NAME: IF-370/DDN

DESCRIPTION:

The IF-370/DDN provides a full-service interface between an IBM MVS or VM host and the DDN. Its hardware and software subsystems connect the IBM block multiplexer channel to the DDN PSN, supporting DDN Standard Mode X.25 and HDH (1822-J) protocol access. The IF-370/DDN is capable of supporting T1 access to the PSN, through the use of 68000 microprocessor technology. The hardware interface is a front-end processor that performs three levels of protocol functions and interfaces to host-resident software sub-system implementing the high-level DoD protocols. These software modules can be either the ACCES/MVS package for MVS systems, or the IBM VM Interface Program for TCP/IP.

CPU:

IBM-370, 43xx, 30xx, and any IBM-compatible machine which supports a FIPS-60 channel interface.

O/S:

MVS - ACC's ACCES/MVS package

VM - IBM's VM Interface Program for TCP/IP (5798-FAL)

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

ACC (Advanced Computer Communications)
720 Santa Barbara Street
Santa Barbara, CA 93101
(805) 963-9431

ORDERING-PROCEDURE:

Call or write for information

PROPRIETY-STATUS:

Proprietary product of ACC

DDN-QUALIFIED:

Yes

INFORMATION-UPDATED:

August 1988

3.23.1.2. ACC ACS 9310

PRODUCT-OR-PACKAGE-NAME: ACS 9310

DESCRIPTION:

The ACS 9310 provides a full-service interface between an IBM MVS or VM host and an Ethernet or IEEE 802.3 Local Area Network. Its hardware and software subsystems connect the IBM block multiplexer channel to a 10-megabit-per-second Ethernet or 802.3 LAN. The ACS 9310 maximizes throughput with its modular design utilizing a high-speed bus and 68000 microprocessor technology. The hardware interface is a front-end processor that performs the necessary protocol functions and interfaces to host-resident software sub-system implementing the high-level TCP/IP protocols. These software modules can be either the ACCES/MVS package for MVS systems, or the IBM VM Interface Program for TCP/IP.

DOCUMENTATION:

Fully documented vendor product; descriptive literature available

CPU:

IBM-370, 43xx, 30xx, and any IBM-compatible machine which supports a FIPS-60 channel interface

O/S:

MVS - ACC's ACCES/MVS package

VM - IBM's VM Interface Program for TCP/IP (5798-DRG)

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

ACC (Advanced Computer Communications)
720 Santa Barbara Street
Santa Barbara, CA 93101

ORDERING-PROCEDURE:

Vendor product; contact sales department

PROPRIETY-STATUS:

Proprietary product of ACC

INFORMATION-UPDATED:

August 1988

3.23.2. ADVINTECH Corporation

3.23.2.1. ADVINTECH FEP

PRODUCT-OR-PACKAGE-NAME: ADVINTECH FEP

DESCRIPTION:

ADVINTECH Corporation builds and supports products that extend the Defense Data Network (DDN). The ADVINTECH TAC, FEP and HFS interconnect IBM 3270 or compatible SNA/SDLC or BSC terminal controllers and devices to IBM or PCM MVS-VTAM computer systems on the DDN providing native mode terminal operation (3270 Data Stream) with the host and the full suite of Department of Defense (DoD) protocols. ADVINTECH products also connect IEEE 802.3 Local Area Networks with IBM MVS systems and the DDN. These products are TCP/IP based and fully interoperable.

FEP models connect IBM or plug compatible MVS-ACF/VTAM host computers to the DDN, IEEE 802.3 LANs and/or T-1 circuits. The FEP is a Front-End Processor communications control unit (FEP) that appears to MVS as a 3274 channel attached terminal control unit. It can readily co-exist with other vendors FEPs or other ADVINTECH FEPs on the host computer. The FEP has full TCP/IP capability used in support of DDN protocols and the 3270 native mode protocols. The FEP provides a direct host connection for native modes 3270 terminals via ACF/VTAM. The terminals appear as 3270 Display Stations or Printers. Users are provided a full service DDN interface to all facilities on the host. ADVINTECH's HFS manages these conections through the Service Access Protocol Interface (SAPI).

FEP Product Summary:

The FEP is a data communications front-end processor that connects to an IBM or PCM (Plug Compatible Manufacturer) MVS ACF/VTAM computer system via a Multiplexer Channel utilizing one subchannel address. It connects to the DDN via an RS-449/422 or RS-232-C interface utilizing X.25 Standard and TCP/IP Protocols. The FEP has a power switch, a reset switch, twelve indicator lights, two Asynchronous ASCII Maintenance Ports (RS-232-C) and a four foot 110 volt power cord with a three pronged (grounded) plug.

The FEP hardware is built on a Multibus (IEEE 796 BUS) structure utilizing Motorola 68000 technology. Two single board computers are utilized with an IBM channel interface board as the core of each FEP model. Additional boards and interfaces are added to provide the different models.

ADVINTECH FEP models include:

- FEP-01: one LAN interface using IEEE 802.3 standard Baseband connection via a Transceiver and 50 foot cable provided with the unit.

- FEP-10: one DDN interface using RS-449/422 at 56 Kbps.

- FEP-10C: one DDN interface using RS-232-C (up to 19.2 Kbps) externally clocked.

- FEP-11: one DDN interface using RS-449/422 at 56 Kbps and one Local Area Network (LAN) interface utilizing the IEEE 802.3 standard.

- FEP-11C: provides one DDN interface using RS-232-C (up to 19.2 Kbps) externally clocked and one Local Area Network (LAN) interface utilizing the IEEE 802.3 standard.

DOCUMENTATION:

FEP Systems Reference Guide

CPU:

No CPU requirement. ADVINTECH's FEP products are Motorola 68000 based and is coupled with ADVINTECH hardware for interfacing to the DDN and other media.

O/S:

ADVINTECH's FEP is based on RTOS, an ADVINTECH proprietary operating system.

IMPLEMENTATION-LANGUAGE:

Predominantly C, some Assembly

DISTRIBUTOR:

ADVINTECH
5185 MacArthur Blvd., N.W.
Washington, D.C. 20016

CONTACT:

Sales Department, (202) 895-4150, (800) 638-9296, Fax# (202) 966-3650

ORDERING-PROCEDURE:

Call for details

PROPRIETY-STATUS:

All Products proprietary

INFORMATION-UPDATED:

February 1988

3.23.2.2. ADVINTECH TAC

PRODUCT-OR-PACKAGE-NAME: ADVINTECH TAC

DESCRIPTION:

> ADVINTECH Corporation builds and supports products that extend the Defense Data Network (DDN). The ADVINTECH TAC FEP and HFS interconnect IBM 3270 or compatible SNA/SDLC or BSC terminal controllers and devices to IBM or PCM MVS-VTAM computer systemS on the DDN providing native mode terminal operation (3270 Data Stream) with the host and the full suite of Department of Defense (DoD) protocols. ADVINTECH products also connect IEEE 802.3 Local Area Networks (LAN) with IBM MVS systems and the DDN. These products are TCP/IP based and are interoperable.

> The ADVINTECH TAC connects IBM 3270 or compatible terminal control units and devices (Display Stations and Printers) to the DDN. Support is provided for 3270 control units and terminals as native mode devices connecting across the DDN (using TCP/IP) to any ADVINTECH FEP at the host, or as a Telnet Network Virtual Terminal (NVT) for access to any DDN host computer supporting Telnet NVT.

> TAC3270 Product Summary:

> The ADVINTECH TAC is a data communications controller for use on the DDN (or directly attached to an IEEE 802.3 Baseband LAN). Up to 128 terminal devices can be connected to the TAC via IBM 3270 terminal control units attached to the six Terminal Ports. These ports support point-to-point or multidrop configurations at speeds up to 19.2 Kbps using either SDLC or BSC protocols on an RS-232-C interface. It connects to the DDN via an RS-449/422 or RS-232-C interface utilizing X.25 Standard and TCP/IP Protocols. The TAC has a power switch, a reset switch, twelve indicator lights, two Asynchronous ASCII Maintenance Ports (RS-232-C) and a four foot 110 volt power cord with a three pronged (grounded) plug.

> The ADVINTECH TAC hardware is built on a Multibus (IEEE 796 BUS) structure utilizing Motorola 68000 technology. Two single board computers are utilized with a port extension card as the core of each TAC model.

> ADVINTECH TAC models include:

> - TAC-01: one LAN interface using IEEE 802.3 standard Baseband connection via a Transceiver and 50 foot cable provided with the unit. It is a companion unit to the FEP, and the FEP-31, all of which provide IBM host computer connection to an IEEE 802.3 Baseband LAN (available in the 2nd quarter 1988).

> - TAC-10: one DDN interface using RS-449/422 at 56 Kbps.

> - TAC-10C: one DDN interface using RS-232-C (up to 19.2 Kbps) externally clocked.

> - TAC-11: one DDN interface using RS-499/44 at 56 Kpbs and one Local Area Network (LAN) interfacing utilizing the IEEE 802.3 Standard.

DOCUMENTATION:

> TAC Systems Reference Guide

CPU:

> No CPU requirement. The FEP and TAC ADVINTECH products are Motorola 68000 based and are coupled with ADVINTECH hardware for interfacing to the DDN and other media.

O/S:

> ADVINTECH's TAC is RTOS based, an ADVINTECH proprietary operating system.

IMPLEMENTATION-LANGUAGE:

> Predominantly C, some Assembly

DISTRIBUTOR:

ADVINTECH Corporation
5185 MacArthur Blvd
Washington, D.C. 20016

CONTACT:

Sales Department, (202) 895-4150, (800) 638-9296, Fax# (202) 966-3650

ORDERING-PROCEDURE:

Call for details

PROPRIETY-STATUS:

All products proprietary

INFORMATION-UPDATED:

February 1988

3.23.3. Fibronics International, Inc.

3.23.3.1. Fibronics K200

PRODUCT-OR-PACKAGE-NAME: K200

DESCRIPTION:

> The K200 Ethernet controller provides a high-speed interface between an IBM 370, 30xx or PCM and the Ethernet local-area network. The K200 is a microprocessor driven control unit that attaches to IBM's block multiplexer channel using standard IBM bus and tag cables. K200 implements the physical and data link layers of the ISO/OSI Reference Model for network architecture and conforms to the specifications for Ethernet, version 1.0. Maximum throughput is in excess of 2.5 megabits per second.

DOCUMENTATION:

> Available from vendor

CPU:

> IBM 370, IBM 30xx, PCM

DISTRIBUTOR:

> Fibronics International, Inc.
> Communications Way
> Hyannis, MA 02601-1892

CONTACT:

> **Inside Sales, (617) 778-0700**

PROPRIETY-STATUS:

> Fibronics product

INFORMATION-UPDATED:

> February 1988

3.23.3.2. Fibronics K310 T1/Ethernet System

PRODUCT OR PACKAGE NAME: K310 T1/Ethernet System

DESCRIPTION:

The K310 Ethernet controller pair provides a high-speed interface between an IBM 370, 30xx or PCM and a remote Ethernet local-area network over T1 or high-speed communication lines.   The K310H is a microprocessor driven control unit that attaches to IBM's block multiplexer channel using standard IBM bus and tag cables and to a communication link. The K310E attaches to a high-speed communication link an the Ethernet. The K310 implements the physical and data link layers of the ISO/OSI Reference Model for network architecture and conforms to the specification for Ethernet, Version 1.0. Please see KNET VM and/or KNET MVS in the Software section.

DOCUMENTATION:

Available from vendor

CPU:

IBM 370, IBM 30xx, or PCM

DISTRIBUTOR:

Fibronics International, Inc.
Communications Way
Hyannis, MA 02601-1892

CONTACT:

Inside Sales, (617) 778-0700

PROPRIETY-STATUS:

Fibronics product

INFORMATION-UPDATED:

February 1988

3.23.4. Protocom Devices

3.23.4.1. Protocom Devices P-Series PAD - IBM 3270BSC/SNA-SDLC/2780/3780

PRODUCT-OR-PACKAGE-NAME: P-Series PAD - IBM 3270 BSC/3270, SNA-SDLC/2780/3780, HASP, SNA Fid 3, SDLC

DESCRIPTION:

Protocom P-Series PADs allow you to run a full range of IBM equipment over public and private packet switched networks that support CCITT X.25 1980/1984. The P-Series PAD is standard certified for up to 64 Kbps on all products for the DDN. The Protocom P-Series PAD involves the TCP/IP protocol. P-Series PADs can be monitored and configured locally or remotely. Local area networking is supported via a line interface module for all P-Series PADs. The P-Series PADs are available in four versions:

- P250: 10 devices/printers are supported on 1 synchronous port

- P2500: Up to 40 terminals/printers are supported on 4 synchronous ports

- P160: This model consists of a varying number of protocol modules, each of which supports a separate protocol and up to 40 devices. Up to 240 sessions and six different protocols can be realized simultaneously at speeds reaching 56 Kbps. A network allows load sharing and call hunting.

- PC Based: A personal computer based PAD is also available that operates on IBM PC/XT compatibles and allows simultaneous emulation of multiple protocols on the PC Based network. This line of dual-ported interface cards supports up to 40 devices per card at speeds up to 19.2 Kbps. Two network ports are available to support redundancy and load sharing at speeds up to 64 Kbps.

All P Series PADs offer the following features:

Independently mapped terminal and host addresses permit communication between any terminals and/or printers and any IBM application on the network. Three possible connections, two simultaneous user sessions on a single terminal, and host originated calls to shared printers are all supported. TurboMode (Protocom's proprietary data streaming) provides unequalled response time. Configurable user screens, mnemonic addressing and user defined function keys are all available.

DOCUMENTATION:

Available on request by contacting below

CPU:

All 3270 BSC/3270 SNA-SDLC/2780/3780, HASP, SNA, Fid 3, SDLC and functionally compatible equipment

O/S:

VM, MVS, OS370, IMS

IMPLEMENTATION-LANGUAGE:

Assembler

DISTRIBUTOR:

Before September 1, 1988
Protocom Devices
1666 Bathgate Avenue
Bronx, N.Y. 10457
(212) 716-5400

After September 1, 1988
Protocom Devices
25 Rockwood Place
Englewood, N.J.

CONTACT:

Contact above

ORDERING-PROCEDURE:

Submit purchase order to above address; call contact for pricing information

PROPRIETY-STATUS:

Product of Protocom Devices, Inc.

DDN-QUALIFIED:

Yes

INFORMATION-UPDATED:

August 1988

3.24. IMAGEN CORPORATION

3.24.1. Imagen ImageServer 2308

PRODUCT-OR-PACKAGE-NAME: ImageServer XP Model 2308 TCP/IP Ethernet

DESCRIPTION:

All products in the ImageServer XP Series achieve true page throughput rates with its proprietary Real-Time Rasterization process which lets you print at full speed because processing and printing are handled simultaneously. All models in this series are compatible with a broad choice of interfaces including Ethernet, RS-423, IBM 3270 and 2780/3780, Centronics, Dataproducts and Versatec. IMAGEN offers a large selection of optional fonts on all products including Lucida, Lucida Sans, Helvetica, Times Roman, and Century Schoolbook.

The ImageServer XP Model 2308 8PPM 300 DPI laser printer includes a Canon LBP-CX print engine, an IMAGEN IP/II Image Processor, a single floppy disk drive and one 8 1/2 x 11" input cassette tray. The 2308 is available in 1, 2, and 3 Mbyte configurations with memory options to include up to 3 additional megabytes of RAM. An optional 20 Mbyte Winchester can be included to allow faster access of fonts and storage of forms or special document formats. The ImageServer XP Model 2308 desktop laser printer is IMAGEN's versatile entry level document processing system designed to meet the publishing needs of small work groups requiring high-quality printing of text and graphics.

DOCUMENTATION:

Available from vendor

CPU:

Motorola 68000, Multibus-based, proprietary hardware

O/S:

Proprietary, not user-programmable

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

IMAGEN Corporation
2650 San Thomas Expressway
Santa Clara, CA 95051
(408) 986-9400

CONTACT:

Sales: Roger McLean, Technical: John Lang

ORDERING-PROCEDURE:

Contact vendor for more information

PROPRIETY-STATUS:

IMAGEN proprietary

INFORMATION-UPDATED:

July 1986

3.24.2. Imagen ImageServer 3320

PRODUCT-OR-PACKAGE-NAME: ImageServer XP Model 3320 TCP/IP Ethernet

DESCRIPTION:

All products in the ImageServer XP Series achieve true page throughput rates with its proprietary Real-Time Rasterization process which lets you print at full speed because processing and printing are handled simultaneously. All models in this series are compatible with a broad choice of interfaces including Ethernet, RS-423, IBM 3270 and 2780/3780, Centronics, Dataproducts and Versatec. IMAGEN offers a large selection of optional fonts on all products including Lucida, Lucida Sans, Helvetica, Times Roman, and Century Schoolbook.

The ImageServer XP Model 3320 20PPM 300 DPI laser printer includes a Canon LBP-20 print engine, an IMAGEN IP/II Image Processor, a single floppy disk drive and two 8 1/2 x 11" input cassette trays. The 3320 is available in 2 or 3 Mbyte configurations with memory options to include up to 3 additional megabytes of RAM. An optional 20 Mbyte Winchester can be included to allow faster access of fonts and storage of forms or special document formats. The 3320 is driven by a page description language and can handle 11 x 17" paper format. This unit is perfect for use as a proofing device in CAE/CAD applications and for large volume document processing applications where high duty cycle, offset quality printing, and low cost of operation are important.

DOCUMENTATION:

Available from vendor

CPU:

Motorola 68000, Multibus-based, proprietary hardware

O/S:

Proprietary, not user-programmable

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

IMAGEN Corporation
2650 San Thomas Expressway
Santa Clara, CA 95051
(408) 986-9400

CONTACT:

Sales: Roger McLean
Technical: John Lang

ORDERING-PROCEDURE:

Contact vendor for more information

PROPRIETY-STATUS:

IMAGEN proprietary

INFORMATION-UPDATED:

July 1986

3.24.3. Imagen ImageServer 4324

PRODUCT-OR-PACKAGE-NAME: ImageServer XP Model 4324 TCP/IP Ethernet

DESCRIPTION:

All products in the ImageServer XP Series achieve true page throughput rates with its proprietary Real-Time Rasterization process which lets you print at full speed because processing and printing are handled simultaneously. All models in this series are compatible with a broad choice of interfaces including Ethernet, RS-423, IBM 3270 and 2780/3780, Centronics, Dataproducts and Versatec. IMAGEN offers a large selection of optional fonts on all products including Lucida, Lucida Sans, Helvetica, Times Roman, and Century Schoolbook.

The ImageServer XP Model 4324 24PPM 300 DPI laser printer includes a Xerox SP-24 print engine, an IMAGEN IP/II Image Processor, a single floppy disk drive and two 8 1/2 x 11" input cassette trays. The 4324 is available in 2 or 3 Mbyte configurations with memory options to include up to 3 additional megabytes of RAM. An optional 20 Mbyte Winchester can be included to allow faster access of fonts and storage of forms or special document formats. With superior paper management capabilities including 11 x 17" paper handling and offset stacking the 4324 is designed to meet the needs of work group document processing and CAE/CAD applications.

DOCUMENTATION:

Available from vendor

CPU:

Motorola 68000, Multibus-based, proprietary hardware

O/S:

Proprietary, not user-programmable

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

IMAGEN Corporation
2650 San Thomas Expressway
Santa Clara, CA 95051
(408) 986-9400

CONTACT:

Sales: Roger McLean
Technical: John Lang

ORDERING-PROCEDURE:

Contact vendor for more information

PROPRIETY-STATUS:

IMAGEN proprietary

INFORMATION-UPDATED:

July 1986

3.24.4. Imagen ImageServer 7320

PRODUCT-OR-PACKAGE-NAME: ImageServer XP Model 7320 TCP/IP Ethernet

DESCRIPTION:

All products in the ImageServer XP Series achieve true page throughput rates with its proprietary Real-Time Rasterization process which lets you print at full speed because processing and printing are handled simultaneously. All models in this series are compatible with a broad choice of interfaces including Ethernet, RS-423, IBM 3270 and 2780/3780, Centronics, Dataproducts and Versatec. IMAGEN offers a large selection of optional fonts on all products including Lucida, Lucida Sans, Helvetica, Times Roman, and Century Schoolbook.

The ImageServer XP Model 7320 20 PPM 300 DPI laser printer includes a Canon LBP-20 print engine with a duplexer unit, a large capacity input tray and dual offset stackers, an IMAGEN IP/II Image Processor, a single floppy disk drive, a serial interface, two 8 1/2 x 11" input cassettes, and a Raster Image Buffer that allows Real-Time Rasterization of the most complex graphics. The 7320 is available with 3 Mbytes of RAM with options to include up to 3 additional megabytes. An optional 20 Mbyte Winchester can be included to allow faster access of fonts and storage of forms or special document formats. The 7320 is the ideal production machine for large-volume document processing or for large-format CAE/CAD applications.

DOCUMENTATION:

Available from vendor

CPU:

Motorola 68000, Multibus-based, proprietary hardware

O/S:

Proprietary, not user-programmable

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

IMAGEN Corporation
2650 San Thomas Expressway
Santa Clara, CA 95051
(408) 986-9400

CONTACT:

Sales: Roger McLean
Technical: John Lang

ORDERING-PROCEDURE:

Contact vendor for more information

PROPRIETY-STATUS:

IMAGEN proprietary

INFORMATION-UPDATED:

July 1986

3.24.5. Stanford Ethernet Appletalk Gateway

PRODUCT-OR-PACKAGE-NAME: Stanford Ethernet Appletalk Gateway (SEAGATE)

DESCRIPTION:

SEAGATE is a gateway that connects an Ethernet using the internet protocols, to an applebus (AppleTalk) using Apple or IP protocols. With such a gateway in place, it becomes possible to create server daemons to provide file, printing, mail, etc. services for Macintoshes.

This distribution of SEAGATE provides all the information and software you should need to setup your own gateway. Please bear in mind that this distribution is not "supported" and that we can't give extensive help about the mechanics of putting your gateway together. We would like to hear about bug reports or enhancements however.

To assemble your own gateway, you will need at least the items below:

* The hardware is a 3 card multibus system: A "SUN" (or Forward) 68000 CPU board, an Interlan NI3210 Ethernet card, and a homemade applebus card (about 8 chips) which takes an afternoon to wirewrap.

* A UNIX (usually VAX) running 4.2 BSD, 4.1 BSD or Eunice. This is because the source distributed is written in the PCC/MIT 68000 C compiler. [This is the same compiler included with the SUMACC Mac C cross development kit.] You can probably substitute any 68K C compiler and assembler, but it will be harder.

* Inside Mac, update service, and the Mac software supplement.

* Applebus Developer's Kit, includes: protocol manual, applebus taps and interconnecting cable, Mac applebus drivers on SONY disks.

Software usable through the gateway includes:

* MAT (Mac / ATP transfer program). A simple file transfer utility and daemon. Also serves as a skeleton application for general Mac transaction services. For example you could easily build a Mac program to read and create "internet mail" containing pictures and speech.

* EFS (external file system). Allows UNIX to act as a general file server for the Macintosh. The Mac user sees the standard "desktop" iconic model of his remote directory on UNIX. This software was written by John Seamons of LucasFilm and adapted by us for AppleTalk.

* TELNET and TFTP. These correspond to the UNIX programs used to access virtual terminal and file transfer services. The Mac programs here were developed by MIT (Romkey) / Dartmouth (Mark Sherman) and CMU (Tim Maroney). This software has been released by Tim to net.sources.mac (usenet) and is FTPable from CMU.

The released material for all of the above includes source code and documentation. These files are currently publicly accessible on-line via FTP to our SUMEX host, in the <info-mac> directory. There are also tar magtapes available of SUMACC and INFO-MAC (which contains the seagate files). Magtape info:

The tape duplication company below charges $65 to send each tape. This includes the new reel of tape and surface (book rate) postage. They will accept prepaid checks or money orders. Call the number below for additional info about postage for airmail or international mail.

> Maria Code
> Data Processing Services
> Info-Mac TAR tape, and/or SUMACC TAR tape
> 1371 Sydney Drive
> Sunnyvale, CA 94087
> (408) 735-8006

DOCUMENTATION:

On [SUMEX]<info-mac> the files are:

seagate.ms   documentation in -ms format

seagate.hard   the wirelist for the applebus interface

seagate.shar1   the main gateway sources (including above docs)

seagate.shar2   the ddt, dlq, testscc, and tftp subdirectories

seagate-efs.shar   the file service (client and server)

seagate-mat.shar   the MAT service

All these files are plain ASCII and can be FTP'd from SUMEX with the "anonymous" login. The shar (shell archive) files are large so we would appreciate it if you would avoid transfers during 9 AM to 5 PM PST.

CPU:

Apple Macintosh

O/S:

UNIX and others

IMPLEMENTATION-LANGUAGE:

C

CONTACT:

Bill Croft, SUMEX, Stanford University, (Croft@SUMEX-AIM.STANFORD.EDU),(415) 723-5565

PROPRIETY-STATUS:

Public domain (Copyrighted by Stanford; may be used, but not sold without permission.)

INFORMATION-UPDATED:

January 1986

3.25. INTERPHASE CORPORATION

3.25.1. V/Ethernet 3207 Hawk Controller for VMEbus

PRODUCT-OR-PACKAGE-NAME: V/Ethernet 3207 Hawk Controller for VMEbus

DESCRIPTION:

This is a link layer controller with Host TCP/IP support

DOCUMENTATION:

V/Ethernet 3207 User's guide (included)

MACHINE-TYPE/CPU:

SUN, Apollo, VMEbus based machines

O/S:

UNIX, SUNOS

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

Interphase Corporation
2925 Merrell Road
Dallas, TX 75229

CONTACT:

Jacob Hsu, Product Manager, (214) 350-9000

ORDERING-PROCEDURE:

Full PZ connector (3207-0)
PZ connector "B" row only (3207-1)

PROPRIETY-STATUS:

V/Ethernet 3207 Controller is an Interphase Proprietary Product

DDN-QUALIFIED:

No

INFORMATION-UPDATED:

February 1989

3.25.2. Interphase V/Ethernet 4207 VMEbus Controller

PRODUCT-OR-PACKAGE-NAME: Interphase V/Ethernet 4207 VMEbus Controller

DESCRIPTION:

This is a link layer with Host TCP/IP support. On-board TCP/IP is planned for the future.

DOCUMENTATION:

V/Ethernet 4207 User's Guide (included)

MACHINE-TYPE/CPU:

SUN, Apollo, VMEbus based machines

O/S:

UNIX, SUNOS

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

Interphase Corporation
2925 Merrell Rd.
Dallas, TX 75229

CONTACT:

Jacob Hsu, Product Manager, (214) 350 9000

ORDERING-PROCEDURE:

P2 connector "B" row only (4207-0), Full P2 connector (4207-1)

PROPRIETY-STATUS:

V/Ethernet 4207 Eagle is an Interphase proprietary product.

INFORMATION-UPDATED:

February 1989

3.26. KINETICS, INC.

3.26.1. EtherPort SEL

PRODUCT-OR-PACKAGE-NAME: EtherPort SEL

DESCRIPTION:

The Kinetics EtherPort SEL is an internal twisted-pair Ethernet controller board for Macintosh SE computers developmed in conjunction with SynOptics Communications, Inc. Software from Kinetics and third party developers allows the EtherPort-equipped Macintosh SE to communicate with a diverse range of Ethernet-based computer systems, including DEC VAXes, UNIX systems, PCs, and terminals.

The EtherPort SE supports AppleTalk, TCP/IP, DECnet, and OSI protocols. It has 32K of on-board memory, comes with a built-in transceiver, and connects to LattisNet, the twisted-pair Ethernet developed by Synoptics Communications.

DOCUMENTATION:

Installation Guide

MACHINE-TYPE/CPU:

Macintosh SE

O/S:

Macintosh O/S

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

Kinetics
2540 Camino Diablo
Walnut Creek, CA 94596
(415)947-0998

CONTACT:

Tom Cromelin, Product Manager (415) 947-0998

ORDERING-PROCEDURE:

EtherPort SEL, 170/000600 or KFRE-2

PROPRIETY-STATUS:

Proprietary product of Kinetics

INFORMATION-UPDATED:

February 1989

3.27. MITRE CORPORATION

3.27.1. Mitre NAC

PRODUCT-OR-PACKAGE-NAME: Mitre Network Access Component

DESCRIPTION:

This is MITRE's second generation network controller (see ZILOG-Z8000). Using an expanded hardware base, industry standard backplanes and multiple microprocessor boards, MITRE has built a MCS-68000-based network access component. This network component has both MULTIBUS and VERSABUS form factors and broadband, Ethernet and 1822 network interfaces.

The standard MULTIBUS network component contains an OMNIBYTE-dual-ported 68000, with 128K bytes dynamic RAM, and 96K bytes EPROM, a memory board, and a Bridge serial i/o (SIO) interface board. The SIO board has its own 68000 cpu, 8 serial ports, 4K bytes RAM and 32K bytes ROM. The long-haul network version contains an ACC MULTIBUS-1822 interface. The VERSABUS version supports an ACC VERSABUS-1822 interface. In addition, the VERSABUS version supports an ACC VERSABUS-UNIBUS interface for host-interfacing to DEC machines.

The software is written in "C" and runs under CMOS, a "C" version of SRI's Micro Operating System. In addition to supporting TCP, IP, ICMP, and the appropriate network level protocol, the network front-end version (aka a host interface unit for the LAN environment) supports both the DTI-Host-to- Front-End Protocol and a MITRE Network Access Protocol.

DOCUMENTATION:

Some Mitre Technical Reports

CPU:

MCS-68000

O/S:

CMOS

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

The Mitre Corporation
7525 Colshire Drive
McLean, VA 22102

CONTACT:

Manette Charny, (charny@mitre-gateway.arpa), (703) 883-6728

PROPRIETY-STATUS:

Public domain

INFORMATION-UPDATED:

February 1988

3.27.2. Mitre Z8000

PRODUCT-OR-PACKAGE-NAME: MITRE Zilog Z8000

DESCRIPTION:

This is MITRE's first generation network controller. It is the product of a series of MITRE projects aimed at making network access (both local and long-haul) as straightforward as computer peripheral access. Microprocessors make it possible to construct a "network controller" that handles the particulars of packet ordering and flow control in the same way that hardware controllers handle the particulars of disk cylinder centerline or an end of tap sensor. This TCP/IP network controller, supported by a Z8000 microprocessor box, is currently interfaced to a number of UNIX systems via a UMC-Z80. The outboard box is accessed by a set of I/O-like management calls (open, close, read, write, and special) which transport TCP requests via a network access protocol.

The outboard box has 64K bytes of RAM, 32 bytes of ROM, a Z8002 micro, and a serial USART (880K BPS max.) All of the software was written in C using an in-house version of the portable C compiler. The unit interfaces as easily to a local network as it does to the DDN. All that is necessary for this conversion is the addition of an ACC-1822 hardware device and a new device driver. Other than different round trip delays, host user-level software sees no difference between the two network devices. The resulting set of Z8000-based building blocks supports host interface unit and a terminal concentrator on the local net.

Performance with TCP/IP has been measured with two user processes talking via TCP/IP over the cable at 350K BPS. Rates as high as 450K BPS occur when user I/O buffer sizes are set at 8K bytes per I/O. The Internet Protocol contains the lowest level of addressing. This allows for local units to be addressed in the same way remote units, two or three networks away, are addressed. The effect of 300 bit TCP/IP headers has negligible impact on performance.

DOCUMENTATION:

Some Mitre Technical Reports

O/S:

CMOS

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

The Mitre Corporation
7525 Colshire Drive
McLean, VA 22102

CONTACT:

Manette Charny, (charny@mitre-gateway.arpa), (703) 883-6728

PROPRIETY-STATUS:

Public domain

INFORMATION-UPDATED:

February 1988

3.27.3. Mitre CMOS

PRODUCT-OR-PACKAGE-NAME: TCP/IP for CMOS systems

DESCRIPTION:

> An implementation of Department of Defense (DoD) communication protocols Internet Protocol (IP) and Transmission Control Protocol (TCP) which implement options specified in MIL-STD 1777 and MIL-STD 1778. IP options STREAM, ROUTING, TIMESTAMPS, and new draft SECURITY are implemented. TCP option MAX SEGMENT LENGTH is implemented as well as precedence.

DOCUMENTATION:

> Documents describing the OS and the TCP/IP implementation can be obtained from MITRE document control.

>> "CMOS, A Portable Operating System in C"
>> Gilbert R. Berglass
>> MITRE Technical Report: MTR-84W00071

>> "DMOS, A Portable Distributed Operating System in C"
>> Shiraz G. Bhanji
>> MITRE Technical Report: MTR-85W00206

>> "Implementation of the BBN 1822 Host-to-IMP Protocol
>> in a CMOS Environment"
>> Manette Charny
>> MITRE Working Paper: WP-84W00223

>> "The MITRE Implementation of MIL-STD 1777:
>> The Internet Protocol"
>> William S. Morgart
>> MITRE Working Paper: WP-86W00533

>> "TCP/IP" Interface Specifications for CMOS Systems"
>> Daryl O. Crandall
>> MITRE Working Paper: WP-86W00180

>> "TCP/IP" Diagnostic Package for CMOS Systems"
>> Daryl O. Crandall
>> MITRE Working Paper: WP-86W00523

CPU:

> Motorola 68000 or 68010

O/S:

> MITRE implementation of CMOS

IMPLEMENTATION-LANGUAGE:

> "C" Motorola 68000 assembler on UNIX

DISTRIBUTOR:

>> The Mitre Corporation
>> 7525 Colshire Drive
>> McLean, VA 22102

CONTACT:

The current contact(s) for the TCP/IP & CMOS distribution tape are:

Manette Charny, (charny@mitre-gateway.arpa), (703) 883-6728 Mailstop: W425, The Mitre Corp (see address above); and Daryl Crandall, (daryl@mitre-gateway.arpa), (703) 883-7278 Mailstop: H4132, The Mitre Corp (see address above)

ORDERING-PROCEDURE:

The requester should send to MITRE:

1. 2400 foot reel of 1/2 inch magnetic tape capable of handling 1600 bpi

2. Letter indicating the following:

   - Who they are

   - What our software is to be used for; equipment and operating system being used by them.

   - Tape format desired: only format possible is Berkeley 4.2 UNIX tar, 1600 bpi, and any blocking factor 1 through 20. (20 by default)

   - They agree to the four conditions listed below.

The software is distributed free of charge with the following conditions:

1. The MITRE TCP/IP source files won't be passed on to third parties. If someone wants them, have them contact us. We just want to know who has what, and what it is being used for.

2. MITRE will be credited should the software be used in a product or written about in any publication. However, MITRE will not be referenced as the source in advertisements.

3. MITRE assumes no legal responsibility for source code and its subsequent use. No warranty is expressed or implied.

4. If any bugs or problems are found then they should be reported back to MITRE.

NOTE:

It takes a good "hacker" to interpret and install the software provided from this office.

INFORMATION-UPDATED:

February 1988

3.28. OPUS SYSTEMS

3.28.1. TCP/IP for Opus Systems Personal Mainframes

PRODUCT-OR-PACKAGE-NAME: TCP/IP for Opus Systems Personal Mainframes

DESCRIPTION:

Opus provides a powerful, board-level 32 bit UNIX coprocessor. The board turns a PC compatible system into a high performance workstation. The networking software supports TCP/IP from the UNIX environment using a standard PC Ethernet card.

DOCUMENTATION:

Opus 200 PM User Manual, Opus 200 PM Release Notice, Opus Networking Release Notice

MACHINE-TYPE/CPU:

Opus 200 PM

O/S:

UNIX

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

Opus Systems
20863 Stevens Creek Blvd. Bldg. 400
Cupertino, CA 95014

CONTACT:

John Schimpf, Technical Marketing

ORDERING-PROCEDURE:

Opus 2X0PM-44, X=2, 6 or 7 depending on performance/CPU, YY= amount of on-board memory (4-20 MB)

INFORMATION-UPDATED:

February 1989

3.29. PLEXUS COMPUTERS, INC.

3.29.1. Plexus LAN

PRODUCT-OR-PACKAGE-NAME: TCP/IP LAN

DESCRIPTION:

An Ethernet LAN implementation using an intelligent front-end processor. TCP, IP and UDP protocols are downloaded into the front-end processor. FTP, Telnet, Mail and remote commands such as rlogin, rsh and rcp reside on the Host job processor.

DOCUMENTATION:

Installation and Users manual are provided.

CPU:

P/90, P/95

O/S:

Plexus implementation of UNIX System V

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

Plexus Computers, Inc.
3833 North First Street
San Jose, CA 95134
(408) 943-9433

CONTACT:

Local Plexus Sales Office

ORDERING-PROCEDURE:

Through above contact

PROPRIETY-STATUS:

Plexus supported product

INFORMATION-UPDATED:

January 1988

3.30. PROTEON, INC.

3.30.1. Proteon p4200 Gateway

PRODUCT-OR-PACKAGE-NAME: Proteon p4200 Gateway

DESCRIPTION:

The p4200 gateway is a multiprotocol router, supporting (among other protocols) TCP/IP. It is a complete system consisting of a CPU, memory, and a wide variety of LAN and WAN interfaces. The LAN interfaces include:

- ProNET-4

- ProNET-10

- ProNET-80

- Ethernet

The WAN interfaces include:

- DDN 1822 (LH & DH)

- Synchronous up to 64 kbaud (for DDS)

- Synchronous up to 2.048 Mbaud (for T1)

The hardware is based on a Multibus 68010, with a watchdog timer that prevents hung software from taking the gateway out of service. The unit boots over one or more of the LAN interfaces, using TFTP, to avoid the unreliability of floppy disks.

All configuration information is stored in battery-backed-up static RAM, allowing user-reconfiguration. The support code for the interfaces includes periodic self-testing, so that failed interfaces or networks will be disabled, allowing the routing protocols to find new routes.

The TCP/IP implementation includes support for IP, ICMP, EGP, and presently uses the RIP protocol as an internal routing protocol. A server Telnet module allows access to the console capabilities, providing statistics, logging, and tracing capabilities. The IP includes support for subnetting.

Additional protocols can be added to the software, such as DECnet or XNS, to allow one backbone network to serve all of the protocols in use on a given internetwork.

DOCUMENTATION:

Documentation includes full manuals on the software, including all trace messages.

CPU:

68010

O/S:

Compatible with any conformant TCP/IP host implementation

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

Proteon, Inc.
Two Technology Drive
Westborough, MA 01581-5008

CONTACT:

Mick Scully, (mcs@proteon.com), (617) 898-2800

PROPRIETY-STATUS:

Proprietary; source code not available

INFORMATION-UPDATED:

February 1988

3.31. SCI TECHNOLOGY, INC.

3.31.1. SCI/Fortune 9000 Supermicrocomputer

PRODUCT-OR-PACKAGE-NAME: SCI/Fortune 9000 Supermicrocomputer

DESCRIPTION:

SCI Technology, Inc. manufactures the SCI/Fortune 9000 Supermicrocomputer, a multi-user, multi-tasking system based on the Intel 80386 and the UNIX operating system. A MULTIBUS card cage can house an Ethernet controller.

DOCUMENTATION:

One full set of documentation is provided with each system; additional sets may be purchased for multiple users.

CPU:

Intel 80386, 16 MHz; intelligent 80186 I/O controllers

O/S:

UNIX System V, Release 3.0

DISTRIBUTOR: For information on authorized dealers contact:

SCI Technology, Inc.
5000 Technology Drive
Huntsville, Al 35805

CONTACT:

Joseph W. Castillo, National Sales/Marketing Manager, (205) 882-4304

ORDERING-PROCEDURE:

Submit P.O. to above address; see above contact for pricing

PROPRIETY-STATUS:

SCI Technology, Inc. proprietary

INFORMATION-UPDATED:

February 1988

3.32. SCOPE INCORPORATED

3.32.1. Scope DDN MicroGateway

PRODUCT-OR-PACKAGE NAME: DDN MicroGateway

DESCRIPTION:

> The DDN MICROGATEWAY is a single board product which implements the MIL Standard TCP/IP as well as ICMP and lower layer link and network protocols - either FIPS 100/X.25 or 1822/HDH.
>
> Using a Motorola 68008 microprocessor, the DDN MICROGATEWAY provides full-service host support at 56K bits per second, and it will accommodate up to 64 TCP/IP sessions with its shared memory interface.
>
> A companion DDN MICROGATEWAY software product support host TELNET, FTP, and SMTP applications, thus offering a total turn-key solution for certain UNIX operating system environments.

DOCUMENTATION:

> A user's manual describes product design and provides information on how to integrate the DDN MICROGATEWAY into the user's host hardware and operating system environment.

CPU:

> Single board implementations for MULTIBUS, IBM-PC Bus, VMEBus and Concurrent Computer MUX Bus

O/S:

> Board product is not O/S specific. ULPs are based on UNIX 4.2 BSD or UNIX System V. Other O/S's are available.

IMPLEMENTATION-LANGUAGE:

> TCP/IP, X.25 are in C firmware, embedded in the hardware product; ULPs are in C

DISTRIBUTOR:

> SCOPE Incorporated
> 1860 Michael Faraday Drive
> Reston, VA 22090
> (703) 471-5600

CONTACT:

> **Charles Roberts**

ORDERING-PROCEDURE:

> See above contact

PROPRIETY-STATUS:

> Commercially available

DDN-QUALIFIED:

> Yes

INFORMATION-UPDATED:

> January 1988

3.33. SPIDER SYSTEMS LIMITED

3.33.1. SpiderPort

PRODUCT-OR-PACKAGE-NAME: SpiderPort

DESCRIPTION:

SpiderPort with TCP/IP software is an Ethernet based terminal and peripheral concentrator with permanent virtual circuits. It allows up to 10 asynchronous devices (e.g. terminals, printers) to access host computers that support TCP/IP and Telnet.

There are 5 types of line connection, Terminal, Slave, Bothway, Demand, and Permanent. All lines are serial and support speeds up to 38.4 Kbps with automatic baud rate detection.

User control allows Local or Remote Network Management with password protected access so that Ethernet, Error, and Connection status reports can be viewed continually.

A Test and Configure Mode can be selected at power up or from a boot request. A Boot Server enables SpiderPort to boot from its own memory or load software across the network.

DOCUMENTATION:

User Guide, Administrator's Guide, and on-line help

CPU:

Box based on Intel 80186

O/S:

Proprietary

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

Spider Systems Limited	Spider Systems
65 Bonnington Road	Suite 400
Edinburgh	12 New England Executive Park
EH6 5JQ	Burlington, MA
Scotland	01803

CONTACT:

Richard G. McNabb, (617) 270-3510

PROPRIETY-STATUS:

Spider Systems

INFORMATION-UPDATED:

August 1988

3.34. TANDEM COMPUTERS

3.34.1. Failsafe Computer Systems TCP/LINK

PRODUCT-OR-PACKAGE-NAME: TCP/LINK

DESCRIPTION:

The TCP/IP protocol family is a collection of individual protocols that implement a solution for high speed multi-vendor connectivity problems. Each individual protocol addresses a distinct aspect of the total network solution. The TCP/LINK product provides support for the following individual protocols:

File Transfer Protocol (FTP) provides for the transfer of files between the Tandem file system and other hosts or workstations on the network. Other FTP operations such as rename, delete, etc. are supported.

TELNET Protocol allows for the connection of a user on another host or workstation to the Tandem-based TCP/LINK environment. This TELNET session is typically employed to allow user entry of the FTP commands.

Transmission Control Protocol (TCP) is a reliable conection oriented transport protocol. Both FTP and TELNET employ the TCP protocol for their transport mechanism.

User Datagram Protocol (UDP) is a datagram oriented transport layer protocol, offering higher transfer speeds than TCP.

Internet Protocol (IP) is oriented to the interconnection of communications subnetworks.

Using the TCP/LINK product, your Tandem system may now achieve high speed connectivity to a wide range of other systems such as UNIX-based workstations or personal computers, MS-DOS based PC's, and a wide variety of mainframes.

This family of protocols had rapidly become the leading vendor independent means of interconnecting dissimlar computer systems. TCP/IP is widely used in many industries such as government, manufacturing, brokerage, securities, and education to name just a few.

Using the TCP/LINK product, your Tandem system may now fully participate in any existing TCP/IP network, or a new network may be deployed to achieve connectivity with other computer systems.

The TCP/LINK product is completely compatible with the Tandem product line and is implemented in conjunction with Tandem's MULTILAN product. A high speed IEEE 802.3 network adapter card is placed in each MLAD, providing the low-level interface to a baseband ETHERNET local area network.

DOCUMENTATION:

Manuals are available with each license agreement plus on site installation.

CPU:

Tandem Guardian 90 and MULTILAN attachment device

O/S:

UNIX

IMPLEMENTATION-LANGUAGE:

Tal

DISTRIBUTOR:

> Failsafe Computer Systems Inc.
> 2700 River Road
> Suite 211
> Des Plains, Ill 60018

CONTACT:

Phillip Schultz, (312) 390-6660

ORDERING-PROCEDURE:

Contact Failsafe Computer Systems Inc.

DDN-QUALIFIED:

Yes

INFORMATION-UPDATED:

February 1988

3.35. TEKTRONIX, INC.

3.35.1. Tektronix 6130 Intelligent Graphics Workstation

PRODUCT-OR-PACKAGE-NAME: 6130 Intelligent Graphics Workstation

DESCRIPTION:

The Tektronix Model 6130 is a UNIX 4.2 BSD & System V based workstation that has a 32-bit processor, 1 megabyte of parity memory (with 16 MB virtual addressability), 20 megabyte winchester (expandable to 40 or 80 MB), dual RS-232-C interfaces, Local Area Network (LAN) interface and ethernet TCP/IP with Distributed File System (DFS) software and a General Purpose Interface Bus (GPIB) all standard. The system can be expanded with additional disks, interfaces, streamer tape drives and software products.

The 6130 uses the ethernet standard (IEEE 803.2) with Transmission Control Protocol/Internet Protocol (TCP/IP) which handles the communications between a users program and other processes executing on the same workstation, at a different workstation on the LAN, or on a different network. The 6130 supports the File Transfer Protocol (FTP), the Simple Mail Transfer Protocol (SMTP) and the Virtual Terminal (Telnet). Tektronix has implemented a Distributed File System that allows a workstation to access files on other workstations as though they were resident locally. The 6130 can support up to 14 RS-232 terminals although 2 or 3 users per system is recommended.

DOCUMENTATION:

The documentation set that is included with the 6130 consists of ten well written manuals which cover system installation, operations, system administration, and extensive reference material. Over 40 other manuals are available which describe the language compilers, statistical software, spreadsheet programs, and other software and enhancement products.

CPU:

The 6130 uses the National Semiconductor 32000 Family of processors; the CPU is the NS 32016 with the NS 32081 Floating Point Unit.

O/S:

UTek, Tektronix UNIX-based (System V and 4.2 BSD)

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

Tektronix Inc.

CONTACT:

Graphics Workstation Marketing, (503) 685-2737

ORDERING-PROCEDURE:

Contact the Local Tektronix Office

PROPRIETY-STATUS:

UTek and the Distributed File System are proprietary products

INFORMATION-UPDATED:

February 1988

3.36. UNISYS CORPORATION

3.36.1. Protocom Devices

3.36.1.1. Protocom Unisys/Burroughs P-Series PAD - Unisys/Burroughs Poll/Select

PRODUCT-OR-PACKAGE-NAME: P-Series PAD - UNISYS/BURROUGHS RJE/BDLC, POLL
SELECT SYNCHRONOUS AND ASYNCHRONOUS/POLL
SELECT TO SPERRY DTP

DESCRIPTION:

Protocom P-Series PADs allow you to run a full range of Burroughs equipment over public and private packet switched networks that support CCITT X.25 1980/1984. The P-Series PAD is standard certified for up to 64 Kbps on all products for the DDN. P-Series PADs can be monitored and configured locally or remotely. Local area networking is supported via a line interface module for all P-Series PADs. The P-Series PADs are available in four versions:

- P250: 10 devices/printiers are supported on 1 synchronous port

- P2500: Up to 40 terminals/printers are supported on 4 synchronous ports

- P160: This model consists of a varying number of protocol modules, each of which supports a separate protocol and up to 40 devices. Up to 240 sessions and six different protocols can be realized simultaneously at speeds reaching 56 Kbps. A network port allows load sharing and call hunting.

- PC Based: A personal computer based PAD is also available that operates on IBM PC/XT compatibles and allows simultaneous emulation of multiple protocols and allows simultaneous emulation of multiple protocols on the PC Based network. This line of dual-ported inte. ce cards supports up to 40 devices per card at speeds up to 19.2 Kbps. Two network ports are available to support redundancy and load sharing at speeds up to 64 Kbps.

All P-Series PADs offer the following features:

Independently mapped terminal and host addresses permit communication between any terminals and/or printers and any Burroughs application on the network. Three possible connections, two simultaneous user sessions on a single terminal, and host originated calls to shared printers are all supported. TurboMode (Protocoms proprietary data streaming method) provides unequalled response time. Configurable user screens, mnemonic addressing and user defined function keys are also available.

DOCUMENTATION:

Available on request by contacting below

CPU:

All Burroughs RJE/BDLC, Poll Select synchronous and asynchronous/Poll Select to Sperry DTP and functionally compatible equipment.

O/S:

VM, MVS, OS370, IMS

IMPLEMENTATION-LANGUAGE:

Assembler

DISTRIBUTOR:

Before September 1, 1988   After September 1, 1988
Protocom Devices   Protocom Devices
1666 Bathgate Avenue   25 Rockwood Place
Bronx, N.Y. 10457   Englewood, N.J.
(212) 716-5400

CONTACT:

Contact above

ORDERING-PROCEDURE:

Submit purchase order to above address; call contacts for pricing

PROPRIETY-STATUS:

Product of Protocom Devices, Inc.

DDN-QUALIFIED:

Yes

INFORMATION-UPDATED:

August 1988

3.36.1.2. Protocom P-Series PAD - Unisys/Sperry Uniscope

PRODUCT-OR-PACKAGE-NAME: P-Series PAD - SPERRY UNISCOPE/UNISCOPE TO DTP,
UDLC

DESCRIPTION:

Protocom P-Series PADs allow you to run Mapper, Demand, Sperrylink and the full range of Sperry equipment over public and private packet switched networks that support CCITT X.25 1980/1984. The P-Series PAD is standard certified for up to 64 Kbps on all products for DDN. The Protocom P-Series PAD involves the TCP/IP protocol. P-Series PADs can be monitored and configured locally or remotely. Local area networking is supported via a line interface module for all P-Series PADs. The P-Series PADs are available in four versions:

- P250: 10 devices/printers are supported on 1 synchronous port

- P2500: Up to 40 terminals/printers are supported on 4 synchronous ports

- P160: This model consists of a varying number of protocol modules, each of which supports a separate protocol and up to 40 devices. Up to 240 sessions and six different protocols can be realized simultaneously at speeds reaching 56 Kbps. A network port allows load sharing and call hunting.

- PC Based: A personal computer based PAD is also available that operates on IBM PC/XT compatibles and allows simultaneous emulation of multiple protocols on the PC Based network. This line of dual-ported interface cards supports up to 40 devices per card at speeds up to 19.2 Kbps. Two network ports are available to support redundancy and load sharing at speeds up to 64 Kbps.

All P-Series PADs offer the following features:

Independently mapped terminal and host addresses permit communication between any terminals and/or printers and any Sperry application on the network. Three possible connections, two simultaneous user sessions on a single terminal, and host originated calls to shared printers are all supported. TurboMode (Protocom's proprietary data streaming method) provides unequalled response time. Configurable user screens, mnemonic addressing and user defined function keys are all available.

DOCUMENTATION:

Available on request by contacting below

CPU:

All Sperry Uniscope/Uniscope TO DTP, UDLC and functionally compatible equipment

O/S:

VM, MVS, OS370, IMS

IMPLEMENTATION-LANGUAGE:

Assembler

DISTRIBUTOR:

Before September 1, 1988	After September 1, 1988
Protocom Devices	Protocom Devices
1666 Bathgate Avenue	25 Rockwood Place
Bronx, N.Y. 10457	Englewood, N.J.
(212) 716-5400	

CONTACT:

Contact above

ORDERING-PROCEDURE:

Submit purchase order to above address; call contact for pricing information

PROPRIETY-STATUS:

Product of Protocom Devices, Inc.

DDN-QUALIFIED:

Yes

INFORMATION-UPDATED:

August 1988

3.36.2. Unisys Corporation

3.36.2.1. Unisys SDC CP8001

PRODUCT-OR-PACKAGE-NAME: SDC MIL/INT LAN Network Front End (CP8001)

DESCRIPTION:

> The MIL/INT Product Line includes network front ends, terminal concentrators and gateways implementing DoD protocols for DDN, broadband, and baseband LANs. The LAN NFE provides access to a broadband LAN for a host computer implementing the DoD Host to Front End Protocol (HFP). The NFE implements HFP, TCP, IP, ICMP, and the LAN access protocol. Connection to the host is via HFP with X.25 LAPB at speeds up to 600 Kbps. The host must implement HFP and any application protocols desired (Telnet, FTP, SMTP). The LAN interface is a proprietary CSMA/CD network access protocol on industry standard broadband cable (CATV) systems. The data rate on each channel of the LAN is 2 Mbps.

DOCUMENTATION:

> Product Specification, Installation Manual, and User Manual

CPU:

> Multiple Intel 8086 microprocessors

O/S:

> Proprietary realtime OS86 based on secure kernel technology

IMPLEMENTATION-LANGUAGE:

> C

DISTRIBUTOR:

> Unisys Defense Systems
> 2400 Colorado Ave.
> Santa Monica, CA 90406

CONTACT:

> **Technical: Laura Bridge, (213) 829-7511**
> **Sales: Jim Garvey, (213) 829-7511**

INFORMATION-UPDATED:

> January 1988

3.36.2.2. Unisys SDC CP8040

PRODUCT-OR-PACKAGE-NAME: SDC MIL/INT LAN Terminal Concentrator (CP8040)

DESCRIPTION:

The MIL/INT Product Line includes network front ends, terminal concentrators and gateways implementing DoD protocols for DDN, broadband, and baseband LANs. The LAN TC provides access to a LAN for up to eight asynchronous terminals operating at speeds up to 19.2 Kbps. The TC may also be configured as a Terminal Emulation Processor (TEP) to attach asynchronous ports on a host to the network. The LAN operates using a proprietary CSMA/CD network access protocol on industry standard broadband cable (CATV) systems. The data rate on each channel of the LAN is 2 Mbps. The TC also implements Telnet, TCP, IP, and ICMP, to support terminal communication with other DoD compatible devices.

DOCUMENTATION:

Product Specification, Installation Manual, and User Manual

CPU:

Multiple Intel 8086 microprocessors

O/S:

Proprietary realtime OS86 based on secure kernel technology

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

Unisys Defense Systems
2400 Colorado Ave.
Santa Monica, CA 90406

CONTACT:

Technical: Laura Bridge, (213) 829-7511
Sales: Jim Garvey, (213) 829-7511

INFORMATION-UPDATED:

January 1988

3.36.2.3. Unisys SDC CP8050

PRODUCT-OR-PACKAGE-NAME: SDC MIL/INT LAN Terminal Bus Interface Unit (CP8050)

DESCRIPTION:

    The MIL/INT Product Line includes network front ends, terminal concentrators and gateways implementing DoD protocols for DDN, broadband, and baseband LANs. The Terminal BIU provides a compact, low cost LAN interface for two asynchronous terminals via two RS-232 ports operating at speeds up to 19.2 Kbps. The BIU implements a proprietary CSMA/CD network access protocol on industry standard broadband cable (CATV) systems. The data rate on each channel of the LAN is 2 Mbps. The BIU also implements Telnet, TCP, IP, and ICMP, to support terminal communication with other DoD compatible devices.

DOCUMENTATION:

    Product Specification, Installation Manual, and User Manual

CPU:

    Intel 8086 microprocessor

O/S:

    Proprietary realtime OS86 based on secure kernel technology

IMPLEMENTATION-LANGUAGE:

    C

DISTRIBUTOR:

    Unisys Defense Systems
    2400 Colorado Ave.
    Santa Monica, CA 90406

CONTACT:

    Technical: Laura Bridge, (213) 829-7511
    Sales: Jim Garvey, (213) 829-7511

INFORMATION-UPDATED:

    January 1988

3.36.2.4. Unisys SDC CP8060

PRODUCT-OR-PACKAGE-NAME: SDC MIL/INT Long Haul Network Gateway (CP8060)

DESCRIPTION:

The MIL/INT Product Line includes network front ends, terminal concentrators and gateways implementing DoD protocols for DDN, broadband, and baseband LANs. The Long Haul Network Gateway interconnects the long haul backbone network of DDN (or any network based on IMP type switches) with a broadband LAN. Dynamic routing is supported using both an internal Gateway-to-Gateway (GGP) protocol with other LAN gateways in the local system, and the DoD External Gateway Protocol (EGP) with the core DDN system. IP, ICMP, and network access protocols are also supported. The LAN employs a proprietary CSMA/CD network access protocol on industry standard broadband cable (CATV) systems. The data rate on each channel of the LAN is 2 Mbps. DDN access may be either local or remote (via modems) using either X.25 or HDH protocols at speeds up to 56 Kbps. The MIL/INT DDN TC has been certified by DCA for DDN access.

DOCUMENTATION:

Product Specification, Installation Manual, and User Manual

CPU:

Multiple Intel 8086 microprocessors

O/S:

Proprietary realtime OS86 based on secure kernel technology

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

Unisys Defense Systems
2400 Colorado Ave.
Santa Monica, CA 90406

CONTACT:

Technical: Laura Bridge, (213) 829-7511
Sales: Jim Garvey, (213) 829-7511

DDN-QUALIFIED:

Yes

INFORMATION-UPDATED:

January 1988

3.36.2.5. Unisys SDC CP8080

PRODUCT-OR-PACKAGE-NAME: SDC MIL/INT LAN Interchannel Gateway (CP8080)

DESCRIPTION:

The MIL/INT Product Line includes network front ends, terminal concentrators and gateways implementing DoD protocols for DDN, broadband, and baseband LANs. The Interchannel Gateway interconnects LAN channels on the same or different cable plants. IP, ICMP, Gateway-to-Gateway (GGP), and LAN access protocols are supported. The LAN employs a proprietary CSMA/CD network access protocol on industry standard broadband cable (CATV) systems. The data rate on each channel of the LAN is 2 Mbps.

DOCUMENTATION:

Product Specification, Installation Manual, and User Manual

CPU:

Multiple Intel 8086 microprocessors

O/S:

Proprietary realtime OS86 based on secure kernel technology

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

Unisys Defense Systems
2400 Colorado Ave.
Santa Monica, CA 90406

CONTACT:

Technical: Laura Bridge, (213) 829-7511
Sales: Jim Garvey, (213) 829-7511

INFORMATION-UPDATED:

January 1988

3.36.2.6. Unisys SDC CP8201

PRODUCT-OR-PACKAGE-NAME: SDC MIL/INT Long Haul Network Front End (CP8201)

DESCRIPTION:

The MIL/INT Product Line includes network front ends, terminal concentrators and gateways implementing DoD protocols for DDN, broadband, and baseband LANs. The Long Haul NFE provides access to the long haul backbone of the DDN (or any network based on IMP type switches) for a host computer implementing the DoD Host to Front End Protocol (HFP). The NFE implements HFP, TCP, IP, ICMP, and the long haul DDN network access protocols (X.25 or HDH). Connection to the host is via HFP with X.25 LAPB at speeds up to 600 Kbps. The host must implement HFP and any application protocols desired (Telnet, FTP, SMTP). IMP connections may be local or remote (via modems) at speeds up to 56 Kbps. The MIL/INT DDN NFE has been certified by DCA for DDN access.

DOCUMENTATION:

Product Specification, Installation Manual, and User Manual

CPU:

Multiple Intel 8086 microprocessors

O/S:

Proprietary realtime OS86 based on secure kernel technology

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

Unisys Defense Systems
2400 Colorado Ave.
Santa Monica, CA 90406

CONTACT:

Technical: Laura Bridge, (213) 829-7511
Sales: Jim Garvey, (213) 829-7511

DDN-QUALIFIED:

Yes

INFORMATION-UPDATED:

January 1988

3.36.2.7. Unisys SDC CP8240

PRODUCT-OR-PACKAGE-NAME: SDC MIL/INT Long Haul Network Terminal Concentrator

DESCRIPTION:

The MIL/INT Product Line includes network front ends, terminal concentrators and gateways implementing DoD protocols for DDN, broadband, and baseband LANs. The Long Haul Network TC provides access to the long haul backbone of DDN (or any network based on IMP type switches) for up to eight asynchronous terminals operating at speeds up to 19.2 Kbps. The TC may also be configured as a Terminal Emulation Processor (TEP) to attach asynchronous ports on a host to the network. The TC implements Telnet, TCP, IP, ICMP, and the DDN network access protocols (X.25 or HDH). IMP connections may be local or remote (via modems) at speeds up to 56 Kbps. The MIL/INT DDN TC has been certified by DCA for DDN access.

DOCUMENTATION:

Product Specification, Installation Manual, and User Manual

CPU:

Multiple Intel 8086 microprocessors

O/S:

Proprietary realtime OS86 based on secure kernel technology

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

Unisys Defense Systems
2400 Colorado Ave.
Santa Monica, CA 90406

CONTACT:

Technical: Laura Bridge, (213) 829-7511
Sales: Jim Garvey, (213) 829-7511

DDN-QUALIFIED:

Yes

INFORMATION-UPDATED:

January 1988

3.37. VITALINK

3.37.1. TransLAN III

PRODUCT-OR-PACKAGE-NAME: TransLAN III

DESCRIPTION:

TransLAN bridges are protocol-transparent remote bridges that extend Ethernet or IEEE 802.3 LANs to create a high-performance, integrated wide area network based on the 802.3 standard. TransLAN III supports one remote link at 2.048 Mbps or up to eight lower speed links.

DOCUMENTATION:

TransLAN III Reference Manual (part# 012942) included with order
TransLAN III Getting Started Guide (part# 012321) included with order

MACHINE-TYPE/CPU:

Cray, DEC VAX, MICROVAX, PDPll, SUN, Apollo, WANG, UNISYS, Honeywell, Xerox, AT&T, Tandem, NCR, IBM 370, IBM PC, IBM PS/2, Apple, IBM compatible

O/S:

UNIX, LISP, SUNOS, VMS, DOS, ULTRIX

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

Vitalink Direct Sales

CONTACT:

Vitalink Telemarketing Representative, (800 443-5740

ORDERING-PROCEDURE:

TransLAN III

PROPRIETY-STATUS·

Vitalink proprietary product

INFORMATION-UPDATED:

February 1989

3.37.2. TransLAN 350

PRODUCT-OR-PACKAGE-NAME: TransLAN 350

DESCRIPTION:

> TransLAN bridges are protocol-transparent remote bridges that extend Ethernet or IEEE 802.3 LANs to create a high-performance, integrated wide area network based on the 802.3 standard. TransLAN 350 supports up to two remote links at 2.048 Mbps or up to eight lower speed links.

DOCUMENTATION:

> TransLAN 350 Reference Manual (part# 013117) included with order
> TransLAN 350 Getting Started Guide (part# 013255) included with order

MACHINE-TYPE/CPU:

> Cray, DEC VAX, MICROVAX, PDPll, SUN, Apollo, WANG, UNISYS, Honeywell, Xerox, AT&T, TANDEM, NCR IBM 370, IBM PC, IBM PS/2, Apple, IBM compatible

O/S:

> UNIX, LISP, SUNOS, VMS, DOS ULTRIX

IMPLEMENTATION-LANGUAGE:

> C

DISTRIBUTOR:

> Vitalink Direct Sales

CONTACT:

> **Vitalink Telemarketing Representative (800) 443-5740**

ORDERING-PROCEDURE:

> TransLAN 350

PROPRIETY-STATUS:

> Vitalink proprietary product

INFORMATION-UPDATED:

> February 1989

3.37.3. TransRING 550

PRODUCT-OR-PACKAGE-NAME: TransRING 550

DESCRIPTION:

TransRING bridges are protocol-transparent remote bridges that extend multiple IBM token ring or IEEE 802.5 LANs to create a high-performance, integrated wide area network based on the 802.5 standard. TransRING 550 supports up to two remote links at 2.048 Mbps or up to eight lower speed links.

DOCUMENTATION:

TransRING 550 Reference Manual (part #M550-RM) included with order
TransRING 550 Getting Started Guide (part#013253) included with order

MACHINE-TYPE/CPU:

SUN, Apollo, TANDEM, NCR, IBM 370, IBM PC, IBM PS/2, IBM compatible

O/S:

UNIX, DOS, ULTRIX

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

Vitalink Direct Sales

CONTACT:

Vitalink Telemarketing Representative, (800) 443-5740

ORDERING-PROCEDURE:

TransRING 550

PROPRIETY-STATUS:

Vitalink proprietary product

INFORMATION-UPDATED:

February 1989

3.38. HARDWARE MULTIPLE-MACHINE IMPLEMENTATIONS

3.38.1. AYDIN MONITOR SYSTEMS

3.38.1.1. Aydin LAN Asynchronous Attachment Unit - Model 4310

PRODUCT-OR-PACKAGE-NAME: LAN Asynchronous Attachment Unit - Model 4310

DESCRIPTION:

> The Aydin Model 4310 provides IEEE 802.3 connectivity for asynchronous devices to a local area network (LAN). Communication costs are significantly reduced due to reliable data transfer across shared communication networks and unattended operation of this device. Data is transferred among different host operating systems under the control of TCP/IP communication.

DOCUMENTATION:

> Manuals available

CPU:

> Multiple (4) 68010 Processors

O/S:

> AMOS (Aydin Micro Operating System)

IMPLEMENTATION-LANGUAGE:

> C

DISTRIBUTOR:

> Aydin Monitor Systems
> 502 Office Center Drive
> Ft. Washington, PA 19034

CONTACT:

> **Michael J. Alford, V.P. Marketing, (212) 646-8100**

ORDERING-PROCEDURE:

> Contact Aydin

PROPRIETY-STATUS:

> Contains some proprietary software

DDN-QUALIFIED:

> Yes

INFORMATION-UPDATED:

> January 1988

3.38.1.2. Gateway to LAN - Model 4320

PRODUCT-OR-PACKAGE-NAME: Gateway to LAN - Model 4320

DESCRIPTION:

The Model 4320 Gateway unit is intended for use when a local area network must interface with the DDN wide area network for purposes of packet-switched data transmission, over long distance, via the DDN. This unit supports the LAN interface protocols and interfaces with the LAN via a Medium Attachment Unit (MAU).

DOCUMENTATION:

Manuals available

CPU:

Multiple (4) 68010 Processors

O/S:

AMOS (Aydin Micro Operating System)

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

Aydin Monitor Systems
502 Office Center Drive
Ft. Washington, PA 19034

CONTACT:

Michael J. Alford, V.P. Marketing, (215) 646-8100

ORDERING-PROCEDURE:

Contact Aydin

PROPRIETY-STATUS:

Contains some proprietary software

DDN-QUALIFIED:

Yes

INFORMATION-UPDATED:

January 1988

3.38.1.3. LAN Synchronous Attachment Unit - Model 4330

PRODUCT-OR-PACKAGE-NAME: LAN Synchronous Attachment Unit - Model 4330

DESCRIPTION:

Aydin's Model 4330 allows bisynchronous or SNA controllers, with IBM 3278 terminals attached, to interface with remote IBM hosts over a LAN, or through the DDN Gateway, to the DDN. It's built-in Network Management support translates into effective network utilization.

DOCUMENTATION:

Manuals available

CPU:

Multiple (4) 68010 Processors

O/S:

AMOS (Aydin Micro Operating System)

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

Aydin Monitor Systems
502 Office Center Drive
Ft. Washington, PA 19034

CONTACT:

Michael J. Alford, V.P. Marketing, (215) 646-8100

ORDERING-PROCEDURE:

Contact Aydin

PROPRIETY-STATUS:

Contains some proprietary software

DDN-QUALIFIED:

Yes

INFORMATION-UPDATED:

January 1988

3.38.1.4. Aydin AYNAC - Plus™

PRODUCT-OR-PACKAGE-NAME: Network Access Controller - Plus (Model 4240)

DESCRIPTION:

The Aydin Monitor Systems' Network Access Controller Plus (AYNAC-PLUS) provides full-service Host Connection without the requirement of being Channel-attached to the Host. The AYNAC-Plus allows both terminals and Hosts to be connected to the same device. It runs the full suite of TCP/IP Protocols supporting Asynchronous, Bisychronous, and SNA users. FTP and SMTP are available off-the-shelf for IBM-MVS VTAM users.

DOCUMENTATION:

Manual available

CPU:

Multiple 68010 Processors

O/S:

AMOS (Aydin Micro Operating Systems)

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

Aydin Monitor Systems
502 Office Center Drive
Ft. Washington, PA   19034

CONTACT:

Michael J. Alford, V.P. Marketing, (215) 646-8100

ORDERING-PROCEDURE:

Contact Aydin

PROPRIETY-STATUS:

Aydin proprietary

DDN-QUALIFIED:

Yes

INFORMATION-UPDATED:

January 1988

3.38.2. CHI CORPORATION

3.38.2.1. ChiLAN PC Terminal and Host Uniscope Servers

PRODUCT-OR-PACKAGE-NAME: ChiLAN PC Terminal and Host Uniscope Servers

DESCRIPTION:

These products, used in conjunction with a TCP/IP board, permit UTS terminals to communicate over a TCP/IP network with a Unisys/Sperry host. The products, which each consist of the Chi CS-1 intelligent communications board and portions of the ChiLAN PC Uniscope Server software, maximize network throughput by localizing polling activity. Up to 16 Unisys/Sperry UTS terminals can be connected through a T-MUX to the ChiLAN PC Terminal Uniscope Server. This server polls the attached terminals and only passes actual traffic over the network to the ChiLAN PC Host Uniscope Server. The host server, which appears to the host to be a Unisys/Sperry Terminal Multiplexer with several terminals attached, has terminal sessions established with the Unisys/Sperry host. This server creates a virtual network of Uniscope and UTS terminals. Since the host polls the server, the network is relieved of this communications activity. Chi's Uniscope handler uses a NetBIOS interface or TCP for establishing a session on an Ethernet-TCP/IP network. For access to the DDN, a TCP session must be used.

DOCUMENTATION:

Technical manual provided with product; descriptive literature available

CPU:

Any IBM PC compatible

O/S:

DOS 2.11 or higher

IMPLEMENTATION-LANGUAGE:

C and assembler

DISTRIBUTOR:

Chi Corporation
26055 Emery Road
Cleveland, OH 44128

CONTACT:

Sales Coordinator, (216) 831-2622

ORDERING-PROCEDURE:

Contact Chi Corporation

PROPRIETY-STATUS:

Proprietary product of Chi Corporation

INFORMATION-UPDATED:

January 1988

3.38.3. COMMUNICATION MACHINERY CORPORATION

3.38.3.1. VN/TCP-IP

PRODUCT-OR-PACKAGE-NAME: VN/TCP-IP

DESCRIPTION:

Protocol Suite runs on Ethernet interface board provided by CMC.   ARPA and Berkeley utility sets included.

DOCUMENTATION:

Included

CPU:

Charles River Data Systems; based on Motorola 68000, 68020, 68030, multiple processors supported

O/S:

VNOS - UNIX System V.2 and POSIX compliant

IMPLEMENTATION-LANGUAGE:

C and Assembler

DISTRIBUTOR:

Charles River Data Systems
983 Concord Street
Framingham, MA 01701

CONTACT:

Technical: Eric Spiewak, (617) 626-1160

ORDERING-PROCEDURE:

Contact at (617) 626-1000

PROPRIETY-STATUS:

Charles River Data Systems and Communication Machinery Corporation (CMC)

INFORMATION-UPDATED:

February 1988

3.38.4. MICOM-INTERLAN

3.38.4.1. MICOM-Interlan NP-series Protocol Processors

PRODUCT-OR-PACKAGE-NAME: MICOM-Interlan NP-series Protocol Processors

DESCRIPTION:

Intelligent Ethernet interface boards that support both on-board (layers 1-4) and link-level protocol implementations.

DOCUMENTATION:

Diagnostics, installation, and user's manuals are included.

CPU:

DEC UNIBUS-based systems (NP100), DEC Q-bus based systems (NP200), MULTIBUS-based systems (NP300) and IBM-PC/AT based systems (NP600)

O/S:

Based on buses as described above, including VMS, MicroVMS, and MS-DOS

DISTRIBUTOR:

MICOM-Interlan
155 Swanson Road
Boxboro, MA 01719

CONTACT:

Bob Wells, Product Manager, (408) 986-0890 or LAN Marketing/Sales at 1-800-LAN-TALK

ORDERING-PROCEDURE:

Contact LAN Marketing/Sales for nearest sales office at 1-800-LAN-TALK

PROPRIETY-STATUS:

MICOM-Interlan

INFORMATION-UPDATED:

February 1988

3.38.5. MITEK SYSTEMS CORPORATION

3.38.5.1. Mitek SNA Network Server

PRODUCT-OR-PACKAGE-NAME: SNA Network Server

DESCRIPTION:

The SNA Network Server is a high performance hardware/software set of products which permits the workstations of systems attached to a TCP/IP IEEE 802.3 LAN to connect to an IBM mainframe as SNA3270 or SNA3770 devices. The system supports 64 LU's of terminal emulation, PC file transfer and API's for both 3270 and 3770. No mainframe software is added or changed.

The SNA Network Server consists of a hardware Control Unit and software (Presentation Services) for the LAN attached computers. The Control Unit is a M68000 based system which connects the LAN TCP/IP 802.3 network to an IBM mainframe as a PU2 device via direct channel attach or via SDLC data link.

Presentation Services is a software applications package which is executed on the LAN attached computers such as VAX, PC's, 3B's, Apollo, Sun or HP to provide network administration and the user interface for SNA3270 and 3770 emulation. Several enhancement features such as color and extended highlighting are included.

DOCUMENTATION:

Available from vendor

CPU:

M680X0

O/S:

The Control Unit O/S is proprietary. The O/S's supported on the LAN Computers are Berkeley Unix 4.2, VMS, DOS and AEGIS.

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

Mitek Systems Corp.
2033 Chennault Drive
Suite 100
Carrollton, TX 75006

CONTACT:

Cleve Graves, (214) 490-4090

ORDERING-PROCEDURE:

Available from vendor

PROPRIETY-STATUS:

Proprietary product of Mitek Systems Corp.

INFORMATION-UPDATED:

August 1988

3.38.5.2. Mitek Presentation Services

PRODUCT-OR-PACKAGE-NAME: Presentation Services

DESCRIPTION:

The SNA Network Server/Presentation Services (SNS/PS) are Mitek Systems' licensed software products. These products enable workstation users on an Ethernet TCP/IP local area network (LAN) to connect to IBM SNA mainframe systems via Mitek's SNA Network Server hardware products. SNS/PS is workstation executable software which runs on all UNIX-based computers and workstations as well as many others. Collectively, these include devices manufactured by SUN, Apollo, Counterpoint, Hewlett-Packard, Digital Equipment Corp. and IBM. Mitek's Presentation Services software products enable users to transfer files from computers on a LAN to an SNA mainframe computer, to access IBM 3270 applications, and to emulate 3770 Remote Job Entry (RJE). The software also provides an Applications Program Interface (API), which allows user applications on the workstation access to the SNA mainframe computer. The use of these products does not require special software nor does it require software change in the IBM SNA mainframe operating system.

DOCUMENTATION:

Available from vendor

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

Mitek Systems Corp.
2033 Chennault Drive
Suite 100
Carrollton, TX 75006

CONTACT:

Cleve Graves, (214) 490-4090

ORDERING-PROCEDURE:

Available from vendor

PROPRIETY-STATUS:

Proprietary product of Mitek Systems Corp.

INFORMATION-UPDATED:

August 1988

3.38.5.3. Mitek Connectivity Solutions for the IBM Application

PRODUCT-OR-PACKAGE-NAME: Connectivity Solutions for the IBM Application
System/400 (AS/400)

DESCRIPTION:

Mitek extends connectivity from your AS/400 to TCP/IP networks with a special line of hardware and software solutions. These product solutions provide bi-directional logon and bi-directional file transfer capabilities. Mitek utilizes the government standard communications architecture known as TCP/IP (Transmission Control Protocol/Internet Protocol) which can coexist on an Ethernet LAN along with other protocols such as DECnet. The Ethernet hosts supported by Mitek's software products include: DEC VAX, AT&T 3B, SUN Microsystems, Apollo, Tektronix, Hewlett-Packard, IBM PC, AT, RT, XT, and PS/2. You choose the solution that's right for your configuration:

- **SNA Network Server Model M2130** Mitek's M2130 provides a physical gateway between the AS/400 and an Ethernet LAN. The M2130 appears to the AS/400 as a standard SNA control unit and performs data translation between the SNA and the TCP/IP protocols. Speeds up to 256K bps are supported.

- **TELNET Client (TERMINAL APPLICATION ACCESS)** Telnet client resides on the AS/400 and provides access capability to the TCP/IP host applications. This product communicates with the standard TCP/IP terminal application, TELNET Server.

- **FTP Client (FILE TRANSFER)** FTP Client resides on the AS/400 and provides you with the capability to create, delete, and extend files with options for ASCII text conversions or binary data transmission. Exits are provided so that you may write you own data base access routines as part of the file transfer. The security systems of the AS/400 and the TCP/IP network hosts are supported.

  FTP Client also includes an extended command feature which allows you to enter a simple command in order to transfer multiple files between multiple systems. This feature can be used interactively as well as in a batch environment.

- **TELNET Server** Telnet Server is an optional feature that resides on the M2130. This application provides 3270 terminal emulation. TELNET Server allows TCP/IP Ethernet hosts to have access to the AS/400. The server handles requests from a TELNET Client on any TCP/IP hosts and translates the ASCII data stream into a 3270 data stream.

- **3270 Presentation Services** 3270 Presentation Services resides on TCP/IP Ethernet hosts and provides enhanced 3270 emulation. A special feature of this product is the Application Program Interface (API). A user written program using the API can access the AS/400 as if the application were an operator at a local display station. It allows emulator sessions to runh unattended. 3270 Presentation Services is a family of products designed to ooperate with specific operating systems.

DOCUMENTATION:

Available from Vendor

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

>Mitek Systems Corp.
>2033 Chennault Drive
>Suite 100
>Carrollton, TX 75006

CONTACT:

Cleve Graves, (214) 490-4090

ORDERING-PROCEDURE:

Available from vendor

PROPRIETY-STATUS:

Proprietary product of Mitek Systems Corp.

INFORMATION-UPDATED:

August 1988

3.38.5.4. Mitek Connectivity Products for the IBM System/3X

PRODUCT-OR-PACKAGE-NAME: Connectivity Products for the IBM System/3X

DESCRIPTION:

Mitek extends IBM System/3X connectivity across Ethernet TCP/IP networks with a specialized line of hardware and software solutions. TCP/IP (Transmission Control Protocol/Internet Protocol) is a government standard communications architecture that can coexist on Ethernet along with other protocols such as DECnet. Mitek's products have the flexibility to reside on a System/3X on an M2130 Network Server, or on TCP/IP hosts, such as the VAX, SUN, Apollo, and so on. We offer you a variety of solutions in order to meet the particular needs of your configuration.

Mitek's SNA Network Server model M2X30 is available to you in both a high-speed and a low speed version to meet your specific data rate requirements.

Our TCP/3X software line features IBM host offerings which include the File Transfer Protocol (FTP) application and the TELNET Client application. You may run both of these applications in an APPN (advanced peer-to-peer networking) environment on any System 3x. Also included in Mitek's software line for the System/3x is the TELNET Server application which is available on an M2X30, and our SNA3270 Presentation Services which resides on the TCP/IP host.

DOCUMENTATION:

Available from vendor

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

Mitek Systems Corp.
2033 Chennault Drive
Suite 100
Carrollton, TX 75006

CONTACT:

Cleve Graves, (214) 490-4090

ORDERING-PROCEDURE:

Available from vendor

PROPRIETY-STATUS:

Proprietary product of Mitek Systems Corp.

INFORMATION-UPDATED:

August 1988

3.38.6. PROTEON, INC.

3.38.6.1. Proteon ProNET-10 Network

PRODUCT-OR-PACKAGE-NAME: ProNET-10 Network

DESCRIPTION:

The ProNET-10 network is a 10 megabit/second Token Passing Ring network providing high performance combined with media flexibility and maintainability. It is a star-shaped ring using Wire Centers to attach nodes.

The media options include:

- Copper (IBM Type 1 and Type 6)

- Fiber optic (multimode fiber, up to 2.5 kilometers/hop)

- Infrared (aerial)

- Microwave (up to 10 kilometers)

- Broadband

These media options may be used on any link in the network, either between wire centers or in the wiring to a node.

There are ProNET-10 interfaces for:

- UNIBUS

- Q-Bus

- Multibus

- IBM-PC and AT

- VMEbus

- VMEbus/9U (Sun and Silicon Graphics)

- "Universal Bus" (a building block)

DOCUMENTATION:

All interfaces include installation and programming manuals.

CPU:

Any

O/S:

UNIX 4.3 BSD includes ProNET-10/80 device driver (if_vv.c)

Drivers for ULTRIX-32, SunOS

TCP/IP for MS-DOS, VAX/VMS

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

Proteon, Inc.
Two Technology Drive
Westborough, MA 01581-5008

CONTACT:

Mick Scully, (mcs@proteon.com), (617) 898-2800

INFORMATION-UPDATED:

February 1988

3.38.6.2. Proteon ProNET-80 Network

PRODUCT-OR-PACKAGE-NAME: ProNET-80 Network

DESCRIPTION:

The ProNET-80 network is a 80 megabit/second Token Passing Ring network providing extremely high performance combined with media flexibility and maintainability. It is a star-shaped ring using Wire Centers to attach nodes. It is usually based on fiber cabling.

The media options include:

- Copper (IBM Type 1)

- Fiber optic (multimode fiber, up to 2 kilometers/hop)

These media options may be used on any link in the network, either between wire centers or in the wiring to a node.

There are ProNET-80 interfaces for:

- Unibus

- Q-Bus

- Multibus

- IBM AT

- VMEbus

- VMEbus/9U (Sun and Silicon Grpahics)

- Gould SelBUS

- "Universal Bus" (a building block)

DOCUMENTATION:

All interfaces include installation and programming manuals.

CPU:

Any

O/S:

UNIX 4.3 BSD includes ProNET-10/80 device driver (if_vv.c)

Drivers for ULTRIX-32, SunOS

TCP/IP for MS-DOS, VAX/VMS

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

> Proteon, Inc.
> Two Technology Drive
> Westborough, MA 01581-5008

CONTACT:

Mick Scully, (mcs@proteon.com), (617) 898-2800

INFORMATION-UPDATED:

February 1988

3.38.7. Wellfleet Communications, Inc.

3.38.7.1. Wellfleet Link Node Model Number 2000 (LN)

PRODUCT-OR-PACKAGE-NAME: Link Node Model Number 2000 (LN)

DESCRIPTION:

The Wellfleet Product line of communications servers provides LAN to WAN internetworking capabilities. The LN and CN provide direct attachment to Ethernet/802.3 LANs and high speed WAN digital networks such as T1. DoD/IP router/gateway services provide internetworking service for TCP/IP devices and hosts. DECNET routing and bridging services are also provided.

DOCUMENTATION:

Available with product

CPU:

Supports all CPU types in terms of TCP/IP gateway functions

O/S:

Proprietary, written for our own gateway

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

Wellfleet Communications, Inc.
12 DeAngelo Drive
Bedford, MA 01730
FAX: 617-275-5001

CONTACT:

Mark Strangin, Director of Product Marketing, (617) 275-2400

ORDERING-PROCEDURE:

Contact vendor

PROPRIETY-STATUS:

Wellfleet Communications, Inc.

INFORMATION-UPDATED:

February 1988

3.38.7.2. Wellfleet Concentrator Node Model Number 3000 (CN)

PRODUCT-OR-PACKAGE-NAME: Concentrator Node Model Number 3000 (CN)

DESCRIPTION:

The Wellfleet Product line of communications servers provides LAN to WAN internetworking capabilities. The LN and CN provide direct attachment to Ethernet/802.3 LANs and high speed WAN digital networks such as T1. DoD/IP router/gateway services provide internetworking service for TCP/IP devices and hosts. DECNET routing and bridging services are also provided.

DOCUMENTATION:

Available with product

CPU:

Supports all CPU types in terms of TCP/IP gateway functions

O/S:

Proprietary, written for our own gateway

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

Wellfleet Communications, Inc.
12 DeAngelo Drive
Bedford, MA 01730
FAX: 617-275-5001

CONTACT:

Mark Strangin, Director of Product Marketing, (617) 275-2400

ORDERING-PROCEDURE:

Contact vendor

PROPRIETY-STATUS:

Wellfleet Communications, Inc.

INFORMATION-UPDATED:

February 1988

4. ANALYSIS TOOLS

4.1. COMMUNICATION MACHINERY CORPORATION

4.1.1. CMC DRN-1700 LanScan Ethernet Monitor

PRODUCT-OR-PACKAGE-NAME: DRN-1700 LanScan Ethernet Monitor

DESCRIPTION:

The CMC DRN-1700 LanScan Ethernet Monitor (known as "SpiderMonitor" in Europe) is a standalone system which can be used to monitor network usage and locate networking faults. LanScan conforms to the IEEE 802.3 standard for Ethernet and has built-in decoders for the TCP/IP, XNS, and ISO protocols. Network performance can be monitored both on a single machine basis and on the total network. These data are presented numerically and in bar-graph format. Counts of all packets sent and received, together with byte-counts, are maintained continuously for each machine on the network. Of special interest are the statistics on bad packets each station sends, as this is important for measuring networking system reliability. The LanScan will identify the location of cable faults (short or open circuit). It also tests the network stations, singly or in groups, by routing test packets through the specified stations and highlighting any errors on the route. The LanScan monitor a sophisticated set of packet-tracing facilities by which network failures caused by incorrect protocol software are identified. The packets are displayed in the selected protocol format. Up to 192 KB of trace data can be held at any one time. The LanScan Ethernet Monitor is supplied complete with a video display screen and detachable keyboard. Users can get a hard copy of any statistics or trace information via the standard serial printer interface.

CPU:

80186

O/S:

Proprietary

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

In the US:	In Europe
Communication Machinery Corporation	Spider Systems Limited
125 Cremona Drive	65 Bonnington Road
Santa Barbara, CA 93117	Edinburgh
(805) 968-4262 or (800) CMC-8023	EH6 5JQ
	Scotland
	+44 (031) 554-9197

CONTACT:

Contact above

INFORMATION-UPDATED:

January 1988

4.2. DATA GENERAL CORPORATION

4.2.1. DG/Sniffer LAN Protocol Analyzer

PRODUCT-OR-PACKAGE-NAME: DG/Sniffer LAN Protocol Analyzer

DESCRIPTION:

DG/Sniffer LAN Protocol Analyzer supports 802.3, Ethernet, and/or StarLAN connections. Protocol interpretation is available for TCP/IP, OSI, DecNet, SUN, Novell, DG/X.25, and XNS. Single or dual units are available on the Dasher/206. StarLan only is available on the DG/One Model 2T. All DG/Sniffers include a 2400-baud moden and remote access software.

DOCUMENTATION:

Using the DG/Sniffer Network Analyzer (included)

MACHINE-TYPE/CPU:

Data General Dasher/286; Data General/One Model 2T (StarLAN only)

O/S:

DOS revision 3.2 or higher

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

Data General Corporation
4400 Computer Drive
Westboro, MA 01580

CONTACT:

Any local Data General Sales Office

ORDERING-PROCEDURE:

DG/Sniffer can be ordered through any Data General sales office or sales representative.

PROPRIETY-STATUS:

Proprietary product of Network General Corp. and Data General Corporation

INFORMATION-UPDATED:

February 1989

4.3. DIGILOG, INC.

4.3.1. Digilog X.25 DTE Certification (Siemens)

PRODUCT-OR-PACKAGE-NAME: X.25 DTE Certification (Siemens)

DESCRIPTION:

Digilog, Inc. provides for the DoD community a X.25 qualification test designed to run on Digilog 620/820/900 models of Protocol Analyzers. It is designed for use by individuals responsible for pre-qualification testing. The program was designed for testing both Link and Packet levels in DTE configuration.

All tests are based on the CCITT Recommendations X.25 October 1984.

There are seven frame level tests and six packet level tests. The 7 frame level tests will test the link access procedure across the DTE/DCE interface. The packet level tests are a test of action taken by the DTE on receipt of packets in a given state.

After execution of selected tests, the error report can be displayed on the Digilog 620/820/900 sent to a printer or saved on disk storage for future.

DOCUMENTATION:

One full set of documentation is provided with the package; additional copies may be purchased.

CPU:

Digilog Models 620/820/900

IMPLEMENTATION-LANGUAGE:

(DCL) Digilog Command Language

DISTRIBUTOR:

Digilog, Inc.
1370 Welsh Road
Montgomeryville, PA 18936

CONTACT:

Digilog Help Desk (800) 233-3151, (215) 628-4530

ORDERING-PROCEDURE:

Submit purchase order to Digilog Inc., contact above for pricing information

PROPRIETY-STATUS:

Digilog, Inc. Proprietary

INFORMATION-UPDATED:

August 1988

4.3.2. Digilog X.75 Certification (Siemens)

PRODUCT-OR-PACKAGE-NAME: X.75 Certification (Siemens)

DESCRIPTION:

> Digilog, Inc. provides for the DoD community a X.75 qualification test designed to run on Digilog 620/820/900 models of Protocol Analyzers. It is designed for use by individuals responsible for pre-qualification testing. The program was designed for testing both test Link and Packet levels in DTE configuration.

> All tests are based on the CCITT Recommendations X.75 October 1984.

> There are 17 programs that emulate an X.75 DTE device. This package allows user testing of STE to STE connection. The frame level tests will test the terminal and transmit call, control procedures. The packet level tests are a test of action taken by the STE on receipt of packets in a given state.

> After execution of selected tests, the error report can be displayed on the Digilog 620/820/900 sent to a printer or saved on disk storage for future.

DOCUMENTATION:

> One full set of Documentation is provided with the package; additional copies may be purchased.

CPU:

> Digilog Models 620/820/900

IMPLEMENTATION-LANGUAGE:

> (DCL) Digilog Command Language

DISTRIBUTOR:

> Digilog, Inc.
> 1370 Welsh Road
> Montgomeryville, PA 18936

CONTACT:

> Digilog Help Desk (800) 233-3151, (215) 628-4530

ORDERING-PROCEDURE:

> Submit purchase order to Digilog Inc., contact above for pricing information

PROPRIETY-STATUS:

> Digilog, Inc. Proprietary

INFORMATION-UPDATED:

> August 1988

4.3.3. Digilog FIPS100/DDN Certification

PRODUCT-OR-PACKAGE-NAME: FIPS100/DDN CERTIFICATION

DESCRIPTION:

Digilog, Inc. provides for the DoD Community a Defense Data Network (DDN) X.25 Qualification test designed to run on the Digilog Models 620/820/900. It is designed for use by individuals responsible for pre-qualification testing. The program was designed for testing both the Link and Packet levels in either DTE or DCE configurations. All tests are based on the Defense Data Network Host Interface Qualification Testing link and Network Layers document (DCAC 370-P195 ( )). The tests are grouped into two types; Valid and Invalid. The Valid group tests protocol scenarios that could occur normally. The Invalid group tests situations outside those which should occur during normal message exchanges.

After execution of selected test, the error report can be displayed on the Digilog model 620/820/900 sent to a printer, or saved on disk storage for future use.

DOCUMENTATION:

One full set of documentation is provided with the package; additional copies may be purchased.

CPU:

Digilog Models 620/820/900

IMPLEMENTATION-LANGUAGE:

(DCL) Digilog Command Language

DISTRIBUTOR:

Digilog, Inc.
1370 Welsh Road
Montgomeryville, PA 18936

CONTACT:

Digilog Help Desk (800) 233-3151, (215) 628-4530

ORDERING-PROCEDURE:

Submit purchase order to Digilog Inc., contact above for pricing information

PROPRIETY-STATUS:

Digilog, Inc. Proprietary

INFORMATION-UPDATED:

August 1988

4.4. DEFENSE COMMUNICATIONS AGENCY

4.4.1. DCA Upper Level Protocol Test System Software

PRODUCT-OR-PACKAGE-NAME: DCA Upper Level Protocol Test System Software

DESCRIPTION:

> The test system performs functional testing over a packet switched netWork (or internet) of upper level protocol (TCP, IP, SMTP, FTP and TELNET) implementations against DoD standardized reference implementations

DOCUMENTATION:

> 1. Functional Description
> 2. Installation and Operations Manual
> 3. Test Operator's Guide
> 4. Test Traceability Index for each protocol (5). Each document lists all scenarios/tests executed for the protocol and cross references the applicable areas of the Mil Spec.
> 5. Remote Driver Specifications for each protocol (5). The driver is coded for and executed on the remote host computer where the implementation under test (IUT) will run.

CPU:

> DEC VAX series w/8MB main memory (minimum) and .8 MIPS (minimum) and 456 MB disk storage space (minimum).

O/S:

> Ultrix version 1.1 (DEC's 4.2BSD product). The test software required kernel modifications to 1.1.

IMPLEMENTATION-LANGUAGE:

> C

DISTRIBUTOR:

> U.S. Department of Commerce
> National Technical Information Service (NTIS)
> 5285 Port Royal Road
> Springfield, VA 22161

CONTACT:
> NTIS

ORDERING-PROCEDURE:

> Write or call the NTIS and ask for the following items by accession number. Description
> NTIS Accession #
>
> Binary software (1/2" tape, 1600 bpi, Unix tar format)
> AD-A195-128

Function 1 Description	AD-A195-129
Installation and Operations Manual	AD-A195-130
Test Operator's Manual	AD-A195-131
IP Remote Driver Spec (RDS)	AD-A195-133

TCP RDS	AD-A195-135
FTP RDS	AD-A195-137
SMTP RDS	AD-A195-142
TELNET RDS	AD-A195-138
IP Test Traceability Index (TTI)	AD-A195-132
TCP TTI	AD-A195-134
FTP TTI	AD-A195-136
SMTP TTI	AD-A195-140
TELNET TTTI	AD-A195-139
TCP/IP (tightly coupled) TTI	AD-A195-143
Internet Protocol Security Option (IPSO) TTI	AD-A195-141

PROPRIETY-STATUS:

Open to public domain

DDN-QUALIFIED:

The DDN PMO is responsible for qualification of network access protocols testing (ie, X.25). The DoD Executive Agent is responsible for qualification of DoD upper level protocol testing (IP and above). The DCA Upper Level Protocol Test System falls under the latter.

INFORMATION-UPDATED:

August 1988

4.5. EON SYSTEMS, INC.

4.5.1. LanProbe Network Analysis System

PRODUCT-OR-PACKAGE-NAME: LanProbe network analysis system

DESCRIPTION:

The LanProbe system is designed for the maintenance, management, and planning of Ethernet LANs. It enables the network manager to monitor all critical aspects, independent of the devices attached to the LAN or the protocols running on it.

DOCUMENTATION:.

UMA-00105-01, LanProbe User Guide included with product

MACHINE-TYPE/CPU:

The LanProbe hardware is proprietary; software runs on a PC/AT or PS/2.

O/S:

DOS

DISTRIBUTOR:

Eon Systems, Inc.
10601 S. DeAnza Blvd., Suite 305
Cupertino, CA 95014

CONTACT:

Pat Malone, Dir. of Sales, (408) 252-5440 or Mary Gardner, Dir. of Marketing

ORDERING-PROCEDURE:

LanProbe ME segment monitor, ProbeView network analysis software

PROPRIETY-STATUS:

Proprietary

INFORMATION-UPDATED:

February 1989

4.6. EXCELAN, INC.

4.6.1. Excelan LANalyzer EX 5000E Ethernet Network Analyzer

PRODUCT-OR-PACKAGE-NAME: LANalyzer EX 5000E Ethernet Network Analyzer

DESCRIPTION:

Excelan's LANalyzer EX 5000E Ethernet Network Analyzer transforms an IBM PC/XT/AT/compatible running DOS into a powerful tool for monitoring, debugging, and characterizing local area networks. It is designed for use on networks based on Ethernet/IEEE 802.3 standards.

The LANalyzer EX 5000E consists of three logical components: the EXOS 225 Ethernet Network Analyzer board, the LANalyzer software, and the associated hardware to connect the PC to the network. These components install on an IBM-PC/XT/AT/compatible running DOS 2.0 or higher. The LANalyzer components are available both as a kit and pre-installed in a COMPAQ PORTABLE 286 computer.

The PC provides a screen-oriented interface for creating tests and for displaying results. Tests can be created to capture packets from the the network or to transmit packets to the network under a variety of criteria. Test results are displayed in real-time or can be saved in DOS files. Although the generic design of the LANalyzer EX 5000E allows it to monitor network traffic on any Ethernet/IEEE 802.3 network, collected Ethernet packets can be later parsed into associated higher layer protocols such as TCP/IP, ISO, XNS and DECnet.

Additionally, a StarLAN adapter board is available for monitoring of StarLAN networks, and EXOS TCP-IP Network Software for DOS can also be run on any PC LANalyzer.

DOCUMENTATION:

LANalyzer EX 5000E Ethernet Network Analyzer User Manual

CPU:

IBM-PC/XT/AT/compatible

O/S:

DOS 2.0 or later

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

Inside Sales
Excelan, Inc.
2180 Fortune Drive
San Jose, CA 95131
(408) 434-2300

Europe:
Excelan
Weir Bank
Bray-on-Thames, N. Maidenhead
Berkshire SL6 2ED England
Telephone: 0628-34281
Telex: 847591

CONTACT:

Inside Sales (408) 434-2300, 1-800-EXCELAN, 1-800-521-3526 (inside CA)

ORDERING-PROCEDURE:

Contact Inside Sales

INFORMATION-UPDATED:

August 1987

4.6.2. LANalyzer EX 5000 Series Network Analyzers

PRODUCT-OR-PACKAGE-NAME: LANalyzer EX 5000 Series Network Analyzers

DESCRIPTION:

The LANalyzer EX5000 Series comprises Excelan's versatile third-generation network analyzer systems. These analyzers let OEMs, systems integrators, and end users monitor network activity, troubleshoot problems, debug protocol and application software, and fine-tune network performance. The portability provided by the COMPAQ PORTABLE II and installed LANalyzer system is an important asset to field service and support departments -- especially when combined with "Carbon Copy PLUS" communications software, which allows LANalyzer test control from any remote Personal Computer. All LANalyzer systems have easy-to-use mouse and menu interfaces, on-line HELP, and built- in, simple "quick tests" for network troubleshooters.

The LANalyzer EX5000 series can: monitor and capture up to 100% of the packets based on user-defined criteria, timestamp captured packets, display test statistics in real time or save them to a DOS file, perform TDR-like cable checking, decode TCP/IP, DECnet, XNS and other protocols, and generate controlled amounts of network traffic.

In addition, Excelan's LAN WorkPlace software for PC DOS provides concurrent access to applications and TCP/IP hosts. Thus, the PC or compatible that runs the LANalyzer program can become a node on the Ethernet network without requiring purchase of an EXOS 205E or EXOS 205T controller.

Additionally, a StarLAN adapter board is available for monitoring of StarLAN networks, and EXOS TCP/IP Network Software for DOS can also be run on any PC LANalyzer.

DOCUMENTATION:

LANalyzer EX5000 Series Network Analyzers Reference Manual

MACHINE-TYPE/CPU:

IBM-PC/XT/ATCompaq 386-based/compatible

O/S:

DOS 3.0 or later

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

Inside Sales: Excelan, Inc.
2180 Fortune Drive
San Jose, CA 95131
(408) 434-2300

Europe: Excelan Europe Ltd.
Intec 2, Suite 17, Wade Road
Basingstoke, Hampshire RG24 One, England

CONTACT:

Inside Sales (408) 434-2300, 1 (800) EXCELAN

ORDERING-PROCEDURE:

Contact Inside sales

INFORMATION-UPDATED:
February 1989

4.7. FTP SOFTWARE, INC.

4.7.1. FTP Software LANWatch

PRODUCT-OR-PACKAGE-NAME: LANWatch

DESCRIPTION:

LANWatch is a software local area network analyzer for the IBM PC and compatibles. LANWatch has two modes: Display Mode, which captures and displays packets in real time, and Examine Mode, which allows the user to scroll back through stored packets and inspect them in greater detail. LANWatch retains a buffer of 254 packets at any given time, and can store more to disk. LANWatch recognizes a variety of protocols, and can be programmed to recognize additional protocol types. Symbolic filters to selectively examine IP family and other types of packets are included. Additional filters can be written and added. LANWatch is available for a variety of network interface cards, including the 3COM 3C500, 3C501, and 3C505, MICOM- Interlan NI5010 and NI5210, Western Digital WD8003, BICC 4100 ISOLAN, Excelan EXOS205/EXOS205T, and Proteon ProNET-10.

DOCUMENTATION:

LANWatch comes with an installation guide, a user's guide, and a programmer's guide.

CPU:

IBM PC, IBM PC/XT, IBM PC/AT, IBM PS/2, AT&T 63000, Compaq, TI BusinessPro, and other compatibles

O/S:

MS-DOS and PC-DOS versions 2.x and 3.x

IMPLEMENTATION-LANGUAGE:

Microsoft C

DISTRIBUTOR:

FTP Software, Inc.
P.O. Box 150
Kendall Square Branch
Boston, MA 02142

CONTACT:

Roger Greene, Vice President, Sales and Marketing, (617) 868-4878, Telex: 981970

ORDERING-PROCEDURE:

Contact FTP Software for a current price list; quantity, government, and academic discounts and site licenses are available.

PROPRIETY-STATUS:

Source licenses and vendor agreements are available.

INFORMATION-UPDATED:

February 1988

4.8. LAWRENCE BERKELEY LABORATORY

4.8.1. LBL tcpdump

PRODUCT-OR-PACKAGE-NAME: tcpdump

DESCRIPTION:

This program passively monitors an ethernet and displays information about the packet traffic. It will display time and ethernet protocol information (source, destination, protocol and size) for any type of packet. In addition it will display all the protocol information in TCP, IP, UDP and ICMP packets. The output may be captured on a file for later analysis. A simple expression language allows a user to selectively dump only "interesting" traffic (e.g., "tcpdump host foo and net arpanet" to watch only the traffic between host "foo" and hosts on the ARPANET).

DOCUMENTATION:

Lengthy manual entry, sample outputs and sample post-capture analysis tools included with distribution

CPU:

Sun-3 (any model)

O/S:

Sun OS 3.2 or later

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

Real Time Systems Group
Lawrence Berkeley Laboratory
1 Cyclotron Road
Berkeley, CA 94720

CONTACT:

Van Jacobson, (Van@lbl-csam.arpa), (415) 486-6411

ORDERING-PROCEDURE:

Obtain via anonymous ftp from Internet host lbl-rtsg.arpa (128.3.254.68 or 128.3.255.68). Ftp the file tcpdump.tar, a binary file in UNIX tar format. The tar file contains the program, documentation and examples.

Note: the only form of distribution from LBL is via anonymous ftp.

PROPRIETY-STATUS:

Program source (currently) proprietary. Program and documentation copyrighted but may be freely copied and redistributed (see README file in distribution).

INFORMATION-UPDATED:

February 1988

4.9. NETWORK GENERAL CORPORATION

4.9.1. Network General Model PA-401

PRODUCT-OR-PACKAGE-NAME: Model PA-401 IBM Token-Ring Network Portable Protocol Analyzer

DESCRIPTION:

Network General's portable LAN protocol analyzer, the Sniffer^{TM}, captures a bit-by-bit sample of network traffic, then translates all protocol information to English for analysis and display in various formats, including SUMMARY, DETAIL, and HEX windows. Protocol Interpreter software suites decoding all seven layers of the OSI model are available for Appletalk (on Ethernet), DECnet, IBM, ISO/MS-NET, Nestar Plan Series, Novell Netware, SUN Microsystems, TCP/IP, Banyan VINES, and XNS protocol families as appropriate. Sniffers are set up and controlled by a three-window, four level, synchronously scrolling menuing system. The Model 401 instrument may be upgraded to accommodate an additional LAN interface for Ethernet, StarLAN, or ARCNET topologies.

DOCUMENTATION:

Complete User Manual

CPU:

Intel 80286

O/S:

MS-DOS

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

Network General Corporation
1945A Charleston Rd.
Mountain View, CA 94043

CONTACT:

George E. Comstock, (415) 965-1800, fax: (415) 965-9608

ORDERING-PROCEDURE:

Phone in purchase order number, or send hard-copy by mail or fax

PROPRIETY-STATUS:

Network General Corporation proprietary

INFORMATION-UPDATED:

August 1988

4.9.2. Network General Model PA-402

PRODUCT-OR-PACKAGE-NAME: Model PA-402 Ethernet Network Portable Protocol Analyzer

DESCRIPTION:

Network General's portable LAN protocol analyzer, the Sniffer™, captures a bit-by-bit sample of network traffic, then translates all protocol information to English for analysis and display in various formats, including SUMMARY, DETAIL, and HEX windows. Protocol Interpreter software suites decoding all seven layers of the OSI model are available for Appletalk (on Ethernet), DECnet, IBM, ISO/MS-NET, Nestar Plan Series, Novell Netware, SUN Microsystems, TCP/IP, Banyan VINES, and XNS protocol families as appropriate. Sniffers are set up and controlled by a three-window, four level, synchronously scrolling menuing system. The Model 402 instrument may be upgraded to accommodate an additional LAN interface for IBM Token-Ring, StarLAN, or ARCNET topologies.

DOCUMENTATION:

Complete User Manual

CPU:

Intel 80286

O/S:

MS-DOS

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

Network General Corporation
1945A Charleston Rd.
Mountain View, CA 94043

CONTACT:

George E. Comstock, (415) 965-1800, fax: (415) 965-9608

ORDERING-PROCEDURE:

Phone in purchase order number, or send hard-copy by mail or fax

PROPRIETY-STATUS:

Network General Corporation proprietary

INFORMATION-UPDATED:

August 1988

4.9.3. Network General Model PA-406

PRODUCT-OR-PACKAGE-NAME: Model PA-406 ARCNET Network Portable Protocol Analyzer

DESCRIPTION:

Network General's portable LAN protocol analyzer, the Sniffer™, captures a bit-by-bit sample of network traffic, then translates all protocol information to English for analysis and display in various formats, including SUMMARY, DETAIL, and HEX windows. Protocol Interpreter software suites decoding all seven layers of the OSI model are available for Appletalk (on Ethernet), DECnet, IBM, ISO/MS-NET, Nestar Plan Series, Novell Netware, SUN Microsystems, TCP/IP, Banyan VINES, and XNS protocol families as appropriate. Sniffers are set up and controlled by a three-window, four level, synchronously scrolling menuing system. The Model 406 instrument may be upgraded to accommodate an additional LAN interface for Ethernet, IBM Token-Ring, or StarLAN topologies.

DOCUMENTATION:

Complete User Manual

CPU:

Intel 80286

O/S:

MS-DOS

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

Network General Corporation
1945A Charleston Rd.
Mountain View, CA 94043

CONTACT:

George E. Comstock, (415) 965-1800, fax:(415) 965-9608

ORDERING-PROCEDURE:

Phone in purchase order number, or send hard-copy by mail or fax

PROPRIETY-STATUS:

Network General Corporation proprietary

INFORMATION-UPDATED:

August 1988

4.9.4. Network General Model PA-407

PRODUCT-OR-PACKAGE-NAME: Model PA-407 StarLAN Network Portable Protocol Analyzer

DESCRIPTION:

Network General's portable LAN protocol analyzer, the Sniffer^{TM}, captures a bit-by-bit sample of network traffic, then translates all protocol information to English for analysis and display in various formats, including SUMMARY, DETAIL, and HEX windows. Protocol Interpreter software suites decoding all seven layers of the OSI model are available for Appletalk (on Ethernet), DECnet, IBM, ISO/MS-NET, Nestar Plan Series, Novell Netware, SUN Microsystems, TCP/IP, Banyan VINES, and XNS protocol families as appropriate. Sniffers are set up and controlled by a three-window, four level, synchronously scrolling menuing system. The Model 407 instrument may be upgraded to accommodate an additional LAN interface for Ethernet, IBM Token-Ring, or ARCNET topologies.

DOCUMENTATION:

Complete User Manual

CPU:

Intel 80286

O/S:

MS-DOS

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

Network General Corporation
1945A Charleston Rd.
Mountain View, CA 94043

CONTACT:

George E. Comstock, (415) 965-1800, fax:(415) 965-9608

ORDERING-PROCEDURE:

Phone in purchase order number, or send hard-copy by mail or fax

PROPRIETY-STATUS:

Network General Corporation proprietary

INFORMATION-UPDATED:

August 1988

4.9.5. Network General Model PA-302

PRODUCT-OR-PACKAGE-NAME: Model PA-302 Ethernet Network Portable Protocol Analyzer

DESCRIPTION:

Network General's laptop LAN protocol analyzer, the Sniffer^{TM}, captures a bit-by-bit sample of network traffic, then translates all protocol information to English for analysis and display in various formats, including SUMMARY, DETAIL, and HEX windows. Protocol Interpreter software suites decoding all seven layers of the OSI model are available for Appletalk (on Ethernet), DECnet, IBM, ISO/MS-NET, Nestar Plan Series, Novell Netware, SUN Microsystems, TCP/IP, Banyan VINES, and XNS protocol families as appropriate. Sniffers are set up and controlled by a three-window, four level, synchronously scrolling menuing system. The Model 302 instrument may be upgraded from its standard 384KB capture buffer size to 3,456KB if desired.

DOCUMENTATION:

Complete User Manual

CPU:

Intel 80286

O/S:

MS-DOS

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

Network General Corporation
1945A Charleston Rd.
Mountain View, CA 94043

CONTACT:

George E. Comstock, (415) 965-1800, fax:(415) 965-9608

ORDERING-PROCEDURE:

Phone in purchase order number, or send hard-copy by mail or fax

PROPRIETY-STATUS:

Network General Corporation proprietary

INFORMATION-UPDATED:

August 1988

4.9.6. Network General Model PA-307

PRODUCT-OR-PACKAGE-NAME: Model PA-307 StarLAN Network Portable Protocol Analyzer

DESCRIPTION:

Network General's laptop LAN protocol analyzer, the Sniffer^{TM}, captures a bit-by-bit sample of network traffic, then translates all protocol information to English for analysis and display in various formats, including SUMMARY, DETAIL, and HEX windows. Protocol Interpreter software suites decoding all seven layers of the OSI model are available for Appletalk (on Ethernet), DECnet, IBM, ISO/MS-NET, Nestar Plan Series, Novell Netware, SUN Microsystems, TCP/IP, Banyan VINES, and XNS protocol families as appropriate. Sniffers are set up and controlled by a three-window, four level, synchronously scrolling menuing system. The Model 307 instrument may be upgraded from its standard 384KB capture buffer size to 3,456KB if desired.

DOCUMENTATION:

Complete User Manual

CPU:

Intel 80286

O/S:

MS-DOS

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

Network General Corporation
1945A Charleston Rd.
Mountain View, CA 94043

CONTACT:

George E. Comstock, (415) 965-1800, fax:(415) 965-9608

ORDERING-PROCEDURE:

Phone in purchase order number, or send hard-copy by mail or fax

PROPRIETY-STATUS:

Network General Corporation proprietary

INFORMATION-UPDATED:

August 1988

4.10. PROTOCOM DEVICES, INC.

4.10.1. Protocom Devices APB1000 Network Control System

PRODUCT-OR-PACKAGE-NAME: APB1000 Network Control System

DESCRIPTION:

APB1000 is a software based system that allows you to monitor and control an entire Protocom P-Series PAD network. The system also provides and stores records used for billing purposes. APB1000 operates on IBM PC/XTs and comptables and allows simultaneous emulation of all protocols on the P-Series PAD network. Specialized APB1000 hardware is available to meet the high throughput required by the system.

APB1000 is designed to prevent security breaches by offering dual level network security for all P-Series PADs on the network as well as for host appllications. All unathorized attempts to access the network are rejected and reported automatically to a database, at a specified location, which is available to the network manager.

APB1000 monitors all P-Series PADs and devices and network. Statistical reports provided include the status of the X.25 line, PAD resets, flow control situations, packet and frame level restarts and status of all ports and devices.

APB1000 generates a billing record for each transaction on the APB1000 network that contains the caller's user ID, the service requested, the caller's PAD address and the date and time connected/disconnected.

APB1000 is designed for use with Protocom P-Series PADs, which offer the following features:

- Independently mapped terminal and host addresses permit communication between any terminals and/or printers and any protocol application on the network.

- Three possible connections, two simultaneous user sessions on a single terminal and host originated calls to shared printers are all supported.

- TurboMode (Protocom's proprietary data streaming method) provides unequalled response time.

- Configurable user screens, mnemonic addressing and user defined function keys are also available.

DOCUMENTATION:

Available on request by contacting below

IMPLEMENTATION-LANGUAGE:

Assembler

DISTRIBUTOR:

Before September 1, 1988	After September 1, 1988
Protocom Devices	Protocom Devices
1666 Bathgate Avenue	25 Rockwood Place
Bronx, N.Y. 10457	Englewood, N.J.
(212) 716-5400	

CONTACT:

Contact above

ORDERING-PROCEDURE:

Submit purchase order to above address; call contact for pricing information

PROPRIETY-STATUS:

Product of Protocom Devices, Inc.

DDN-QUALIFIED:

Yes

INFORMATION-UPDATED:

August 1988

4.10.2. Protocom Devices PCS1000 Network Management System

PRODUCT-OR-PACKAGE-NAME: PCS1000 Network Management System

DESCRIPTION:

PCS1000 is a software based system that allows you to manage, monitor and control an entire Protocom P-Series PAD network. The system operates on IBM PC/XTs and compatibles and allows simultaneous emulation of all protocols on the P-Series PAD network. With PCS1000, configuration is performed locally or remotely and is stored in database format at a specified location. Uploading and downloading is performed easily and efficiently.

PCS1000 collects statistical information, including EIA signals, and provides detailed perfomance reports automatically at specified intervals. Outputs can be sent automatically or on request to printer or disk file. Security control features include the PCS1000 system file which maintains a log of all user transactions and the User Access Database which allows the network manager to delimit access to PCS1000 itself. To eliminate duplicity in network equipment, the PCS1000 personal compter also serves as an asynchronous terminal for manual access to the network.

PCS1000 is designed for use with Protocom P-Series PADs, which offer the following features:

- Independently mapped terminal and host addresses permit communication between any terminals and/or printers and any protocol application on the network.

- Three possible connections, two simultaneous user sessions on a single terminal and host originated calls to shared printers are all supported.

- TurboMode (Protocom's proprietary data streaming method) provides unequalled response time.

- Configurable user screens, mnemonic addressing and user defined function keys are also available.

DOCUMENTATION:

Available on request by contacting below

IMPLEMENTATION-LANGUAGE:

Assembler

DISTRIBUTOR:

Before September 1, 1988	After September 1, 1988
Protocom Devices	Protocom Devices
1666 Bathgate Avenue	25 Rockwood Place
Bronx, N.Y. 10457	Englewood, N.J.
(212) 716-5400	

CONTACT:

Contact above

ORDERING-PROCEDURE:

Submit purchase order to above address; call contact for pricing information

PROPRIETY-STATUS:

Product of Protocom Devices, Inc.

DDN-QUALIFIED:

Yes

INFORMATION-UPDATED:

August 1988

4.11. SPIDER SYSTEMS LIMITED

4.11.1. SpiderMonitors

PRODUCT-OR-PACKAGE-NAME: SpiderMonitors

DESCRIPTION:

The SpiderMonitor P200 is a compact, high performance, portable Ethernet monitor ideal for network System Managers, Supports Organizations and System Developers. It includes an IBM PC/AT compatible computer running MS-DOS, 20 MB hard disk, 1.2 MB floppy disc and LCD screen.

The SpiderMonitor K150 is an Ethernet board kit suitable for installation into any suitable IBM PC/AT compatible computer. It offers comprehensive monitoring and analysis capabilities combined with sophisticated trouble shooting facilities while maintaining ease of use. Data can be read in by Lotus 1-2-3 for presentation of results.

Both SpiderMonitors conform to IEEE 802.3 and are fully Multi-Tasking which allows Packet filtering, Summary information and Statistics collection to run while in other modes. They are easy to use, function driven, and require no complex training. Each monitor offers 6 major monitoring and analysis functions for up to 1024 stations on a network. TCP/IP, DECnet, XNS, and ISO protocols are decoded. Both units have an Intel 80186 processor and 82586 Ethernet controller.

DOCUMENTATION:

User Guide, Support Guide, OEM guide

CPU:

SpiderMonitor P200 - Intel 80286

O/S:

CPU/Monitor Board - Proprietary; PC - MS/DOS

IMPLEMENTATION-LANGUAGE:

C

DISTRIBUTOR:

Spider Systems Limited
65 Bonnington Road
Edinburgh
EH6 5JQ
Scotland

Spider Systems
Suite 400
12 New England Executive Park
Burlington, MA
01803

CONTACT:

Richard G. McNabb, (617) 270-3510

PROPRIETY-STATUS:

Spider Systems

INFORMATION-UPDATED:

August 1988

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DDN Protocol Implementations and Vendors Guide

August 1989

To request inclusion of your product in the next edition, please complete and submit this template by US mail (detach and fold), or by electronic mail (to NIC@SRI-NIC.ARPA). This template is available online via anonymous FTP from the host SRI-NIC.ARPA and is called NETINFO:VENDORS-TEMPLATE.TXT. You may provide any additional information on a separate or continuing page. The following products are suitable for inclusion: TCP/IP and related (e.g. protocol analyzers); OSI; and X.25. This guide is published twice a year (February and August) in both hardcopy (DDN Protocol Implementations and Vendors Guide) and online versions (NETINFO:VENDORS-GUIDE.DOC) by the DDN Network Information Center, SRI International, 333 Ravenswood, Menlo Park, CA, 94025. Direct questions or comments to Sol Lederman, Room EJ276 (415 859-4536).

Note: This registry in no way constitutes an endorsement of any product listed, by either SRI International, the DDN NIC, or any U.S. Government agency.

PRODUCT-OR-PACKAGE-NAME: (EXAMPLE: Sam TCP/IP for SunOS.)

PRODUCT-CATEGORY: (Select all that apply; please use a lower case "x" as your indicator)
HARDWARE_____   SOFTWARE_____   NETWORK-ANALYZER_____
TCP-IP _____   X.25 _____   OSI_____   OTHER _____

DESCRIPTION: (Specify in your description how your product relates to TCP/IP, OSI and/or X.25.)

DOCUMENTATION: (Specify the documentation such as Installation and Operations Manual, Command Reference Manual, etc., part #'s for manual's, and whether they are included or optional.)

MACHINE TYPE:
CRAY_____   DEC VAX_____   MICROVAX_____   PDP11_____   SUN_____   APOLLO_____
WANG_____   UNISYS_____   HONEYWELL_____   XEROX_____   AT&T_____   TANDEM_____
NCR_____   IBM 370_____   IBM PC, PS/2_____ APPLE_____   IBM compatible_____
OTHER_____ (Specify machine type and series.)

O/S (OPERATING SYSTEM):
UNIX_____   LISP_____   SUNOS_____   VMS_____   DOS_____   ULTRIX_____
OTHER_____ (Specify operating system, releases and versions.)

IMPLEMENTATION-LANGUAGE:
C_____   LISP_____   PASCAL_____   OTHER_____
                                        (Specify implementation-language.)

DISTRIBUTOR:
EXAMPLE: Sam Smith Systems   _____
             000 North Street
             Smithville, SV 00000 _____

                                   _____

CONTACT: (EXAMPLE: Sam Smith, Program Manager, (000) 000-0000. Specify a personal contact to use for technical information.)

ORDERING-PROCEDURE: (Specify Product Name / Operating System, Product No.)

PROPRIETY-STATUS: (Specify if it is a proprietary product of your company.)

DDN-QUALIFIED: YES____NO____

DATE-UPDATED:

Fold this flap first

_____

DDN Network Information Center
SRI International
Attn: Sol Lederman EJ276
333 Ravenswood Avenue
Menlo Park, CA 94025

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