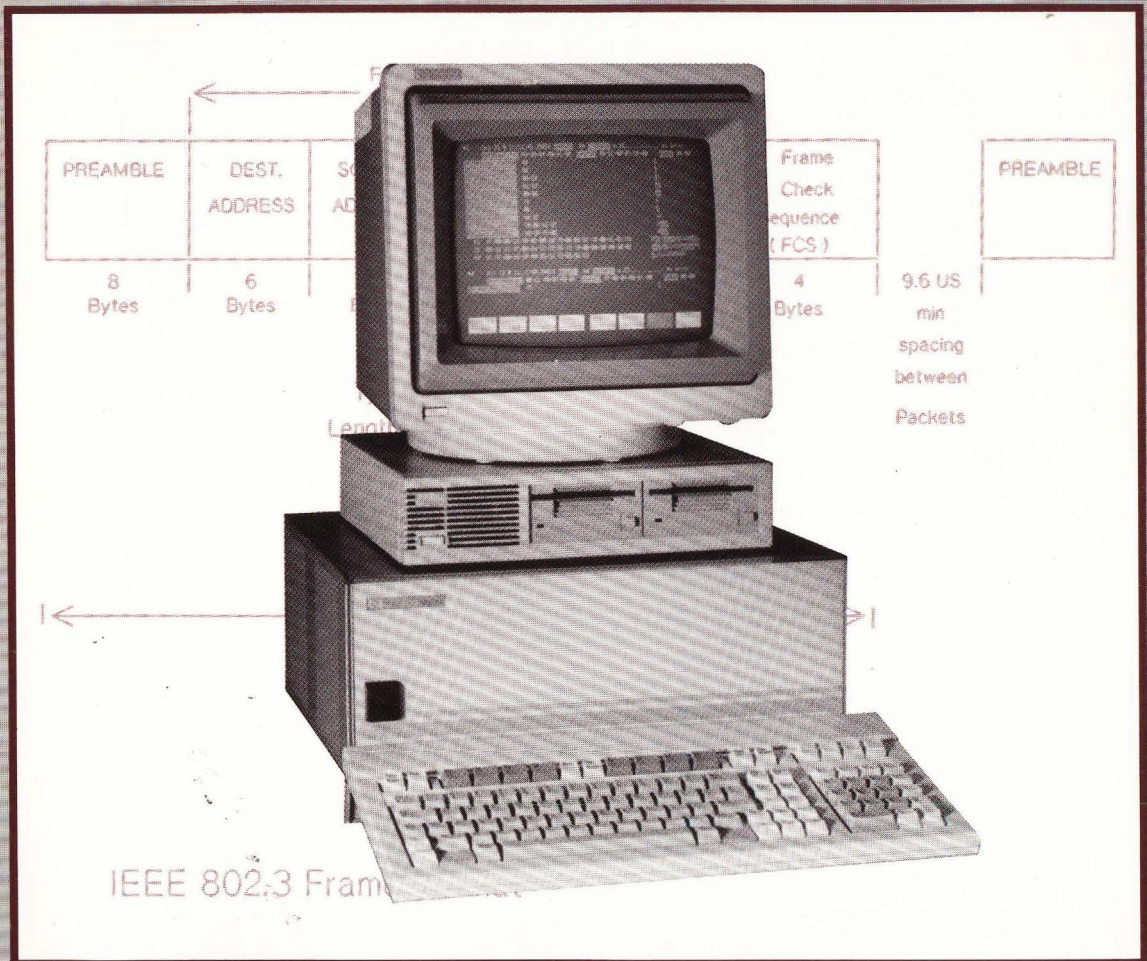Software Library

HP 4971S LAN Protocol Analyzer Utility Disc

User's Guide

for the HP 4971 LAN Protocol Analyzer

PREFACE

This users guide and its associated disc are a set of unsupported tools for use with the HP 4971S LAN Protocol Analyzer. These tools were developed to help the HP 4971S be more useful in analyzing Local Area Networks. The utilities can be easily modified and customized to your particular needs.

This users guide is not intended to document protocol functions or features; it is meant to document the utilities that are contained on the associated disc.

While most of these utilities have been tested they have not gone through a rigorous testing/Q.A. program. If bugs are found please let us know by using the bug/enhancement reporting form at the back of this guide.

If you develop utilities that you feel would be useful to other users and would like to share them, please send a printed copy of your utility with a completed bug/enhancement form to the address shown on the form.

Note

These tools are UNSUPPORTED and are provided on an as is basis.

HP 4971S LAN PROTOCOL ANALYZER

UTILITY DISC

USERS GUIDE

HEWLETT PACKARD

Version 1.0

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CONTENTS BY FILE NAME

MAKING A BACKUP DISC

We recommend you keep the supplied utility disc as a master copy and make backup copies for your daily use. Chapter 18, "<Disc Functions>", in the HP 4971S Users Manual describes how to make copies of a disc.

Keep the master copy of the utility disc in a protected environment.

CHAPTER 1
NETWORK PERFORMANCE MEASUREMENTS

This chapter discusses various utilities for looking at network performance characteristics.

Utilities are included which count frames and collisions in single samples or in intervals over an hour, shift, or day. There are utilities to analyze traffic by frame size or address type.

Additionally, there are traffic generator programs to generate traffic at various levels.

These programs can be easily modified to monitor different time intervals, etc. .

FILE NAME: # Adr_Anl

PURPOSE: Categorize traffic by destination address type over 60 seconds.

FILTERS: Broadcast_Address   Matches broadcast destination address
Individual_Addr   Matches individual destination address
Group_Address   Matches group destination address
Global_Address   Matches global destination address
Local_Address   Matches local destination address

MESSAGES: None

PROGRAMS: AddressAn   Count frames by address type

DESCRIPTION: This program counts the number of frames by destination address type over a 60 second period.

FILE NAME: **CollCnt**

PURPOSE: Count the number of frames and collisions over a 60 second period.

FILTERS: None

MESSAGES: None

PROGRAMS: CountColl   Count frames and collisions over 60 seconds

DESCRIPTION: This simple program counts the number of frames and collisions over a 60 second period.

FILE NAME: # LoadNtB

PURPOSE: To generate background network traffic load at various levels with error frames.

FILTERS: None

MESSAGES:

62_Byte_Runt	62 byte data frame
64_Byte_Message	64 byte data frame
115_Byte_Message	115 byte data frame
226_Byte_Message	226 byte data frame
337_Byte_Message	337 byte data frame
448_Byte_Message	448 byte data frame
559_Byte_Message	559 byte data frame
670_Byte_Message	670 byte data frame
781_Byte_Message	781 byte data frame
892_Byte_Message	892 byte data frame
1003_Byte_Message	1003 byte data frame
1115_Byte_Bad_FCS	1115 byte data frame
1226_Byte_Message	1226 byte data frame
1337_Byte_Message	1337 byte data frame
1448_Byte_Message	1448 byte data frame
2026_Byte_Jabber	2026 byte data frame

PROGRAMS:

BadTraf10	Generate 10% traffic load
BadTraf20	Generate 20% traffic load
BadTraf30	Generate 30% traffic load
BadTraf40	Generate 40% traffic load
BadTrafMX	Generate 94% Traffic load

File **LoadNtB** (cont.)

DESCRIPTION: This set of programs generates a network traffic load, including frames in error, by transmitting frames of various sizes at various intervals over time. Because the HP 4971 follows the CSMA/CD algorithm the percentages shown for each program are maximums. If a collision occurs while the HP 4971 is transmitting, it follows the standard back off algorithm and therefore, less traffic is generated.

The following table gives an estimate of the percentage distribution of frames sizes that are generated for each network loading program:

Frame Size	Program Load				
	10%	20%	30%	40%	94%
62	1.0%	.9%	.8%	2.2%	0.0%
64	78.5%	74.1%	74.1%	47.4%	0.0%
115	3.6%	4.8%	4.8%	8.7%	0.0%
226	2.2%	2.8%	3.1%	5.7%	0.0%
337	1.5%	2.0%	1.9%	4.7%	0.0%
448	1.2%	1.2%	1.3%	3.2%	0.0%
559	1.2%	1.2%	1.3%	3.2%	0.0%
670	1.5%	2.0%	1.9%	4.7%	0.0%
781	2.2%	2.8%	3.1%	5.7%	0.0%
892	3.6%	4.8%	4.8%	8.7%	0.0%
1003	1.0%	.9%	.8%	2.2%	0.0%
1115	.8%	.7%	.7%	1.6%	0.0%
1226	.6%	.6%	.5%	1.0%	0.0%
1337	.4%	.6%	.5%	.7%	0.0%
1448	.4%	.4%	.4%	.4%	0.0%
2024	.0%	.0%	.0%	.0%	100.0%

FILE NAME: # LoadNtG

PURPOSE: To generate background network traffic load at various levels.

FILTERS: None

MESSAGES:

64_Byte_Message1	64 byte data frame
64_Byte_Message2	64 byte data frame
115_Byte_Message	115 byte data frame
226_Byte_Message	226 byte data frame
337_Byte_Message	337 byte data frame
448_Byte_Message	448 byte data frame
559_Byte_Message	559 byte data frame
670_Byte_Message	670 byte data frame
781_Byte_Message	781 byte data frame
892_Byte_Message	892 byte data frame
1003_Byte_Message	1003 byte data frame
1115_Byte_Message	1115 byte data frame
1226_Byte_Message	1226 byte data frame
1337_Byte_Message	1337 byte data frame
1448_Byte_Message	1448 byte data frame
1518_Byte_Message	1518 byte data frame

PROGRAMS:

Traffic10	Generate 10% traffic load
Traffic20	Generate 20% traffic load
Traffic30	Generate 30% traffic load
Traffic40	Generate 40% traffic load
TrafficMX	Generate 94% Traffic load

DESCRIPTION: This set of programs generates a network traffic load by transmitting frames of various sizes at various intervals over time. Because the HP 4971 follows the CSMA/CD algorithm, the percentages shown for each program are maximums. If a collision occurs while the HP 4971 is transmitting, it follows the standard back off algorithm and therefore, less traffic is generated.

File **LoadNtG** (cont.)

The following table gives an estimate of the percentage distribution of frames sizes that are generated for each network loading program:

Frame Size	Program Load				
	10%	20%	30%	40%	94%
64	79.3%	74.8%	74.6%	49.5%	0.0%
115	3.6%	4.8%	4.8%	8.7%	0.0%
226	2.2%	2.8%	3.1%	5.7%	0.0%
337	1.5%	2.0%	1.8%	4.7%	0.0%
448	1.2%	1.2%	1.3%	3.2%	0.0%
559	1.2%	1.2%	1.3%	3.2%	0.0%
670	1.5%	2.0%	1.9%	4.6%	0.0%
781	2.2%	2.8%	3.1%	5.7%	0.0%
892	3.6%	4.8%	4.8%	8.7%	0.0%
1003	1.0%	.9%	0.8%	2.2%	0.0%
1115	.8%	.7%	.7%	1.6%	0.0%
1226	.6%	.6%	.5%	1.0%	0.0%
1337	.4%	.6%	.5%	.7%	0.0%
1448	.3%	.4%	.4%	.4%	0.0%
1518	.3%	.4%	.4%	.3%	100.0%

FILE NAME: **SizeAnl**

PURPOSE: Categorize traffic by frame size over 60 seconds.

FILTERS:

Frame_64_100Byte	Matches frames of 64-100 bytes
Frame_101_200Byte	Matches frames of 101-200 bytes
Frame_201_300Byte	Matches frames of 201-300 bytes
Frame_301_400Byte	Matches frames of 301-400 bytes
Frame_401_500Byte	Matches frames of 401-500 bytes
Frame_501_600Byte	Matches frames of 501-600 bytes
Frame_601_700Byte	Matches frames of 601-700 bytes
Frame_701_800Byte	Matches frames of 701-800 bytes
Frame_801_900Byte	Matches frames of 801-900 bytes
Frame_901_1000B	Matches frames of 901-1000 bytes
Frame_1001_1100B	Matches frames of 1001-1100 bytes
Frame_1101_1200B	Matches frames of 1101-1200 bytes
Frame_1201_1300B	Matches frames of 1201-1300 bytes
Frame_1301_1400B	Matches frames of 1301-1400 bytes
Frame_1401_1518B	Matches frames of 1401-1518 bytes

MESSAGES: None

PROGRAMS: Length   Count frames by frame size

DESCRIPTION: This program uses filters that match frames by size. When complete, the counters display the number of frames in each size category over the last 60 seconds.

FILE NAME: **TimDay**

PURPOSE: Count the number of frames during a 24 hour period.

FILTERS: Any_Frame   Match any frame

MESSAGES: None

PROGRAMS: DayWatch   Analyze traffic over a 24 hour period

DESCRIPTION: This program counts the number of frames and collisions over the period of 24 hours. Traffic is broken down in 2 hour intervals.

The program is designed to update the timer/counters display every two hours. Display updating is minimized so the program can keep up with high network loads. If the load is light, the display can be set to be continuously updated.

Note

If traffic is too heavy for the program to keep up, try removing all start and stop display statements except the last.

FILE NAME: # TimHour

PURPOSE: Count the number of frames in each 5 minute period during an hour.

FILTERS: Any_Frame   Match any frame

MESSAGES: None

PROGRAMS: HourWatch   Analyze traffic over an hour

DESCRIPTION: This program counts the number of frames and collisions over the period of an hour. Traffic is broken down in five minute intervals.

The program is designed to update the timer/counters display every five minutes. Display updating is minimized so the program can keep up with high network loads. If the load is light, the display can be set to be continuously updated.

Note

If traffic is too heavy for the program to keep up, try removing all start and stop display statements except the last.

FILE NAME: **TimShft**

PURPOSE: Count the number of frames during an 8 hour period.

FILTERS: Any_Frame   Match any frame

MESSAGES: None

PROGRAMS: ShftWatch   Analyze traffic over an 8 hour period

DESCRIPTION: This program counts the number of frames and collisions over the period of 8 hours. Traffic is broken down in 1 hour intervals.

The program is designed to update the timer/counters display every hour. Display updating is minimized so the program can keep up with high network loads. If the load is light, the display can be set to be continuously updated.

Note

If traffic is too heavy for the program to keep up, try removing all start and stop display statements except the last.

CHAPTER 2
PROTOCOL ANALYSIS

This chapter covers the utilities designed to format and analyze various common level 3 and 4 protocols.

Utilities are provided to format DECNET, TCP/IP, XNS, and others.

FILE NAME: # DECNMOP

PURPOSE:	Protocol format for Digital Equipment's Maintenance Operation Protocol

FILTERS:		
	Dump_Load	Matches dump load messages
	Memory_Load	Matches memory load messages
	Req_Memory_Dump	Matches request memory dump messages
	Request_Program	Matches request program messages
	Req_Memory_Load	Matches request memory load messages
	Req_Dump_Service	Matches request dump service messages
	Memory_Dump_Data	Matches memory dump data messages
	Parm_Load_with_TA	Matches program load with transfer address
	Dump_Complete	Matches dump complete messages
	Boot	Matches boot messages
	Req_ID	Matches request identification messages
	System_ID	Matches system identification messages
	Request_Counters	Matches request counters message
	Counters	Matches a counter response message
	Reserve_Console	Matches a reserve console message
	Release_Console	Matches a release console message

MESSAGES:	None

PROGRAMS:	MOP_Count	Program to count the number of frames of each MOP message type

File **DECNMOP** (cont.)

DESCRIPTION: This set of filters can be used to format Digital Equipment Maintenance Operation Protocol (MOP) messages. This is accessed through the filter format function in examine data.

The MOP protocol provides support for the control and management of nodes on a DECNet network.

MOP messages are in two categories:
One group has an Ethernet type of 6001_h.
The other group has an Ethernet type of 6002_h.

Because of the limit of 16 filters, the following two messages are not formatted:

Console Command and Poll

Destination	Source	6002_h	Byte Count	11_h	Cntrol Flag	Command Data
byte	6	6	2	2	1	1
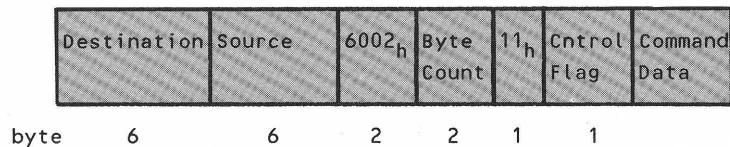
Console Response and Acknowledge

Destination	Source	6002_h	Byte Count	13_h	Cntrol Flag	Command Data
byte	6	6	2	2	1	1
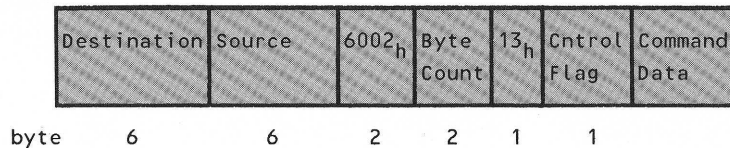
FILE NAME: # DECNNSP

PURPOSE: Protocol format for the DECnet layer 4 NSP protocol

FILTERS:

Data_Segment	Matches data from level 5
Interrupt	Matches interrupt messages
Link_Service	Matches link management messages
Data_Acknowledge	Matches acknowledge data messages
Other_Data_Ack	Matches acknowledge interrupt messages
Connect_Ack	Matches connection acknowledge messages
No_Operation	Matches No Op messages
Connect_Initiate	Matches initiate a connection messages
Retran_Conn_Init	Matches initiation retransmission messages
Connect_Confirm	Matches confirm a connection messages
Disconnect_Init	Matches initiate a disconnect messages
Disconnect_Confir	Matches confirm a disconnection messages

MESSAGES: None

PROGRAMS: NSP_Count   Program to count the number of each NSP message type.

DESCRIPTION: This set of filters can be used to format Digital Equipment's DECnet NSP layer messages. DECnet messages have an Ethernet Type value of 6003_h.

NSP message filters have optional padding at the routing layer. The padding can be from 1 to 8 bytes in size. Most DECnet traffic we have seen that has padding bytes, only has a single pad byte. For this reason, you may have to modify the filters to match the packet with or without padding.

FILE NAME: **DECNROT**

PURPOSE: Protocol format for the DECnet layer 3 protocol known as the Routing layer

FILTERS:		
	Long_Data_Packet	Matches higher level protocol messages
	Routing_Hello	Matches Level 3 node notification messages
	Endnode_Hello	Matches level 3 node notification messages
	Routing_Level1	Matches level 3 routing information messages
	Routing_Level2	Matches level 3 routing information messages
	Long_Data_PacketP	Matches opt padding for higher level protocol messages
	Routing_HelloP	Matches opt padding for level 3 node notification messages
	Endnode_HelloP	Matches opt padding for level 3 node notification messages
	Routing_Level1P	Matches opt padding for level 3 routing info messages
	Routing_Level2P	Matches opt padding for level 3 routing info messages

MESSAGES: None

PROGRAMS: ROUT_Count   Program to count the number of routing layer messages.

DESCRIPTION: This set of filters can be used to format Digital Equipment's DECnet Routing layer messages. DECnet messages have an Ethernet type value of 6003_h. Routing messages have an optional padding field that can be from 1 to 8 bytes in size. Most DECnet traffic we have seen that has padding bytes only has a single pad byte. For this reason, there are two copies of each filter, one with and one without the pad byte.

FILE NAME: **HPProbe**

PURPOSE: Protocol format for the Hewlett-Packard Probe protocol.

FILTERS:

802PR_Name_Req	Matches name request message in a 802.3 frame
802PR_Name_Reply	Matches name reply message in a 802.3 frame
802PR_VirtAdr_Req	Matches virtual address request message in a 802.3 frame
802PR_VirtAdr_Rep	Matches virtual address reply message in a 802.3 frame
802PR_Unsolic_Req	Matches unsolicited reply message in a 802.3 frame
802PR_Gateway_Req	Matches where is gateway request message in a 802.3 frame
802PR_Gateway_Rep	Matches where is gateway reply message in a 802.3 frame
EthPR_Name_Req	Matches name request message in an Ethernet frame
EthPR_Name_Reply	Matches name reply message in an Ethernet frame
EthPR_VirtAdr_Req	Matches virtual address request message in an Ethernet frame
EthPR_VirtAdr_Rep	Matches virtual address reply message in an Ethernet frame
EthPR_Unsolic_Rep	Matches unsolicited reply message in an Ethernet frame
EthPR_Gateway_Req	Matches where is gateway request message in an Ethernet frame
EthPR_Gateway_Rep	Matches where is gateway reply message in an Ethernet frame

MESSAGES: None

PROGRAMS: None

DESCRIPTION: This set of filters can be used to format the Hewlett-Packard Probe Protocol.

FILE NAME: ISOtrns

PURPOSE: Protocol format for the International Standards Organization transport protocol.

FILTERS:

Connection_Req	Matches a connection request
Connection_Confrm	Matches a connection confirmation
Disconnect_Req	Matches a disconnection request
Disconnect_Confrm	Matches a disconnection confirmation
Data	Matches data from the upper layers
Expedited_Data	Matches expedited data packets
Acknowledgment	Matches acknowledgment
Expedited_Ack	Matches expedited acknowledgment
Reject	Matches rejection sequence
Error	Matches error frames

MESSAGES: None

PROGRAMS: ISO_Count — Program to count the number of ISO Transport messages by type.

DESCRIPTION: This set of filters can be used to format the ISO Transport Protocol packets. Additionally, there is a program to count the number of packets by type.

FILE NAME: # TCPIP

PURPOSE: Protocol format for the Transmission Control Protocol (TCP) and the Internet Protocol (IP) from DOD.

FILTERS:

802_TCPIP_SYNACK	Matches synchronize & acknowledge message in a 802.3 frame
802_TCPIP_FIN	Matches finish message in a 802.3 frame
802_TCPIP_RST	Matches a reset connection message in a 802.3 frame
802_TCPIP_EOL	Matches an end of letter message in a 802.3 frame
802_TCPIP_URG	Matches an urgent message in a 802.3 frame
802_TCPIP_ACK	Matches an acknowledge message in a 802.3 frame
802_TCPIP_SYN	Matches a synchronize message in a 802.3 frame
Ethr_TCPIP_SYNACK	Matches synchronize & acknowledge message in a 802.3 frame
Ethr_TCPIP_FIN	Matches finish message in a 802.3 frame
Ethr_TCPIP_RST	Matches a reset connection message in a 802.3 frame
Ethr_TCPIP_EOL	Matches an end of letter message in a 802.3 frame
Ethr_TCPIP_URG	Matches an urgent message in a 802.3 frame
Ethr_TCPIP_ACK	Matches an acknowledge message in a 802.3 frame
Ethr_TCPIP_SYN	Matches a synchronize message in a 802.3 frame
802_IP_Detail	Matches an IP header in a 802.3 frame
Ethr_IP_Detail	Matches an IP header in an Ethernet frame

(continued)

File **TCPIP** (cont.)

MESSAGES: None

PROGRAMS: None

DESCRIPTION: This set of filters can be used to format Transmission Control Protocol and the Internet Protocol from the Department of Defense. This set of filters matches TCP/IP in either IEEE 802 or Ethernet format.

Because some of the different message types can be combined, multiple filters may match a given message.

The format can be accessed through the filter format in the <Examine Data> Menu.

FILE NAME: # Typ_Anl

PURPOSE: Categorize network traffic by Ethernet type field.

FILTERS:

XNS	Matches XNS frames
DOD_IP	Matches DOD IP (TCP/IP) frames
X75_Internet	Matches X75 Internet frames
NBS_Internet	Matches NBS Internet frames
ECMA_Internet	Matches ECMA Internet frames
DEC_MOP_Dump_Load	Matches DEC MOP frames
DEC_MOP_Console	Matches DEC MOP frames
DEC_DECNet	Matches DECNet frames
DEC_LAT	Matches DEC LAT (terminal server) frames
DEC_User	Matches DEC User defined frames
Ethernet_Loopback	Matches Ethernet Loopback frames

MESSAGES: None

PROGRAMS: Type_Anal   Program to count the number of frames of each message type.

DESCRIPTION: This utility can be used to analyze traffic on a network operating in Ethernet mode. Traffic is broken down by the Ethernet Type field according to higher level protocols.

FILE NAME: **XNS**

PURPOSE: Protocol format for the Xerox Network System protocols at levels 3 and 4.

FILTERS:

Sequenced_Packet	Matches a sequenced packet message
Packet_Exchange	Matches a packet exchange message
Routing_Info_Req	Matches a routing information request message
Routing_Info_Resp	Matches a routing information response
Echo_Req	Matches an echo request message
Echo_Reply	Matches an echo reply message
Error	Matches an error message
Internet_Datagram	Matches any level 3 datagrams

MESSAGES: None

PROGRAMS: XNS_Count   Program to count the number of XNS messages by type.

DESCRIPTION: This set of filters can be used to format Xerox Network Systems Internet Datagram protocol and the XNS transport protocols. Additionally, there is a program to count the number of packets by type. The format function can be accessed through the filter format function of the <Examine Data> Menu.

CHAPTER 3
TESTING

This chapter documents utilities that can be used to test the proper connection and operation of nodes on the network.

Utilities are provided to test a node using IEEE 802 XID test and Ethernet configuration testing protocol as well as others.

FILE NAME: # DECNSID

PURPOSE: Send a Request ID message to a DEC node and trap response

FILTERS: Any_System_ID   Matches any System ID responses
Request_Sys_ID   Matches specific system ID request
Response_Sys_ID   Matches specific system ID response

MESSAGES: Req_Sys_ID_Mesg   Request System ID message

PROGRAMS: Req_Sys_ID   Program to send Request Sys ID message and time the response

Any_SysID   Program to collect and count Sys ID messages

DESCRIPTION: This utility may be used to send a Digital Equipment Maintenance Operation Protocol (MOP) Request ID message and trap the response. This is a simple test to see if a DEC node is alive and is responding.

To execute, the following parameters must filled in:

Messages: Source Address   HP 4971S address

Destination Address   DEC node (Use the DECnet address ie. AA-00-04...)

Filters: Req_Sys_ID   Source Address-HP 4971S address
Destination Address-DEC node address

Sys_ID_Resp   Source Address-DEC node address
Destination Address-HP 4971S address

FILE NAME: **EthrCTP**

PURPOSE: Test nodes with the Ethernet Loop Back Configuration Testing Protocol

FILTERS:

1_Hop_Send	Matches a CTP 1 Hop request
1_Hop_Reply	Matches a CTP 1 Hop reply
1_Hop_Generic	Matches a CTP 1 Hop message
2_Hop_Send	Matches a CTP 2 Hop request
2_Hop_Reply	Matches a CTP 2 Hop reply
2_Hop_Generic	Matches a CTP 2 Hop message
3_Hop_Send	Matches a CTP 3 Hop request
3_Hop_Reply	Matches a CTP 3 Hop reply
3_Hop_Generic	Matches a CTP 3 Hop message
Multicast_Send	Matches a CTP Multicast request
Multicast_Reply	Matches a CTP Multicast reply
Generic_CTP	Matches a CTP message

MESSAGES:

1_Hop_Send_Msg	A single hop CTP request
2_Hop_Send_Msg	A two step hop CTP request
3_Hop_Send_Msg	A three step hop CTP request
Multicast_Assist	A Broadcast CTP assist message

PROGRAMS:

1_Hop_Tst	Send a 1 hop request and wait for response
2_Hop_Tst	Send a 2 hop request and wait for responses
3_Hop_Tst	Send a 3 hop request and wait for responses
Multicast	Send a multicast request and display responses

DESCRIPTION: This utility may be used to send various types of Ethernet loopback messages. This loopback protocol is known as the Ethernet Configuration Testing Protocol (CTP) The messages defined executes a 1, 2 or 3 hop loopback test. There is also a message defined using the loopback assist multicast address as the destination address. This causes all nodes that can act as loopback assistants to reply to the HP 4971.

(continued)

File **EthrCTP** (cont.)

DESCRIPTION: (cont.)

To execute any of the programs the following parameters for the appropriate messages and filters must be filled in (format the message as a filter for ease of entry).

Messages:	Source Address	The HP4971.
	Destination Address	The 1st node you wish to loop to.
	Forward Address	The next node you want the message forwarded to.
	Final Destination Address	The HP 4971 address.

Filters:	Send filters:	
	Destination Address	X's (don't cares).
	Source Address	The HP 4971.
	Final Destination Address	The HP 4971 (or all don't cares).
	Reply filters:	
	Destination Address	The HP 4971
	Source Address	X's (don't cares)
	Final Destination Address	The HP 4971 (or all don't cares)

The only difference between send and reply filters, other than Source and Destination Addresses, is the Skip_count field:

For the Send filters, the Skip_count field is 00-00.

For the Reply filters, it is XX-XX.

The Generic_CTP filter matches all messages that have a Type field of 90-00.

FILE NAME: # XNSLoop

PURPOSE: Send a XNS echo request and trap the reply message.

FILTERS: XNS_Echo_Request   Matches an XNS Echo request
                 XNS_Echo_Reply   Matches an XNS Echo response

MESSAGES: XNS_Echo_Request   XNS Echo request message

PROGRAMS: XNSEchoRq   Program to send XNS echo request and trap the response

DESCRIPTION: This utility may be used to send a Xerox Network System echo request. This is a simple test to see if a XNS node is alive and is responding.

To execute, the following parameters must filled in:

Messages: Source Address   The HP4971 Destination Address - the node you wish to loop to.

IDP_Dest_Host   The Ethernet address of the node you wish to loop to.

IDP_Source_Host   The Ethernet address of the HP 4971.

Optionally, you may want to change the IDP socket or network numbers depending on your local environment

Filters: Send Filters:
                 Source Address   The HP4971.
                 Destination Address   The node you wish to loop to.

                 Reply Filters:
                 Source Address   The HP4971.
                 Destination Address   The node you wish to loop to.

Optionally, you may want to choose to use the IDP host, socket or network numbers depending on your needs.

FILE NAME: # XID_Tst

PURPOSE: Send a 802.2 XID or Test message and trap response

FILTERS:

XID_Command	Matches a XID command
XID_Response	Matches a XID response
TEST_Command	Matches a Test command
TEST_Response	Matches a Test response

MESSAGES:

XID_Command_Brdcs	Broadcast XID command
TEST_Command_Brdc	Broadcast Test command
XID_Command_Indiv	XID command to an individual address
TEST_Command_Indi	TEST command to an individual address

PROGRAMS:

XID_Req	Send a XID request to an individual address
TEST_Req	Send a TEST request to an individual address
XID_Broad	Send a XID broadcast message
TEST_Broad	Send a TEST broadcast message

DESCRIPTION: This utility may be used to send either 802.2 Exchange ID commands or 802.2 Test loopback commands. These can be used to test the attachment and functioning of nodes to the network. For each message there are two programs: one to transmit to an individual address, and another, that sends a message with the broadcast address.

To execute, the following parameters must filled in:

Messages:	Source Address	HP 4971.
	Destination Address	For non broadcast, set to appropriate node.
Filter:	Source Address	For request, use HP 4971. For reply, use X's (don't cares).
	Destination Address	For non broadcast request, use object node. For reply, use HP 4971.

CHAPTER 4
MISCELLANEOUS

The following utilities do not fit in any of the prior categories.

FILE NAME: # Mfg_Anl

PURPOSE: Categorize traffic by manufacture according to the first three bytes of the source address.

FILTERS:

ATT	Matches ATT's address prefix
Bridge	Matches Bridge's address prefix
Digital_Equipment	Matches DEC's address prefix
Hewlett_Packard	Matches HP's address prefix
SUN	Matches SUN's address prefix
Ungermann-Bass	Matches UB's address prefix
Symbolics	Matches Symbolic's address prefix
DECNet	Matches DECNet Addresses
DECNet_Multicast	Matches DECNet Multicast Addresses
None_of_the_Above	Matches when the above don't

MESSAGES: None

PROGRAMS: Mfg_Count   Count frames by manufacture address

DESCRIPTION: This program uses filters that match the first three bytes of the source address based on the manufactures registered address prefix. The program is currently set to run for 60 seconds.

HEWLETT PACKARD