

Acceptance Test

Requested by: Mr. Ken Swarner
Systems Administrator
Computer Science Department of Siena College

TCP/IP Packet Descriptor

Mirage Incorporated

“We are there...even if you cannot see us”

Mirageinc2003@yahoo.com

Prepared by: Paul Aiuto
Richard Connell
Lauren Englisbe
Jayme Gresen, Team Leader
Jeffrey Habiniak

**Preliminary Design
Table of Contents**

1.1 Product Overview and Summary	4
1.2 Development, Operating, and Maintenance Development	4
1.3 Functional Requirement Review	4
1.4 Deliverables	5
2.0 Screenshots	6
2.1 Title Page	6
2.2 Choose a Protocol	7
2.3 FTP PDU	8
2.3.1 IP PDU for the selected FTP PDU	8
2.3.2 TCP PDU for the selected FTP PDU	9
2.3.3 FTP PDU for the selected FTP PDU	10
2.4 TELNET PDU for the selected TELNET PDU	11
2.5 ARP PDU for the selected ARP PDU	12
2.6 HTTP PDU for the selected HTTP PDU	13
2.7 PING PDU for the selected PING PDU	14
2.8 SSH PDU for the selected SSH PDU	15
3.0 Testing Sheets	16
3.1 Functional Requirements	16-17
3.2 ARP Testing Sheets	18
3.2.1 Ethernet Testing Sheet for the selected ARP PDU	18-19
3.2.2 ARP Testing Sheet for the selected ARP PDU	20-21
3.3 ICMP Testing Sheets	22
3.3.1 Ethernet Testing Sheet for the selected ICMP PDU	22-23
3.3.2 IP Testing Sheet for the selected ICMP PDU	24-26
3.3.3 ICMP Testing Sheet for the selected ICMP PDU	27
3.4 PING Testing Sheets	28
3.4.1 Ethernet Testing Sheet for the selected PING PDU	28-29
3.4.2 IP Testing Sheet for the selected PING PDU	30-32
3.4.3 ICMP Testing Sheet for the selected PING PDU	33
3.4.4 PING Testing Sheet for the selected PING PDU	34-36
3.5 UDP Testing Sheets	37
3.5.1 Ethernet Testing Sheet for the selected UDP PDU	37-38
3.5.2 IP Testing Sheet for the selected UDP PDU	39-41
3.5.3 UDP Testing Sheet for the selected UDP PDU	42

3.6	SNMP Testing Sheets	43
3.6.1	Ethernet Testing Sheet for the selected SNMP PDU	43-44
3.6.2	IP Testing Sheet for the selected SNMP PDU	45-47
3.6.3	UDP Testing Sheet for the selected SNMP PDU	48
3.6.4	SNMP Testing Sheet for the selected SNMP PDU	49-50
3.7	FTP Testing Sheets	51
3.7.1	Ethernet Testing Sheet for the selected FTP PDU	51-52
3.7.2	IP Testing Sheet for the selected FTP PDU	53-55
3.7.3	TCP Testing Sheet for the selected FTP PDU	56-59
3.7.4	FTP Testing Sheet for the selected FTP PDU	60
3.8	SSH Testing Sheets	61
3.8.1	Ethernet Testing Sheet for the selected SSH PDU	61-62
3.8.2	IP Testing Sheet for the selected SSH PDU	63-65
3.8.3	TCP Testing Sheet for the selected SSH PDU	66-69
3.8.4	SSH Testing Sheet for the selected SSH PDU	70
3.9	HTTP Testing Sheets	71
3.9.1	Ethernet Testing Sheet for the selected HTTP PDU	71-72
3.9.2	IP Testing Sheet for the selected HTTP PDU	73-75
3.9.3	TCP Testing Sheet for the selected HTTP PDU	76-79
3.9.4	HTTP Testing Sheet for the selected HTTP PDU	80
3.10	TELNET Testing Sheets	81
3.10.1	Ethernet Testing Sheet for the selected TELNET PDU	81-82
3.10.2	IP Testing Sheet for the selected TELNET PDU	83-85
3.10.3	TCP Testing Sheet for the selected TELNET PDU	86-89
3.10.4	TELNET Testing Sheet for the selected TELNET PDU	90
3.11	SMTP Testing Sheets	91
3.11.1	Ethernet Testing Sheet for the selected SMTP PDU	91-92
3.11.2	IP Testing Sheet for the selected SMTP PDU	93-95
3.11.3	TCP Testing Sheet for the selected SMTP PDU	96-99
3.11.4	SMTP Testing Sheet for the selected SMTP PDU	100
4.0	Glossary	101-103

1.1 Product Overview and Summary

The TCP/IP Packet Descraptor will be used as a learning tool by both Dr. Timothy Lederman and Mr. Ken Swarner. The application's Graphical User Interface (GUI) gives students a visual guide of how protocols are contained within a hierarchy, and ultimately, their relationship with other PDUs. The TCP/IP Packet Descraptor is an interactive application that will allow students to click on the different fields of each protocol and view the field's definition, the data contained within it, and the conversion of this data into the appropriate base(s) – Hexadecimal, Binary, Decimal, and ASCII.

1.2 Development, Operating, and Maintenance Development

The TCP/IP Packet Descraptor was developed on the Siena College Engineering workstations. To create our GUI, we used Macromedia Fireworks, and to develop our website we used XHTML.

The users of the Descraptor include Dr. Lederman, Mr. Swarner, and the students in their classes. The application will be accessible from any computer system with Internet capabilities.

1.3 Functional Requirement Review

In the Software Requirements Specification of the TCP/IP Packet Descraptor, we stated that there would only be one type of user for this system. The following is a list of the functional requirements:

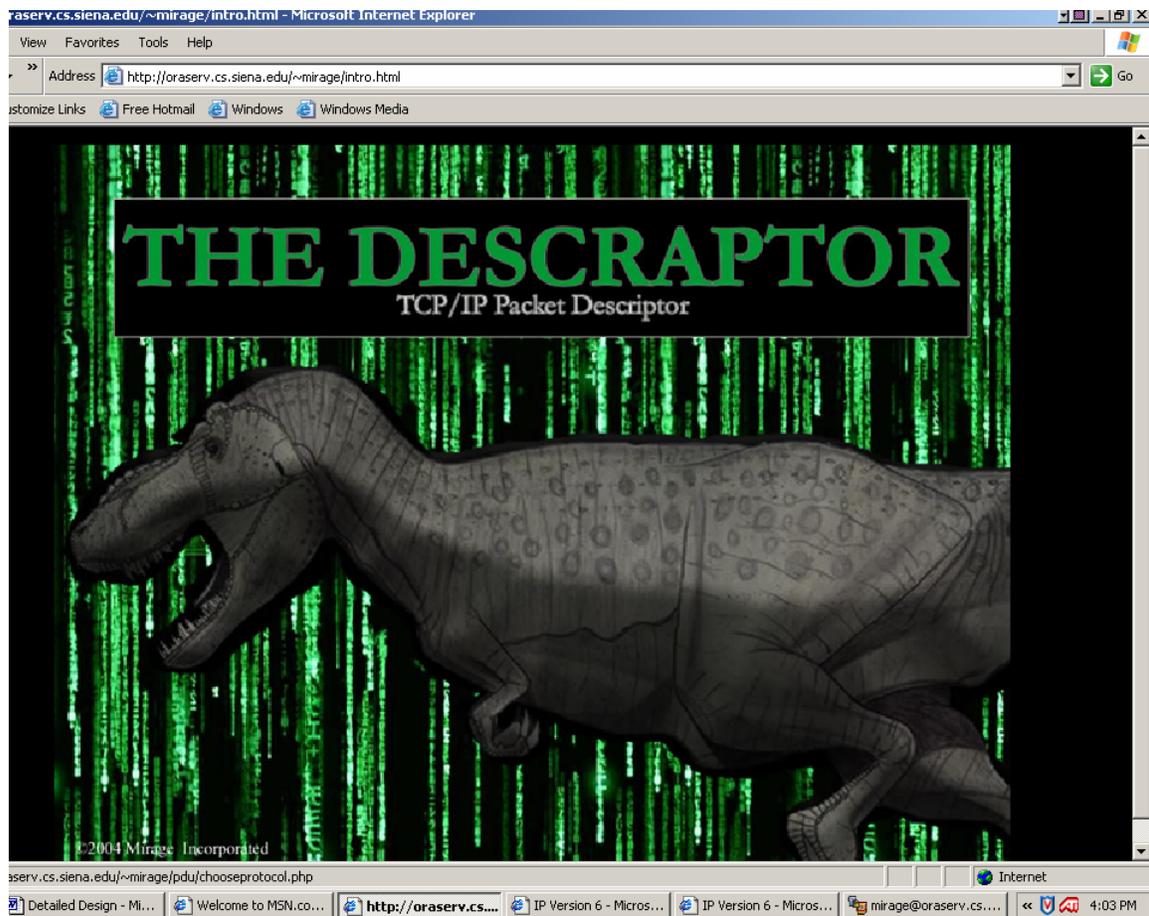
- Clearly display on a 1024x768 pixel screen
- Application is readable from farthest corners in classrooms when displayed on an overhead projector
- Contain information for the protocols requested by Mr. Swarner
- Produce GUI to colorfully and clearly display the components of each protocol
- Choose a Protocol Button is available on every screen, allowing the user to learn about another protocol at any time
- Clearly illustrate how different protocols are related to one another through the hierarchical conception of the IP Protocol Suite
- Produce information box for the “clicked” field displaying:
 - Purpose of field
 - The data values contained within that field
 - This data converted into the appropriate bases (i.e. Hexadecimal, Binary, Decimal, ASCII)
- Provide link for Request For Comments (RFC) for each protocol

1.4 Deliverables

Our deliverables include a compact disc and a hard copy of the acceptance criteria document, which will be delivered on May 4, 2004. Included on the compact disc are the executable, source code and any needed data files. Also included on the compact disc is the complete website, with all links to the past documents.

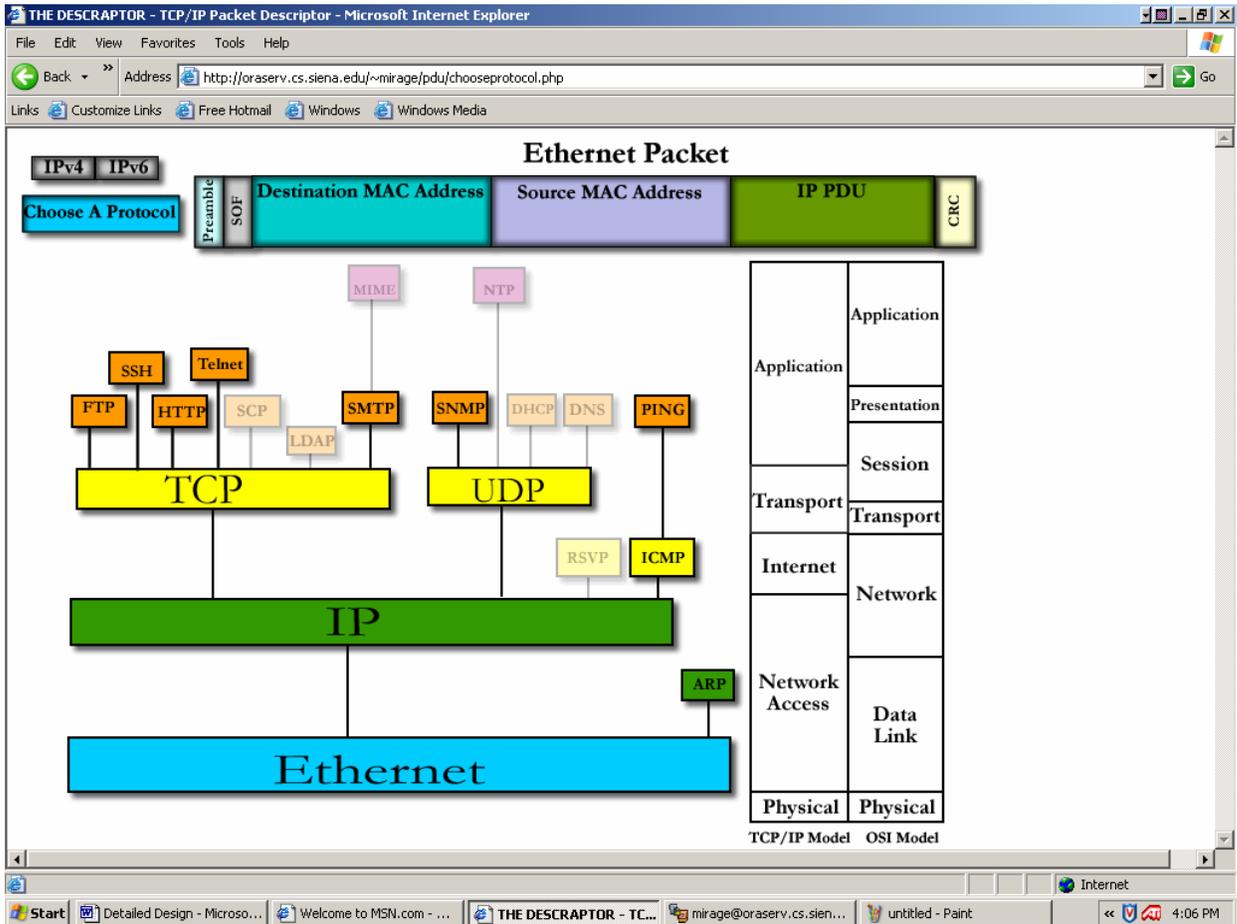
2.0 Screenshots

2.1 Title Page



This will be the first screen the user sees. It is the introduction screen to our software, and presents our mascot, “The Descriptor”.

2.2 Choose a Protocol



This is the first functional screen the user will see. It allows the user to see what an Ethernet Packet looks like, and eventually each frame within that packet will be click-able and able to display information about that frame.

The “Choose a Protocol” menu gives the user a graphical representation of how protocols are interrelated, and allows the desired protocol to be selected.

2.3 FTP PDU

2.3.1 IP PDU for the selected FTP PDU

The screenshot shows a web-based packet analyzer interface. At the top, it displays the browser address: `http://oraserv.cs.siena.edu/~mirage/pdu/ip_pdu_ftp/ip_generalinfo_ftp/ip_generalinfo_ftp.php`. The main window is titled "Ethernet Packet" and shows a protocol stack on the right: FTP (orange), TCP (yellow), IP (green), and Ethernet (blue). The "Choose A Protocol" button is highlighted in blue. The main display area shows the packet structure with fields and their binary values:

Protocol	Field Name	Field Value (Binary)
IP	Version	0100
	IHL	0101
	Type of Service	00000101
	Total Length	0000000001101001
TCP	Identification	1010101001000100
	Flags	010
	Fragment Offset	00000000000000
FTP	Time to Live	01000000
	Protocol	00000110
	Header Checksum	0000111010000101
	Source IP Address	11000001010100000000000100111
FTP	Destination IP Address	110000010101000000000001100101
	Data (TCP PDU)	[Data field]

On the right, an information box titled "IP PDU for the selected FTP PDU" displays the following details:

- Field Name: *IP PDU*
- Purpose and Definition:
- Field Key: *Not applicable*
- Data value:
- Data values in other bases:

Once a protocol has been selected by the user, this screen will display. The basis for our protocol suite, the IP PDU, is displayed on the left, filled in with the given data for the selected protocol. The user is able to click on any field in the IP PDU, and an information box will display on the right, describing that field. In the IP PDU Data field, "TCP PDU" is written – this indicates that the entire TCP PDU is contained within the IP Data field. If the user clicks on this field, the TCP PDU will be displayed.

The PDUs are tabbed on their lower left corners: this allows the user to navigate between them. Additionally, there is a key at the top right corner to display what PDUs make up the chosen protocol. The user may also click on any PDU in this map to navigate. If at any point, the user wants to choose a different protocol to view, he or she may click on the "Choose a Protocol" button in the top left corner.

2.3.2 TCP PDU for the selected FTP PDU

The screenshot displays the 'Ethernet Packet' structure in THE DESCRIPTOR application. The packet is shown as a sequence of fields: Preamble, SOF, Destination MAC Address (00 01 03 1E E2 24), Source MAC Address (00 00 F8 1F 00 85), IP PDU, and CRC. The IP PDU is further detailed with fields: RFC, Source Port Number (1000 0000 00 11 0000), Destination Port Number (0000 0000 00 00 10 10), Sequence Number (1000 0001 10 10 01 01 00 01 01 10 01 10 11 00), Acknowledgement Number (1000 0111 10 10 00 11 01 01 00 11 01 01 11 01), Length (1000 0000 00 01 1000), Reserved (01 1000), Window Size (0001 0001 0001 0001), Checksum (0001 0001 1111 0100), Urgent Pointer, Options, and Data (FTP PDU).

The TCP PDU is highlighted in yellow, and its details are shown in a yellow information box on the right:

```

IP > TCP PDU for the selected FTP PDU
Field Name: TCP PDU
Purpose and Definition:
Field Key:
Data value:
Data values in other bases:
Not applicable
  
```

The next screen shows the TCP PDU on top of the IP PDU. This is meant to show that the TCP PDU is contained within the IP PDU. Additionally, the Telnet PDU is contained within the TCP PDU Data field, so clicking on that field will display the Telnet PDU. As with IP, if a TCP field is clicked, the information for that field will be displayed in the information box at the right.

2.3.3 FTP PDU for the selected FTP PDU

Ethernet Packet

Choose A Protocol: IPv4 | IPv6

Preamble SOF Destination MAC Address: 00 01 03 1E E2 24 Source MAC Address: 00 00 F8 1F 00 85 IP PDU CRC

FTP PDU for the selected FTP PDU

Field Name: *PASS (Password)* The argument field is a Telnet string specifying the user's password. This command must be immediately preceded by the user name command, and, for some sites, completes the user's identification for access control

Purpose and Definition: *PASS (Password)* The argument field is a Telnet string specifying the user's password. This command must be immediately preceded by the user name command, and, for some sites, completes the user's identification for access control

Field Key:

Data value: 50 41 53 53 20 66 31 61 32 6B 33 75 73 65 72 0D 0A

Data values in other bases:

The data for FTP is displayed within the orange information box on the left-side of the screen.

2.4 TELNET PDU for the selected TELNET PDU

The screenshot displays the THE DESCRIPTOR - TCP/IP Packet Descriptor interface. The main window shows the structure of an Ethernet Packet, which includes an IP PDU, a TCP PDU, and a TELNET PDU. The TELNET PDU is highlighted in orange, and its details are shown in an information box on the right.

Ethernet Packet Structure:

- Destination MAC Address:** 00 01 2B C4 03 44
- Source MAC Address:** 00 01 03 1E E2 24
- IP PDU:**
 - Source Port Number:** 0000000000001011
 - Destination Port Number:** 1000000000100101
 - Sequence Number:** 1001000000010011 1000100000001000
 - Acknowledgement Number:** 10010110 10010001 00111111 00000101
 - Length:** 0111000
 - Reserved:** 011000
 - Window Size:** 0111 0111 0111 0111
 - Checksum:** 01011001 10001001
 - Urgent Pointer:** 0111 0111 0111 0111
 - Options:** (empty)
 - Data (TELNET PDU):** (empty)

Information Box (TELNET PDU):

- Field Name:** TELNET PDU
- Purpose and Definition:** PASS (Password)
The argument field is a SSH string specifying the user's password. This command must be immediately preceded by the user name command, and, for some sites, completes the user's identification for access control. All information below is encrypted
- Field Key:** Not applicable
- Data value:** 03 B6 51 11 6A 46 12 36 4F 46 C9 63 B1 A4 B5 48 A2 BA 68 1C 42 17 AB D2 CE 8E 6D 3F 49 7E EB 36 A0 1B 16 62 E4 0F D7 55 DD 5F EB 52 64 B9 A7 62
- Data values in other bases:**

Hexadecimal	5	0	6	1
Binary	0101	0000	0110	0001

This is the TELNET PDU is located in the information box to the right of the TCP PDU.

2.5 ARP PDU for the selected ARP PDU

The screenshot displays the 'Ethernet Packet' section of THE DESCRIPTOR. At the top, it shows the Destination MAC Address as FF FF FF FF FF FF and the Source MAC Address as 00 01 E6 34 ED A3. Below this, the ARP PDU is detailed with the following fields and their binary values:

Field Name	Binary Value
Hardware Address Type	0000000000000001
Protocol Address Type	0000100000000000
H/W Addr Length	0000110
Prot Addr Length	0000100
Operation	0000000000000001
Source Hardware Address	0000000000000000 1110 0110 0011 0100
Source Hardware Address (cont'd)	1110 1101 1010 0011
Source Protocol Address	000000001010 1000
Source Protocol Address (cont'd)	000000000010 110
Target Hardware Address	0000000000000000
Target Hardware Address (cont'd)	000000000000000000000000000000
Target Protocol Address	1100 0000 1010 1000 0000 0000 1001 0001

On the right side of the interface, a green box titled 'ARP PDU for the selected ARP PDU' contains the following information:

- Field Name: *ARP PDU*
- Purpose and Definition:
- Field Key: *Not applicable*
- Data value (binary):
- Data values in other bases:

This is a screenshot of the ARP protocol and its “general info” information field.

2.6 HTTP PDU for the selected HTTP PDU

Ethernet Packet

Choose A Protocol: IPv4 | IPv6

Preamble: SOF

Destination MAC Address: 00 01 03 1E E2 24

Source MAC Address: 00 00 B7 0F FF 77

IP PDU

CRC

Stack: HTTP, TCP, IP, Ethernet

IP

RFC

Source Port Number: 00000000

Destination Port Number: 10100000

TCP

Sequence Number: 00111010 11100011 1110100000010000

Acknowledgement Number: 01010011010110000101110001110100

Length: 011000

Reserved: 011000

Window Size: 0001000100010001

HTTP

Checksum: 1111000011110110

Urgent Pointer: 00000000

Options

Data (HTTP PDU)

IP > TCP > HTTP PDU for the selected HTTP Packet

Field Name: *HTTP PDU*

Purpose and Definition: This HTTP PDU contains five subfields.

- **Content Type:** The Content-Type entity-header field indicates the media type of the Entity-Body sent to the recipient.
- **Date:** This field contains the date and time on which the web page was accessed.
- **HTTP:** This field displays the category of the page that is being displayed.
- **Server:** The Server response-header field contains information about the software used by the origin server to handle the request.
- **Data:** This field stores the information that is actually contained in the HTTP Protocol.

Field Key: *Not applicable*

HTTP Protocol

2.7 PING PDU for the selected PING PDU

The screenshot displays a web-based packet analyzer interface titled "THE DESCRIPTOR - TCP/IP Packet Descriptor". The main content area shows the structure of an Ethernet Packet, which is composed of several layers:

- Ethernet Packet:** Contains a Preamble, SOF, Destination MAC Address (00 01 03 1E E2 24), Source MAC Address (00 00 F8 1F 00 85), IP PDU, and CRC.
- IP:** Contains a Type field (0), Code field (1), and Checksum field (2-3). Below these are Identifier (4) and Sequence Number (5-7) fields.
- ICMP:** Contains a Data (PING PDU) field (4-7).
- PING:** The selected protocol, which is further detailed in a separate window.

The selected PING PDU details are shown in a green box:

- Field Name:** IP PDU
- Purpose and Definition:**
- Field Key:** Not applicable
- Data value (hexadecimal):**
- Data values in other bases:**

The interface also includes a navigation menu with "IPv4" and "IPv6" options, a "Choose A Protocol" button, and a "RFC" button. The bottom of the window shows the Windows taskbar with the Start button and several open applications, including "THE DESCRIPTOR" and "Screen Shots". The system clock shows 7:01 PM.

PING Protocol

2.8 SSH PDU for the selected SSH PDU

Ethernet Packet

Choose A Protocol: IPv4 | IPv6

Destination MAC Address: 08 00 2B C4 03 44 | Source MAC Address: 00 01 03 1E E2 24 | IP PDU | CRC

IP

Source Port Number: 0000010011001011 | Destination Port Number: 0000010011011011

TCP

Sequence Number: 1110 1110 1110 1111 0111 1111 1110 1101

Acknowledgement Number: 1110 0010 0110 1100 1011 0111 0111 0000

SSH

Length: 011000 | Reserved: 011000 | Window Size: 0111 0111 0111 0111

Checksum: 10001011 11001010 | Urgent Pointer: 00000000

Options: [Empty]

Data (SSH PDU): [Binary Data]

IP > TCP PDU for the selected SSH PDU

Field Name: *SSH PDU*

Purpose and Definition: PASS (Password)
The argument field is a SSH string specifying the user's password. This command must be immediately preceded by the user name command, and, for some sites, completes the user's identification for access control. All information below is encrypted

Field Key: *Not applicable*

Data value: 03 B6 51 11 6A 46 12 36 4F 46 C9 63 B1 A4 B5 48 A2 BA 68 1C 42 17 AB D2 CE 8E 6D 3F 49 7E EB 36 A0 1B 16 62 E4 0F D7 55 DD 5F EB 52 64 B9 A7 62

Data values in other bases:

Hexadecimal	0	3	B	6
Binary	0000	0011	1011	0110

SSH Protocol

3.0 Testing Sheets

3.1 Functional Requirements

Functional Requirements				
Date: _____				
Tester: _____				
Screen: _____ Pass _____ Fail _____				

Requirement	Actual Result	Comments	Pass	Fail
Contains information for various protocols.			X	

Requirement	Actual Result	Comments	Pass	Fail
Produces GUI that colorfully and clearly displays contents of the specified protocol.			X	

Requirement	Actual Result	Comments	Pass	Fail
Displays clearly on a 1024x768 pixel screen.			X	

Requirement	Actual Result	Comments	Pass	Fail
Menus on top of screen should be visible on every page to allow user to change protocol, or switch between layers.			X	

Requirement	Actual Result	Comments	Pass	Fail
Ability to view either an independent field or an entire protocol in a different radix		Visible in information box	X	

Functional Requirements

Requirement	Actual Result	Comments	Pass	Fail
Produces information box for each field of a protocol which displays Purpose of Field, Data Contained, this data in various radix, and a field key			X	

Requirement	Actual Result	Comments	Pass	Fail
Displays RFC link for entire protocol or specific field when available.			X	

3.2 ARP Testing Sheets

3.2.1 Ethernet Testing Sheet for the selected ARP PDU

Screen: Ethernet				
Date: 4/25/04				
Tester: Jeff Habiniak				
Screen: Pass x Fail				

Field Name: "Choose a Protocol" Button

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Tree with all possible protocols is displayed			

Field Name: IPv4 Button

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Pops up message box saying feature is currently unavailable			

Field Name: IPv6 Button

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Message box will be displayed saying that IPv6 is currently not available			

Field Name: Preamble

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Preamble information field is displayed in a blue box			

Field Name: Start of Frame (SOF)

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	SOF information field is displayed in a gray box			

Field Name: Cyclic Redundancy Check (CRC)

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	CRC information field is displayed in a yellow box			

Screen: Ethernet

Field Name: *IP PDU*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up			
2. Left Click	IP PDU information field is displayed in a green box		X	

3.2.2 ARP Testing Sheet for the selected ARP PDU

Screen: ARP PDU				
Date:	4/25/04			
Tester:	Jeff Habiniak			
Screen:	Pass	X	Fail	

Field Name: *Hardware Address Type*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Hardware Address Type information field pops up in a light blue box			

Field Name: *Protocol Address Type*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Protocol Address Type information field pops up in an aquamarine box			

Field Name: *Hardware Address Length*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Hardware Address Length information field pops up in a beige box			

Field Name: *Protocol Address Length*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Protocol Address Length information field pops up in an off-white box			

Field Name: *Operation*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Operation information field pops up in an pink box			

Screen: ARP PDU

Field Name: *Source Hardware Address*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Sender Hardware Address information field pops up in a purple box			

Field Name: *Source Protocol Address Type*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Protocol Address Type information field pops up in a green box			

Field Name: *Target Hardware Address*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Target Hardware Address information field pops up in a gray box			

Field Name: *Target Protocol Address*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Target Protocol Address information field pops up in a magenta box			

3.3 ICMP Testing Sheets

3.3.1 Ethernet Testing Sheet for the selected ICMP PDU

Screen: Ethernet	
Date:	4/25/04
Tester:	Lauren Englisbe
Screen:	Pass X Fail

Field Name: "Choose a Protocol" Button

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Tree with all possible protocols is displayed			

Field Name: IPv4 Button

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Pops up message box saying feature is currently unavailable			

Field Name: IPv6 Button

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Message box will be displayed saying that IPv6 is currently not available			

Field Name: Preamble

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Preamble information field is displayed in a blue box			

Field Name: Start of Frame (SOF)

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	SOF information field is displayed in a gray box			

Field Name: Cyclic Redundancy Check (CRC)

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	CRC information field is displayed in a yellow box			

Screen: Ethernet

Field Name: *IP PDU*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up			
2. Left Click	IP PDU information field is displayed in a green box		X	

3.3.2 IP Testing Sheet for the selected ICMP PDU

Screen: IP PDU				
Date:	4/25/04			
Tester:	Lauren Englisbe			
Screen:	Pass	X	Fail	

Field Name: *Version*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Version information field pops up in a pink box			

Field Name: *Internet Header Length*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Internet Header Length information field pops up in a cyan box			

Field Name: *Type of Service*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Type of Service information field pops up in a purple box			

Field Name: *Total Length*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Total Length information field pops up in a brown box			

Field Name: *Identification*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Identification information field pops up in a red box			

Screen: IP PDU

Field Name: *Flags*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Flags information field pops up in a gray box			

Field Name: *Fragment Offset*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Fragment Offset information field pops up in a magenta box			

Field Name: *Time to Live*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Time to Live information field pops up in an indigo box			

Field Name: *Protocol*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Protocol information field pops up in a yellow box			

Field Name: *Header Checksum*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Header Checksum information field pops up in a coral box			

Field Name: *Source IP Address*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Source IP Address information field pops up in a green box			

Screen: IP PDU

Field Name: *Destination IP Address*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Destination IP Address information field pops up in a brown box			

Field Name: *Options*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Options information field pops up in a blue box			

Field Name: *Data*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	General information box for next PDU pops up			

3.3.3 ICMP PDU for the selected ICMP PDU

Screen: ICMP PDU				
Date:	4/25/04			
Tester:	Lauren Englisbe			
Screen:	Pass	X	Fail	

Field Name: *Type*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Type information field pops up in a pink box			

Field Name: *Code*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Code information field pops up in a yellow box			

Field Name: *Checksum*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Checksum information field pops up in a green box			

Field Name: *Identifier*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Identifier information field pops up in a purple box			

Field Name: *Data*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Data information field pops up in a brown box			

3.4 PING Testing Sheets

3.4.1 Ethernet Testing Sheet for the selected PING PDU

Screen: Ethernet				
Date:	4/25/04			
Tester:	Paul Aiuto			
Screen:	Pass	Fail	X	

Field Name: "Choose a Protocol" Button

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Tree with all possible protocols is displayed			

Field Name: IPv4 Button

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Pops up message box saying feature is currently unavailable			

Field Name: IPv6 Button

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Message box will be displayed saying that IPv6 is currently not available			

Field Name: Preamble

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Preamble information field is displayed in a blue box			

Field Name: Start of Frame (SOF)

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	SOF information field is displayed in a gray box			

Field Name: Cyclic Redundancy Check (CRC)

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	CRC information field is displayed in a yellow box			

Screen: Ethernet

Field Name: *IP PDU*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up			
2. Left Click	IP PDU information field is displayed in a green box		X	

3.4.2 IP Testing sheet for the selected PING PDU

Screen: IP PDU				
Date:	4/25/04			
Tester:	Paul Aiuto			
Screen:	Pass	Fail	X	

Field Name: *Version*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up			X
2. Left Click	Version information field pops up in a pink box			

Field Name: *Internet Header Length*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up	Wrong data in field		X
2. Left Click	Internet Header Length information field pops up in a cyan box			

Field Name: *Type of Service*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up	Wrong data in field		X
2. Left Click	Type of Service information field pops up in a purple box			

Field Name: *Total Length*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up	Wrong data in field		X
2. Left Click	Total Length information field pops up in a brown box			

Field Name: *Identification*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up	Wrong data in field		X
2. Left Click	Identification information field pops up in a red box			

Screen: IP PDU

Field Name: *Flags*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up	Wrong data in field		X
2. Left Click	Flags information field pops up in a gray box			

Field Name: *Fragment Offset*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Fragment Offset information field pops up in a magenta box			

Field Name: *Time to Live*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up	Wrong data in all places	X	
2. Left Click	Time to Live information field pops up in an indigo box			

Field Name: *Protocol*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Protocol information field pops up in a yellow box			

Field Name: *Header Checksum*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Header Checksum information field pops up in a coral box			

Field Name: *Source IP Address*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up	Links to HTTP	X	
2. Left Click	Source IP Address information field pops up in a green box			

Screen: IP PDU

Field Name: *Destination IP Address*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up			X
2. Left Click	Destination IP Address information field pops up in a brown box			

Field Name: *Options*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Options information field pops up in a blue box			

Field Name: *Data*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up			X
2. Left Click	General information box for next PDU pops up			

3.4.3 ICMP Testing sheet for the selected ICMP PDU

Screen: ICMP PDU				
Date:	4/25/04			
Tester:	Paul Aiuto			
Screen:	Pass	Fail	X	

Field Name: *Type*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up			X
2. Left Click	Type information field pops up in a pink box			

Field Name: *Code*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up			X
2. Left Click	Code information field pops up in a yellow box			

Field Name: *Checksum*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up			X
2. Left Click	Checksum information field pops up in a green box			

Field Name: *Identifier*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up			X
2. Left Click	Identifier information field pops up in a purple box			

Field Name: *Data*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up			X
2. Left Click	Data information field pops up in a brown box			

3.4.4 PING Testing Sheet for the selected PING PDU

Screen: PING				
Date:	4/25/04			
Tester:	Paul Aiuto			
Screen:	Pass	Fail	X	

Field Name: *Destination*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up	Does not link		X
2. Left Click	Destination information field pops up in the appropriately colored box			

Field Name: *Source*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up	Directory paths are wrong		X
2. Left Click	Source information field pops up in the appropriately colored box			

Field Name: *Fragment*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up	Directory paths are wrong		X
2. Left Click	Fragment offset information field pops up in the appropriately colored box			

Field Name: *Time to Live*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up	Directory paths are wrong		X
2. Left Click	Time to Live information field pops up in the appropriately colored box			

Field Name: *Protocol*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up	Directory paths are wrong		X
2. Left Click	Protocol information field pops up in the appropriately colored box			

Screen: PING

Field Name: *Header Checksum*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up	Directory paths are wrong		X
2. Left Click	Header Checksum information field pops up in the appropriately colored box			

Field Name: *Source*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up	Directory paths are wrong		X
2. Left Click	Source information field pops up in the appropriately colored box			

Field Name: *Destination*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up	Directory paths are wrong		X
2. Left Click	Destination information field pops up in the appropriately colored box			

Field Name: *Checksum*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up	Directory paths are wrong		X
2. Left Click	Checksum information field pops up in the appropriately colored box			

Field Name: *Identifier*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up	Directory paths are wrong		X
2. Left Click	Identifier information field pops up in the appropriately colored box			

Screen: PING

Field Name: *Sequence Number*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up	Directory paths are wrong		X
2. Left Click	Sequence number information field pops up in the appropriately colored box			

3.5 UDP Testing Sheets

3.5.1 Ethernet Testing Sheet for the selected UDP PDU

Screen: Ethernet				
Date:	4/25/04			
Tester:	Jayme Gresen			
Screen:	Pass	X	Fail	

Field Name: "Choose a Protocol" Button

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Tree with all possible protocols is displayed			

Field Name: IPv4 Button

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Pops up message box saying feature is currently unavailable			

Field Name: IPv6 Button

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Message box will be displayed saying that IPv6 is currently not available			

Field Name: Preamble

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Preamble information field is displayed in a blue box			

Field Name: Start of Frame (SOF)

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	SOF information field is displayed in a gray box			

Field Name: Cyclic Redundancy Check (CRC)

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	CRC information field is displayed in a yellow box			

Screen: Ethernet

Field Name: *IP PDU*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	IP PDU information field is displayed in a green box			

3.5.2 IP Testing Sheet for the selected UDP PDU

Screen: IP PDU				
Date:	4/25/04			
Tester:	Jayme Gresen			
Screen:	Pass	X	Fail	

Field Name: *Version*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Version information field pops up in a pink box			

Field Name: *Internet Header Length*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Internet Header Length information field pops up in a cyan box			

Field Name: *Type of Service*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Type of Service information field pops up in a purple box			

Field Name: *Total Length*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Total Length information field pops up in a brown box			

Field Name: *Identification*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Identification information field pops up in a red box			

Screen: IP PDU

Field Name: *Flags*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Flags information field pops up in a gray box			

Field Name: *Fragment Offset*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Fragment Offset information field pops up in a magenta box			

Field Name: *Time to Live*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Time to Live information field pops up in an indigo box			

Field Name: *Protocol*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Protocol information field pops up in a yellow box			

Field Name: *Header Checksum*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Header Checksum information field pops up in a coral box			

Field Name: *Source IP Address*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Source IP Address information field pops up in a green box			

Screen: IP PDU

Field Name: *Destination IP Address*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Destination IP Address information field pops up in a brown box			

Field Name: *Options*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Options information field pops up in a blue box			

Field Name: *Data*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	General information box for next PDU pops up			

3.5.3 UDP Testing Sheet for the selected UDP PDU

Screen: UDP PDU				
Date:	4/25/04			
Tester:	Jayme Gresen			
Screen:	Pass	Fail	X	

Field Name: *Source Port*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up			X
2. Left Click	Source Port information field pops up in the appropriately colored box			

Field Name: *Destination Port*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up			X
2. Left Click	Destination Port information field pops up in the appropriately colored box			

Field Name: *Length*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up			X
2. Left Click	Length information field pops up in the appropriately colored box			

Field Name: *Checksum*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up			X
2. Left Click	Checksum information field pops up in the appropriately colored box			

Field Name: *Data*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up			X
2. Left Click	Data information field pops up in the appropriately colored box			

3.6 SNMP Testing Sheets

3.6.1 Ethernet Testing Sheet for the selected SNMP PDU

Screen: Ethernet				
Date:	4/25/04			
Tester:	Jayme Gresen			
Screen:	Pass	X	Fail	

Field Name: "Choose a Protocol" Button

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Tree with all possible protocols is displayed			

Field Name: IPv4 Button

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Pops up message box saying feature is currently unavailable			

Field Name: IPv6 Button

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Message box will be displayed saying that IPv6 is currently not available			

Field Name: Preamble

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Preamble information field is displayed in a blue box			

Field Name: Start of Frame (SOF)

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	SOF information field is displayed in a gray box			

Field Name: Cyclic Redundancy Check (CRC)

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	CRC information field is displayed in a yellow box			

Screen: Ethernet

Field Name: *IP PDU*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up			
2. Left Click	IP PDU information field is displayed in a green box		X	

3.6.2 IP Testing Sheet for the selected SNMP PDU

Screen: IP PDU				
Date:	4/25/04			
Tester:	Jayme Gresen			
Screen:	Pass	X	Fail	

Field Name: *Version*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Version information field pops up in a pink box			

Field Name: *Internet Header Length*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Internet Header Length information field pops up in a cyan box			

Field Name: *Type of Service*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Type of Service information field pops up in a purple box			

Field Name: *Total Length*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Total Length information field pops up in a brown box			

Field Name: *Identification*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Identification information field pops up in a red box			

Screen: IP PDU

Field Name: *Flags*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Flags information field pops up in a gray box			

Field Name: *Fragment Offset*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Fragment Offset information field pops up in a magenta box			

Field Name: *Time to Live*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Time to Live information field pops up in an indigo box			

Field Name: *Protocol*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Protocol information field pops up in a yellow box			

Field Name: *Header Checksum*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Header Checksum information field pops up in a coral box			

Field Name: *Source IP Address*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Source IP Address information field pops up in a green box			

Screen: IP PDU

Field Name: *Destination IP Address*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Destination IP Address information field pops up in a brown box			

Field Name: *Options*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Options information field pops up in a blue box			

Field Name: *Data*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	General information box for next PDU pops up			

3.6.3 UDP Testing Sheet for the selected SNMP PDU

Screen: UDP PDU				
Date:	4/25/04			
Tester:	Jayme Gresen			
Screen:	Pass	Fail	X	

Field Name: *Source Port*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up			X
2. Left Click	Source Port information field pops up in the appropriately colored box			

Field Name: *Destination Port*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up			X
2. Left Click	Destination Port information field pops up in the appropriately colored box			

Field Name: *Length*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up			X
2. Left Click	Length information field pops up in the appropriately colored box			

Field Name: *Checksum*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up			X
2. Left Click	Checksum information field pops up in the appropriately colored box			

Field Name: *Data*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up			X
2. Left Click	Data information field pops up in the appropriately colored box			

3.6.4 SNMP Testing Sheet for the selected SNMP PDU

Screen: SNMP PDU				
Date:	4/25/04			
Tester:	Jayme Gresen			
Screen:	Pass	X	Fail	

Field Name: *Version*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Version information field pops up in the appropriate colored box			

Field Name: *Community*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Community information field pops up in the appropriate colored box			

Field Name: *PDU Type*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	PDU information field pops up in the appropriate colored box			

Field Name: *Request ID*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Request ID information field pops up in the appropriate colored box			

Field Name: *Error Status*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Error status information field pops up in the appropriate colored box			

Screen: SNMP PDU

Field Name: *Object Id*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Object information field pops up in the appropriate colored box			

Field Name: *Value Integer*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Value information field pops up in the appropriate colored box			

Field Name: *Value ID*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Value ID information field pops up in the appropriate colored box			

Field Name: *Object ID*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Object information field pops up in the appropriate colored box			

3.7 FTP Testing Sheets

3.7.1 Ethernet Testing Sheet for the selected FTP PDU

Screen: Ethernet	
Date:	4/25/04
Tester:	Lauren Englisbe
Screen:	Pass X Fail

Field Name: "Choose a Protocol" Button

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Tree with all possible protocols is displayed			

Field Name: IPv4 Button

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Pops up message box saying feature is currently unavailable			

Field Name: IPv6 Button

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Message box will be displayed saying that IPv6 is currently not available			

Field Name: Preamble

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Preamble information field is displayed in a blue box			

Field Name: Start of Frame (SOF)

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	SOF information field is displayed in a gray box			

Field Name: Cyclic Redundancy Check (CRC)

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	CRC information field is displayed in a yellow box			

Screen: Ethernet

Field Name: *IP PDU*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up			
2. Left Click	IP PDU information field is displayed in a green box		X	

3.7.2 IP Testing Sheet for the selected FTP PDU

Screen: IP PDU				
Date:	4/25/04			
Tester:	Lauren Englisbe			
Screen:	Pass	X	Fail	

Field Name: *Version*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Version information field pops up in a pink box			

Field Name: *Internet Header Length*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Internet Header Length information field pops up in a cyan box			

Field Name: *Type of Service*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Type of Service information field pops up in a purple box			

Field Name: *Total Length*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Total Length information field pops up in a brown box			

Field Name: *Identification*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Identification information field pops up in a red box			

Screen: IP PDU

Field Name: *Flags*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Flags information field pops up in a gray box			

Field Name: *Fragment Offset*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Fragment Offset information field pops up in a magenta box			

Field Name: *Time to Live*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Time to Live information field pops up in an indigo box			

Field Name: *Protocol*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Protocol information field pops up in a yellow box			

Field Name: *Header Checksum*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Header Checksum information field pops up in a coral box			

Field Name: *Source IP Address*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Source IP Address information field pops up in a green box			

Screen: IP PDU

Field Name: *Destination IP Address*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Destination IP Address information field pops up in a brown box			

Field Name: *Options*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Options information field pops up in a blue box			

Field Name: *Data*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	General information box for next PDU pops up			

3.7.3 TCP Testing Sheet for the selected FTP PDU

Screen: TCP PDU				
Date:	4/25/04			
Tester:	Lauren Englisbe			
Screen:	Pass	X	Fail	

Field Name: *Source Port*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Source Port information field pops up in a pink box			

Field Name: *Destination Port*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Destination Port information field pops up in a cyan box			

Field Name: *Sequence Number*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Sequence Number information field pops up in a coral box			

Field Name: *Acknowledgement Number*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Acknowledgment Number information field pops up in a green box			

Field Name: *Length*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Length information field pops up in a purple box			

Field Name: *Reserved*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Reserved information field pops up in a magenta box			

Screen: TCP PDU

Field Name: *URG*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	URG information field pops up in a green box containing all Control Fields			

Field Name: *ACK*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	ACK information field pops up in a green box containing all Control Fields			

Field Name: *PSH*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	PSH information field pops up in a green box containing all Control Fields			

Field Name: *RST*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	RST information field pops up in a magenta box			

Field Name: *SYN*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	SYN information field pops up in a green box containing all Control Fields			

Screen: TCP PDU

Field Name: *FIN*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	FIN information field pops up in a green box containing all Control Fields			

Field Name: *Window Size*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Window Size information field pops up in sky blue box			

Field Name: *Data*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	General information box for next PDU pops up			

Field Name: *Checksum*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Checksum information field pops up in a green box			

Field Name: *Urgent Pointer*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Urgent Pointer information field pops up in a yellow box			

Field Name: *Options*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Options information field pops up in a magenta box			

Screen: TCP PDU

Field Name: *Data*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	FTP PDU pops up			

3.7.4 FTP Testing Sheet for the selected FTP PDU

Screen: FTP PDU				
Date:	4/25/04			
Tester:	Lauren Englisbe			
Screen:	Pass	X	Fail	

Field Name: *Destination Address*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Destination Address field information box is contained within an orange FTP PDU information box			

Field Name: *Source Address*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Source Address field information box is contained within an orange FTP PDU information box			

Field Name: *Pass*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Pass field information box is contained within an orange FTP PDU information box			

3.8 SSH Testing Sheets

3.8.1 Ethernet Testing sheet for the selected SSH PDU

Screen: Ethernet	
Date:	4/25/04
Tester:	Lauren Englisbe
Screen:	Pass X Fail

Field Name: "Choose a Protocol" Button

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Tree with all possible protocols is displayed			

Field Name: IPv4 Button

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Pops up message box saying feature is currently unavailable			

Field Name: IPv6 Button

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Message box will be displayed saying that IPv6 is currently not available			

Field Name: Preamble

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Preamble information field is displayed in a blue box			

Field Name: Start of Frame (SOF)

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	SOF information field is displayed in a gray box			

Field Name: Cyclic Redundancy Check (CRC)

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	CRC information field is displayed in a yellow box			

Screen: Ethernet

Field Name: *IP PDU*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up			
2. Left Click	IP PDU information field is displayed in a green box		X	

3.8.2 IP Testing Sheet for the selected SSH PDU

Screen: IP PDU				
Date:	4/25/04			
Tester:	Lauren Englisbe			
Screen:	Pass	X	Fail	

Field Name: *Version*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Version information field pops up in a pink box			

Field Name: *Internet Header Length*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Internet Header Length information field pops up in a cyan box			

Field Name: *Type of Service*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Type of Service information field pops up in a purple box			

Field Name: *Total Length*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Total Length information field pops up in a brown box			

Field Name: *Identification*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Identification information field pops up in a red box			

Screen: IP PDU

Field Name: *Flags*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Flags information field pops up in a gray box			

Field Name: *Fragment Offset*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Fragment Offset information field pops up in a magenta box			

Field Name: *Time to Live*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Time to Live information field pops up in an indigo box			

Field Name: *Protocol*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Protocol information field pops up in a yellow box			

Field Name: *Header Checksum*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Header Checksum information field pops up in a coral box			

Field Name: *Source IP Address*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Source IP Address information field pops up in a green box			

Screen: IP PDU

Field Name: *Destination IP Address*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Destination IP Address information field pops up in a brown box			

Field Name: *Options*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Options information field pops up in a blue box			

Field Name: *Data*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	General information box for next PDU pops up			

3.8.3 TCP Testing Sheet for the selected SSH PDU

Screen: TCP PDU				
Date:	4/25/04			
Tester:	Lauren Englisbe			
Screen:	Pass	X	Fail	

Field Name: *Source Port*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Source Port information field pops up in a pink box			

Field Name: *Destination Port*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Destination Port information field pops up in a cyan box			

Field Name: *Sequence Number*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Sequence Number information field pops up in a coral box			

Field Name: *Acknowledgement Number*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Acknowledgment Number information field pops up in a green box			

Field Name: *Length*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Length information field pops up in a purple box			

Field Name: *Reserved*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Reserved information field pops up in a magenta box			

Screen: TCP PDU

Field Name: *URG*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	URG information field pops up in a green box containing all Control Fields			

Field Name: *ACK*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	ACK information field pops up in a green box containing all Control Fields			

Field Name: *PSH*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	PSH information field pops up in a green box containing all Control Fields			

Field Name: *RST*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	RST information field pops up in a magenta box			

Field Name: *SYN*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	SYN information field pops up in a green box containing all Control Fields			

Screen: TCP PDU

Field Name: *FIN*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	FIN information field pops up in a green box containing all Control Fields			

Field Name: *Window Size*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Window Size information field pops up in sky blue box			

Field Name: *Data*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	General information box for next PDU pops up			

Field Name: *Checksum*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Checksum information field pops up in a green box			

Field Name: *Urgent Pointer*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Urgent Pointer information field pops up in a yellow box			

Field Name: *Options*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Options information field pops up in a magenta box			

Screen: TCP PDU

Field Name: *Data*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	FTP PDU pops up			

3.8.4 SSH Testing Sheet for the selected SSH PDU

Screen: SSH PDU	
Date:	4/25/04
Tester:	Lauren Englisbe
Screen:	Pass X Fail

Field Name: *Data*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up			
2. Left Click	Data information field pops up in an orange box		X	

3.9 HTTP Testing Sheets

3.9.1 Ethernet Testing Sheet for the selected HTTP PDU

Screen: Ethernet				
Date:	4/25/04			
Tester:	Paul Aiuto			
Screen:	Pass	X	Fail	

Field Name: "Choose a Protocol" Button

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Tree with all possible protocols is displayed			

Field Name: IPv4 Button

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Pops up message box saying feature is currently unavailable			

Field Name: IPv6 Button

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Message box will be displayed saying that IPv6 is currently not available			

Field Name: Preamble

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Preamble information field is displayed in a blue box			

Field Name: Start of Frame (SOF)

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	SOF information field is displayed in a gray box			

Field Name: Cyclic Redundancy Check (CRC)

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	CRC information field is displayed in a yellow box			

Screen: Ethernet

Field Name: *IP PDU*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up			
2. Left Click	IP PDU information field is displayed in a green box		X	

3.9.2 IP Testing Sheet for the selected HTTP PDU

Screen: IP PDU				
Date:	4/25/04			
Tester:	Paul Aiuto			
Screen:	Pass	X	Fail	

Field Name: *Version*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Version information field pops up in a pink box			

Field Name: *Internet Header Length*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Internet Header Length information field pops up in a cyan box			

Field Name: *Type of Service*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Type of Service information field pops up in a purple box			

Field Name: *Total Length*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Total Length information field pops up in a brown box			

Field Name: *Identification*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Identification information field pops up in a red box			

Screen: IP PDU

Field Name: *Flags*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Flags information field pops up in a gray box			

Field Name: *Fragment Offset*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Fragment Offset information field pops up in a magenta box			

Field Name: *Time to Live*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Time to Live information field pops up in an indigo box			

Field Name: *Protocol*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Protocol information field pops up in a yellow box			

Field Name: *Header Checksum*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Header Checksum information field pops up in a coral box			

Field Name: *Source IP Address*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Source IP Address information field pops up in a green box			

Screen: IP PDU

Field Name: *Destination IP Address*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Destination IP Address information field pops up in a brown box			

Field Name: *Options*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Options information field pops up in a blue box			

Field Name: *Data*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	General information box for next PDU pops up			

3.9.3 TCP Testing Sheet for the selected HTTP PDU

Screen: TCP PDU				
Date:	4/25/04			
Tester:	Paul Aiuto			
Screen:	Pass	X	Fail	

Field Name: *Source Port*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Source Port information field pops up in a pink box			

Field Name: *Destination Port*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Destination Port information field pops up in a cyan box			

Field Name: *Sequence Number*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Sequence Number information field pops up in a coral box			

Field Name: *Acknowledgement Number*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Acknowledgment Number information field pops up in a green box			

Field Name: *Length*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Length information field pops up in a purple box			

Field Name: *Reserved*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Reserved information field pops up in a magenta box			

Screen: TCP PDU

Field Name: *URG*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	URG information field pops up in a green box containing all Control Fields			

Field Name: *ACK*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	ACK information field pops up in a green box containing all Control Fields			

Field Name: *PSH*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	PSH information field pops up in a green box containing all Control Fields			

Field Name: *RST*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	RST information field pops up in a magenta box			

Field Name: *SYN*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	SYN information field pops up in a green box containing all Control Fields			

Screen: TCP PDU

Field Name: *FIN*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	FIN information field pops up in a green box containing all Control Fields			

Field Name: *Window Size*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Window Size information field pops up in sky blue box			

Field Name: *Data*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	General information box for next PDU pops up			

Field Name: *Checksum*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Checksum information field pops up in a green box			

Field Name: *Urgent Pointer*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Urgent Pointer information field pops up in a yellow box			

Field Name: *Options*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Options information field pops up in a magenta box			

Screen: TCP PDU

Field Name: *Data*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	FTP PDU pops up			

3.9.4 HTTP Testing Sheet for the selected HTTP PDU

Screen: HTTP				
Date:	4/25/04			
Tester:	Paul Aiuto			
Screen:	Pass	X	Fail	

Field Name: *Data*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up			
2. Left Click	Data information field pops up in an orange box		X	

3.10 TELNET Testing Sheets

3.10.1 Ethernet Testing Sheets for the selected TELNET PDU

Screen: Ethernet	
Date:	4/25/04
Tester:	Jayne Gresen
Screen:	Pass X Fail

Field Name: "Choose a Protocol" Button

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Tree with all possible protocols is displayed			

Field Name: IPv4 Button

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Pops up message box saying feature is currently unavailable			

Field Name: IPv6 Button

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Message box will be displayed saying that IPv6 is currently not available			

Field Name: Preamble

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Preamble information field is displayed in a blue box			

Field Name: Start of Frame (SOF)

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	SOF information field is displayed in a gray box			

Field Name: Cyclic Redundancy Check (CRC)

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	CRC information field is displayed in a yellow box			

Screen: Ethernet

Field Name: *IP PDU*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up			
2. Left Click	IP PDU information field is displayed in a green box		X	

3.10.2 IP Testing Sheet for the selected TELNET PDU

Screen: IP PDU				
Date:	4/25/04			
Tester:	Jayme Gresen			
Screen:	Pass	X	Fail	

Field Name: *Version*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Version information field pops up in a pink box			

Field Name: *Internet Header Length*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Internet Header Length information field pops up in a cyan box			

Field Name: *Type of Service*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Type of Service information field pops up in a purple box			

Field Name: *Total Length*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Total Length information field pops up in a brown box			

Field Name: *Identification*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Identification information field pops up in a red box			

Screen: IP PDU

Field Name: *Flags*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Flags information field pops up in a gray box			

Field Name: *Fragment Offset*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Fragment Offset information field pops up in a magenta box			

Field Name: *Time to Live*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Time to Live information field pops up in an indigo box			

Field Name: *Protocol*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Protocol information field pops up in a yellow box			

Field Name: *Header Checksum*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Header Checksum information field pops up in a coral box			

Field Name: *Source IP Address*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Source IP Address information field pops up in a green box			

Screen: IP PDU

Field Name: *Destination IP Address*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Destination IP Address information field pops up in a brown box			

Field Name: *Options*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Options information field pops up in a blue box			

Field Name: *Data*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	General information box for next PDU pops up			

3.10.3 TCP Testing Sheet for the selected TELNET PDU

Screen: TCP PDU				
Date:	4/25/04			
Tester:	Jayme Gresen			
Screen:	Pass	X	Fail	

Field Name: *Source Port*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Source Port information field pops up in a pink box			

Field Name: *Destination Port*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Destination Port information field pops up in a cyan box			

Field Name: *Sequence Number*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Sequence Number information field pops up in a coral box			

Field Name: *Acknowledgement Number*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Acknowledgment Number information field pops up in a green box			

Field Name: *Length*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Length information field pops up in a purple box			

Field Name: *Reserved*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Reserved information field pops up in a magenta box			

Screen: TCP PDU

Field Name: *URG*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	URG information field pops up in a green box containing all Control Fields			

Field Name: *ACK*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	ACK information field pops up in a green box containing all Control Fields			

Field Name: *PSH*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	PSH information field pops up in a green box containing all Control Fields			

Field Name: *RST*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	RST information field pops up in a magenta box			

Field Name: *SYN*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	SYN information field pops up in a green box containing all Control Fields			

Screen: TCP PDU

Field Name: *FIN*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	FIN information field pops up in a green box containing all Control Fields			

Field Name: *Window Size*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Window Size information field pops up in sky blue box			

Field Name: *Data*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	General information box for next PDU pops up			

Field Name: *Checksum*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Checksum information field pops up in a green box			

Field Name: *Urgent Pointer*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Urgent Pointer information field pops up in a yellow box			

Field Name: *Options*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Options information field pops up in a magenta box			

Screen: TCP PDU

Field Name: *Data*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	FTP PDU pops up			

3.10.4 TELNET Testing Sheet for the selected TELNET PDU

Screen: TELNET PDU				
Date:	4/25/04			
Tester:	Jayme Gresen			
Screen:	Pass	X	Fail	

Field Name: *Data*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up			
2. Left Click	Data information field pops up in an orange box		X	

3.11 SMTP Testing Sheet

3.11.1 Ethernet Testing Sheet for the selected SMTP PDU

Screen: Ethernet				
Date:	4/25/04			
Tester:	Paul Aiuto			
Screen:	Pass	X	Fail	

Field Name: "Choose a Protocol" Button

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Tree with all possible protocols is displayed			

Field Name: IPv4 Button

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Pops up message box saying feature is currently unavailable			

Field Name: IPv6 Button

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Message box will be displayed saying that IPv6 is currently not available			

Field Name: Preamble

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Preamble information field is displayed in a blue box			

Field Name: Start of Frame (SOF)

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	SOF information field is displayed in a gray box			

Field Name: Cyclic Redundancy Check (CRC)

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	CRC information field is displayed in a yellow box			

Screen: Ethernet

Field Name: *IP PDU*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up			
2. Left Click	IP PDU information field is displayed in a green box		X	

3.11.2 IP Testing Sheet for the selected SMTP PDU

Screen: IP PDU				
Date:	4/25/04			
Tester:	Paul Aiuto			
Screen:	Pass	X	Fail	

Field Name: *Version*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Version information field pops up in a pink box			

Field Name: *Internet Header Length*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Internet Header Length information field pops up in a cyan box			

Field Name: *Type of Service*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Type of Service information field pops up in a purple box			

Field Name: *Total Length*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Total Length information field pops up in a brown box			

Field Name: *Identification*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Identification information field pops up in a red box			

Screen: IP PDU

Field Name: *Flags*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Flags information field pops up in a gray box			

Field Name: *Fragment Offset*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Fragment Offset information field pops up in a magenta box			

Field Name: *Time to Live*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Time to Live information field pops up in an indigo box			

Field Name: *Protocol*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Protocol information field pops up in a yellow box			

Field Name: *Header Checksum*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Header Checksum information field pops up in a coral box			

Field Name: *Source IP Address*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Source IP Address information field pops up in a green box			

Screen: IP PDU

Field Name: *Destination IP Address*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Destination IP Address information field pops up in a brown box			

Field Name: *Options*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Options information field pops up in a blue box			

Field Name: *Data*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	General information box for next PDU pops up			

3.11.3 TCP Testing Sheet for the selected SMTP PDU

Screen: TCP PDU				
Date:	4/25/04			
Tester:	Paul Aiuto			
Screen:	Pass	X	Fail	

Field Name: *Source Port*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Source Port information field pops up in a pink box			

Field Name: *Destination Port*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Destination Port information field pops up in a cyan box			

Field Name: *Sequence Number*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Sequence Number information field pops up in a coral box			

Field Name: *Acknowledgement Number*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Acknowledgment Number information field pops up in a green box			

Field Name: *Length*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Length information field pops up in a purple box			

Field Name: *Reserved*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Reserved information field pops up in a magenta box			

Screen: TCP PDU

Field Name: *URG*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	URG information field pops up in a green box containing all Control Fields			

Field Name: *ACK*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	ACK information field pops up in a green box containing all Control Fields			

Field Name: *PSH*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	PSH information field pops up in a green box containing all Control Fields			

Field Name: *RST*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	RST information field pops up in a magenta box			

Field Name: *SYN*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	SYN information field pops up in a green box containing all Control Fields			

Screen: TCP PDU

Field Name: *FIN*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	FIN information field pops up in a green box containing all Control Fields			

Field Name: *Window Size*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Window Size information field pops up in sky blue box			

Field Name: *Data*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	General information box for next PDU pops up			

Field Name: *Checksum*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Checksum information field pops up in a green box			

Field Name: *Urgent Pointer*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Urgent Pointer information field pops up in a yellow box			

Field Name: *Options*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	Options information field pops up in a magenta box			

Screen: TCP PDU

Field Name: *Data*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up		X	
2. Left Click	FTP PDU pops up			

3.11.4 SMTP Testing sheet for the selected SMTP PDU

Screen: SMTP PDU				
Date:	4/25/04			
Tester:	Paul Aiuto			
Screen:	Pass	X	Fail	

Field Name: *Data*

Attempted	Expected Result	Comments	Pass	Fail
1. Right Click	Nothing pops up			
2. Left Click	Data Information field pops up in an orange box		X	

4.0 Glossary

ASCII:

American Standard Code for Information Interchange: a code for representing English characters as numbers, with each letter assigned a number from 0 to 127.

Attribute:

A named value or relationship that exists for some or all instances of some entity and is directly associated with that instance.

Binary:

Pertaining to a number system that has just two unique digits, 0 and 1. Computers operate on a binary number system.

Code:

The symbolic arrangement of data or instructions in a computer program or the set of such instructions.

Data Flow Diagram:

A graphical notation used to describe how data flows between processes in a system. They are a representation of the functional decomposition of a system.

Decimal:

Refers to numbers in base 10—the numbers we use in everyday life.

Dynamic Combo Menu:

Menu showing all actions possible at the current moment.

Frame:

A feature that divides a browser's window into separate segments that can be scrolled independently of each other; a single step in a sequence of programmed instructions

GUI:

Graphical User Interface: A user interface based on graphics (icons, pictures, and menus) instead of text; uses a mouse as well as a keyboard as an input device.

Gantt Chart:

A chart that depicts progress in relation to time, often used in planning and tracking a project

Gray Box Testing: Testing procedure done with some knowledge of the internals.

HTML:

Hypertext Transfer Markup Language: A markup language used to structure text and multimedia documents and to set up hypertext links between documents, used extensively on the World Wide Web.

Hexadecimal:

Refers to the base-16 number system which consists of 16 unique symbols: the numbers 0 to 9 and the letters A to F.

Hypertext:

A computer-based text retrieval system that enables a user to access particular locations in web pages or other electronic documents by clicking on links within specific web pages or documents.

Internet:

An interconnected system of networks that connects computers around the world via the TCP/IP protocol.

Linear Sequential Model:

Sometimes called the *classic life cycle* or the *waterfall model*, this model suggests a systematic, sequential approach to software development that begins at the system level and progresses through analysis, design, coding, testing, and support.

Linux:

A trademark for an open-source version of the UNIX operating system.

Network:

A group of two or more computer systems linked together.

Open-Source:

A method and philosophy for software licensing and distribution designed to encourage use and improvement of software written by volunteers by ensuring that anyone can copy the source code.

PHP:

PHP Hypertext Preprocessor (server-side scripting language)

Packet:

A short block of data transmitted in a packet switching network.

PDU:

Protocol Data Unit: A packet of data passed across a network.

Protocol:

A set of formal rules describing how to transmit data, especially across a network.

Prototype:

An original type, form, or instance serving as a basis or standard for later stages.

RFC:

Request for Comments: One of a long-established series of numbered Internet informational documents and standards widely followed by commercial software and freeware in the Internet and Unix communities.

Software:

The code executed by a computer, as opposed to the physical device which they run on.

TCP/IP:

Transmission Control Protocol/Internet Protocol: A suite of protocols for communication between computers, used as a standard for transmitting data over networks and as the basis for standard Internet protocols.

UNIX:

A powerful operating system developed at the ATT Bell Laboratories.

Use Case:

The specification of sequences of actions that a system, subsystem, or class can perform by interacting with outside actors.

XHTML:

Extensible Hypertext Markup Language: A type of HTML that is compatible with XML. HTML is not strict enough to be compatible with XML, so XHTML was made to bridge the gap.

Visual Analyst:

Project management software used in Computer-Aided Software Engineering (CASE) to create such illustrations as the data flow diagrams.