Welcome

Mr. Ken Swarner

Requirements Specification Presentation
October 31, 2003
Mirage Incorporated

Presented by:

Lauren Englisbe, Introduction and Conclusion

Paul Aiuto, General Description

Jeff Habiniak, Specific Requirements

Mirage Incorporated

Paul Aiuto, Systems Administrator
Richard Connell, Webmaster
Lauren Englisbe, Team Leader
Jayme Gresen, Librarian
Jeff Habiniak, Database Administrator

General Description

Product Perspective and Product Functions

- A graphical representation of given Internet packets
- Will display multiple packets and frames in their hierarchical order
- Information for each packet obtained by a mouse click
- Will run independently of platform

User Characteristics

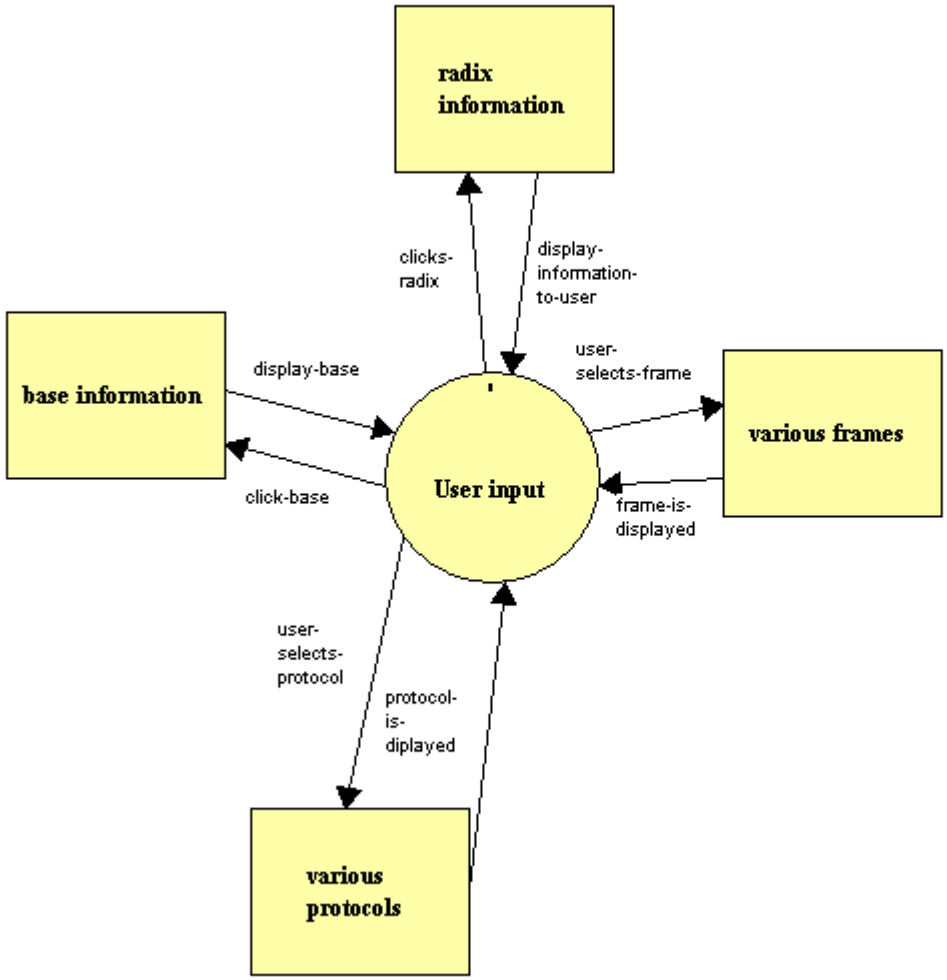
- Must be able to view all the information on the monitor with minimal scrolling
- Must be able to display the software on a projector
- Will obtain information through mouse clicks
- Expected to have little or no knowledge of packets and protocols.

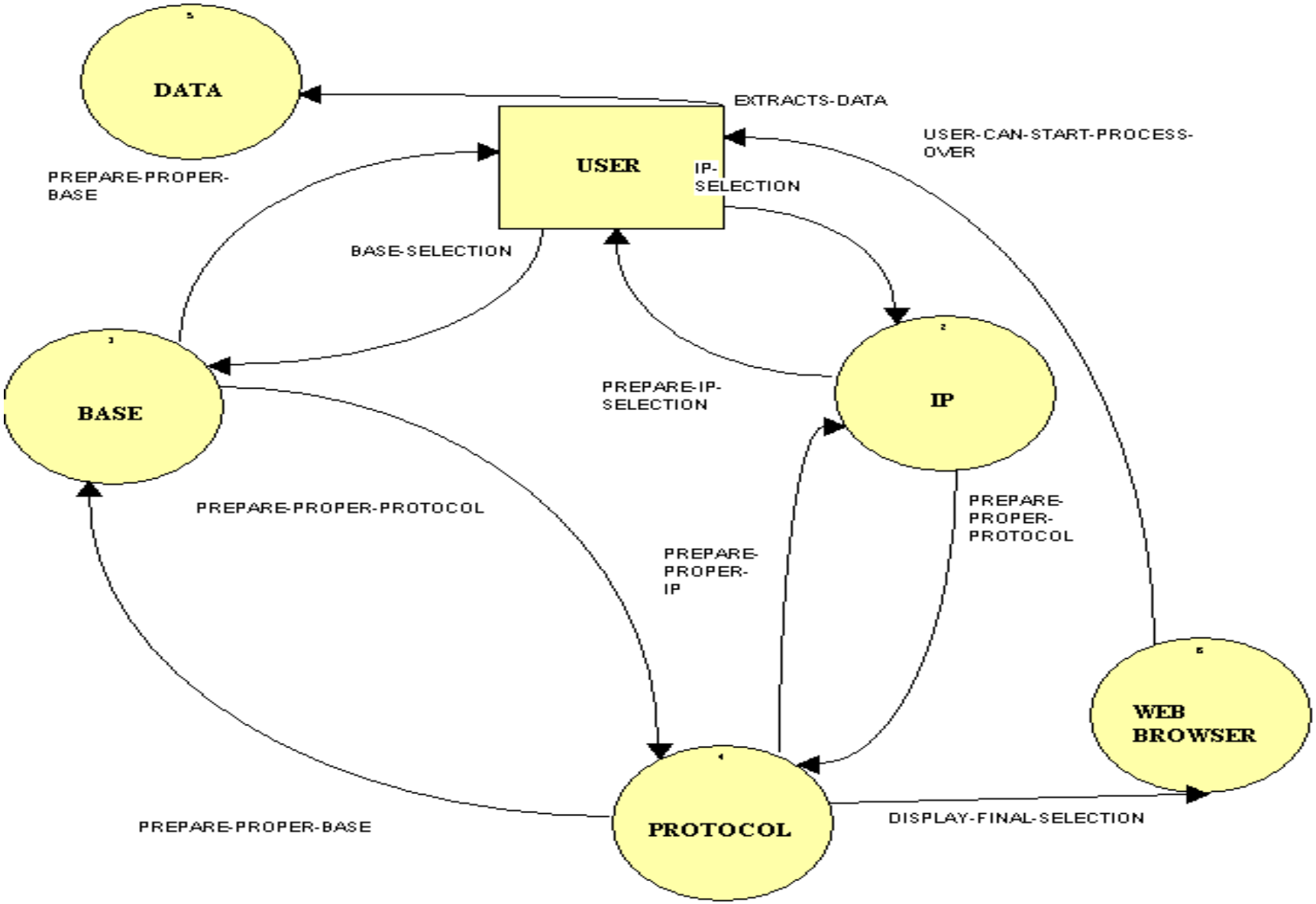
General Constraints

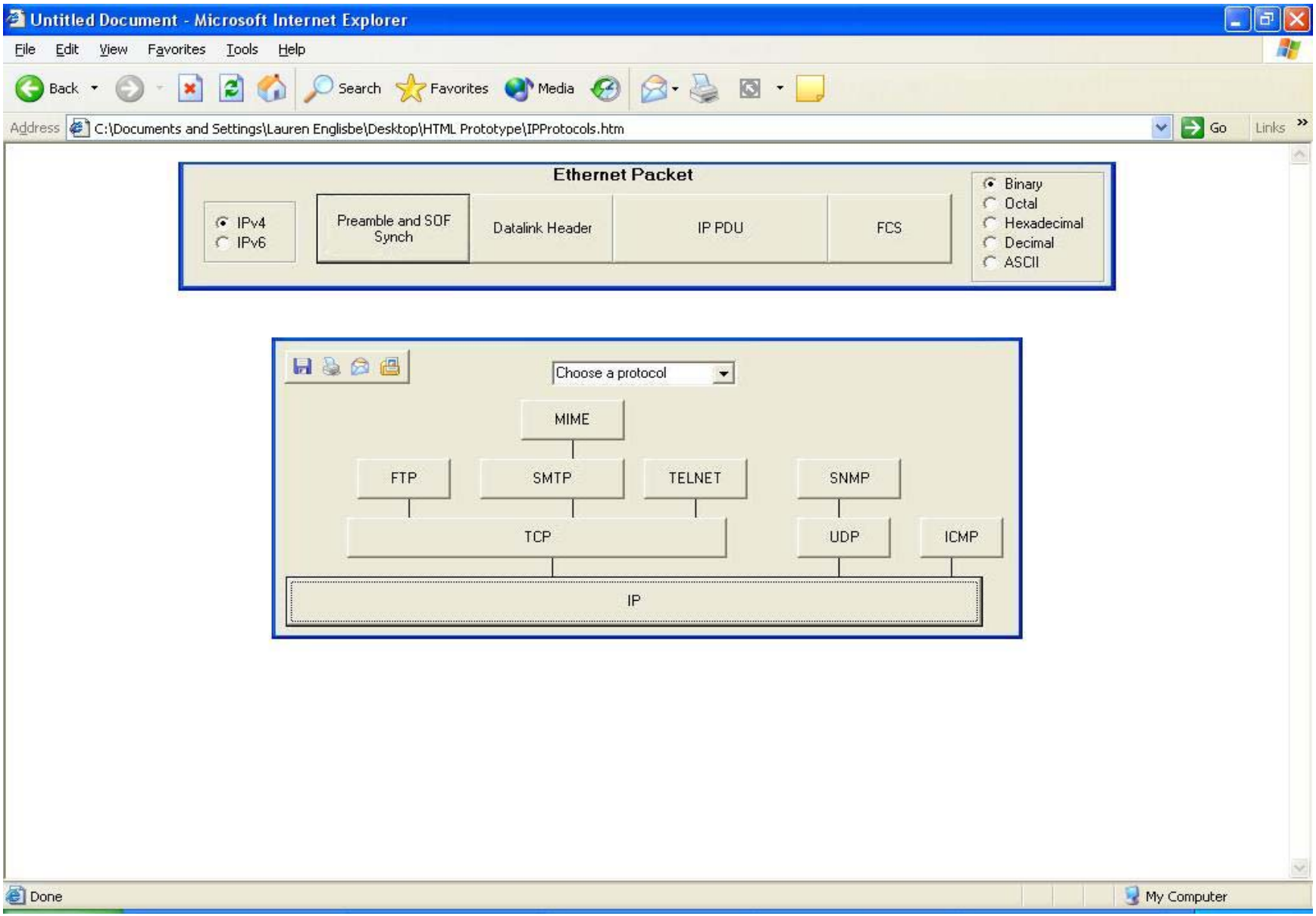
- Size of team
- Amount of time available

Data Flow Diagram and the Process

Level Zero Diagram




DATA
EXTRACTS-DATA
USER
USER-CAN-START-PROCESS-OVER
PREPARE-PROPER-BASE
IP-SELECTION
BASE-SELECTION
BASE
PREPARE-IP-SELECTION
IP
PREPARE-PROPER-PROTOCOL
PREPARE-PROPER-PROTOCOL
PREPARE-PROPER-IP
WEB BROWSER
PREPARE-PROPER-BASE
PROTOCOL
DISPLAY-FINAL-SELECTION


Untitled Document - Microsoft Internet Explorer
File Edit View Favorites Tools Help
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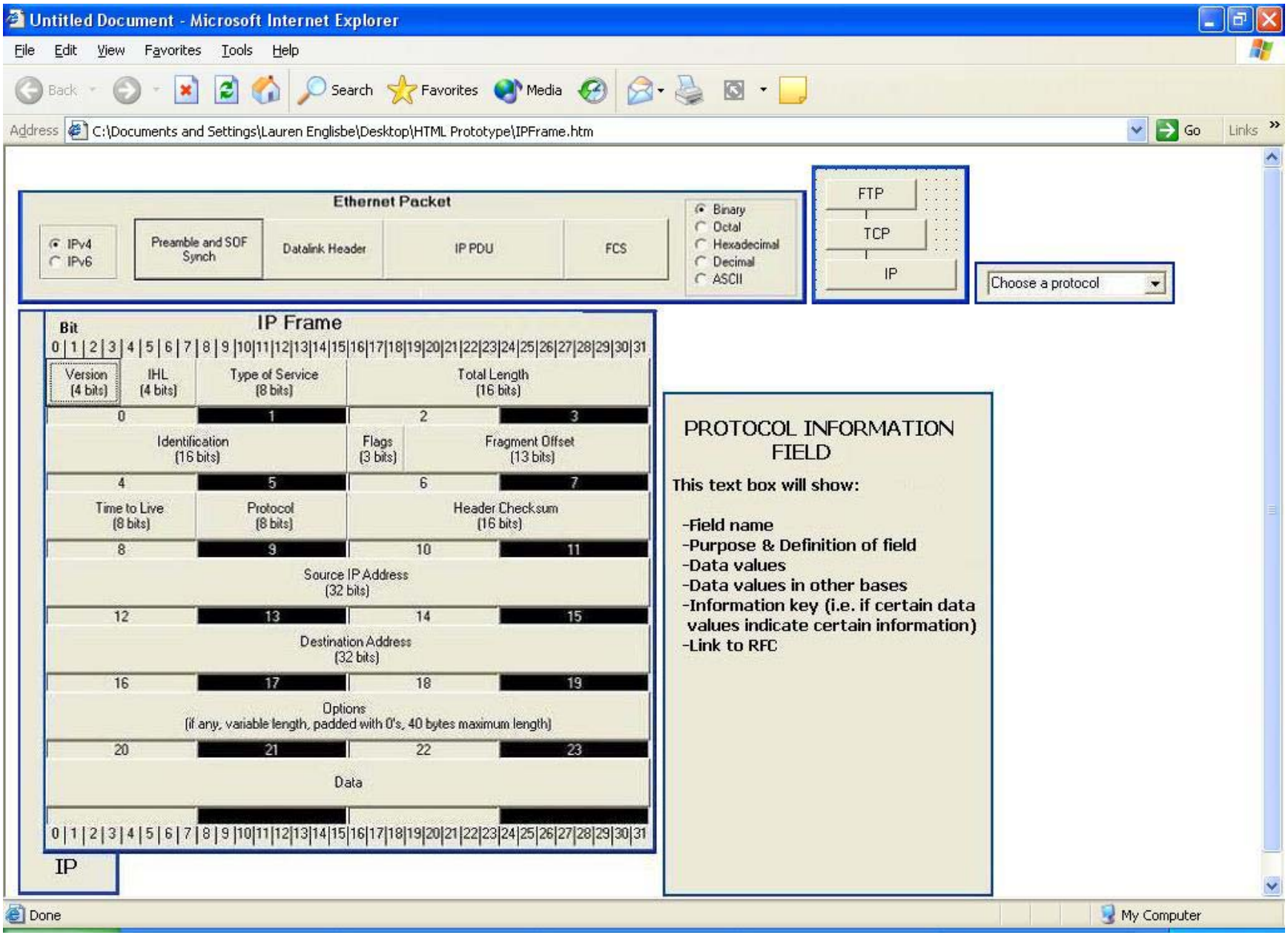
Go Links
Ethernet Packet
IPv4
IPv6
Preamble and SOF Synch
Datalink Header
IP PDU
FCS
Binary
Octal
Hexadecimal
Decimal
ASCII
Choose a protocol
MIME
FTP
SMTP
TELNET
SNMP
TCP
UDP
ICMP
IP
Done
My Computer


Untitled Document - Microsoft Internet Explorer
File Edit View Favorites Tools Help
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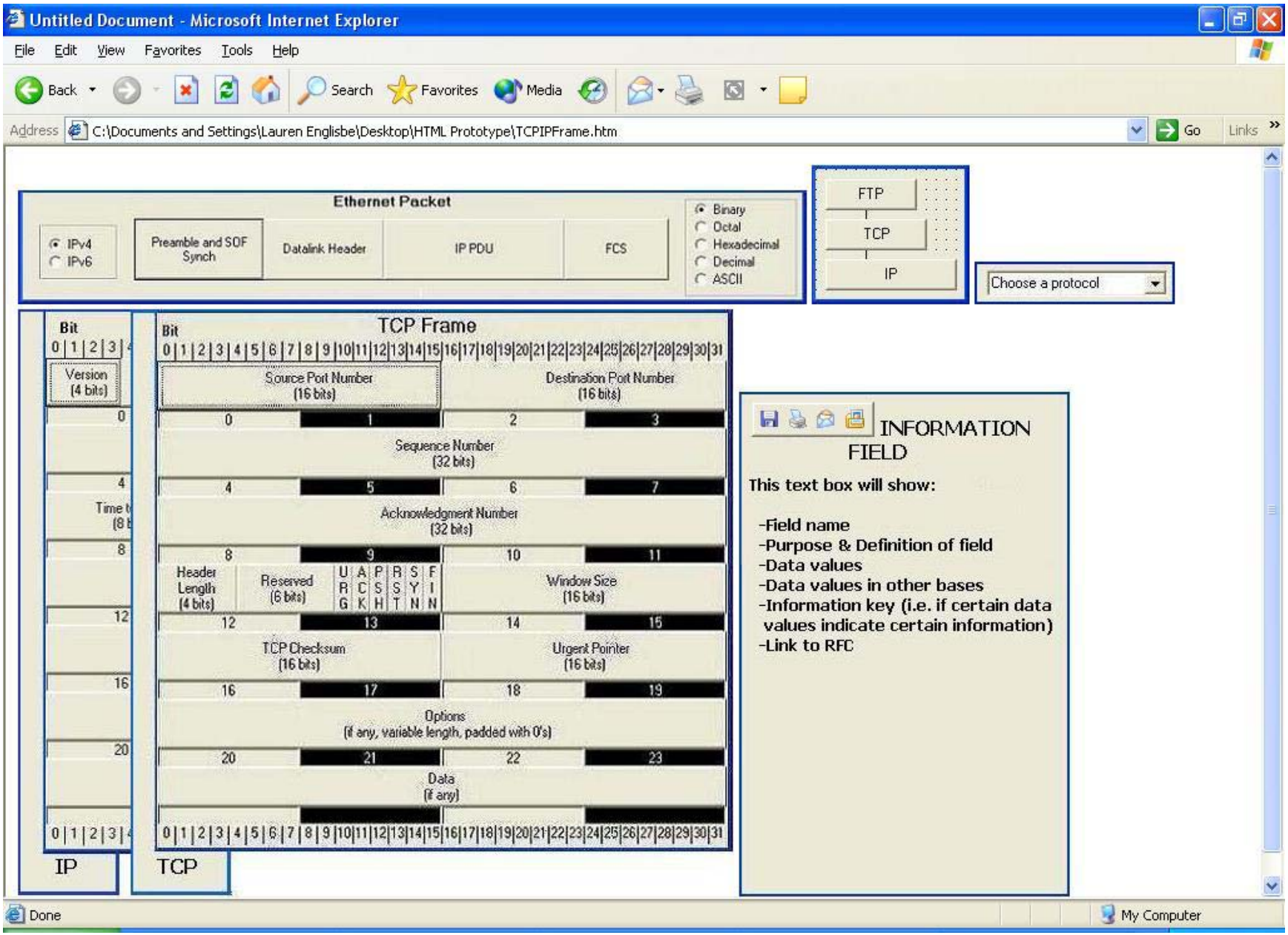
Address C:\Documents and Settings\Lauren Englisbe\Desktop\HTML Prototype\IPFrame.htm
Go Links
Ethernet Packet
IPv4
IPv6
Preamble and SOF Synch
Datalink Header
IP PDU
FCS
Binary
Octal
Hexadecimal
Decimal
ASCII
FTP
TCP
IP
Choose a protocol
IP Frame
Bit
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31
Version (4 bits)
IHL (4 bits)
Type of Service (8 bits)
Total Length (16 bits)
Identification (16 bits)
Flags (3 bits)
Fragment Offset (13 bits)
Time to Live (8 bits)
Protocol (8 bits)
Header Checksum (16 bits)
Source IP Address (32 bits)
Destination Address (32 bits)
Options (if any, variable length, padded with 0's, 40 bytes maximum length)
Data
IP
PROTOCOL INFORMATION FIELD
This text box will show:
-Field name
-Purpose & Definition of field
-Data values
-Data values in other bases
-Information key (i.e. if certain data values indicate certain information)
-Link to RFC
Done
My Computer


Untitled Document - Microsoft Internet Explorer
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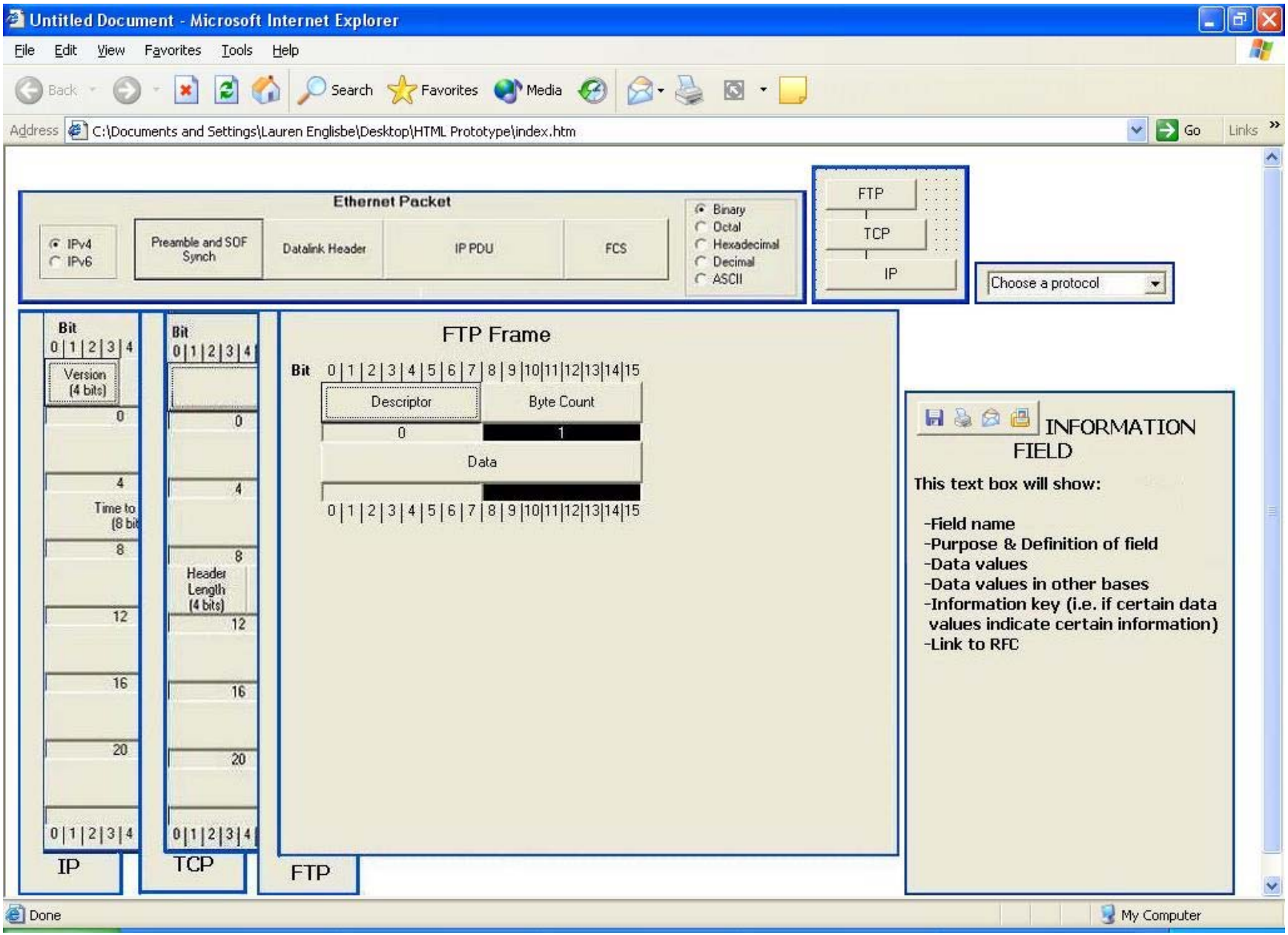
Address C:\Documents and Settings\Lauren Englisbe\Desktop\HTML Prototype\TCPIPFrame.htm
Go Links
Ethernet Packet
IPv4
IPv6
Preamble and SOF Synch
Datalink Header
IP PDU
FCS
Binary
Octal
Hexadecimal
Decimal
ASCII
FTP
TCP
IP
Choose a protocol
Bit
0 1 2 3
Version (4 bits)
TCP Frame
Bit
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31
Source Port Number (16 bits)
Destination Port Number (16 bits)
Sequence Number (32 bits)
Acknowledgment Number (32 bits)
Header Length (4 bits)
Reserved (6 bits)
URG ACK PSH RST SYN FIN
Window Size (16 bits)
TCP Checksum (16 bits)
Urgent Pointer (16 bits)
Options (if any, variable length, padded with 0's)
Data (if any)
IP
TCP
INFORMATION FIELD
This text box will show:
-Field name
-Purpose & Definition of field
-Data values
-Data values in other bases
-Information key (i.e. if certain data values indicate certain information)
-Link to RFC
Done
My Computer

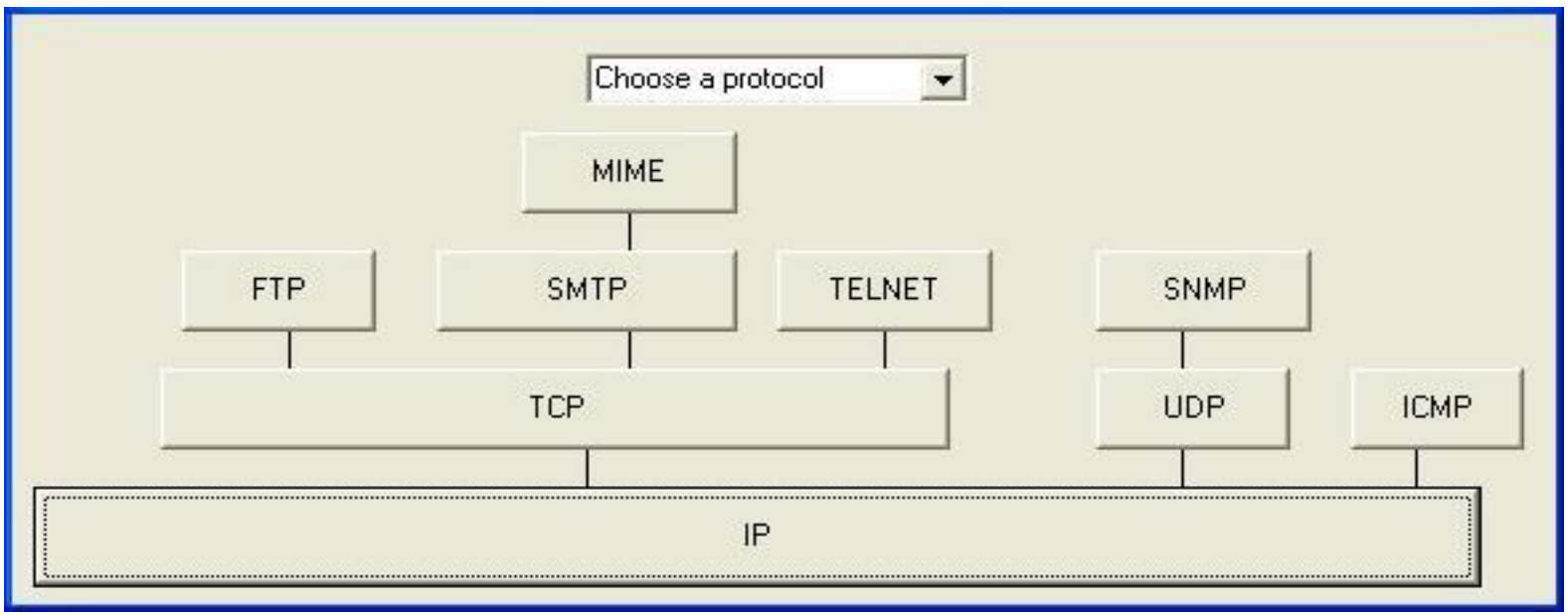

Untitled Document - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Search Favorites Media
Address C:\Documents and Settings\Lauren Englisbe\Desktop\HTML Prototype\index.htm
Go Links
Ethernet Packet
IPv4
IPv6
Preamble and SOF Synch
Datalink Header
IP PDU
FCS
Binary
Octal
Hexadecimal
Decimal
ASCII
FTP
TCP
IP
Choose a protocol
Bit
0 1 2 3 4
Version (4 bits)
Time to
(8 bit
Header Length (4 bits)
IP
TCP
FTP Frame
Bit 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
Descriptor
Byte Count
Data
FTP
INFORMATION FIELD
This text box will show:
-Field name
-Purpose & Definition of field
-Data values
-Data values in other bases
-Information key (i.e. if certain data values indicate certain information)
-Link to RFC
Done
My Computer

Specific Requirements

Functional Requirements

- Load various protocols
- GUI will display protocol components
- Visible menu allows users to go back to previous protocols
- Dynamic combo menu on hierarchical tree

- Show how different protocols are interrelated



- Ability to change an independent field or all fields of the protocol into a desired radix
- Ability to display different protocols
- Produces message box to give more information when user clicks on a field
- Link to RFC number for TCP/IP standard protocols

External Interface Requirements

- Macromedia Dreamweaver for GUI, mated with PHP for functionality

Design Constraints

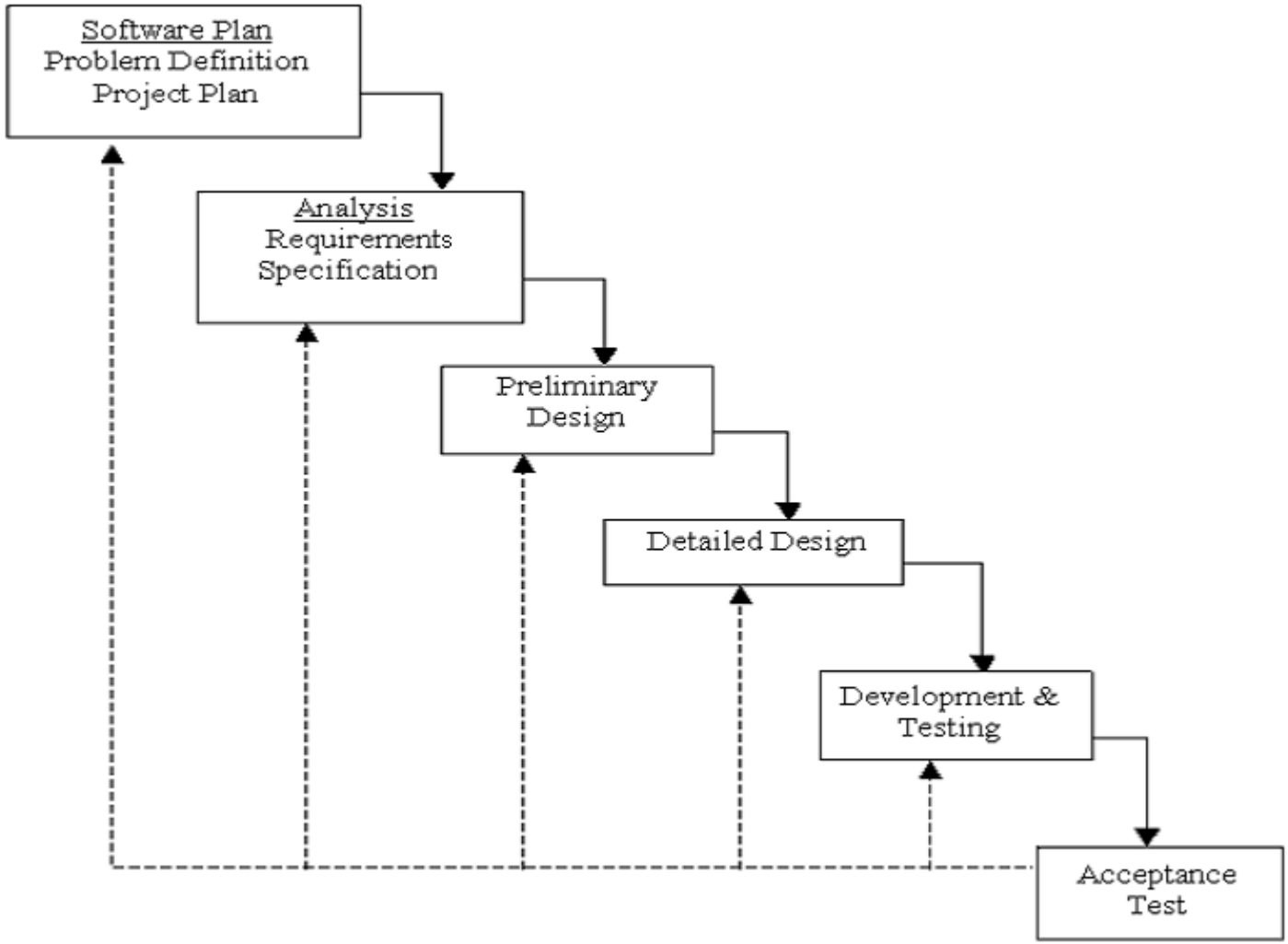
- Descriptor must be web-based
- Hosted on Ares Siena College server
- Microsoft Internet Explorer 5.0 or higher and Netscape Navigator 7.1

- Clearly presentable on 1024x768 classroom projector screens
- Clear colors for boxes, fields, values, etc.
- Fields should not obscure other fields
- Minimum amount of scrolling for better presentation

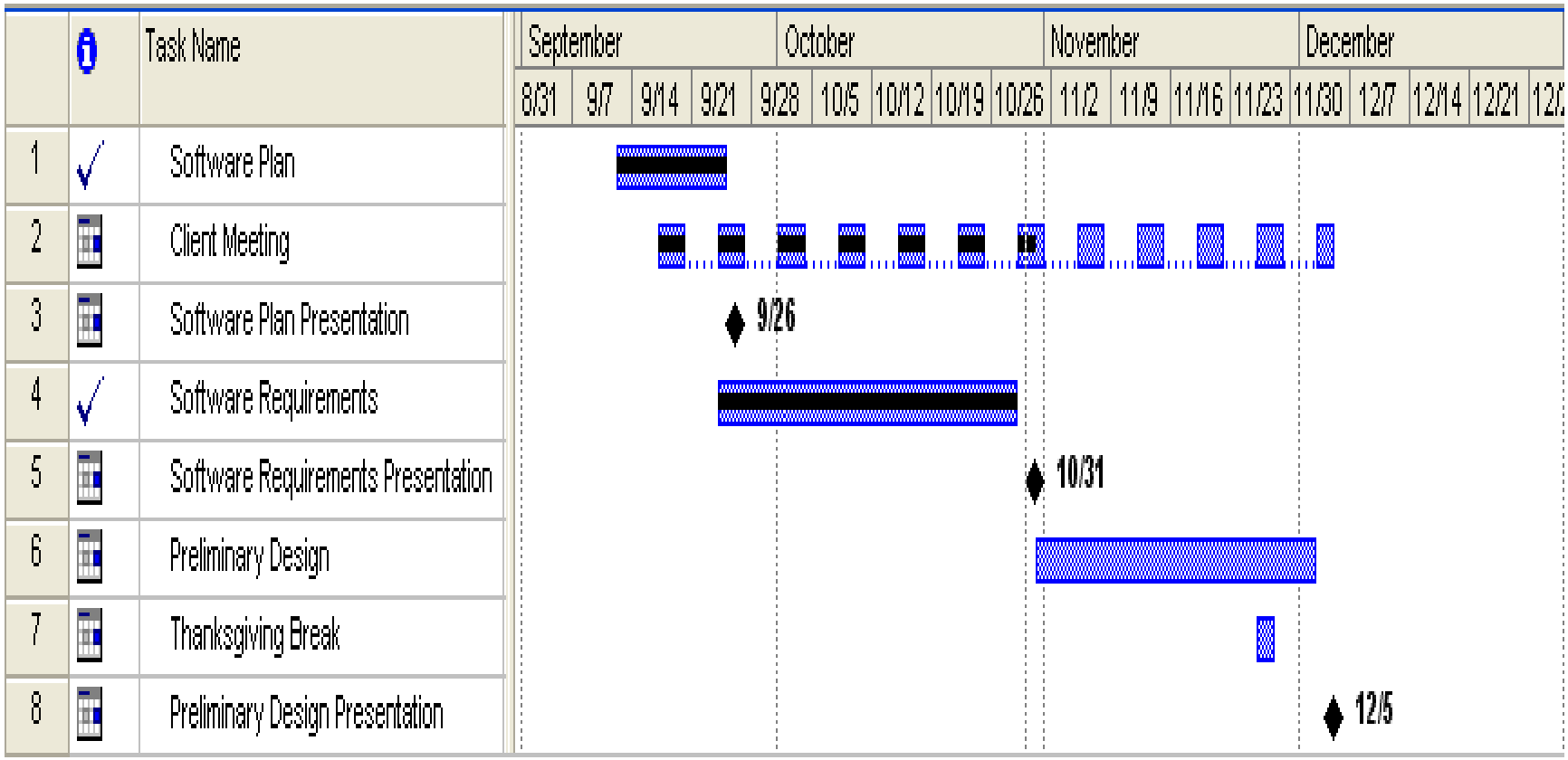
Other Requirements

- We would like to make the TCP/IP Packet Descriptor robust enough for future Software Engineering teams to expand upon the program as the client desires.

The Next Phase



Timeline


Task Name
September
October
November
December
8/31
9/7
9/14
9/21
9/28
10/5
10/12
10/19
10/26
11/2
11/9
11/16
11/23
11/30
12/7
12/14
12/21
1 Software Plan
2 Client Meeting
3 Software Plan Presentation
9/26
4 Software Requirements
5 Software Requirements Presentation
10/31
6 Preliminary Design
7 Thanksgiving Break
8 Preliminary Design Presentation
12/5

Thank you!