



# WAN PEAK DECODES

for X.21, G.703, ISDN, Bridge / Router and other wan links

## Wan Peek's Decodes include :-

- TCP/IP and suites
- Frame Relay & LMI (Local Management Interface)
- PPP – Point to Point Protocol & LCP (Link Control)
- X.25 Frame and Packet Layers 2 & 3 (mod 8 and 128)
- ISDN Basic Rate Q.921 and Q.931
- SNA
- IPARS P1024B and Unisys P1024C

## Wan Filters:

- Frame Relay by DLCI address, FECN, BECN etc
- PPP Frame Type
- X.25 Frame and Packet Type, etc
- Q.921, IPARS, UTS, etc.
- WanPeek comes with bundled Wan filters, and users can create and save their own simple and advanced filters

Packet: 63

Mocha WAN data - from dCe

- DCE origin data
  - Timestamp: 15:51:28.587720 04/16/2002
- Frame Relay Header - Q.922 bearer
  - DLCI address: 130 0x2025
  - Header Flags: FECN=0 BECN=1 DE=0 C/R=1 Response
- IP Header - Internet Protocol Datagram
- TCP - Transport Control Protocol
  - Source Port: 1052 ddt
  - Destination Port: 139 netbios-ssn
  - Sequence Number: 900409
  - Ack Number: 18597163
  - Offset: 5 (20 bytes)
  - Reserved: %000000
  - Flags: %011000
  - Window: 8653

```

0000: 09 00 00 4C 47 58 09 00 00 44 43 45 69 22 00 25 ...LGX...DCEI" %
0010: 45 00 00 D9 D9 02 40 00 00 06 7F 0D C0 A8 01 02 E..p..@.....
0020: C0 A8 02 07 04 1C 00 8B 00 0D BD 39 01 1B C5 2B .....9...+
  
```

Frame Relay carrying TCP/IP

Mocha WAN data - from dTe

- DTE origin data
  - Timestamp: 11:56:52.344209 06/14/2002
- Frame Relay LMI - Local Management Interface
  - DLCI for LMI: 0 0x0001
  - UI = 0x03 ED = 0x08 Call Ref = 0x00
  - Message Type: 0x75 = Status Report
  - Info Element: 0x95 = Ansi Look Shift
  - Info Element: 0x01 = Report Type
  - Element Length: 0x01
  - Element type: 0x00 = Link Integrity only
  - Info Element: 0x03 = Sequence No. Exchange
  - Element Length: 0x02
  - Send Sequence No.: 16
  - Recv Sequence No.: 111
  - Info Element: 0x07 = PVC Status
  - Element Length: 0x03
  - DLCI msb/lsb: 0x1180
  - DLCI address: 72 Status: 0xA2 0=Present 1=Active
  - Info Element: 0x07 = PVC Status

```

0000: 09 00 00 00 4C 47 58 09 00 00 44 54 45 69 22 00 01 ...LGX...DTEI"...
0010: 03 08 00 75 95 01 01 00 03 02 10 6F 07 03 11 80 ...u.....o...
0020: A2 07 03 15 85 20 01 00 00 00 00 00 00 00 00 00 ...
  
```

Frame Relay LMI (local management interface)

3	wan dTe	mocha wan	64	14:56:09.265444	ETHER-69-22
4	dCe wan	mocha wan	64	14:56:09.283187	ETHER-69-22

Packet: 1

Mocha WAN data - from dCe

- PPP
  - Link Control Protocol
  - LCP Code: 1 Configure Request
  - Identifier: 0x86
  - Length: 18
  - Option Type: 1 Minimum Receive Unit
    - Data: 4
  - Option Type: 5 Magic Number
    - Data: 6
  - Option Type: 7 Protocol Field Compression
    - Data: 2
  - Option Type: 8 Address and Control Field Compression
    - Data: 2

```

0000: 09 00 00 4C 47 58 09 00 00 44 54 45 69 22 FF 03 ...LGX...DTEI"...
0010: C0 21 01 D6 00 1E 01 04 05 E2 05 06 00 08 89 95 .....
0020: 02 02 07 02 08 00 00 00 00 00 00 00 00 00 00 00 .....
0048: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 .....
  
```

PPP LCP Link Control Protocol

Packet: 191

Mocha WAN data - from dCe

- PPP
  - Internet Protocol Datagram
  - TCP - Transport Control Protocol
  - HTTP - Hyper Text Transfer Protocol
    - Command: GET [55-57]
    - URI: /us.yimg.com/a/ne/netstock\_direct/120x60\_green.gif [58-109]
    - Version: HTTP/1.1 [110-120]
    - Accept: \*/\* [121-131]
    - Referer: http://geocities.com/Coah888 [134-173]
    - Accept-Language: en-us [174-197]
    - Accept-Encoding: gzip, deflate [198-229]
    - User-Agent: Mozilla/4.0 (compatible; MSIE 5.5; Windows 98) [230-289]
    - Host: us.al.yimg.com [290-311]
    - Connection: Keep-Alive [312-341]

```

0000: 09 00 00 4C 47 58 09 00 00 44 43 45 69 22 21 45 ...LGX...DCEI"IE
0010: 01 43 B6 23 40 00 7F 06 DD B8 39 60 C2 C3 ...C.#.....-...
0020: SC E4 2D 05 07 00 50 00 01 31 35 90 47 50 97 60 ...P.LS.GP.p
  
```

PPP carrying TCP/IP with HTTP datagram

Packet: 23

Mocha WAN data - from dTe

- ISDN
  - Level 2 Frame
    - Sequence: 0x00 B(S)=0 0x00 N(S)=0 0x00
    - Call Ref length: 0x01
    - Information Frame: 0x0A CR = 0 Dest (To) Call Ref = 0x3A
    - Message Type: 0x05 SETUP Call Establishment
    - Information Element: 0x01 Sending Complete
    - Information Element: 0x04 Bearer Capability length=2
    - Information Element: 0x08 CCITT Standardized Coding Unrestricted DS
    - Information Element: 0x09 Circuit mode 64 Kbit/s
    - Information Element: 0x18 Channel Identification length=1
    - Information Element: 0x83 any channel i/f implicit / basic preferred
    - Information Element: 0x70 Called Party number length=12 0x81 0x41

```

0000: 09 00 00 4C 47 58 09 00 00 44 54 45 69 22 00 D1 ...LGX...DTEI"...
0010: 00 00 00 02 1A 05 11 04 02 89 96 18 01 83 70 96 .....
  
```

ISDN Q.921 / Q.931 Call set up

Packet: 76

Mocha WAN data - from dCe

- DCE origin data
  - Timestamp: 15:33:45.962973 04/11/2002
- X.25 Level 2 Frame
  - Call/Resp = 0x01
  - Information Frame: 0x64 N(R) = 3 N(S) = 2 P/P = 0
  - X.25 Level 3 Packet
    - CFI/LCI: 0x14 Q = 0 D = 0
    - LCI = 0x04
    - LCN = 0x00
    - Unnumbered Frame: 0x0B CALL - Call Request Packet
    - Length: 0x29 Calling DTE length=9 Called DTE length=13
    - Called Address: 0123456789012
    - Calling Address: 345670000
    - Facility Length: 0x00 0

```

0000: 09 00 00 4C 47 58 09 00 00 44 43 45 69 22 01 64 ...LGX...DCEI" d
0010: 14 00 0B 9D 01 23 45 67 89 01 23 45 67 00 00 00 ....#9...#9...
0020: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 .....
0030: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 .....
  
```

X.25 level 2 Frame with level 3 Call Packet

Packet	Source	Size	Absolute Time	Delta Time	Cumulative Bytes	Filter
20	wan dTe	72	15:20:19.470383	00.000040	1360	
21	dCe wan	64	15:20:19.796211	00.000328	1424	
22	wan dTe	64	15:20:19.798293	00.000077	1488	
23	dCe wan	72	15:20:20.330488	00.000395	1560	
24	wan dTe	72	15:20:20.103135	00.000000	1632	IPARS Packet #11
25	dCe wan	64	15:20:20.3045	00.000130	1696	
26	wan dTe	72	15:20:20.7979	00.000149	1768	
27	dCe wan	64	15:20:21.111	00.000132	1832	
30	wan dTe	64	15:20:21.111	00.000000	1896	
31	dCe wan	72	15:20:21.481	00.000037	1968	
32	wan dTe	72	15:20:21.481	00.000000	2040	
33	dCe wan	64	15:20:21.777	00.000036	2104	
34	wan dTe	64	15:20:21.777	00.000000	2168	
35	dCe wan	72	15:20:22.100	00.000033	2240	
36	wan dTe	72	15:20:22.100	00.000000	2312	

```

0000: 09 00 00 4C 47 58 09 00 00 44 43 45 69 22 01 64 ...LGX...DCEI" d
0010: 14 74 68 09 73 20 09 70 20 09 20 09 20 09 20 09 ...this is
0020: 02 02 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...IPARS
0030: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...
0040: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 .....
  
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IPARS (P1024B)