

ISO/IEC 8208:2000-11 (E)

Information technology - Data communications - X.25_Packet Layer Protocol for Data Terminal Equipment

CONTENTS

	Page
Foreword	vi
1 Scope	1
2 Normative references	1
2.1 Identical Recommendations International Standards	1
2.2 Paired Recommendations International Standards equivalent in technical content.....	2
2.3 Additional references	2
3 General considerations	2
3.1 Compatibility with versions of Recommendation X.25	3
3.2 Environments	5
3.3 Differences in DTE/DTE and DTE/DCE operation	5
3.4 Operation over circuit-switched connections	6
3.5 Provision of the OSI Network Service	7
3.6 External Packet Layer interactions.....	7
3.7 Logical channels	7
3.8 Packet Layer entity.....	8
3.9 Packet types	9
3.10 Procedures for initialization.....	9
4 Procedures for restart	9
4.1 Originating a restart request	10
4.2 Receiving a restart indication.....	12
4.3 Restart collision	12
4.4 Restart confirmation.....	12
4.5 Determining “DTE” or “DCE” characteristics.....	12
5 Procedures for Virtual Call setup and clearing	13
5.1 Ready state.....	13
5.2 Procedures for Virtual Call setup.....	13
5.3 Rejecting a call.....	15
5.4 Aborting a call request	15
5.5 Procedures for Virtual Call clearing	15
6 Procedures for data and interrupt transfer	16
6.1 States for data and interrupt transfer	17
6.2 Maximum User Data Field length of DATA packets	17
6.3 Delivery Confirmation bit	17
6.4 More Data mark	18
6.5 Complete packet sequence	18
6.6 Qualifier bit.....	18
6.7 Fragmentation and reassembly of messages.....	19
6.8 Procedures for interrupt	20
6.9 Transit delay of DATA packets.....	21
7 Procedures for flow control	21
7.1 Flow control.....	22
7.2 Throughput characteristics and throughput classes.....	25

8 Procedures for reset	25
8.1 Originating a reset request	27
8.2 Receiving a reset indication	27
8.3 Reset collision.....	27
8.4 Reset confirmation	27
9 Effects of clear, reset, and restart procedures on the transfer of packets	27
10 Effects of Layers 1 and 2 on the Packet Layer.....	28
11 Error handling	28
11.1 The DIAGNOSTIC packet.....	29
11.2 Nonreceipt of window-rotation information	29
11.3 Receipt of erroneous DATA packets	30
12 Packet formats.....	31
12.1 General.....	31
12.2 Call setup and call clearing packets	33
12.3 DATA and interrupt packets.....	42
12.4 Flow control packets.....	44
12.5 Reset packets	45
12.6 Restart packets	47
12.7 DIAGNOSTIC packet.....	48
12.8 REJECT packet.....	49
12.9 Registration packets.....	50
13 Procedures for optional user facilities	52
13.1 On-line Facility Registration.....	52
13.2 Extended and Super Extended Packet Sequence Numbering	59
13.3 D-bit Modification	60
13.4 Packet Retransmission	60
13.5 Incoming Calls Barred	61
13.6 Outgoing Calls Barred	61
13.7 One-way Logical Channel Outgoing.....	61
13.8 One-way Logical Channel Incoming	61
13.9 Nonstandard Default Packet Sizes	61
13.10 Nonstandard Default Window Sizes	61
13.11 Default Throughput Classes Assignment.....	62
13.12 Flow Control Parameter Negotiation	62
13.13 Throughput Class Negotiation Facilities.....	63
13.14 Closed User Group related facilities	64
13.15 Bilateral Closed User Group related facilities.....	68
13.16 Fast Select.....	69
13.17 Fast Select Acceptance	70
13.18 Reverse Charging.....	70
13.19 Reverse Charging Acceptance	70
13.20 Local Charging Prevention	70
13.21 Network User Identification (NUI) related facilities.....	71
13.22 Charging Information.....	71
13.23 ROA related facilities	73
13.24 Hunt Group.....	73
13.25 Call Redirection and Call Deflection related facilities.....	73
13.26 Called Line Address Modified Notification.....	76
13.27 Transit Delay Selection and Indication	76
13.28 Alternative Addressing Related Facilities	76
13.29 TOA/NPI address subscription	78
13.30 Reference Number	78
14 Procedures for optional ITU-T specified DTE facilities.....	80
14.1 Calling Address Extension.....	80
14.2 Called Address Extension.....	80
14.3 Minimum Throughput Class Negotiation	80
14.4 End-to-End Transit Delay Negotiation	81

14.5 Priority	81
14.6 Protection.....	81
14.7 Expedited Data Negotiation.....	81
15 Format for Facility Field in call setup/clearing packets	82
15.1 General.....	82
15.2 Coding of the Facility Field for optional user facilities	83
15.3 Coding of the Facility Field for ITU-T specified DTE facilities	89
16 Format for Registration Field in registration packets.....	92
16.1 General.....	92
16.2 Coding of the Registration Field for registration-facilities	93
17 Diagnostic codes	95
18 Timers and retransmission counts	101
19 State diagrams	105
20 State tables.....	111
21 Conformance	120
21.1 Static conformance.....	120
21.2 Protocol Implementation Conformance Statement	120
21.3 Dynamic conformance	120
 Annexes	
A Private networks.....	123
B PICS Proforma	131
C Differences between various editions of ISO/IEC 8208.....	159
D Abbreviations.....	169