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Suppliers' Information Note

For The BT Network

BT Basic X.25 Direct

Service Description

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CONTENTS

1. INTRODUCTION 3

2. SERVICE AVAILABILITY AND TARIFFS 3

3. BT BASIC X.25 DIRECT SERVICE DESCRIPTION 3

3.1 GENERAL SERVICE CHARACTERISTICS 3
3.2 DATA RATES 3
3.3 INTERFACE DESCRIPTIONS 4
3.3.1 X.21 bis at 2.4 kbits/s and 9.6 kbits/s 4
3.3.2 X.21 bis at 48 kbits/s 4
3.3.3 X.21 64 kbits/s, 128 kbits/s and 256kbits/s Presentation 4
3.4 SERVICE FEATURES 4
3.5 PROTOCOL DETAILS 4
3.5.1 Frame Layer 4
3.5.2 Packet Layer 4

4. PHYSICAL ARRANGEMENTS 5

4.1 PHYSICAL LOCATION OF CONNECTORS 5
4.2 NTE POWER SUPPLY REQUIREMENTS 5

5. REFERENCES 6

6. ABBREVIATIONS 6

7. HISTORY 7

Note: This product was Withdrawn From New Supply in Dec 2008. It is no longer available for new customers

1. Introduction

This Suppliers Information Note (SIN) describes the BT Basic X25 Direct Service. This document provides information about the service for use by Customer Premises Equipment (CPE) manufacturers and developers.

2. Service Availability and Tariffs

BT Basic X.25 Direct is available (where capacity exists) in mainland Britain and Northern Ireland. Connection to the service is only available in the UK (Connections in Hull and the Channel Islands are provided by the respective Regional Operators). Calls may be made to public X.25 networks around the world, at time of writing over 200 networks can be reached in more than 100 countries from the BT Data Network.

For further information, please contact the BT Convergent Solutions Helpdesk, as listed at http://www.btplc.com/sinet/

If you have enquiries relating to this document, then please contact us at: sinet.helpdesk@bt.com

3. BT Basic X.25 Direct Service Description

3.1 General Service Characteristics

The BT Basic X.25 Direct Service provides transport of X.25 packets between X.25 end-points. The service offers a Switched Virtual Circuit (SVC) between two X.25 Data Terminating Equipment (DTE) points. A DTE will support SVC incoming, SVC outgoing or SVC bothway connections.

3.2 Data Rates

The BT Basic X.25 Direct Service conforms to the ITU-T Recommendation X.25[4] 1984. The service provides support of data applications at the following rates:

Rate	Interface
2.4 kbits/sec	V.24
9.6 kbits/sec	V.24
48 kbits/sec	V.35
64 kbits/sec	X.21
128 kbits/sec	X.21
256 kbits/sec	X.21

Note – Not all above data rate options are available for new orders due to withdrawal of low speed service types from portfolios.

3.3 Interface Descriptions

The service supports the following types of customer interface

Note – Not all data rate options are available for new orders due to withdrawal of low speed service types from portfolios.

3.3.1 X.21 bis at 2.4 kbits/s and 9.6 kbits/s

This option provides an ITU-T Recommendation X.21 bis (V.24) interface at 2.4 kbits/s and/or 9.6 kbits/. The interchange circuits for this interface are defined in ITU-T Recommendation V.24[5] with the electrical characteristics specified in ITU-T Recommendation V.28[6]. BS ISO 2110:1989[2] defines the mechanical connector arrangements and the pole assignments.

3.3.2 X.21 bis at 48 kbits/s

This option provides an ITU-T Recommendation X.21bis (V.35) interface at 48 kbits/s. Electrical characteristics for this interface are specified in ITU-T Recommendation V.11[7] and ISO/IEC 2593:1993[1] defines the mechanical connector and pole arrangements.

3.3.3 X.21 64 kbits/s, 128 kbits/s and 256kbits/s Presentation

This option provides an ITU-T Recommendation X.21[8] interface at 64 kbits/s. Electrical characteristics for this interface are specified in ITU-T Recommendation X.27 (V.11)[9] and ISO 4903:1989[3] defines the mechanical connector and pole arrangements.

3.4 Service Features

- Multiline - this is where more than one access line may share a common Network User Address (NUA).
- Packet format - as described in ITU-T Recommendation X.25 1984[4].
- Facilities supported by the service are listed below, and are described in ITU-T Recommendation X.25 1980[4].
    - Packet Size Negotiation (valid range 128-1024 bytes)
    - Window Size Negotiation (valid range 2-7)
    - Fast Select
    - Closed user Group
    - Reverse Charging
    - Call Redirection

In addition the throughput class facility will be accepted by the network, but not acted upon.

3.5 Protocol Details

3.5.1 Frame Layer

Frame Addressing.

Frame addressing is as defined in ITU-T Recommendation X.25 1984[4].

3.5.2 Packet Layer

Call request.

The customer equipment should send in a call request to the network, specifying the destination address. If the calling address is specified, the network will validate it against the NUA assigned to that line. If there is a mismatch, the call will be cleared by the network. Otherwise the call will be routed to the called address specified. If the calling address is not specified, then the network will insert the address associated with that port.

Packet Addressing.

The addressing structure of the network will follow ITU-T Recommendation X.121. The Data Network Identification Code (DNIC) for the service will be 2342. The Network User Addresses (NUAs) will be 12 digits long including DNIC. Two further digits (the subaddress) may be used and these will be passed transparently by the network for use by the customer equipment. The NUA is assigned by BT at the time of service provision.

Clearing.

Network clear causes will be as specified in ITU-T Recommendation X.25 1980. User equipment should generate clears with Cause Code 00.

Flow Control

Packet and Frame level flow control is as defined in ITU-T Recommendation 1980.

4. Physical Arrangements

4.1 Physical Location of Connectors

The Network Termination Point (NTP) is located at the connector on the BT Network Terminating Equipment (NTE) with a plug (male) on the customer side as described in the relevant part of Section 3.

4.2 NTE Power Supply Requirements

Various types of NTE maybe installed, these require an a.c. mains power source. Power consumption varies, dependent on type of NTE, between 5 Watts and 20 Watts.

5. References

International Standards Organisation Standards:

[1]	ISO/IEC 2593	Information Technology - Telecommunications and information exchange between systems - 34-pole DTE/DCE interface connector and contact number assignments.	1993

British Standards:

[2]	BS ISO 2110	Information Technology - Data communication - 25-pole DTE/DCE interface connector and contact number assignments.	1980
[3]	BS ISO 4903	15 Pole DTE/DCE Interface Connector and Contact Number Assignments.	1989

ITU-T Recommendation:

[4]	X.25	Interface between data terminal equipment (DTE) and data circuit-terminating equipment (DCE) for terminals operating in the packet mode and connected to the public data networks by dedicated circuit.	1984
[5]	V.24	List of definitions for interchange circuits between data terminal equipment (DTE) and data circuit-terminating equipment (DCE).	1988
[6]	V.28	Electrical characteristics for unbalanced double-current interchange circuits.	1988
[7]	V.11	Electrical characteristics for balanced double-current interchange circuits for general use with integrated circuit equipment in the field of data communications.	1988
[8]	X.21	Interface between Data Terminal Equipment and Data Circuit-terminating Equipment for synchronous operation on public data networks.	Sept. 1992
[9]	X.27 (V.11)	Electrical characteristics for balanced double-current interchange circuits for general use with integrated circuit equipment in the field of data communications.	1988

For further information or copies of referenced sources, please see document sources at http://www.btplc.com/sinet/

6. Abbreviations

BS EN	British Standard European Norm
BTNR	British Telecommunications Network Requirements

CPE	Customer Premise Equipment (Previously known as Terminal Equipment)
DCE	Data Circuit-Terminating Equipment
DNIC	Data Network Identification Code
DTE	Data Terminating Equipment
ITU-T	International Telecommunication Union - Telecommunication Standardization Sector
NTE	Network Termination Equipment
NTP	Network Termination Point
NUA	Network User Address
SIN	Supplier Information Note
SVC	Switched Virtual Circuit

7. History

Issue 1	December 1997	First published.
Issue 1.1	February 2001	Editorial changes & approval requirements now by reference to SIN 325.
Issue 1.2	June 2002	Service Availability section update (Sec.2).
Issue 1.3	July 2003	Approval Requirements statement removed, information available via SINet Useful Contacts page. Contact details in Section 2 updated.
Issue 1.4	December 2004	Contact information updated. Text concerning Hull and the Channel Islands added to Service Availability and Tariffs clause.
Issue 1.5	April 2009	Helpdesk information updated
Issue 1.6	May2010	Product Status Updated
Issue 1.7	February 2015	Change SINet site references from http://www.sinet.bt.com to http://www.btplc.com/sinet/
Issue 1.8	December 2016	Service options updated

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