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Suppliers' Information Note

For The BT Network

BT FLEXIBLE BANDWIDTH SERVICE (FBS) Service Description & Withdrawal Notification

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Enquiries relating to this document should be directed to: help@sinet.bt.com

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1. INTRODUCTION

Flexible Bandwidth Service (FBS) is a network service, which provides an alternative to the complexities of building corporate private Time Division Multiplex (TDM) networks of bought-in multiplexers and private transmission circuits. It consists of a core network of nodes spread throughout the UK, each of which is equipped with multiplexers and inter-connected to the other nodes. Customer Access to the core network is by 2 Mbit/s lines, with an on-site multiplexer, or by 64 kbit/s lines.

Further information, for example on tariffs and availability, is available from the Data Connect Helpdesk by using the contact details at <http://www.sinet.bt.com/usenum.htm>.

2. SERVICE AVAILABILITY

The Flexible Bandwidth Service was launched in September 1992.

It is planned to withdraw the Flexible Bandwidth Service in March 2006.

3. SERVICE OUTLINE

3.1 General

The FBS service offers a flexible private virtual network providing the customer with both re-routing, on-demand, to pre-determined destinations and bandwidth flexibility, on-demand, within agreed limits.

An outline of these features follows:-

3.2 Bandwidth Flexibility

Bandwidths are available on a 24 hour, scheduled, or on-demand basis.

3.2.1 24 hour bandwidth

Purchased as either 2/4 wire analogue services or digital services with speeds ranging from 0.8 kbit/s to 1920 kbit/s. "24 hour" bandwidth is available 24 hours a day, 365 days a year. Unlike a traditional private circuit, the bandwidth required can be changed monthly. Initially most new customers will opt for a significant proportion of "24 hour" bandwidth until knowledge of the service and application usage improves when they may migrate to "Scheduled" or "On-Demand" bandwidth.

3.2.2 Scheduled Bandwidth

This type of bandwidth can be switched on and off according to a pre-defined customer schedule. "Scheduled" bandwidth will normally be used for applications needing connectivity for less than a typical working day. Having booked "Scheduled" bandwidth customers will be required to pay for it whether or not they use it. Changes to the schedule can be made monthly in joint reviews with BT.

3.2.3 On-Demand Bandwidth

Where bandwidth requirements cannot be defined monthly, “On-Demand” bandwidth may be used. Here the customer specifies a need to use an application between two sites but not the times. “On-Demand” bandwidth can be requested via a telephone call or a facsimile message to their Service Centre and the bandwidth will be made available within 3 hours. A good example of the use of “On-Demand” bandwidth is video conferencing where the need for a service can be identified but the exact timing of sessions will not be known until a few hours beforehand

3.2.4 Time of Day Reconfiguration

With prior arrangement routes can be changed based on the time of day.

4. SERVICE ACCESS

4.1 Analogue Access

Analogue access to the FBS will be provided on both 2 and 4-wire presentations. Signalling facilities will be provided in the forms of in-band and E&M.

4.2 Digital Access

The FBS offers a variety of digital interfaces, some of which align with other BT private circuit services. For example, CPE used for Kilo-stream type services can also be connected and operated on the equivalent FBS service.

The Details of the FBS interface offerings follow. These interfaces offer a range of data rates and the ability of existing CPE to be used on the equivalent FBS services.

4.2.1 G.703/G.704

This interface type is presented to CPE using either a 75-ohm coaxial BNC plug or a 4-wire twisted pair suitable for termination on an IDC type block. 120 ohm 15pin D- type connectors can be provided as an option. This interface presentation will require G.704 structuring.

4.2.2 X.21, X.21bis

This interface type offers data rates of 9.6, 12.8, 14.4, 16.8, 19.2, 24, 36, 48, 56, 64 and $n \times 64$ kbit/s, where values of n can be incremented to give a maximum data rate of 1948 kbit/s. The physical connection will be by either 15 or 25 way D-type plug as described in ISO 4903 and ISO 2110 respectively.

4.2.3 V.24

This interface is offered for slower data rates with the following rates available: 1.2, 2.4, 4.8, 7.2, 9.6, and 19.2 kbit/s. This service is presented using a 25 way D-type as described in ISO 2110. As part of this interface offering an additional facility V.54 (Loop Test Device for Modems) is also available.

4.2.4 V.35

The FBS service will also offer data transmission at 48 kbit/s via V.35. However, this interface is not a recommended mode of connection and is only being offered to enable existing V.35 CPE to be connected. It is not anticipated that new CPE will be designed for this interface type and that the 48 kbit/s data rate will be offered by other interfaces such as X.21, X21bis. The physical presentation of this V.35 interface will be a 37 way D-type, or 34 way M rack plug.

5. ACRONYMS

BNC	Bayonet-Neill-Concelman
CCITT	Comité Consultatif International Télégraphique et Téléphonique
CPE	Customer Premise Equipment
E&M	Ear and Mouth or Earth & Mark terms for DC 5 signalling system
FBS	Flexible Bandwidth Service
G.703	Physical/electrical characteristics of hierarchical digital interfaces [ITU-T]
G.704	Synchronous frame structures used at primary and secondary hierarchical levels [ITU-T]
IDC	Insulation Displacement Connection
ISO	International Organisation for Standardization
SIN	Suppliers' Information Note [BT]
TDM	Time Division Multiplexing
V.24	List of definitions for interchange circuits between terminal equipment (DTE) and data circuit-terminating equipment (DCE) [ITU-T]
V.35	ITU-T standard
V.54	ITU-T Modem standard
X.21	Interface between data terminal equipment and data circuit-terminating equipment for synchronous operation on public data networks [ITU-T]
X.21bis	ITU-T datacomms standard

6. REFERENCES

ITU-T Recommendations

G.703	Recommendation G.703 (10/98) - Physical/electrical characteristics of hierarchical digital interfaces
G.704	Recommendation G.704 (10/98) - Synchronous frame structures used at 1544, 6312, 2048, 8448 and 44 736 kbit/s hierarchical levels
V.24	Recommendation V.24 (02/00) - List of definitions for interchange circuits between data terminal equipment (DTE) and data circuit-terminating equipment (DCE)
V.35	Recommendation V.35 (10/84) - Data transmission at 48 kilobits per second using 60-108 kHz group band circuit
V.54	Recommendation V.54 (11/88) - Loop test devices for modems
X.21	Recommendation X.21 (09/92) - Interface between Data Terminal Equipment and Data Circuit-terminating Equipment for synchronous operation on public data networks
X.21bis	Recommendation X.21 bis (11/88) - Use on public data networks of Data Terminal Equipment (DTE) which is designed for interfacing to synchronous V-Series modems

For sources of the quoted standards please see <http://www.sinet.bt.com/docsources.htm>

7. HISTORY

Issue 1.0	February 2001	First Published
Issue 1.1	July 2002	Editorial changes
Issue 1.2	January 2004	Clause on terminal equipment approvals deleted, information available via SINet Useful Contacts page. Editorial changes
Issue 2.0	September 2005	Notification of service withdrawal added.

<END>

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