



# SIN 337

Issue 2.4

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## Suppliers' Information Note

*For The BT Network*

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### **BT MegaStream 622, BT MegaStream Aggregate (STM4) Service Description**

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## **1. Introduction**

This Suppliers' Information Note (SIN) describes the BT MegaStream 622 and MegaStream Aggregate (STM4) services and provides technical information for terminal equipment (TE) manufacturers and suppliers. It should be read in conjunction with SIN333, SDH Customer Interfaces At the STM-N level (where N=1,4,16).

**Note: Whilst still supported for existing customers, MegaStream 622 is withdrawn for new sale.**

## **2. Service Outline**

### **2.1 General**

BT STM4 is an inland Synchronous Digital Hierarchy (SDH) point to point or aggregate (MegaStream Aggregate) leased high speed digital service supporting customer access at 622Mbit/s which conforms to ITU-T Recommendation G.707<sup>[1]</sup>.

### **2.2 MegaStream 622 Point to Point**

The service will support the bandwidth provided by four concatenated VC4 SDH Virtual Containers. The use of the STM4 will depend on customer application. The service is available to the customer via the following interface:

- ITU-T Recommendation G.957<sup>[2]</sup> (STM-4 optical)

### **2.3 MegaStream Aggregate (STM4)**

The MegaStream Aggregate (STM4) service allows for multiple numbers of inland MegaStream 2048Kbit/s circuits or a combination of MegaStream 2048Kbit/s, 34,368Kbit/s and 45,736Kbit/s, 149,760Kbit/s, or KiloStream Aggregate Interface Bearer, International Private Circuits, ISDN 30 or any other 2Mbit/s presentation as per the multiplexing structure in figure 1 of ETS 300 147<sup>[3]</sup> possibly from all over the United Kingdom; to be delivered to a site as a single 622,080Kbit/s customer presentation. The service will support a maximum of 252 Customer useable individual 2048Kbit/s channels per Aggregate Interface.

The service will support both Aggregate to Single 2048Kbit/s working and Aggregate to Aggregate working.

## **3. Service Availability**

The STM4c service is available where network capacity exists.

The STM4 Aggregate service is available throughout the UK (inland only) where network capacity exists.

## 4. Technical Specification

### 4.1 Service Presentation

The technical presentation is described in SIN 333, SDH Customer Interfaces At the STM-N level (where N=1,4,16)

The services are presented as an optical Single-Mode fibre connection conforming to ITU-T Recommendation G.957<sup>[2]</sup> for SDH optical requirements. The optical fibre presentation at the UNI is conformant to BS EN 60825-1<sup>[4]</sup> and BS EN 60825-2<sup>[5]</sup> as a Class 1 Laser Product.

The physical presentation is via a FC type optical connector conforming to BS EN 186110:1994<sup>[6]</sup>. The connector is Physical Contact (PC) polished. Non Return-to-Zero (NRZ) line coding is used as specified in ITU-T Recommendation G.957<sup>[2]</sup>.

The signal transmitted from the BT NTE is derived from a 1310nm wavelength long haul SDH class (L-1.1 as specified in ITU-T Recommendation G.957<sup>[2]</sup>) optical transmitter; which has been attenuated by 10dB to provide a transmitted power range of between -10dBm and -15dBm (The 10dB attenuator is provided by BT on the NTE transmitter to ensure that the Network Terminal Equipment receiver is not saturated). The NTE receiver power range is between -10dBm and -34dBm.

The recommended configuration of the SDH Section and Path Overheads is given SIN333. Figure 1 highlights the difference between SDH Sections and SDH Paths.

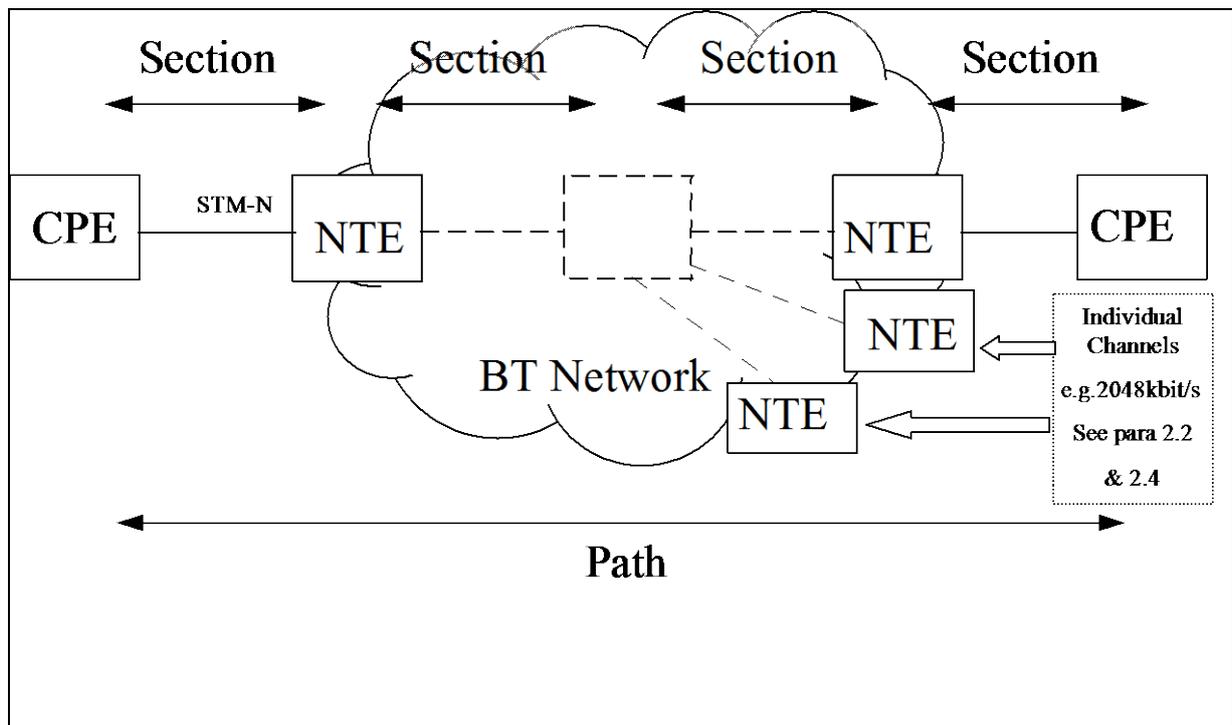


Figure 1 - Comparison of SDH Path vs. Section

## 4.2 Connection Characteristics

Connection characteristics are described in SIN 333, SDH Customer Interfaces At the STM-N level (where N=1,4,16).

## 4.3 Multiplex section protection (MSP)

Multiplex section protection (MSP) will provide a standby connection within the customer's premises. For STM4 services, this connection is optical. See SIN333 for technical details.

## 5. Further Information Contact Point

For enquiries concerning connection availability between particular sites and for further "sales and marketing" information on the MegaStream services, please contact your Account Manager or authorised dealer.

If you have enquiries relating to this document then please contact: [sinet.helpdesk@bt.com](mailto:sinet.helpdesk@bt.com)

## 6. References

|     |               |  |      |                  |
|-----|---------------|--|------|------------------|
| [1] | G.707         | Network node interface for the Synchronous Digital Hierarchy (SDH)                               | 1996 | ITU-T            |
| [2] | G.957         | Optical interfaces for equipment's and systems relating to the synchronous digital hierarchy     | 1995 | ITU-T            |
| [3] | ETS 300 147   | Transmission and Multiplexing (TM); Synchronous Digital Hierarchy (SDH); Multiplexing Structure. | 1997 | ETSI             |
| [4] | BS EN 60825-1 | Safety of Laser Products Part 1 Equipment classification   | 1994 | British Standard |
| [5] | BS EN 60825-2 | Safety of Laser Products Part 2 Safety of Optical fibre communications systems                   | 1995 | British Standard |
| [6] | BS EN 186110  | Sectional Specification. Connector sets for optical fibre and cables Type FC                     | 1994 | British Standard |

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

## 7. Abbreviations

|       |   |
|-------|---|
| CCITT | Now known as ITU-T  |
| ETS   | European Telecommunication Standard   |
| ETSI  | European Telecommunications Standards Institute                               |
| ITU-T | International Telecommunication Union For Telecommunications (formerly CCITT) |
| NTE   | Network Terminating Equipment   |
| MSP   | Multiplex Section Protection  |
| SDH   | Synchronous Digital Hierarchy   |
| SIN   | Suppliers' Information Note   |
| TE    | Terminal Equipment  |
| UNI   | User Network Interface  |
| VC    | Virtual Container   |

## 8. History

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|-----------|----------------|--|
| Issue 1   | Nov 1999       | First Issue  |
| Issue 2.0 | March 2001     | Addition of MegaStream 2.4Gbit/s service options   |
| Issue 2.1 | June 2002      | Removal of MegaStream 2.4Gbit/s service options  |
| Issue 2.2 | June 2003      | Approval Requirements statement removed, information available via SINet Useful Contacts page.   |
| Issue 2.3 | March 2009     | Noted that MegaStream 622 is withdrawn for new sale. Updated contact information. Minor editorial amendments.  |
| Issue 2.4 | September 2014 | Change SINet site references from <a href="http://www.sinet.bt.com">http://www.sinet.bt.com</a> to <a href="http://www.btplc.com/sinet/">http://www.btplc.com/sinet/</a> |

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