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Suppliers' Information Note

For The BT Network

BT Broadlook Service Description

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1. Introduction

This Suppliers Information Note (SIN) describes the BT BroadLook service and provides technical information for terminal equipment manufacturers, suppliers and developers.

2. Service outline

The BT BroadLook service provides the transparent transport of Serial Digital Component Video (SDCV) at 270 Mbit/s and conforms to ITU-R Recommendations BT 601 ^[1] and 656 ^[2]. It may also contain AES digital audio signals conforming to SMPTE 272M ^[3] embedded in the SDCV as detailed in section 4 below.

Studio equipment based on the component ITU-R BT 601 signal standard offers an increase in quality compared with analogue composite PAL systems. The BT BroadLook, 270 Mbit/s service therefore provides an increase in quality over the analogue composite PAL service. BT BroadLook allows the transfer between broadcasters, production companies, advertising agencies, facility houses and financial institutions of video material in the digital studio format, preserving the quality.

3. Service availability

The service provides a unidirectional digital 625 line 50 fields per second (or 525 line 60 fields) vision circuit operating at 270 Mbit/s between the customer's premises and a digital switch at BT Tower London, circuits are limited to nominally 30 km from that point.

4. Technical specification

4.1 Interface presentation

The following interfaces are provided by the Network Terminating Equipment (NTE):

Interfaces at the NTE	Electrical presentation	Physical presentation
Video	625/50 or 525/60 SDCV to ITU-R BT 601 ^[1] and 656 ^[2] at 270 Mbit/s	Customer connection - 75 ohm BNC Test access - 75 ohm Musa U link (industry standard coaxial connector)
Audio	As for video above AES Digital audio embedded in the SDCV as SMPTE 272M ^[3]	Same connector as video above

Table 1

All circuits are presented at the NTE utilising a patch panel. This provides customer cable connections at the rear and removable U links at the front providing test access as described in Table 1.

4.2 Network Terminating Equipment (NTE) Power Requirements

The NTE is mains powered and requires a customer supplied a.c. mains power source close to the installation.

5. References

[1]	ITU-R BT 601; Studio encoding parameters of digital television for standard 4:3 and wide-screen 16:9 aspect ratios.
[2]	ITU-R BT656; Interfaces for digital component video signals in 525-line and 625-line television systems operating at the 4:2:2 level of Recommendation ITU-R BT.601 (Part A).
[3]	SMPTE 272M (1994); Formatting AES/EBU audio and auxiliary data into digital video ancillary data space.

For further information or copies of referenced sources, please see document sources at: <http://www.sinet.bt.com/usenum.htm#docsources>

6. Further information

For further information please go to: <http://www.broadcast.bt.com/contact-us.html> .

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7. Glossary

625/50	625 lines 50 fields per second video - the European standard
525/60	525 lines 60 fields per second video - the American standard
AES	Audio Engineering Society
CCIR	International Consultative Committee for Radio. Now known as ITU-R
EBU	European Broadcasting Union
ITU-R	International Telecommunications Union - Radio standardisation section (formerly CCIR)
Musa	Industry standard broadcast coaxial connector
NTE	Network Terminating Equipment
PAL	Phase Alternate Line
SDCV	Serial Digital Component Video
SIN	Suppliers' Information Note
SMPTE	Society of Motion Picture and Television Engineers

8. History

Issue 1.0	March 2002	First Issued.
Issue 1.1	October 2003	ITU-R references updated. Section 6 'Further Information' details updated. Approval Requirements statement removed, information available via SINet Useful Contacts page.
Issue 1.2	9 May 2008	Inserted new references for further information

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