

**ANALOGUE TRANSMISSION SPECIFICATIONS**  
**FOR THE TELSTRA MULTIMEDIA ACCESS AGREEMENT**

**Version 1.1 - Dated 14 November 2002**

**Customer:**

**1. General**

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- 1.1 These Specifications are the Analogue Transmission Specifications to the *Telstra Multimedia Access Agreement - Analogue Services (with transition to Digital Services)* between Telstra Multimedia Pty Limited ("**Telstra**") and the Customer ("**Agreement**"), as referenced by the Analogue Services Module to the Agreement.
- 1.2 Capitalised terms used in these Specifications have the same meaning as defined terms in the Dictionary and Analogue Services Module to the Agreement.
- 1.3 These Specifications may be varied from time to time in accordance with the Agreement. A later Version of these Specifications replaces every earlier Version.

**2. Interconnection Point**

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- 2.1 Each Interconnection Point is located at the G.703 rack nominated by Telstra at each Headend.
- 2.2 Customer Equipment that is connected to an Interconnection Point must comprise, at Telstra's option, either:
  - (a) an ITU-T specification G703 44.736Mbit/s E3 compliant interface; or
  - (b) an ASI interface compliant with EN 50083-9.
- 2.3 Telstra may disconnect the Customer if Analogue Compliance Testing does not clearly demonstrate that the Customer's interconnection complies with all relevant provisions of the Analogue Services Module, these Specifications and any other relevant compliance standards (as determined under paragraph 3.14 of Part 3 of the Analogue Service Module).

**3. Customer Input Signal**

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- 3.1 An identical Customer Input Signal must be delivered by the Customer simultaneously to each Interconnection Point via one of the following mechanisms which embed MPEG encoded data in the Customer Input Signal:
  - (a) MPEG encoded data carried in a 45 Mbit G.703 stream compliant to ITU G.703 44.736 Mbit/sec; or
  - (b) MPEG encoded data carried in an ASI 270 Mbit stream.
- 3.2 The Customer must agree with Telstra in writing in advance which of these two mechanisms it will use to deliver the Customer Input Signal to each Interconnection

Point and must seek Telstra's agreement to change between these delivery mechanisms.

- 3.3 The Customer Input Signal must be supplied without conditional access.
- 3.4 The Customer Input Signal must not be delivered to any point of interconnection between Customer Equipment and the Telstra HFC Network other than an Interconnection Point.
- 3.5 The Customer Input Signal can be at G.703 Bearer Rates or at the Digital Video rate of 270Mbit/s. In both cases the payload is what is important not the transport rate.
- 3.6 The Customer Input Signal must comprise an MPEG Main Profile @ Main Level program compliant to the implementation guidelines referenced in ETSI Technical Report ETR 154 as well as the MPEG 2 Standards defined in ISO/IEC 13818 parts 1, 2 and 3.
- 3.7 Telstra may disconnect the Customer Input Signal if Analogue Compliance Testing does not clearly demonstrate that the Customer Input Signal complies with all relevant provisions of the Analogue Services Module, these Specifications and any other relevant compliance standards (as determined under paragraph 3.14 of Part 3 of the Analogue Service Module).

#### **4. Carried Signal**

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- 4.1 Provided the Customer Input Signal complies with the Agreement and these Specifications, and all other requirements of the Agreement are satisfied, the Customer Input Signal will be carried by Telstra to the Conditional Access Equipment located at the Headends for the purposes of creating the Carried Signal.
- 4.2 In order to create the Carried Signal. the Customer Input Signal will be modulated and up converted by Telstra to the relevant Analogue Channel frequency allocated to the Customer.
- 4.3 The Carried Signal will also be created by the amalgamation and encryption of the Customer Input Signal by the Conditional Access Equipment in accordance with Part 2 of the Analogue Service Module and the Conditional Access Specifications.
- 4.4 The Carried Signal will then be transmitted over the Telstra HFC network in the form of a PAL B VSB signal compliant to "*Transmission Standards for the Australian Analog Terrestrial Television Service*", which can be sourced from the Australian Broadcasting Authority.
- 4.5 Telstra will configure all Analogue Channels for the carriage of a Carried Signal in the form of video and stereo audio with the audio pilot tones set to stereo.

#### **5. Analogue Transmission Service – End Of Line Performance**

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- 5.1 Subject to the Agreement and these Specifications, the characteristics of the Carried Signal at each Network Termination Point should be as follows:
  - (a) between 0 dBmV and +15 dBmV depending on the customer premises configuration;
  - (b) Signal to Noise Ratio (SNR) not less than 46.7 dB;
  - (c) Composite Third Order Distortion (CTB) not worse than 55.9 dB; and
  - (d) Composite Second Order Distortion (CSO) not worse than 54.5 dB.

## 6. Outage Period

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- 6.1 The period of time in excess of the Outage Period for the purposes of clause 10.7 of the General Terms and Conditions is the period of time during each calendar month during which the actual availability of the Analogue Transmission Service does not achieve the target availability.
- 6.2 The Outage Period is the period of time during which there was an Actual Outage but the actual availability of the Analogue Transmission Service still achieved the target availability.
- 6.3 The target availability in each calendar month for the Analogue Transmission Service is 99.8%.
- 6.4 The actual availability will be calculated in accordance with the following availability formula:

$$\text{Actual availability} = 100 \times (1 - Z)$$

Where:

- Z** is  $(A/B \times C/D)$ , subject to paragraph 6.4.
- A** is the number of minutes during which there was a failure to deliver the Carried Signal to an End User Premises in accordance with the Agreement due to a default by Telstra under the Agreement during the relevant calendar month (“**interruption**”), measured (“**Actual Outage**”):
- (a) from the time at which the Customer gave notice of such interruption to Telstra in accordance with the Fault reporting procedures in Annex Three of this Agreement; and
  - (b) the time at which Telstra resumed delivery of the Carried Signal to the End User Premises .
- B** is the total number of minutes in the relevant calendar month.
- C** is the number of End User Premises to which the Carried Signal was not delivered during the Actual Outage due to a default by Telstra under the Agreement.
- D** is the total number of homes passed by the Telstra HFC network at the end of the relevant calendar month.

- 6.5 Where, in a calendar month:
- (a) there is more than 1 failure to deliver the Carried Signal to End User Premises in accordance with the Agreement due to a default by Telstra under the Agreement; or
  - (b) a single failure to deliver the Carried Signal to End User Premises in accordance with the Agreement due to a default by Telstra under the Agreement results in different numbers of End Users being affected for different periods; or
  - (c) a combination of paragraphs 6.5(a) and (b) applies,
- the variable Z in the availability formula in paragraph 6.4 will be the aggregate of each Z value calculated in respect of each such failure and/or each such period.

