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*Belgacom / BELCOMLAB
Rue Carlistraat 2
B-1140 Evere
Belgium*

tel: +32 2 244.58.88

fax: +32 2 244.59.99

E-mail: belcomlab@belgacom.be

**Transmission and interface characteristics
of television leased lines service**

Table of Contents

- 1. INTRODUCTION1**
- 2. NETWORK INTERFACE CHARACTERISTICS.....2**
 - 2.1. Analog television leased lines2
 - 2.2. Digital television leased lines2
- 3. TRANSMISSION CHARACTERISTICS OF TELEVISION LEASED LINES3**
 - 3.1. Analog television leased lines3
 - 3.2. Digital television leased lines3
- 4. REFERENCES4**

1. Introduction

Belgacom also provides TV leased lines, offering the customer the choice between a permanent or temporary connection; temporary leased lines may be installed for news reporting and gathering, covering a soccer match, special events, etc. As far as technical characteristics are concerned, there is no difference between temporary and permanent leased lines. For this reason, the present document will make no further distinction between the two.

Depending on the nature of the television signal to be transmitted (analog or digital), a distinction is made between two leased line types:

- analog TV leased lines;
- digital TV leased lines.

The purpose of this document is to describe transmission and interface characteristics of digital and analog TV leased lines.

2. Network interface characteristics

Below you will find a description of the mechanical and electrical characteristics of the network interface Belgacom is offering its customers for each type of TV leased line.

2.1. Analog TV leased lines

- *electrical characteristics*
 - ◇ the video signal level is $1V \pm 2\%$ with a bandwidth of 6 MHz;
 - ◇ the level of one audio signal is $+6dBm \pm 0.1dB$ (600 Ohm, symmetrical) for a bandwidth of 15 kHz.
- *mechanical characteristics*
 - ◇ The video signal is supplied by means of a BNC connector.
 - ◇ The audio signal is supplied by an XLR connector (3 pins).

2.2. Digital TV leased lines

- *electrical characteristics*
 - ◇ The electrical characteristics of the outgoing video signal are compliant with ITU-R recommendation 601 (type 4:2:2, serial) and 656.
- *mechanical characteristics*
 - ◇ The digital video signal is supplied by means of a BNC connector (75 Ohm, asymmetrical).

3. Transmission characteristics of TV leased lines

As stated in the introduction, the customer can choose between analog and digital TV leased lines.

3.1. Analog TV leased lines

The video signal supplied to the customer has a video signal-to-noise ratio of at least 55 dB, in compliance with ITU-R recommendation 568. The transmission characteristics of audio signals are also compliant with ITU-R recommendation 468.

3.2. Digital TV leased lines

The transmission quality of the digital TV leased lines is at least compliant with ITU-T recommendation G.826.

4. References

- ITU-R 468:* Transmission characteristics for analog audio signal.
- ITU-R 568:* Single value of the signal-to-noise ratio for all television systems.
- ITU-R 601:* Paramètres de codage de télévision numérique pour studios.
- ITU-R 656:* Interfaces pour les signaux vidéo numériques en composantes dans les systèmes de télévision à 525 lignes et à 625 lignes.
- ITU-T G.826:* Error performance parameters and objectives for international, constant bit rate digital paths at or above the primary rate.