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*European Standard (Telecommunications series)*

# Television systems; 625-line television Wide Screen Signalling (WSS)


Reference
REN/JTC-WSS-3

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# Foreword

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# Introduction

For a smooth introduction of new television services with a 16:9 display aspect ratio in PAL and SECAM standards, it is necessary to signal the aspect ratio used together with some switching information to the television receiver. The receiver should be capable of reacting automatically to this information by displaying the video information in a specified aspect ratio. This signalling is to be considered separately from the type of system used, but it should allow transmission of system related switching information as well.

The present document permits the later allocation of additional switching information, related to the introduction of enhanced television services.

The present document is applicable for 625-line PAL and SECAM television systems, but there is potential to adopt it to other standards as well.

# 1 Scope

The present document is applicable to 625-line PAL and SECAM systems in use, in case, where wide screen signalling is required by the broadcasters.

It specifies the wide screen signalling information, the coding and the way of incorporating the coded information into a 625-line system.

The wide screen signalling information contains information on the aspect ratio range of the transmitted signal and its position, on the position of the subtitles and on the camera/film mode. Furthermore signalling for EDTV and for surround sound is included. Some bits are reserved for future use.

The present document specifies the transmitted signal. Annex A gives the rules of operation for the minimum requirements for receiver display formats as well as for subtitling. Annex B gives recommendations. Annex C gives a guideline for copyright information. Annex D describes how the one remaining unused bit can be used to convey multi-bit information.

# 2 References

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

- References are either specific (identified by date of publication and/or edition number or version number) or non-specific.
- For a specific reference, subsequent revisions do not apply.
- For a non-specific reference, the latest version applies.

Referenced documents which are not found to be publicly available in the expected location might be found at http://docbox.etsi.org/Reference.

[1] EBU Recommendation R62 (1998): "Recommended dominant field for 625-line 50-Hz video processing".

# 3 Definition, symbols and abbreviations

## 3.1 Definition

For the purposes of the present document, the following definition applies:

**letterbox operation:** use of a picture format with an aspect ratio greater than 1,33, in such a way that empty (black) lines are added to conform to a 4:3 transmission format

## 3.2 Symbols

For the purposes of the present document, the following symbols apply:

| | |
|---|---|
| a | aspect ratio |
| $F_s$ | clock frequency |
| $0_h$ | falling sync edge |
| $T_d$ | data bit period |
| $T_s$ | sampling period |