



# SLOVENSKI STANDARD SIST EN IEC 62731:2018

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## Pretvorba besedila v govor (govorna sinteza) za televizijo - Splošne zahteve

Text to speech for television - General requirements

Text-zu-Sprache für Fernsehen - Allgemeine Anforderungen

Synthèse vocale pour télévision - Exigences générales

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### **ICS:**

33.160.25      Televizijski sprejemniki      Television receivers

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EUROPEAN STANDARD

EN IEC 62731

NORME EUROPÉENNE

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March 2018

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English Version

## Text-to-speech for television - General requirements (IEC 62731:2018)

Synthèse vocale pour télévision - Exigences générales  
(IEC 62731:2018)

Text-zu-Sprache für Fernsehen - Allgemeine  
Anforderungen  
(IEC 62731:2018)

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European Committee for Electrotechnical Standardization  
Comité Européen de Normalisation Electrotechnique  
Europäisches Komitee für Elektrotechnische Normung

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

**EN IEC 62731:2018 (E)****European foreword**

The text of document 100/2989/FDIS, future edition 2 of IEC 62731, prepared by IEC/TC 100 "Audio, video and multimedia systems and equipment" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 62731:2018.

The following dates are fixed:

- latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2018-11-14
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2021-02-14

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In the official version, for Bibliography, the following note has to be added for the standard indicated:

ISO/IEC 13818-1 NOTE Harmonized as EN ISO/IEC 13818-1.

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IEC 62731

Edition 2.0 2018-01

# INTERNATIONAL STANDARD

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Text-to-speech for television – General requirements

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INTERNATIONAL  
ELECTROTECHNICAL  
COMMISSION

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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

**TEXT-TO-SPEECH FOR TELEVISION –  
GENERAL REQUIREMENTS**

## FOREWORD

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International Standard IEC 62731 has been prepared by IEC technical committee 100: Audio, video and multimedia systems and equipment.

This second edition cancels and replaces the first edition published in 2013. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

- a) in 6.2, the levels of announcement quality were revised as well as considerations for ways in which device users can provide service providers with feedback on incorrectly announced terms.
- b) in 6.3, the following TV functionality was added: the TV can receive updated words, associated conversions and updated conversion rules for the TTS engine via a network connection.

The text of this standard is based on the following documents:

FDIS	Report on voting
100/2989/FDIS	100/3013/RVD

Full information on the voting for the approval of this International Standard can be found in the report on voting indicated in the above table.

This document has been drafted in accordance with the ISO/IEC Directives, Part 2.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under "<http://webstore.iec.ch>" in the data related to the specific document. At this date, the document will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

A bilingual version of this publication may be issued at a later date.

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## TEXT-TO-SPEECH FOR TELEVISION – GENERAL REQUIREMENTS

### 1 Scope

This International Standard specifies the text-to-speech functionality for a (broadcast) receiver with a text-to-speech system. Such a system may be one device, i.e. a receiver with an integrated text-to-speech generator, or may be two devices, i.e. a receiver interfacing with an external text-to-speech device. This document applies only to completely functional stationary (or semi-stationary) digital TV receivers such as set top boxes, integrated digital TVs, recorders and other products whose primary function is to receive TV content. Where this document refers to TV, this will be shorthand for all such receivers.

This document does not apply to products that are capable of receiving TV as a secondary function (e.g. PCs or game consoles with digital television receivers). It also does not apply to sub-assemblies (e.g. PC tuner cards).

### 2 Normative references

There are no normative references in this document.

### 3 Terms, definitions and abbreviated terms

#### 3.1 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at <http://www.electropedia.org/>
- ISO Online browsing platform: available at <http://www.iso.org/obp>

#### 3.1.1 context

one specific function of a TV

EXAMPLE: Watching TV, EPG.

#### 3.1.2 DTV broadcast event classification

general category of programme/event content, or its classification

EXAMPLES: Movie (drama), news/current affairs, talk show, sports (football).

#### 3.1.3 EPG filter

filter that organises or reduces the list of displayed EPG items according to certain criteria

EXAMPLES Of criteria are to show only:

- programmes with a certain content type;
- favourites;
- programmes that are audio described;
- programmes for a given time period (for instance "today", "tomorrow", "next 7 days").

**3.1.4****event**

trigger to start an action

**3.1.5****list**

collection of items

**3.1.6****menu**

subsequent order of items

**3.1.7****receiver**

device capable of receiving or handling digital television signals

**3.1.8****service**

sequence of programmes under the control of a broadcaster which can be broadcast as part of a schedule

**3.1.9****subtitle**

textual representation of the dialogue (and frequently additional auditory information), typically shown at the bottom of the screen

Note 1 to entry: Subtitles can be a textual rendering in the same language as the spoken dialogue, or can provide a written translation in a different language.

Note 2 to entry: In some parts of the world, subtitles are called "(closed) captions", and subtitling is referred to as "(closed) captioning".

Note 3 to entry: This document uses the term subtitles throughout.

**3.1.10****TTS audio**

audio generated by the TTS engine based on the TTS data

Note 1 to entry: If the TV uses an external TTS converter, TTS audio is interpreted as TTS data.

**3.1.11****priority audio information**

audio information for immediate output typically related to emergency information

**3.1.12****TTS data**

(text) data converted into TTS audio information by the text-to-speech engine

**3.2 Abbreviated terms**

DTV	digital television
EPG	electronic programme guide
STB	set top box
TTS	text-to-speech
TV	television
UI	user interface

## 4 Guiding principles and conventions

This document describes the required basic behaviour for a TV text-to-speech combination in a basic profile, but also provides for enhanced profiles. It also gives a short introduction into the basic problems of visually impaired people: i.e. what are the problems visually impaired people experience when using and watching TV?

Providing text-to-speech functionality for a broadcast receiver, for example a TV or an STB, can be of great help to (visually) disabled people. Such speech functionality may be integrated in the receiver or may be external to the receiver in a separate device.

In general as the guiding principle, when building a TTS interface in the context of this document, implementers should aspire to achieve functional equivalence of the user experience. This means that a person operating the device using the speech interface should have access to similar information and be able to accomplish tasks similar to those they would with a graphical UI.

The main features of this document are:

- basic functional description for a TV-TTS device combination or TV with integrated TTS;
- profiles for different levels of TV-TTS functionality;
- targeted towards the digital TV application.

In this document, mandatory requirements are specified; optional and informative features are also included.

A claim of conformity with this document requires conformity with all mandatory requirements. A TV-TTS device combination or a TV with a TTS that is integrated may provide options for a user to enable or disable each feature of a product. While options for user configurations may be provided, the product shall meet the mandatory requirements.

## 5 User requirements of visually impaired people

### 5.1 Users' needs

This subclause explains the needs of visually impaired people as the primary target users for a TV with TTS. Unless these needs are met, the system is not accessible to this user group. Visually impaired people experience access barriers in the course of the following activities when watching TV:

- a) following TV programming, e.g. the TV series;
- b) using a remote control;
- c) not being able to see subtitles;
- d) navigating channels;
- e) navigating TV inputs;
- f) using additional data (text) services provided by the broadcaster, e.g. an EPG;
- g) daily operation of the TV and initial setup of the TV for use.

Items a), b) and c) are outside the scope of this document. Item c) further relates to the fact that, in some countries, foreign language programmes are translated via subtitles. For users who cannot see the subtitles, supplementary audio services are sometimes used to deliver an audio version of the subtitles. This document elaborates on the remaining four items, i.e. d), e), f) and g), in 5.2 to 5.6.