

## Teleweb application Part 2: Delivery methods

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 62298-2:2005 sisaldab Euroopa standardi EN 62298-2:2005 ingliskeelset teksti.

Standard on kinnitatud Eesti Standardikeskuse 06.07.2005 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.

Euroopa standardimisorganisatsioonide poolt rahvuslikele liikmetele Euroopa standardi teksti kättesaadavaks tegemise kuupäev on 24.06.2005.

Standard on kättesaadav Eesti standardiorganisatsioonist.

This Estonian standard EVS-EN 62298-2:2005 consists of the English text of the European standard EN 62298-2:2005.

This standard is ratified with the order of Estonian Centre for Standardisation dated 06.07.2005 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.

Date of Availability of the European standard text 24.06.2005.

The standard is available from Estonian standardisation organisation.

ICS 33.170, 35.240.99

Võtmesõnad:

### Standardite reprodutseerimis- ja levitamiseõigus kuulub Eesti Standardikeskusele

Andmete paljundamine, taastekitamine, kopeerimine, salvestamine elektroonilisse süsteemi või edastamine ükskõik millises vormis või millisel teel on keelatud ilma Eesti Standardikeskuse poolt antud kirjaliku loata.

Kui Teil on küsimusi standardite autorikaitse kohta, palun võtke ühendust Eesti Standardikeskusega:  
Aru 10 Tallinn 10317 Eesti; [www.evs.ee](http://www.evs.ee); Telefon: 605 5050; E-post: [info@evs.ee](mailto:info@evs.ee)

**Teleweb application**  
**Part 2: Delivery methods**  
(IEC 62298-2:2005)

Application Teleweb  
Partie 2: Méthodes de distribution  
(CEI 62298-2:2005)

TeleWeb-Anwendung  
Teil 2: Übertragungsverfahren  
(IEC 62298-2:2005)

This European Standard was approved by CENELEC on 2005-06-01. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CENELEC member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CENELEC member into its own language and notified to the Central Secretariat has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

**CENELEC**

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

**Central Secretariat: rue de Stassart 35, B - 1050 Brussels**

## Foreword

The text of document 100/923/FDIS, future edition 1 of IEC 62298-2, prepared by IEC TC 100, Audio, video and multimedia systems and equipment, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 62298-2 on 2005-06-01.

The following dates were fixed:

- |  |       |            |
|--|-------|------------|
| – latest date by which the EN has to be implemented at national level by publication of an identical national standard or by endorsement | (dop) | 2006-03-01 |
| – latest date by which the national standards conflicting with the EN have to be withdrawn   | (dow) | 2008-06-01 |

Annex ZA has been added by CENELEC.

---

## Endorsement notice

The text of the International Standard IEC 62298-2:2005 was approved by CENELEC as a European Standard without any modification.

---

This document is a preview generated by EVS

## Annex ZA (normative)

### Normative references to international publications with their corresponding European publications

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

NOTE Where an international publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 62298-1	- <sup>1)</sup>	Teleweb application Part 1: General description	EN 62298-1	2005 <sup>2)</sup>
IEC 62298-3	- <sup>1)</sup>	Part 3: Superteletext profile	EN 62298-3	2005 <sup>2)</sup>
IEC 62298-4	- <sup>3)</sup>	Part 4: Hyperteletext profile	-	-
ISO/IEC 13818-1	- <sup>1)</sup>	Information technology - Generic coding of moving pictures and associated audio information Part 1: Systems	-	-
ISO/IEC 13818-6	- <sup>1)</sup>	Part 6: Extensions for DSM-CC	-	-
ISO 639-2	- <sup>1)</sup>	Codes for the representation of names of languages Part 2: Alpha-3 code	-	-
ISO/IEC 8859-1	- <sup>1)</sup>	Information technology - 8-bit single-byte coded graphic character sets Part 1: Latin alphabet No.1	-	-
ETSI TR 101 154	- <sup>1)</sup>	Digital Video Broadcasting (DVB); Implementation guidelines for the use of MPEG-2 Systems, Video and Audio in satellite, cable and terrestrial broadcasting applications	-	-
ETSI TR 101 202	- <sup>1)</sup>	Digital Video Broadcasting (DVB); Implementation guidelines for Data Broadcasting	-	-
ETSI EN 300 421	- <sup>1)</sup>	Digital Video Broadcasting (DVB); Framing structure, channel coding and modulation for 11/12 GHz satellite services	-	-

<sup>1)</sup> Undated reference.

<sup>2)</sup> Valid edition at date of issue.

<sup>3)</sup> To be published.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
ETSI EN 300 429	- <sup>1)</sup>	Digital Video Broadcasting (DVB); Framing structure, channel coding and modulation for cable systems	-	-
ETSI EN 300 706	- <sup>1)</sup>	Enhanced teletext specification	-	-
ETSI EN 300 708	- <sup>1)</sup>	Data transmission within Teletext	-	-
ETSI EN 300 744	- <sup>1)</sup>	Digital Video Broadcasting (DVB) - Framing structure, channel coding and modulation for digital terrestrial television (DVB-T)	-	-
ETSI EN 301 192	- <sup>1)</sup>	Digital Video Broadcasting (DVB) - DVB specification for data broadcasting, v1.2.1	-	-
ETSI EN 300 472	- <sup>1)</sup>	Digital Video Broadcasting (DVB) - Specification for conveying ITU-R system B teletext in DVB bitstreams	-	-

This document is a preview generated by EVS

# INTERNATIONAL STANDARD

**IEC**  
**62298-2**

First edition  
2005-05

---

---

**TeleWeb application –**

**Part 2:  
Delivery methods**

This document is a preview generated by EVS



Reference number  
IEC 62298-2:2005(E)

## Publication numbering

As from 1 January 1997 all IEC publications are issued with a designation in the 60000 series. For example, IEC 34-1 is now referred to as IEC 60034-1.

## Consolidated editions

The IEC is now publishing consolidated versions of its publications. For example, edition numbers 1.0, 1.1 and 1.2 refer, respectively, to the base publication, the base publication incorporating amendment 1 and the base publication incorporating amendments 1 and 2.

## Further information on IEC publications

The technical content of IEC publications is kept under constant review by the IEC, thus ensuring that the content reflects current technology. Information relating to this publication, including its validity, is available in the IEC Catalogue of publications (see below) in addition to new editions, amendments and corrigenda. Information on the subjects under consideration and work in progress undertaken by the technical committee which has prepared this publication, as well as the list of publications issued, is also available from the following:

- **IEC Web Site** ([www.iec.ch](http://www.iec.ch))

- **Catalogue of IEC publications**

The on-line catalogue on the IEC web site ([www.iec.ch/searchpub](http://www.iec.ch/searchpub)) enables you to search by a variety of criteria including text searches, technical committees and date of publication. On-line information is also available on recently issued publications, withdrawn and replaced publications, as well as corrigenda.

- **IEC Just Published**

This summary of recently issued publications ([www.iec.ch/online\\_news/justpub](http://www.iec.ch/online_news/justpub)) is also available by email. Please contact the Customer Service Centre (see below) for further information.

- **Customer Service Centre**

If you have any questions regarding this publication or need further assistance, please contact the Customer Service Centre:

Email: [custserv@iec.ch](mailto:custserv@iec.ch)  
Tel: +41 22 919 02 11  
Fax: +41 22 919 03 00

# INTERNATIONAL STANDARD

**IEC**  
**62298-2**

First edition  
2005-05

**TeleWeb application –**

**Part 2:  
Delivery methods**

© IEC 2005 — Copyright - all rights reserved

No part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from the publisher.

International Electrotechnical Commission, 3, rue de Varembé, PO Box 131, CH-1211 Geneva 20, Switzerland  
Telephone: +41 22 919 02 11 Telefax: +41 22 919 03 00 E-mail: [inmail@iec.ch](mailto:inmail@iec.ch) Web: [www.iec.ch](http://www.iec.ch)



Commission Electrotechnique Internationale  
International Electrotechnical Commission  
Международная Электротехническая Комиссия

PRICE CODE

**W**

*For price, see current catalogue*

## CONTENTS

FOREWORD.....	3
INTRODUCTION.....	5
1 Scope.....	6
2 Normative references .....	6
3 Terms, definitions and abbreviations .....	7
3.1 Terms and definitions .....	7
3.2 Abbreviations .....	8
4 Delivery profiles .....	8
4.1 TeleWeb delivered via Teletext packets in VBI lines .....	8
4.2 TeleWeb delivered via PES packets in an MPEG-2 TS .....	9
4.3 TeleWeb delivered via DSM-CC sections in an MPEG-2 TS .....	10
4.4 TeleWeb delivered via other methods .....	10
5 Transport layer protocols.....	10
5.1 DSM-CC data carousel .....	10
5.2 Interaction channel.....	25
6 TeleWeb DSM-CC transmission via Teletext.....	29
6.1 Transmission of data carousels .....	29
6.2 Transmission protocol .....	29
6.3 Teletext packet format.....	30
7 Signalling TeleWeb in DVB.....	31
7.1 Signalling in the program map table (PMT).....	31
7.2 Signalling in the service description table (SDT).....	33
7.3 Service detection time .....	35
7.4 Multiple TeleWeb services.....	35
8 Transport in DVB.....	35
8.1 Transport in PES packets .....	35
8.2 Transport in DSM-CC sections .....	35
Annex A (informative) CCITT CRC-16.....	36
Bibliography.....	37
Figure 1 – Delivery method for TeleWeb using Teletext packets in VBI lines.....	9
Figure 2 – Delivery method for TeleWeb using PES packets in an MPEG-2 TS.....	9
Figure 3 – Delivery method for TeleWeb using DSM-CC sections in an MPEG-2 TS .....	10
Figure 4 – Structure of one-layer and two-layer data carousels .....	11
Figure 5 – Format of transactionId field.....	13
Figure 6 – Format of the profile_flags byte.....	24
Figure 7 – Message transmission sequence.....	29

## INTERNATIONAL ELECTROTECHNICAL COMMISSION

## TELEWEB APPLICATION –

## Part 2: Delivery methods

## FOREWORD

- 1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as "IEC Publication(s)"). Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
- 2) The formal decisions or agreements of IEC on technical matters express, as nearly as possible, an international consensus of opinion on the relevant subjects since each technical committee has representation from all interested IEC National Committees.
- 3) IEC Publications have the form of recommendations for international use and are accepted by IEC National Committees in that sense. While all reasonable efforts are made to ensure that the technical content of IEC Publications is accurate, IEC cannot be held responsible for the way in which they are used or for any misinterpretation by any end user.
- 4) In order to promote international uniformity, IEC National Committees undertake to apply IEC Publications transparently to the maximum extent possible in their national and regional publications. Any divergence between any IEC Publication and the corresponding national or regional publication shall be clearly indicated in the latter.
- 5) IEC provides no marking procedure to indicate its approval and cannot be rendered responsible for any equipment declared to be in conformity with an IEC Publication.
- 6) All users should ensure that they have the latest edition of this publication.
- 7) No liability shall attach to IEC or its directors, employees, servants or agents including individual experts and members of its technical committees and IEC National Committees for any personal injury, property damage or other damage of any nature whatsoever, whether direct or indirect, or for costs (including legal fees) and expenses arising out of the publication, use of, or reliance upon, this IEC Publication or any other IEC Publications.
- 8) Attention is drawn to the Normative references cited in this publication. Use of the referenced publications is indispensable for the correct application of this publication.
- 9) Attention is drawn to the possibility that some of the elements of this IEC Publication may be the subject of patent rights. IEC shall not be held responsible for identifying any or all such patent rights.

International Standard IEC 62298-2 has been prepared by IEC technical committee 100: Audio, video and multimedia systems and equipment.

This standard cancels and replaces IEC/PAS 62298 published in 2002.

This first edition constitutes a technical revision.

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

FDIS	Report on voting
100/923/FDIS	100/961/RVD

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

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

IEC 62298 consists of the following parts, under the general title *TeleWeb application*:

- Part 1: General description
- Part 2: Delivery methods
- Part 3: Superteletext profile
- Part 4: Hyperteletext profile

The committee has decided that the contents of this publication will remain unchanged until the maintenance result date indicated on the IEC web site under <http://webstore.iec.ch> in the data related to the specific publication. At this date, the publication will be

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

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

This document is a preview generated by EVS

## INTRODUCTION

The aim of TeleWeb is to deliver World Wide Web-style content to the living-room TV to give the viewer an enhanced television experience. A TeleWeb service broadcasts data files containing text and high-definition graphics to suitable decoders. The data transmitted can be closely linked to events within the accompanying TV programmes or can be more general in nature to emulate a traditional, but higher definition, supertext service. Different profiles are defined.

It is intended that TV-based decoders be implemented in a cost-effective manner without recourse to the technology normally associated with personal computers. In part, this is achieved by limiting the number of different types of multimedia data that can be used within a service. By careful design of the user interface, decoder manufacturers will be able to offer easy-to-use equipment for accessing TeleWeb services without requiring the consumer to be computer-literate. In addition, they will be able to customize their products to differentiate them from those of their competitors.

This standard focuses on the transmission layer.

This document is a preview generated by EVS

## TELEWEB APPLICATION –

### Part 2: Delivery methods

#### 1 Scope

This part of IEC 62298 specifies the transmission layer of TeleWeb.

TeleWeb services can be broadcast in a number of different ways, for example, VBI, DVB, DAB, etc., and to a variety of decoder types, for example, TVs, portable decoders, PCs, etc. This standard specifies the transmission layer for VBI and DVB broadcasts.

#### 2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 62298-1: *TeleWeb application – Part 1: General description*

IEC 62298-3: *TeleWeb application – Part 3: Superteletext profile*

IEC 62298-4: *TeleWeb application – Part 4: Hyperteletext profile<sup>1</sup>*

ISO/IEC 13818-1, *Information technology – Generic coding of moving pictures and associated audio information: Systems*

ISO/IEC 13818-6, *Information technology – Generic coding of moving pictures and associated audio information – Part 6: Extension for DSM-CC*

ISO 639-2, *Codes for the representation of names of languages – Part 2: Alpha-3 code*

ISO 8859-1, *Information technology – 8-bit single-byte coded graphic character sets – Part 1: Latin alphabet No. 1*

ETSI TR 101 154: V1.4.1, *Digital Video Broadcasting (DVB); Implementation guidelines for the use of MPEG-2 Systems, Video and Audio in satellite, cable and terrestrial broadcasting applications*

ETSI TR 101 202, *Implementation guidelines for data broadcasting, V1.1.1*

ETSI EN 300 421, *Digital Video Broadcasting (DVB); Framing structure, channel coding and modulation for 11/12 GHz satellite services*

ETSI EN 300 429, *Digital Video Broadcasting (DVB); Framing structure, channel coding and modulation for cable systems*

---

<sup>1</sup> To be published.

ETSI EN 300 706, *Enhanced Teletext Specification*

ETSI EN 300 708, *Television Systems; Data Transmission within Teletext*

ETSI EN 300 744, *Digital Video Broadcasting (DVB); Framing structure, channel coding and modulation for digital terrestrial television*

ETSI EN 301 192, *Digital Video Broadcasting (DVB); DVB specification for data broadcasting, V1.2.1*

ETSI ETS 300 472, *Digital Video Broadcasting (DVB); Specification for conveying ITU-R System B Teletext in DVB bit streams*

### 3 Terms, definitions and abbreviations

#### 3.1 Terms and definitions

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

##### 3.1.1

##### **bit ordering**

in all schematics, numeric values ordered with the most significant bit at the left-hand side and the least significant bit at the right-hand side

##### 3.1.2

##### **conditional access (CA)**

mechanism by which user access to service components can be restricted

##### 3.1.3

##### **Independent Data Line (IDL)**

stand-alone Teletext packet containing both control and application data. It does not form part of a Teletext page. The packet address is either 30 or 31

##### 3.1.4

##### **module**

when broadcast within a DSM-CC data carousel, the contents of a file and its attributes (for example, file type, creation date, etc.) are transmitted separately. The file itself is carried by a number of DDB messages and its attributes appear as descriptors within its module loop within a DII control message

##### 3.1.5

##### **signed integer**

positive or negative integer value, in decimal notation. The first digit is preceded by a mandatory plus (+) or minus (–) symbol with no white space between the symbol and the first digit

##### 3.1.6

##### **text string**

sequence of displayable Latin-1 characters

##### 3.1.7

##### **unsigned integer**

integer value, in decimal notation, not preceded by a plus (+) or minus (–) symbol