INTERNATIONAL STANDARD

IEC 62297-1

First edition
2005-05

Triggering messages for broadcast applications –

Part 1: Format

iTeh Standards
(https://standards.iteh.ai)
Document Preview

IEC 62297-1:2005
https://standards.iteh.ai/catalog/standards/iec/f775c688-7ee5-4664-8b07-f8b7a10d2ce4/iec-62297-1-2005

Reference number
IEC 62297-1:2005(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)**

- **Catalogue of IEC publications**

  The on-line catalogue on the IEC web site (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 On-line information is also available on recently issued publications, withdrawn and replaced publications, as well as corrigenda.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) 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:

iTeh Standards
(https://standards.iteh.ai)
Document Preview
IEC 62297-1:2005
https://standards.iteh.ai/catalog/standards/iec/f775c688-7ee5-4664-8b07-f8b7a10d2ce4/iec-62297-1-2005

Email: custserv@iec.ch
Tel: +41 22 919 02 11
Fax: +41 22 919 03 00

INTERNATIONAL STANDARD

IEC 62297-1

First edition
2005-05

Triggering messages for broadcast applications –

Part 1: Format

iTeh Standards
(https://standards.iteh.ai)
Document Preview

IEC 62297-1:2005
https://standards.iteh.ai/catalog/standards/iec/f775c688-7ee5-4664-8b07-f8b7a10d2ce4/iec-62297-1-2005

© 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 Web: www.iec.ch

Commission Electrotechnique Internationale
International Electrotechnical Commission
Международная Электротехническая Комиссия

PRICE CODE S

For price, see current catalogue

CONTENTS

FOREWORD 3
INTRODUCTION 5

1 Scope 6
2 Normative references 6
3 Terms, definitions and abbreviations 6
3.1 Definitions 6
3.2 Abbreviations 8
4 Trigger message 9
4.1 General 9
4.1.1 Viewer interaction 9
4.1.2 Priority ratings 9
4.1.3 Character coding 9
4.1.4 Future compatibility 9
4.2 Life cycles 9
4.2.1 Trigger message and event message life cycle 9
4.2.2 Event message preparation life cycle 10
4.2.3 Application life cycle 11
4.3 Syntax of trigger message 13
4.3.1 General 13
4.3.2 Trigger text length 13
4.3.3 Syntax of trigger text 13
4.3.4 Trigger repetition 17

Annex A (informative) Recommendations 18
Annex B (informative) Code of practice 19

Bibliography 22

Figure 1 – Trigger messages and event messages life cycle 10
Figure 2 – TriggerObject life cycle 11
Figure 3 – ApplicationObject life cycle 12
Figure B.1 – Icon bitmap tailored for a display with a resolution of 640 by 480 20

Table 1 – Syntax of trigger_message 13
Table 2 – Syntax of trigger_text 13

iTeh Standards
(https://standards.iteh.ai)
Document Preview
IEC 62297-1:2005

INTERNATIONAL ELECTROTECHNICAL COMMISSION

TRIGGERING MESSAGES FOR BROADCAST APPLICATIONS –

Part 1: Format

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.

iTeh Standards (https://standards.iteh.ai) Document Preview
IEC 62297-1:2005

International Standard IEC 62297-1 has been prepared by IEC technical committee 100: Audio, video and multimedia systems and equipment.

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

FDIS	Report on voting
100/910/FDIS	100/949/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 62297 consists of the following parts, under the general title *Triggering messages for broadcast applications:*

Part 1: Format

Part 2: Transport methods

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.

iTeh Standards
(https://standards.iteh.ai)
Document Preview

IEC 62297-1:2005
https://standards.iteh.ai/catalog/standards/iec/f775c688-7ee5-4664-8b07-f8b7a10d2ce4/iec-62297-1-2005

INTRODUCTION

Emerging data broadcasting specifications allow a service provider to **trigger** an **application** in a TV receiver. This International Standard specifies the format of a triggering message for TV broadcasting as based on the requirements defined in Annex A. Examples of possible use include displaying information to warn for severe weather conditions or to give rating advice for extreme content in TV programmes. In an interactive system, a message or icon might be displayed inviting on-line access to vote, to register an interest in an advertised product, or to browse programme-related content.

This standard describes a trigger mechanism for teletext transmission methods. The trigger mechanism can also be used for services broadcast via MPEG-2 DSM-CC sections. For the purposes of this standard, a **trigger** is defined as information sent from a service provider as part of a data broadcasting transmission and intended to control an **application** in a TV receiver. Additional information can be supplied along with the basic **trigger** to allow filtering or prioritization techniques to be applied at the receiver. The transmission aspects of trigger messages are specified in IEC 62297-2.

This trigger mechanism is very similar to the one defined in IEC/PAS 62292. The difference lies primarily in different state models, semantics and attribute names.

iTeh Standards
(https://standards.iteh.ai)
Document Preview

IEC 62297-1:2005
https://standards.iteh.ai/catalog/standards/iec/f775c688-7ee5-4664-8b07-f8b7a10d2ce4/iec-62297-1-2005

TRIGGERING MESSAGES FOR BROADCAST APPLICATIONS –

Part 1: Format

1 Scope

This part of IEC 62297 specifies an application-triggering scheme for TV broadcasting information sent from a service provider as part of a data broadcasting transmission and intended to control an **application** in a receiver.

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.

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

ETSI TS 101 231, *Television systems; Register of Country and Network Identification (CNI), Video Programming System (VPS) codes and Application codes for Teletext based systems*

ETSI EN 300 706, *Enhanced Teletext Specification*

iTeh Standards
(https://standards.iteh.ai)
Document Preview

3 Terms, definitions and abbreviations

IEC 62297-1:2005
https://standards.iteh.ai/catalog/standards/iec/f775c688-7ee5-4664-8b07-f8b7a10d2ce4/iec-62297-1-2005

3.1 Definitions

For the purposes of this document, the following terms and definitions, in singular or plural form, apply.

3.1.1
ActiveTimeValue
member of the **ApplicationObject**. The value decrements at video frame rate. It is updated on every reception of an **event message**.

3.1.2
Application
software running on a receiver that is addressed by the URL of a **trigger message** and providing the following modes of operation:

a) the display of information, the playback of sound, the download of data;

b) the initiation of any action.

Application examples include the display of a simple text message sent as part of the trigger message, the display of a Teletext, Superteletext (TeleWeb [Tw]) or Internet page, information from an Electronic Programme Guide (EPG), electronic voting, an emergency alert

3.1.3
ApplicationObject
object storing the information about an **application** started or modified by triggers referencing the same URL

3.1.4
Attribute
member of an **ApplicationObject** or **TriggerObject** storing the information transported via an **attribute element**

3.1.5
attribute element
attribute name/value pair

3.1.6
attribute string
any sequence of characters with codes in the range 0×20 to 0×7E inclusive, excluding square brackets (0×5B and 0×5D)

3.1.7
charset
abbreviation for character set

3.1.8
CountdownValue
member of a **TriggerObject**. The value decrements at video frame rate. It is updated on every reception of a **trigger mes**

3.1.9
DateTime
date and time instance of UTC expressed in the form: *yyyymmdd*T*hhmmss*, where *yyyy* represents a year, *mm* represents a month (range 1–12), *dd* represents the day of the month (range 1–31), the capital letter 'T' separates the date component from the time component, *hh* represents an hour (range 0–23), *mm* represents the minutes (range 0–59) and *ss* represents the seconds (range 0–59)

iTeh Standards
(https://standards.iteh.ai)
Document Preview
IEC 62297-1:2005
https://standards.iteh.ai/catalog/standards/iec/f775c688-7ee5-4664-8b07-f8b7a10d2ce4/iec-62297-1-2005

3.1.10
Dummy URL
URL that does not reference any application or data and used in the mandatory URL field of a **trigger message** when the intention is to display only the trigger icon (together with its text) and not to control an application

3.1.11
event message
information extracted from a **trigger message** that is used to create an **ApplicationObject**

3.1.12
event start
event message with its 'script' **attribute element** set to 'start'

3.1.13
event stop
event message with its 'script' **attribute element** set to 'stop'

3.1.14
pending trigger
state where a trigger message has created a **TriggerObject** but the conditions to create an **ApplicationObject** have not yet occurred

3.1.15
priority filtering
rejecting a **trigger message** on account of the value assigned to its 'priority' **attribute element**

3.1.16
RelativeTime
time period measured in seconds and video frames

3.1.17
string
any sequence of characters with codes in the range 0×20 to 0×7E inclusive. Throughout this document **strings** are not case-sensitive unless otherwise indicated

3.1.18
trigger
signal sent from a service provider as part of a data broadcasting transmission with the intention to start or modify an application at a certain time

3.1.19
trigger character
character with a code in the range 0×20 to 0×7E inclusive

3.1.20
trigger del
trigger message with a 'delete' attribute element

3.1.21
trigger event
instant in time when a **trigger** fires and an **event message** is created

iTeh Standards
(https://standards.iteh.ai)
Document Preview

3.1.22
trigger mes
trigger message without a 'delete' attribute element

3.1.23
trigger message
information embedded in a **trigger** and intended to control an **application** in a receiver

IEC 62297-1:2005
https://standards.iteh.ai/catalog/standards/iec/[illegible]/iec-62297-1-2005

3.1.24
TriggerObject
object storing the information from all the triggers referencing the same URL

3.1.25
trigger_text
descriptive part of a **trigger message**.

3.1.26
URL string
any sequence of characters with codes in the range 0×20 to 0×7E inclusive, excluding angular brackets (0×3C and 0×3E)

3.2 Abbreviations

CNI Country and Network Identification

URL Uniform Resource Locator

UTC Coordinated Universal Time

VPS Video Programming System