SLOVENSKI STANDARD
SIST EN 62379-3:2015

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Skupni krmilni vmesnik za digitalne avdio in video izdelke, vključene v omrežje - 3. del: Video (TA 4) (IEC 62379-3:2015)

Common control interface for networked digital audio and video products -- Part 3: Video (TA 4) (IEC 62379-3:2015)

Gemeinsame Steuerschnittstelle für netzwerkbetriebene digitale Audio- und Videogeräte - Teil 3: Video (IEC 62379-3:2015)

Interface de commande commune destiné aux produits audio et vidéo numériques connectés en réseau - Partie 3: Vidéo (IEC 62379-3:2015)

Ta slovenski standard je istoveten z: **EN 62379-3:2015**

ICS:

33.160.40	Video sistemi	Video systems
35.200	Vmesniška in povezovalna oprema	Interface and interconnection equipment

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EUROPEAN STANDARD

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Common control interface for networked digital audio and video products - Part 3: Video (IEC 62379-3:2015)

Interface de commande commune destiné aux produits audio et vidéo numériques connectés en réseau - Partie 3: Vidéo (IEC 62379-3:2015)

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

CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

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European foreword

The text of document 100/2465/FDIS, future edition 1 of IEC 62379-3, prepared by Technical Area 4 "Digital system interfaces and protocols" of IEC/TC 100 "Audio, video and multimedia systems and equipment" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 62379-3:2015.

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)	2016-04-10
• latest date by which the national standards conflicting with the document have to be withdrawn	(dow)	2018-07-10

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In the official version, for Bibliography, the following notes have to be added for the standards indicated:

IEC 62379-2:2008	NOTE	Harmonized as EN 62379-2:2009 (not modified).
IEC 62379-5 Series	NOTE	Harmonized as EN 62379-5 Series.
IEC 62379-7	NOTE	Harmonized as EN 62379-7.

Annex ZA
(normative)

Normative references to international publications with their corresponding European publications

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

NOTE 1 When an International Publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

NOTE 2 Up-to-date information on the latest versions of the European Standards listed in this annex is available here: www.cenelec.eu

Publication	Year	Title	EN/HD	Year
IEC 62379-1	2007	Common control interface for networked digital audio and video products - Part 1: General	EN 62379-1	2007

IEC 62379-3

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INTERNATIONAL STANDARD

Common control interface for networked digital audio and video products – Part 3: Video

INTERNATIONAL ELECTROTECHNICAL COMMISSION

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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COMMON CONTROL INTERFACE FOR NETWORKED DIGITAL AUDIO AND VIDEO PRODUCTS –

Part 3: Video

FOREWORD

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International Standard IEC 62379-3 has been prepared by technical area 4: Digital system interfaces and protocols of 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
100/2465/FDIS	100/2495/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.

A list of all parts in the IEC 62379 series, published under the general title *Common control interface for networked digital audio and video products*, can be found on the IEC website.

The committee has decided that the contents of this publication will remain unchanged until the stability date indicated on the IEC website 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.

INTRODUCTION

The IEC 62379 series specifies the common control interface, a protocol for managing equipment which conveys audio and/or video across digital networks.

The following parts exist or are planned:

1) General
2) Audio
3) Video
4) Data
5) Transmission over networks
6) Packet transfer service
7) Measurement for EBU ECN-IPM

IEC 62379-1:2007, specifies aspects which are common to all equipment, and it includes an introduction to the common control interface.

IEC 62379-2:2008, IEC 62379-3 (this standard) and IEC 62379-4 (under consideration) specify control of internal functions specific to equipment carrying particular types of live media. IEC 62379-4 refers to time-critical data such as commands to automation equipment, but not to packet data such as the control messages themselves.

IEC 62379-5 specifies control of transmission of these media over each individual network technology. It includes network specific management interfaces along with network specific control elements that integrate into the control framework.

IEC 62379-5-1 specifies management of aspects which are common to all network technologies.

IEC 62379-5-2 specifies protocols which can be used between networking equipment to enable the setting up of calls which are routed across different networking technologies.

IEC 62379-5-3, onwards, specify management of aspects which are particular to individual networking technologies.

IEC 62379-6, specifies carriage of control and status messages and non-audiovisual data over transports that do not support audio and video, such as RS232 serial links, with (as for IEC 62379-5) a separate subpart for each technology.

IEC 62379-7 specifies aspects that are specific to the measurement of the service experienced by audio and video streams and in particular to the requirements of EBU ECN-IPM Measurements Group.

COMMON CONTROL INTERFACE FOR NETWORKED DIGITAL AUDIO AND VIDEO PRODUCTS –

Part 3: Video

1 Scope

This part of IEC 62379 details aspects of the common control interface specified in IEC 62379-1 that are specific to video.

2 Normative references

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

IEC 62379-1:2007, *Common control interface for networked audio and video products – Part 1: General*

3 Terms, definitions and abbreviations

3.1 Terms and definitions

For the purposes of this document, the terms and definitions given in IEC 62379-1 apply.

3.2 Abbreviations

EBU ECN-IPM	European Broadcasting Union Expert Community Network and Infrastructure Internet Protocol Measurement
HD	High Definition
OID	Object Identifier
PSF	Progressive Segmented Frame
SD	Standard Definition
UHD	Ultra High Definition

4 Video format definitions

4.1 Video signal format definitions

4.1.1 General

At any point in the video signal chain, the video data will be in a particular format. For management purposes, the format shall be identified by an object identifier, either a “Common control interface standard” object identifier as defined in this standard or an object identifier defined elsewhere.

NOTE Permitting video format identifiers to be defined outside this standard allows use of proprietary formats within the standard protocol and also allows industry standard formats to emerge that may eventually be incorporated into future revisions of this standard.

4.1.2 Video parameters

4.1.2.1 General

The definitions in 4.1.3 make reference to "parameters" which provide additional information about the format. These parameters shall be mapped to "sub-identifier" values as specified in the other subclauses of 4.1.2. Any parameter may be "unspecified".

The "sub-identifier" values shall be appended to the object identifiers as additional arcs, in the order in which the parameters are listed in the relevant subclause of 4.1.3; except that if a

parameter is unspecified, and either is the last parameter or all subsequent parameters are also unspecified, then it shall be omitted.

For all parameters, "unspecified" is coded as zero, so this rule ensures that the OID does not end with a zero arc.

EXAMPLE If the last two parameters are vertical resolution and scan type, then 1080P would be coded as .1080.1, 1080P (with scan type unspecified) as .1080, and P (with vertical resolution unspecified) as .0.1.

4.1.2.2 Frame rate

The sub-identifier for frame rate shall be a value of the following type:

```
FrameRate::= Unsigned32 (0.. 2147483647)
-- An integer representing the calculated frame rate ratio of the encoded
-- video signal.
-- A value of zero shall indicate unspecified.

-- This is computed by calculating the frame rate ratio,
-- such as 24000/1001 = 23.976Hz and multiplying by 1000
-- to convert the value to an integer; in this case 23976.

-- For display purposes the value needs to be divided by
-- 1000 and a decimal point inserted as shown in the
-- Display-Hint.
```

4.1.2.3 Source type

The sub-identifier for the source type of the video shall be a value of the following type:


```
SourceType::= INTEGER {
  unspecified  (0),
  sd           (1),
  hd           (2),
  uhd4k        (3),
  uhd8k        (4)
} (unspecified.. uhd8k)
```



```
-- An integer representing the source type of the encoded video signal.
-- A value of zero shall indicate unspecified.
```

4.1.2.4 Vertical resolution

The sub-identifier for the vertical resolution shall be a value of the following type:

```
LineResolution::= INTEGER
-- An integer representing the vertical
-- resolution of the encoded video signal.
-- A value of zero shall indicate unspecified.
```

4.1.2.5 Scan type

The sub-identifier for the video scan type shall be a value of the following type:

```
ScanType::= INTEGER {
  unspecified  (0),
  progressive  (1),
  interlaced   (2),
  psf          (3)
} (unspecified..psf)

-- An integer representing the scan type of the encoded video signal.
-- A value of zero shall indicate unspecified.
```

4.1.2.6 Coding type

The sub-identifier for the video coding type shall be a value of the following type:

```
CodingType::= INTEGER {
```

```
  unspecified    (0),
  uncompressed   (1),
  mpeg2          (2),
  h264           (3),
  jpeg2000       (4),
  smptevc2       (5),
  vp8            (6),
  h264ScaleExtn  (7),
  h265HEVC       (8)
} (unspecified.. h265HEVC)

-- An integer representing the coding type of the encoded video signal.
-- A value of zero shall indicate unspecified.
```

4.1.2.7 Source aspect ratio

The sub-identifier for the source aspect ratio shall be a value of the following type:

```
SourceAspectRatio::= INTEGER {
  Unspecified     (0),
  fourByThree     (43),
  sixteenByNine   (169),
  twoPointTwoOne  (221)
} (unspecified..twoPointTwoOne)

-- An integer representing the source aspect ratio of the encoded
-- video signal.
-- A value of zero shall indicate unspecified.
```


4.1.2.8 Active format description codes

The sub-identifier for the active format description codes shall be a value of the following type:

```
ActiveFormatDescriptionCodes::= INTEGER
-- An integer representing the active format description codes for
-- video used with the range of source aspect ratios.
-- The codes are from 0000-1111
-- See SMPTE ST 2016-1:2009 for code descriptions.
```


4.1.3 Video signal formats

4.1.3.1 Video signal format root location

Video signal formats shall be rooted at the following location in the MIB tree:

```
iec62379              OBJECT IDENTIFIER::= { iso(1) standard(0) 62379 }

videoFormat           OBJECT IDENTIFIER::= { iec62379 video(3) format(2) }

videoSignalFormat  OBJECT IDENTIFIER::= { videoFormat Signal(1) }
```

The following definitions shall be used to identify the specified formats.

NOTE Annex C contains an example of set of formats defined by this standard.

4.1.3.2 Unspecified video

```
unspecifiedVideo      OBJECT IDENTIFIER::=
                                    { videoSignalFormat unspecified(0) }
-- wildcard - any supported format allowed
```

4.1.3.3 No video

```
noVideo               OBJECT IDENTIFIER::= { videoSignalFormat none(1) }
-- indicates the output is non-existent
```

4.1.3.4 Invalid video

```
invalidVideo         OBJECT IDENTIFIER::= { videoSignalFormat invalid(2) }
```