SLOVENSKI STANDARD
SIST EN 62071-2:2007

01-januar-2007

Digitalni videokasetni snemalni sistem z zapisovanjem s poševnimi sledmi na magnetnem traku, širokem 6,35 mm, in komprimiranjem – Format D-7 – 2. del: Kompresijski format (IEC 62071-2:2005)

Helical-scan compressed digital video cassette system using 6,35 mm magnetic tape - Format D-7 -- Part 2: Compression format (IEC 62071-2:2005)

Videokassettensystem mit komprimierter digitaler Schrägspuraufzeichnung auf Magnetband 6,35 mm - Format D-7 -- Teil 2: Kompressionsformat (IEC 62071-2:2005)

Systeme de magnétoscope numérique à cassette à balayage hélicoidal a signal compressé utilisant une bande magnétique de 6,35 mm - Format D-7 -- Partie 2: Format de compression (IEC 62071-2:2005)

Ta slovenski standard je istoveten z: **EN 62071-2:2006**

ICS:

33.160.40	Video sistemi	Video systems

SIST EN 62071-2:2007 **en,de**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 62071-2

July 2006

ICS 33.160.40

English version

Helical-scan compressed digital video cassette system using 6,35 mm magnetic tape - Format D-7 Part 2: Compression format

(IEC 62071-2:2005)

Système de magnétoscope numérique à cassette à balayage hélicoïdal à signal compressé utilisant une bande magnétique de 6,35 mm - Format D-7 Partie 2: Format de compression (CEI 62071-2:2005)

Videokassettensystem mit komprimierter digitaler Schrägspuraufzeichnung auf Magnetband 6,35 mm - Format D-7 Teil 2: Kompressionsformat (IEC 62071-2:2005)

This European Standard was approved by CENELEC on 2006-06-01. 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 two official versions (English and 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.

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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

Ref. No. EN 62071-2:2006 E

Foreword

The text of the International Standard IEC 62071-2:2005, prepared by IEC TC 100, Audio, video and multimedia systems and equipment, was submitted to the formal vote and was approved by CENELEC as EN 62071-2 on 2006-06-01 without any modification.

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)	2007-06-01
– latest date by which the national standards conflicting with the EN have to be withdrawn	(dow)	2009-06-01

Endorsement notice

The text of the International Standard IEC 62071-2:2005 was approved by CENELEC as a European Standard without any modification.

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

IEC 61834-2	NOTE	Harmonized as EN 61834-2:1998 (not modified).
IEC 61833-2	NOTE	Harmonized as EN 61833-2:2005 (not modified).

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

Publication	Year	Title	EN/HD	Year
ITU-R BT.601-5	1995	Studio encoding parameters of digital television for standard 4:3 and wide-screen 16:9 aspect ratios	-	-
AES3	2003	AES Recommended practice for digital audio engineering - Serial transmisson format for two-channel linearly represented digital audio data	-	-
SMPTE 12M	1999	Television, audio and film - Time and control code	-	-

INTERNATIONAL STANDARD

IEC 62071-2

First edition
2005-10

Helical-scan compressed digital video cassette system using 6,35 mm magnetic tape – Format D-7 –

Part 2: Compression format

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

HELICAL-SCAN COMPRESSED DIGITAL VIDEO CASSETTE SYSTEM USING 6,35 mm MAGNETIC TAPE – FORMAT D-7 –

Part 2: Compression format

FOREWORD

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International Standard IEC 62071-2 has been prepared by technical area 6: Higher data rate storage media, data structures and equipment of IEC technical committee 100: Audio, video and multimedia systems and equipment.

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

CDV	Report on voting
100/901/CDV	100/985/RVC

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 62071 consists of the following parts, under the general title *Helical-scan compressed digital video cassette system using 6,35 mm magnetic tape – Format D-7:*

Part 1: VTR specifications

Part 2: Compression format

Part 3: Data stream format

This part 2 describes the specifications for encoding process and data format for 525i and 625i systems.

Part 1 describes the VTR specifications which are tape, magnetization, helical recording, modulation method and basic system data for video compressed data.

Part 3 describes the specifications for transmission of DV-based compressed video and audio data stream over 270Mb/s and 360 Mb/s serial digital interface.

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.

HELICAL-SCAN COMPRESSED DIGITAL VIDEO CASSETTE SYSTEM USING 6,35 mm MAGNETIC TAPE – FORMAT D-7 –

Part 2:Compression format

1 Scope

This part of IEC 62071 defines the DV-based data structure for the interface of digital audio, subcode data and compressed video with the following parameters:

525/60 system – 4:1:1 image sampling structure, 25 Mb/s data rate;

525/60 system – 4:2:2 image sampling structure, 50 Mb/s data rate;

625/50 system – 4:1:1 image sampling structure, 25 Mb/s data rate;

625/50 system – 4:2:2 image sampling structure, 50 Mb/s data rate.

This standard does not define the DV compliant data structure for interface, of digital audio, subcode data and compressed video with the following parameters:

625/50 system – 4:2:0 image sampling structure, 25 Mb/s data rate

The compression algorithm and the DIF structure conform to the DV data structure as defined in IEC 61834. Differences between the DV-based data structure defined in this standard and IEC 61834 are shown in Annex A.

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.

ITU-R BT.601-5: 1995, *Studio encoding parameters of digital television for standard 4:3 and wide-screen 16:9 aspect ratios*

AES3-2003: *Serial transmission format for two-channel linearly represented digital audio data*

SMPTE 12M: 1999, *Television, Audio and Film – Time and Control Code*

3 Abbreviations and acronyms

AAUX	Audio auxiliary data
AP1	Audio application ID
AP2	Video application ID
AP3	Subcode application ID
APT	Track application ID
Arb	Arbitrary
AS	AAUX source pack
ASC	AAUX source control pack
B/W	Black and white flag
CGMS	Copy generation management system

CM	Compressed macro block
DBN	DIF block number
DCT	Discrete cosine transform
DIF	Digital interface
DRF	Direction flag
Dseq	DIF sequence number
DSF	DIF sequence flag
DV	Identification of a compression family
EFC	Emphasis audio channel flag
EOB	End of block
FR	Identification for the first half or the second half of each channel
FSC	Identification of a DIF block in each channel
LF	Locked mode flag
QNO	Quantization number
QU	Quantization
Res	Reserved for future use
SCT	Section type
SMP	Sampling frequency
SSYB	Subcode sync block
STA	Status of the compressed macro block
STYPE (see Note)	Signal type
Syb	Subcode sync block number
TF	Transmitting flag
VAUX	Video auxiliary data
VLC	Variable length coding
VS	VAUX source pack
VSC	VAUX source control pack

NOTE STYPE as used in this standard is different from that in ANSI/IEEE 1394.

4 Interface

4.1 General

As shown in Figure 1, processed audio, video and subcode data, are output for different applications through a digital interface port.

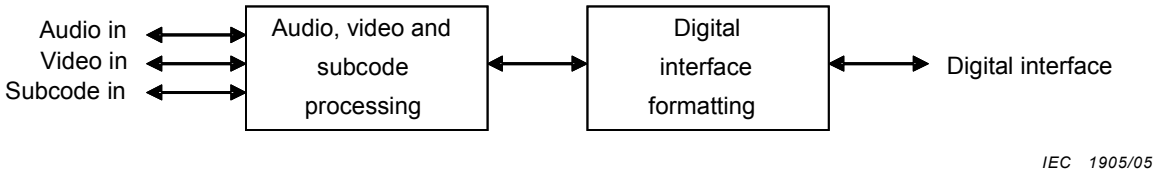

Figure 1 – Block diagram on the digital interface

4.2 Data structure

The data structure of the compressed stream at the digital interface is shown in Figures 2 and 3. Figure 2 shows the data structure for a 50 Mb/s structure, and Figure 3 shows the data structure for a 25 Mb/s structure.

In the 50 Mb/s structure, the data of one video frame are divided into two channels. Each channel is divided into 10 DIF sequences for the 525/60 system and 12 DIF sequences for the 625/50 system.

In the 25 Mb/s structure, the data of one video frame are divided into 10 DIF sequences for the 525/60 system and 12 DIF sequences for the 625/50 system.

Each DIF sequence consists of a header section, subcode section, VAUX section, audio section and video section with the following DIF blocks respectively:

Header section	:	1 DIF block,
Subcode section	:	2 DIF blocks,
VAUX section	:	3 DIF blocks,
Audio section	:	9 DIF blocks,
Video section	:	135 DIF blocks.

As shown in Figures 2 and 3, each DIF block consists of a 3-byte ID and 77 bytes of data. DIF data bytes are numbered 0 to 79.

Figure 4 shows the data structure of a DIF sequence for a 50 Mb/s or 25 Mb/s structure.