

<b>STN</b>	<b>System umiestňovania súborov s minimalizovaným premiestňovaním pre domáce multimediálne servery (TA 8).</b>	<b>STN EN 62842</b>  36 8030
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File allocation system with minimized reallocation for multimedia home server (TA 8)

Táto norma obsahuje anglickú verziu európskej normy.  
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 04/16

Obsahuje: EN 62842:2015, IEC 62842:2015

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EUROPEAN STANDARD

**EN 62842**

NORME EUROPÉENNE

EUROPÄISCHE NORM

December 2015

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English Version

**File allocation system with minimized reallocation for multimedia  
home server (TA 8)  
(IEC 62842:2015)**

Système d'allocation de fichiers avec réallocation minimisée  
pour serveur domestique multimedia  
(IEC 62842:2015)

Multimedia-Homeserversysteme - System zur  
Dateizuordnung mit minimaler Umverteilung  
(IEC 62842:2015)

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## **European foreword**

The text of document 100/2367/CDV, future edition 1 of IEC 62842, prepared by Technical Area 8 "Multimedia home systems and applications for end-use network" 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 62842:2015.

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) 2016-07-14
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2018-10-14

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<u>Publication</u>	<u>Year</u> series	<u>Title</u>	<u>EN/HD</u>	<u>Year</u> series
ISO/IEC 13346		Information technology - Volume and file structure of write-once and rewritable media using non-sequential recording for information interchange	-	
ISO/IEC 13346-1	1995	Information technology - Volume and file structure of write-once and rewritable media using non-sequential recording for information interchange -- Part 1: General	-	-
ISO/IEC 13346-3	1999	Information technology - Volume and file structure of write-once and rewritable media using non-sequential recording for information interchange - Part 3: Volume structure	-	-
ISO/IEC 13346-4	1999	Information technology - Volume and file structure of write-once and rewritable media using non-sequential recording for information interchange - Part 4: File structure	-	-



# INTERNATIONAL STANDARD

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**Multimedia home server systems – File allocation system with minimized reallocation**





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# INTERNATIONAL STANDARD

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**Multimedia home server systems – File allocation system with minimized reallocation**

INTERNATIONAL  
ELECTROTECHNICAL  
COMMISSION

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## CONTENTS

FOREWORD.....	4
INTRODUCTION.....	6
1 Scope.....	7
2 Normative references .....	7
3 Terms, definitions, abbreviations and notation .....	7
3.1 Terms and definitions.....	7
3.2 Abbreviations .....	11
3.3 Notation .....	11
4 Precondition and the policy.....	11
4.1 Preconditions.....	11
4.2 Policy.....	12
5 Method to be applied-CoPo2 .....	12
6 Explanation of basic method CoPo2 .....	14
6.1 Basics.....	14
6.2 Two choices to apply CoPo2 to an existing partition scheme.....	14
6.2.1 General .....	14
6.2.2 Applying to an existing partition .....	14
6.2.3 Applying to a virtual container partition .....	15
6.2.4 Choice conclusion .....	16
6.3 Management tables for CoPo2.....	16
6.3.1 General .....	16
6.3.2 Region configuration master partition table .....	18
6.3.3 Multilevel-divided-partition management tables.....	18
6.4 Functions required to implement CoPo2.....	18
6.4.1 General .....	18
6.4.2 Initialize.....	18
6.4.3 Manage-multilevel-divided-partitions.....	18
7 Considerations on the size of management tables .....	19
7.1 General.....	19
7.2 Multilevel-divided-partition allocation table.....	19
7.2.1 Blu-ray.....	19
7.2.2 HDD .....	19
8 Applying CoPo2 to UDF .....	19
8.1 Storage media to be applied .....	19
8.2 Basics when UDF volume format is applied to HDD .....	20
8.3 Basics to apply management tables to UDF .....	20
8.3.1 Master divided-partition table.....	20
8.3.2 Using the implementation use field of the partition descriptor.....	20
8.3.3 Multilevel-divided-partition allocation table.....	21
9 Data structures applied to UDF .....	21
9.1 General.....	21
9.1.1 Entity identifier .....	21
9.1.2 IdentifierSuffix .....	21
9.2 Volume structure.....	21
9.2.1 Logical volume descriptor .....	21



9.2.2	Logical volume integrity descriptor .....	22
9.2.3	Partition descriptor .....	23
9.3	File data structures .....	24
9.3.1	Partition header descriptor.....	24
9.3.2	CoPo2 partition header descriptor .....	24
9.3.3	Space bitmap descriptor .....	25
Figure 1 – Virtual container partition .....		16
Figure 2 – Management tables for CoPo2 .....		17
Table 1 – Domain identifier suffix field format .....		22
Table 2 – Domain flags .....		22
Table 3 – ImplementationUse format.....		23
Table 4 – CoPo2ManageTable .....		25

## INTERNATIONAL ELECTROTECHNICAL COMMISSION

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**MULTIMEDIA HOME SERVER SYSTEMS –  
FILE ALLOCATION SYSTEM WITH MINIMIZED REALLOCATION**
**FOREWORD**

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International Standard IEC 62842 has been prepared by technical area 8: Multimedia home systems and applications for end-user network of IEC technical committee 100: Audio, video and multimedia systems and equipment.

The text of this technical report is based on the following documents:

CDV	Report on voting
100/2367/CDV	100/2459/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.

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

Recently, hard disk and Blu-ray Disc<sup>1</sup> recorders have become popular in the home to record television programmes. Normally a Hard Disk Recorder (HDR) is used for time shift and a Blu-ray Disc (BD) is used for library. When an HDR is used for time shift, television programmes are recorded and played, then many of them are deleted to reuse the spaces for other programmes to be recorded. These programmes are stored as files in a hard disk drive (HDD) using a file system. Continuous recording and deletion of programmes involves the continuous storing and deletion of files in the file system. Television programme streams include at least videos and an electronic programme guide (EPG). The HDR stores videos in a long, variable length file depending on the quality and recording hours. Compared with videos, EPG related information is stored in a shorter file or files but is often updated. This continuous creation, deletion and updating of files of different lengths finally causes the files to be stored in fragments, and the system performance becomes very low.

In a computer, defragmentation tools are provided to solve the problem of a fragmented file system. Normally defragmentation with reallocation of files in sequence takes a long time and the end user cannot but wait for the completion of the defragmentation, with no other activity. In the home server environment, a smarter solution to resolve this problem needs to be provided.

The recent newly developed HDD features will be reflected in the next version of the standard.

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<sup>1</sup> Blu-ray Disc™ is a trademark of the Blu-ray Disc Association. This information is given for the convenience of users of this document and does not constitute an endorsement by IEC of the product named.

## MULTIMEDIA HOME SERVER SYSTEMS – FILE ALLOCATION SYSTEM WITH MINIMIZED REALLOCATION

### 1 Scope

This International Standard specifies the method for allocating requested file space with no fragmentation, to minimize the need for reallocation of fragmented files in the Universal Disc Format (UDF) file system applied to hard disk drives used in hard disk recorders.

### 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.

ISO/IEC 13346 (all parts), *Information technology – Volume and file structure of write-once and rewritable media using non-sequential recording for information*

ISO/IEC 13346-1:1995, *Information technology – Volume and file structure of write-once and rewritable media using non-sequential recording for information interchange – Part 1: General*

ISO/IEC 13346-3:1999, *Information technology – Volume and file structure of write-once and rewritable media using non-sequential recording for information interchange – Part 3: Volume structure*

ISO/IEC 13346-4:1999, *Information technology – Volume and file structure of write-once and rewritable media using non-sequential recording for information interchange – Part 4: File structure*

OSTA UDF2.01:200, *Information technology – OSTA Universal Disk Format Specification, Revision 2.01*

Secure Universal Disk Format Specification Revision 1.00, *Optical Storage Technology Association (OSTA)*, <http://www.osta.org/>

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