

This document is a preview generated by EVS

EESTI STANDARDI EESSÖNA

NATIONAL FOREWORD

See Eesti standard EVS-EN 62448:2014 sisaldab Euroopa standardi EN 62448:2014 inglisekeelset teksti.	This Estonian standard EVS-EN 62448:2014 consists of the English text of the European standard EN 62448:2014.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 18.04.2014.	Date of Availability of the European standard is 18.04.2014.
Standard on kättesaadav Eesti Standardikeskusest.	The standard is available from the Estonian Centre for Standardisation.

Tagasisidet standardi sisu kohta on võimalik edastada, kasutades EVS-i veebilehel asuvat tagasiside vormi või saates e-kirja meiliaadressile standardiosakond@evs.ee.

ICS 33.160.60, 35.240.30

Standardite reproduutseerimise ja levitamise õigus kuulub Eesti Standardikeskusele

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

Kui Teil on küsimusi standardite autorikaitse kohta, võtke palun ühendust Eesti Standardikeskusega:
Aru 10, 10317 Tallinn, Eesti; www.evs.ee; telefon 605 5050; e-post info@evs.ee

The right to reproduce and distribute standards belongs to the Estonian Centre for Standardisation

No part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying, without a written permission from the Estonian Centre for Standardisation.

If you have any questions about copyright, please contact Estonian Centre for Standardisation:
Aru 10, 10317 Tallinn, Estonia; www.evs.ee; phone 605 5050; e-mail info@evs.ee

EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 62448

April 2014

ICS 33.160.60; 35.240.30

Supersedes EN 62448:2009

English version

**Multimedia systems and equipment -
Multimedia e-publishing and e-books -
Generic format for e-publishing
(IEC 62448:2013)**

Systèmes et équipements multimédia -
Publication et livres électroniques
multimédia -
Format générique pour la publication
électronique
(CEI 62448:2013)

Multimediasysteme und -geräte -
E-Publishing und E-Books für Multimedia-
Anwendungen -
Allgemeines Format für E-Publishing
(IEC 62448:2013)

This European Standard was approved by CENELEC on 2014-01-01. 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 CEN-CENELEC Management Centre 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 CEN-CENELEC Management Centre has the same status as the official versions.

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

CENELEC

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

Foreword

The text of document 100/2053/CDV, future edition 3 of IEC 62448, prepared by technical area 10, "Multimedia e- publishing and e-book technologies", 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 62448:2014.

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) 2014-10-18
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2017-01-01

This document supersedes EN 62448:2009.

EN 62448:2014 includes the following significant technical changes with respect to EN 62448:2009:

- a) Addition of Annex C;
- b) Related minor changes in Clause 6;
- c) Updates in Annex B.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CENELEC [and/or CEN] shall not be held responsible for identifying any or all such patent rights.

Endorsement notice

The text of the International Standard IEC 62448:2013 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 62605:2011 NOTE Harmonised as EN 62605:2011 (not modified).

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 When 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>
ISO/IEC 19757-2	2008	Information technology - Document Schema Definition Language (DSDL) - Part 2: Regular-grammar-based validation - RELAX NG	-	-
ISO 639-1	-	Codes for the representation of names of languages - Part 1: Alpha-2 code	-	-
ISO 3166-1	-	Codes for the representation of names of countries and their subdivisions - Part 1: Country codes	-	-

CENELEC

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

CONTENTS

FOREWORD	10
INTRODUCTION	12
1 Scope	13
2 Normative references	13
3 Terms and definitions	13
4 Position and requirements for generic format	14
4.1 Generic format in contents creation/distribution model	14
4.2 Requirements for generic format	14
5 Notation	14
6 Logical structure	14
7 Semantics	17
Annex A (normative) BBeB Xylog format	18
A.1 General	18
A.2 Structure description	18
A.3 Block layout	37
A.3.1 Layout	37
A.3.2 Block	37
A.3.3 Coordinate system	38
A.4 Terminology	38
A.4.1 Page layout	38
A.4.2 Block layout	39
A.4.3 Data types	40
A.5 Elements and attributes	41
A.5.1 BBeBXylog	41
A.5.2 BookInformation	41
A.5.3 Info	41
A.5.4 BookInfo	42
A.5.5 Title	42
A.5.6 Author	42
A.5.7 BookID	42
A.5.8 Publisher	42
A.5.9 Label	43
A.5.10 Category	43
A.5.11 Classification	43
A.5.12 FreeText	43
A.5.13 DocInfo	43
A.5.14 CThumbnail	43
A.5.15 Language	43
A.5.16 Creator	43
A.5.17 SumPage	44
A.5.18 Keyword	44
A.5.19 TOC	44
A.5.20 TocLabel	44
A.5.21 Main	44
A.5.22 Page	44
A.5.23 Wait	48

A.5.24	TextBlock	48
A.5.25	P	55
A.5.26	Plot.....	56
A.5.27	CR.....	57
A.5.28	Fill.....	57
A.5.29	Space.....	57
A.5.30	CharButton	57
A.5.31	Rubi.....	57
A.5.32	Oyamoji.....	57
A.5.33	Gaiji.....	58
A.5.34	AltString	58
A.5.35	Org.....	58
A.5.36	Alt.....	58
A.5.37	Rubimoji	58
A.5.38	Box.....	58
A.5.39	EmpDots.....	59
A.5.40	EmpLine	60
A.5.41	Sub.....	60
A.5.42	Sup.....	60
A.5.43	Yoko.....	60
A.5.44	Tate.....	60
A.5.45	Nekase	60
A.5.46	NoBR.....	60
A.5.47	DrawChar	60
A.5.48	Italic	61
A.5.49	Bold.....	61
A.5.50	ImageBlock.....	61
A.5.51	ButtonBlock	64
A.5.52	BaseButton.....	66
A.5.53	FocusinButton	67
A.5.54	JumpTo	67
A.5.55	Run	67
A.5.56	SoundStop.....	68
A.5.57	CloseWindow.....	68
A.5.58	PushButton	68
A.5.59	UpButton	68
A.5.60	Canvas	69
A.5.61	PutObj	70
A.5.62	Moveto	71
A.5.63	Lineto	71
A.5.64	DrawBox	72
A.5.65	DrawEllipse	73
A.5.66	RuledLine	74
A.5.67	Style	74
A.5.68	BookStyle	74
A.5.69	SetDefault	75
A.5.70	RegistFont.....	76
A.5.71	BookSetting	77
A.5.72	TextStyle	78

A.5.73	BlockStyle	82
A.5.74	PageStyle	84
A.5.75	Objects	87
A.5.76	Window	87
A.5.77	PopUpWin	88
A.5.78	Sound.....	88
A.5.79	SoundStream.....	89
A.5.80	ImageStream.....	89
A.5.81	Header	90
A.5.82	Footer.....	91
A.5.83	eSound.....	92
A.5.84	Font.....	92
A.5.85	Image	93
A.5.86	Button.....	94
A.6	Reserved elements	94
A.6.1	General	94
A.6.2	ShowOrder	94
A.6.3	SetText.....	94
A.6.4	div	94
A.6.5	SendMessage.....	95
A.6.6	SimpleTextBlock.....	95
A.6.7	MoveObj	95
A.6.8	ViewPoint	95
A.6.9	MiniPage	95
A.6.10	PageDiv.....	95
A.6.11	BlockList.....	95
A.6.12	Text.....	95
A.6.13	SimpleText	95
A.6.14	Locate	95
A.6.15	Import.....	95
A.6.16	ObjLink	95
A.6.17	FileLink.....	95
A.6.18	Solo.....	96
A.6.19	Pages	96
A.6.20	Template	96
A.6.21	TemplateSet	96
A.6.22	PlotText.....	96
A.6.23	AutoSpacing	96
A.6.24	Span.....	96
A.6.25	Property	96
Annex B (normative)	XMDf XML format.....	97
B.1	General.....	97
B.2	Overview of the format's structure.....	97
B.3	Elements and attributes	98
B.3.1	General	98
B.3.2	Page_ID	98
B.3.3	Object_ID	99
B.3.4	Char_ID	99
B.3.5	Reading.....	99

B.3.6	Filename	99
B.3.7	Standard character	100
B.3.8	Standard character string	100
B.3.9	Extended character.....	100
B.3.10	Extended character string	101
B.3.11	External character	101
B.3.12	External character string.....	102
B.3.13	External extended character string	102
B.3.14	Coordinates	102
B.3.15	Polygonal_region.....	103
B.3.16	Color	103
B.3.17	Date	104
B.3.18	Time	104
B.3.19	Country.....	104
B.3.20	Personal_name.....	104
B.3.21	Organization_name	105
B.3.22	Address	105
B.3.23	Permission	106
B.3.24	Keyword	106
B.3.25	Telephone_number.....	107
B.3.26	Mail_address	107
B.4	Description format details	108
B.4.1	General	108
B.4.2	Book information modules <bvf>	109
B.4.3	Bibliographic data <book_info>	109
B.4.4	Content management module <body_module>.....	116
B.4.5	Event info module <event_info>	129
B.4.6	Parts data module <parts_module>	134
B.4.7	Object instances	139
B.5	Color names (normative).....	197
B.6	Localization (informative)	198
B.6.1	Possible additions	198
B.6.2	Standard characters	198
B.6.3	Characters usable for reading.....	199
B.6.4	Sorting rules for <search_table_def>	199
B.6.5	Additional attributes for <enable_key_type>	200
B.7	Specification of the XMDF XML format in the RELAX NG compact syntax.....	200
B.7.1	General	200
B.7.2	Tags and attributes for object instances, bibliographic data and other data for content structure	200
B.7.3	Tags and attributes for dictionary data object instance.....	229
B.7.4	Tags and attributes for text object instance 2.....	235
Annex C (normative)	ESP format	248
C.1	General.....	248
C.2	Overview.....	248
C.2.1	Content structure	248
C.2.2	XML files	249
C.2.3	The relationship between body data and style data.....	249
C.2.4	Character codes	250

C.2.5	Line break codes	250
C.2.6	Coding precautions.....	250
C.2.7	Restrictions	251
C.3	Elements and attributes	252
C.3.1	General	252
C.3.2	Common tags	253
C.3.3	Text-related tags	255
C.3.4	Dictionary-related tags.....	271
C.3.5	Search-table related tags.....	276
C.3.6	Comic-related tags	279
C.3.7	Bibliography data tags	285
C.3.8	Global settings data tags	289
C.3.9	Table of contents/item data tags.....	290
C.3.10	Animation data tags	292
C.4	Style data	293
C.4.1	General	293
C.4.2	Properties.....	293
C.4.3	Property-selector combinations.....	305
C.5	Comments to specifications	313
C.5.1	Block tag behavior	313
C.5.2	Style data parsing.....	314
C.5.3	Folder structure	315
C.5.4	Indicating vendor-specific information	316
C.5.5	Minimum/small/medium/large/maximum values that indicate text size, text spacing, and line spacing	317
C.5.6	Font size descriptions	317
C.6	Color names	317
C.7	Specification of ESP format in the RELAX NG compact syntax	318
Bibliography	352
Figure 1 – Contents creation/distribution model	14	
Figure A.1 – Conceptual diagram of the “Block layout”.....	37	
Figure A.2 – Coordinate system	38	
Figure A.3 – Page layout composition	39	
Figure A.4 – Block layout composition	40	
Figure A.5 – Bgimagemode attribute	46	
Figure A.6 – Layout attribute.....	47	
Figure B.1 – XML tree structure	98	
Figure B.2 – Example of valign=”middle”	140	
Figure B.3 – Example of dropped capital.....	145	
Figure B.4 – Left and right margin of a paragraph	145	
Figure B.5 – Horizontal writing in vertical text	148	
Figure B.6 – Ruby.....	149	
Figure B.7 – Example of search page object instance rendering	171	
Figure B.8 – Comic object Instance.....	176	
Figure C.1 – Content XML file example	249	
Figure C.2 – Style data example	250	

Figure C.3 – Tag coding example	250
Figure C.4 – Numbers that indicate the origin point for the absolute position on the page	253
Figure C.5 – <section> tag coding example	254
Figure C.6 – Content/page progression directions.....	315
Figure C.7 – Folder (directory) structure example	316
Table A.1 – Data types	41
Table A.2 – Attribute of BBeBXylog.....	41
Table A.3 – Attribute of Info	41
Table A.4 – Attribute of Title	42
Table A.5 – Attribute of Author.....	42
Table A.6 – Attribute of Publisher	42
Table A.7 – Attribute of Label	43
Table A.8 – Attribute of CThumbnail	43
Table A.9 – Attribute of TocLabel.....	44
Table A.10 – Attribute of Page	45
Table A.11 – Attribute of Wait	48
Table A.12 – Attribute of TextBlock.....	49
Table A.13 – rubyalign attribute	51
Table A.14 – rubyadjust attribute	52
Table A.15 – rubyoverhang attribute	52
Table A.16 – empdotsposition attribute	52
Table A.17 – emplineposition attribute	53
Table A.18 – emplinetype attribute.....	53
Table A.19 – align attribute	53
Table A.20 – blockrule attribute	54
Table A.21 – Attribute of P.....	56
Table A.22 – Attribute of Plot	56
Table A.23 – Attribute of Fill	57
Table A.24 – Attribute of Space	57
Table A.25 – Attribute of CharButton	57
Table A.26 – Attribute of Gaiji	58
Table A.27 – Attribute of Box	59
Table A.28 – linetype attribute	59
Table A.29 – Attribute of EmpDots	59
Table A.30 – Attribute of Empline.....	60
Table A.31 – Attribute of DrawChar.....	61
Table A.32 – Attribute of ImageBlock	62
Table A.33 – Attribute of ButtonBlock	65
Table A.34 – Attribute of BaseButton	66
Table A.35 – Attribute of FocusinButton.....	67
Table A.36 – Attribute of JumpTo.....	67

Table A.37 – Attribute of Run.....	67
Table A.38 – runoption attribute.....	68
Table A.39 – Attribute of PushButton	68
Table A.40 – Attribute of UpButton.....	68
Table A.41 – Attribute of Canvas	69
Table A.42 – Attribute of PutObj	70
Table A.43 – Attribute of Moveto.....	71
Table A.44 – Attribute of Lineto	71
Table A.45 – arrowtype attribute	72
Table A.46 – Attribute of DrawBox	72
Table A.47 – Attribute of DrawEllipse.....	73
Table A.48 – Attribute of RuledLine	74
Table A.49 – Attribute of BookStyle	75
Table A.50 – Attribute of SetDefault.....	75
Table A.51 – setwaitprop attribute	76
Table A.52 – Attribute of RegistFont	77
Table A.53 – Attribute of BookSetting	77
Table A.54 – Attribute of TextStyle	79
Table A.55 – Attribute of BlockStyle.....	83
Table A.56 – Attribute of PageStyle	85
Table A.57 – Attribute of Window.....	87
Table A.58 – Attribute of PopUpWin.....	88
Table A.59 – Attribute of Sound	88
Table A.60 – Attribute of SoundStream	89
Table A.61 – Attribute of ImageStream	90
Table A.62 – Attribute of Header.....	90
Table A.63 – Attribute of Footer	91
Table A.64 – Attribute of eSound	92
Table A.65 – Attribute of Font	92
Table A.66 – Attribute of Image	93
Table A.67 – Attribute of Button	94
Table B.1 – Base characters for reading	99
Table B.2 – Examples of standard character sets	100
Table B.3 – Usable characters for a telephone number	107
Table B.4 – Characters usable for email addresses	108
Table B.5 – Characters usable for the lookup key	127
Table B.6 – Color names	198
Table B.7 – Examples of standard character sets for different languages	199
Table B.8 – Example of additional characters usable for readings for different languages	199
Table B.9 – Example of additional sorting rules	200
Table B.10 – Example of additional language specific attributes for <enable_key_type>	200
Table C.1 – ESP format structure	249

Table C.2 – Usable line break codes.....	250
Table C.3 – Half-width symbols for file names.....	251
Table C.4 – Notations	252
Table C.5 – Property-selector correrenspondence.....	305
Table C.6 – Tags that make independent blocks	314
Table C.7 – Property parsing	314
Table C.8 – An example of conversion to numeric values.....	317
Table C.9 – Color names	318

INTRODUCTION

Markets for multimedia e-book and e-publishing require standardization of formats for e-book data interchange among associated people; authors, data preparers, publishers and readers. The formats are classified into submission format, generic format and reader's format. The submission format has to support an interaction between authors and data preparers. The reader's format depends on e-publishing equipment. The generic format has to provide an interchange format for data preparers and publishers and therefore should be e-publishing equipment independent.

The International Electrotechnical Commission (IEC) draws attention to the fact that it is claimed that compliance with this document may involve the use of patents.

Sony Corporation has informed IEC that it has patent applications or granted patents.

IEC takes no position concerning the evidence, validity and scope of this patent right.

The holder of this patent right has assured the IEC that he/she is willing to negotiate licences either free of charge or under reasonable and non-discriminatory terms and conditions with applicants throughout the world. In this respect, the statement of the holder of this patent right is registered with IEC. Information may be obtained from:

Sony Corporation
1-7-1 Konan, Minato-ku, Tokyo 108-0075, Japan

Sharp Corporation has informed IEC that it has patent applications or granted patents.

IEC takes no position concerning the evidence, validity and scope of this patent right.

The holder of this patent right has assured the IEC that he/she is willing to negotiate licences under reasonable and non-discriminatory terms and conditions with applicants throughout the world. In this respect, the statement of the holder of this patent right is registered with the IEC. Information may be obtained from:

Sharp Corporation
2613-1, Ichinomoto-cho, Tenri, Nara 632-8587, Japan

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights other than those identified above. IEC shall not be held responsible for identifying any or all such patent rights.

ISO (www.iso.org/patents) and IEC (<http://patents.iec.ch>) maintain on-line data bases of patents relevant to their standards. Users are encouraged to consult the data bases for the most up to date information concerning patents.