



BSI Standards Publication

**Multimedia systems and equipment — Multimedia
e-publishing and e-book — Conceptual
model for multimedia e-publishing**

National foreword

This Published Document is the UK implementation of IEC TS 62229:2017.

The UK participation in its preparation was entrusted to Technical Committee EPL/100, Audio, video and multimedia systems and equipment.

A list of organizations represented on this committee can be obtained on request to its secretary.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

© The British Standards Institution 2017
Published by BSI Standards Limited 2017

ISBN 978 0 580 96349 0

ICS 33.080; 35.240.30

Compliance with a British Standard cannot confer immunity from legal obligations.

This Published Document was published under the authority of the Standards Policy and Strategy Committee on 31 December 2017.

Amendments/corrigenda issued since publication

Date	Text affected
------	---------------



TECHNICAL SPECIFICATION

**Multimedia systems and equipment – Multimedia e-publishing and e-book –
Conceptual model for multimedia e-publishing**

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

ICS 33.080; 35.240.30

ISBN 978-2-8322-4281-0

Warning! Make sure that you obtained this publication from an authorized distributor.

CONTENTS

FOREWORD.....	3
INTRODUCTION.....	5
1 Scope.....	6
2 Normative references	6
3 Terms and definitions	6
4 Model for multimedia e-publishing	7
4.1 Contents creation/distribution model	7
4.2 Multimedia data structure model	7
4.3 E-book distribution model.....	8
4.3.1 General	8
4.3.2 E-publishing market.....	9
4.3.3 Related data	9
4.4 Interfaces to e-book systems and equipment	9
4.4.1 General	9
4.4.2 Operation and presentation	10
4.4.3 E-paper	10
4.4.4 Application program interface	10
5 Issues to be standardized.....	10
5.1 Data formats of multimedia e-book contents.....	10
5.2 Minimum requirements for multimedia e-book viewers	10
5.3 User interfaces for multimedia e-book viewers	11
5.4 E-publishing services	11
5.5 Guideline for e-book distribution by interchangeable storage media	11
5.6 Application specific e-books.....	11
Annex A (informative) Electronic dictionary.....	12
Annex B (informative) Electronic map and its application in e-book.....	13
Annex C (informative) Electronic newspaper.....	14
Annex D (informative) Digital comic	15
D.1 Generic format	15
D.2 Reader's format and other formats	15
Annex E (informative) Digital sheet music.....	16
Bibliography.....	17
Figure 1 – Contents creation/distribution process.....	7
Figure 2 – E-book distribution model.....	9
Figure B.1 – Electronic map application in an e-book	13

INTERNATIONAL ELECTROTECHNICAL COMMISSION

**MULTIMEDIA SYSTEMS AND EQUIPMENT –
MULTIMEDIA E-PUBLISHING AND E-BOOK –
CONCEPTUAL MODEL FOR MULTIMEDIA E-PUBLISHING****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 itself does not provide any attestation of conformity. Independent certification bodies provide conformity assessment services and, in some areas, access to IEC marks of conformity. IEC is not responsible for any services carried out by independent certification bodies.
- 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.

The main task of IEC technical committees is to prepare International Standards. In exceptional circumstances, a technical committee may propose the publication of a technical specification when

- the required support cannot be obtained for the publication of an International Standard, despite repeated efforts, or
- the subject is still under technical development or where, for any other reason, there is the future but no immediate possibility of an agreement on an International Standard.

Technical specifications are subject to review within three years of publication to decide whether they can be transformed into International Standards.

IEC 62229, which is a technical specification, has been prepared by IEC technical committee 100: Audio, video and multimedia systems and equipment.

This second edition cancels and replaces the first edition published in 2006. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

- a) Annexes D and E have been added;
- b) Clause 5.6 has been added.

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

Enquiry draft	Report on voting
100/2818/DTS	100/2870/RVDTS

Full information on the voting for the approval of this technical specification can be found in the report on voting indicated in the above table.

This document 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

- transformed into an International standard,
- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

A bilingual version of this publication may be issued at a later date.

INTRODUCTION

Enlarging the size of the international and domestic markets for multimedia e-publishing and e-books requires standardization of their related technology. As a first step to the discussion and standardization of the technology, a conceptual model for the technology should be established and standardization issues should be clarified. The conceptual model includes all the e-publishing components and their functionality and clarifies the relationships between them. These clarifications are essential for the development of standards for e-publishing and e-book technology and are required by associated industries and users.

MULTIMEDIA SYSTEMS AND EQUIPMENT – MULTIMEDIA E-PUBLISHING AND E-BOOK – CONCEPTUAL MODEL FOR MULTIMEDIA E-PUBLISHING

1 Scope

This document describes a conceptual model for multimedia e-publishing and e-book. The conceptual model is specified from the standardization point of view in order to clarify the functionality of e-publishing/e-book components and the relationships between them and to define e-publishing services.

The model provides the key technology to be standardized in the e-publishing environment. The modelling is not intended for actual implementation of a system or system components for e-publishing. The modelling is expected to be used as a reference for discussing and developing new standardization work on multimedia e-publishing and e-books and, therefore, to contribute to the expansion of the international and domestic markets for multimedia e-publishing and e-book.

The model is given as an example of the models for the multimedia data creation, data structure, equipment/system structure and user-system interface defined in IEC 61998.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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.

IEC 61998:2015, *Model and framework for standardization in multimedia equipment and systems*

ISO/IEC 19757-2:2008, *Information technology – Document Schema Definition Language (DSDL) – Part 2: Regular-grammar-based validation – RELAX NG*

Extensible Markup Language (XML) 1.0 (Third Edition), W3C Rec., 2004-02-04

NOTE Extensible Markup Language (XML) is a subset of ISO 8879:1986 (SGML) amended by its Technical Corrigendum 2.

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at <http://www.electropedia.org/>
- ISO Online browsing platform: available at <http://www.iso.org/obp>

3.1

multimedia e-publishing

business model that produces, distributes and/or deals in multimedia e-books