

INTERNATIONAL STANDARD

Multimedia systems and equipment – Multimedia e-publishing and e-books –
Interchange format for e-dictionaries

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IEC 62605:2021

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IEC Central Office
3, rue de Varembe
CH-1211 Geneva 20
Switzerland

Tel.: +41 22 919 02 11
info@iec.ch
www.iec.ch

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MULTIMEDIA SYSTEMS AND EQUIPMENT – MULTIMEDIA E-PUBLISHING AND E-BOOKS – INTERCHANGE FORMAT FOR E-DICTIONARIES

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International Standard IEC 62605 has been prepared by technical area 10: Multimedia e-publishing and e-book technologies, of IEC technical committee 100: Audio, video and multimedia systems and equipment.

This third edition cancels and replaces the second edition published in 2016. This edition constitutes a technical revision.

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

The format described in Annex B was significantly enhanced in the following ways:

- a) elements to enhance uses of data (e.g. web-related usage);
- b) attribute for accessibility-related functions;
- c) attributes for more detailed markup for data reusability.

The text of this International Standard is based on the following documents:

| FDIS | Report on voting |
|---------------|------------------|
| 100/3589/FDIS | 100/3602/RVD |

Full information on the voting for its approval can be found in the report on voting indicated in the above table.

The language used for the development of this International Standard is English.

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at www.iec.ch/members_experts/refdocs. The main document types developed by IEC are described in greater detail at www.iec.ch/standardsdev/publications.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under webstore.iec.ch in the data related to the specific document. At this date, the document will be

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- withdrawn,
- replaced by a revised edition, or
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INTRODUCTION

Markets for multimedia e-books 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, interchange format and reader's format. The submission format supports an interaction between authors and data preparers. The reader's format depends on e-publishing equipment. The interchange format provides an interchange format for data preparers and publishers and, therefore, should be e-publishing equipment independent.

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MULTIMEDIA SYSTEMS AND EQUIPMENT – MULTIMEDIA E-PUBLISHING AND E-BOOKS – INTERCHANGE FORMAT FOR E-DICTIONARIES

1 Scope

This document specifies the interchange format for e-dictionaries among publishers, content creators and manufacturers.

This document does not address the following aspects:

- data formats for reading devices;
- elements necessary for final print reproduction only;
- rendering issues related to physical devices;
- security issues such as DRM for documents.

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 TS 62229, *Multimedia systems and equipment – Multimedia e-publishing and e-book – Conceptual model for multimedia e-publishing*

3 Terms and definitions

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

3.1

manufacturer

organization or person that manufactures hardware and/or software of the e-book

4 Position and requirements for interchange format for e-dictionaries

4.1 Interchange format for e-dictionaries in contents creation/distribution model

The conceptual model for multimedia e-publishing (IEC TS 62229) defines a contents creation/distribution model shown in Figure 1.

Author <--(1)--> Data preparer <--(2)--> Publisher --(3)--> Reader

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Key

- (1) content data in submission format
- (2) content data in interchange format
- (3) content data in reader's format

Figure 1 – Contents creation/distribution model

It should be noted that the role of manufacturers of e-dictionary hardware and software overlaps that of the publisher in Figure 1. Therefore, a slightly modified model will be assumed for this International Standard, as shown in Figure 2.

Author <--(1)--> **Data preparer** <--(2)--> **Publisher (manufacturer)** --(3)--> **Reader**
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Figure 2 – Contents creation/distribution model (modified)

This document specifies the interchange format between data preparers and publishers, i.e. a format for (2) in Figure 2, though it may be used as a reader's format.

4.2 Requirements for interchange format for e-dictionaries

An interchange format for e-dictionaries needs to address the following.

- Description of keywords, links from the keywords to entries (link data) and the order of the entries.
- Description of articles for each entry (entry data). This includes text, image, and other multimedia functionalities generally required for e-books.
- Description of bibliographical data and other data. This should include the name of the author and the publisher, the title of the content and the explanatory note. The relationship between these concepts is visually represented in Figure 3.
- Description of contents written in various languages.

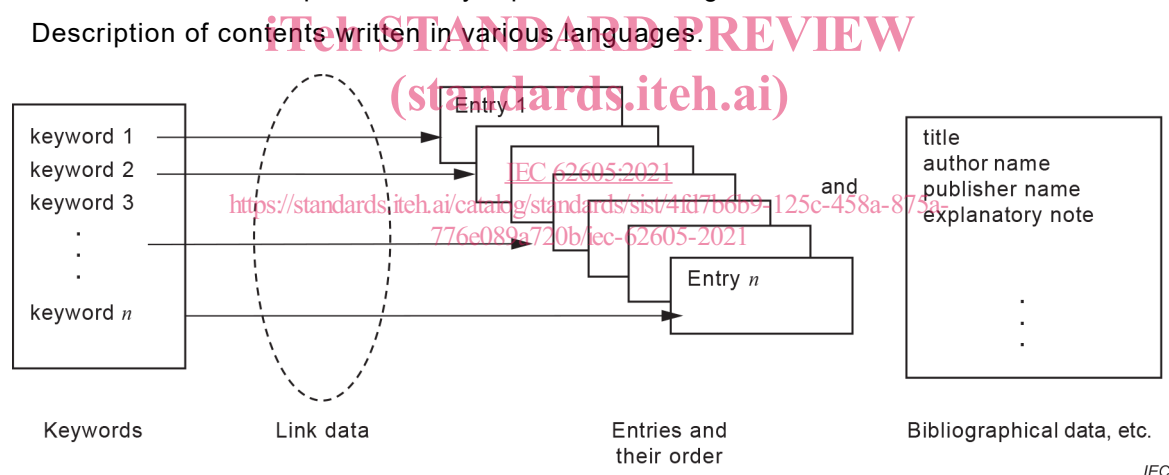


Figure 3 – Relationship between concepts

5 File formats

This document defines two XML-based formats. One is based on XMDF (as described in IEC 62448:2017, Annex B) and LeXML¹. The format is hereafter called XMDF-LeXML format. The other is based solely on LeXML 3.0. They are presented in Annex A and Annex B, respectively.

¹ LeXML is the trade name of a product supplied by Digital ASSIST Ltd. Its original specifications are found at <http://www.d-assist.com/index.html> (in Japanese). This information is given for the convenience of users of this document and does not constitute an endorsement by IEC of the product named. Equivalent products may be used if they can be shown to lead to the same results.

6 Semantics

Elements of the XMDF-LeXML format can be rendered in accordance with appropriate style specifications, which are outside the scope of this document.

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