Technical Specification

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Document management — Portable Document Format — RichMedia annotations conforming to glTF assets

Gestion de documents — Portable Document Format — Annotations RichMedia conformes aux actifs glTF

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Foreword

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The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO document should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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This document was prepared by Technical Committee ISO/TC 171, *Document management applications*, Subcommittee SC 2, *Document file formats, EDMS systems and authenticity of information.*

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Introduction

0.1 PDF: ISO 32000

ISO 32000-2 can embed 3D Computer-aided design (CAD) models as either 3D or RichMedia annotations. 3D node, stream and view dictionaries can only reference data saved in either the ECMA-363 [Universal 3D (U3D) file format] or ISO 14739-1 [the Product Representation Compact (PRC) file format]. This can require the authoritative CAD data to be translated to either U3D or PRC solely to embed the data in a PDF file.

0.2 glTF: ISO/IEC 12113

glTF is an open, royalty-free 3D asset delivery format designed and managed by the Khronos Group, which is a Standards Developing Organization (SDO).

The specification for glTF 2.0 is published as **ISO/IEC 12113:2022**.

0.3 Extending PDF to support glTF

The purpose of this document is to extend the PDF specification to allow RichMedia annotations to include 3D artworks saved in the glTF format.

Document management — Portable Document Format — RichMedia annotations conforming to glTF assets

1 Scope

This document specifies how to extend the ISO 32000-2 specification by adding the ISO/IEC 12113 (glTF) format as a valid format for 3D artworks contained in a RichMedia annotation. It is intended for:

— developers of software that creates PDF files (PDF writers);

— software that reads existing PDF files and usually interprets their contents for display (PDF readers);

— software that reads and displays PDF content and interacts with the computer users to modify and save the PDF file (PDF processors);

— PDF products that read and/or write PDF files for a variety of other purposes (PDF processors).

NOTE PDF writers and PDF readers are more specialized classifications of PDF processors.

This document does not specify the following:

— specific processes for converting paper or electronic documents to the PDF file format;

— specific technical design, user interface implementation, or operational details of rendering;

— specific physical methods of storing these documents such as media and storage conditions;

— methods for validating the conformance of PDF files or PDF processors;

— required computer hardware or operating systems.

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.

ISO/IEC 12113:2022, Information technology — Runtime 3D asset delivery format — Khronos glTF™ 2.0

ISO 32000-2:2020, Document management — Portable document format — Part 2: PDF 2.0

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:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at http://www.electropedia.org/