

International Standard

ISO 14306-1

Industrial automation systems and integration — JT file format specification for 3D visualization —

Part 1:

Overview and fundamental principles

Systèmes d'automatisation industrielle et integration —
Spécification de format de fichier JT pour visualisation 3D. —

Partie 1: Aperçu et Principes Fondamentaux

First edition 2024-08

iso/41f22d3b-a83a-4143-ab68-700495d63783/iso-14306-1-2024/

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Published in Switzerland

ISO 14306-1:2024(en)

Co	ontents	Page
Fore	eword	iv
Introduction		v
1	Scope	1
2	Normative references	1
3	Terms, definitions and abbreviated terms 3.1 Terms and definitions 3.2 Abbreviated terms	1
4	Overview of the ISO 14306 series 4.1 Overview of the purpose of the ISO 14306 series 4.2 Overview of the scope of the ISO 14306 series 4.3 Fundamental principles of the ISO 14306 series 4.4 Structure of the ISO 14306 series	2
5	Conformance 5.1 Conformance classes 5.2 General file structure 5.3 Precise geometry	3
Ann	nex A (normative) Information object registration	4
Rihl	liography	5

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Foreword

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This document was prepared by Technical Committee ISO/TC 184, *Automation systems and integration*, Subcommittee SC 4, *Industrial data*.

A list of all parts in the ISO 14306 series can be found on the ISO website.

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.

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Introduction

The ISO 14306 series describes a file format which is used in industry for the representation of computer-interpretable 3D product data. The objective of the industrial user when using data contained in the format described in the ISO 14306 format is 3D visualization to enable collaboration, validation and information sharing throughout the extended enterprise.

The file format description is flexible in design focusing on compression for compact and efficient 3D data representations. Computer Aided Design (CAD) models, represented as data according to the ISO 14306 format are significantly smaller than the size of the original authored CAD data. Software applications that use this description focus on workflows requiring high-performance, both capturing and repurposing of lightweight 3D data that includes content such as product assembly structure and product and manufacturing information (PMI) independent of the original CAD authoring application.

A typical screenshot display of the Product Assembly Structure and PMI data is shown in Figure 1.

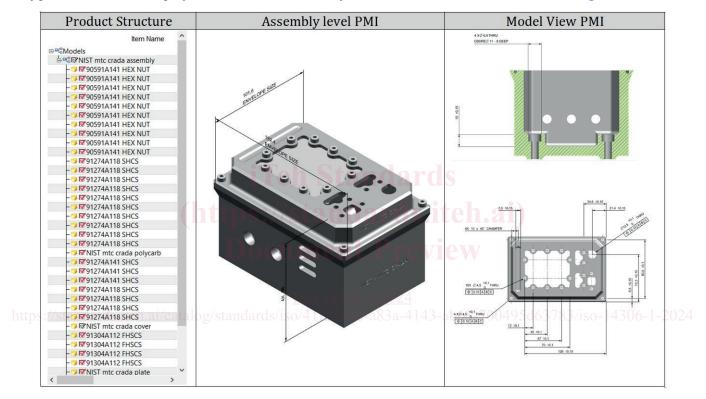


Figure 1 — Example screenshot showing Product Structure and PMI images

The ISO 14306 format file is stored on disk with a file extension of ".jt".

Beyond the data contents description of the ISO 14306 format, the overall organization of the format is designed to support operations such as:

- offline optimizations of the data contents, therefore file granularity and flexibility, are optimized to meet the needs of enterprise data sharing solutions
- asynchronous streaming of content, therefore viewing optimizations such as view frustum;
- occlusion culling and fixed-framerate display modes
- layers, and layer filters

Annex A contains an identifier that conforms to ISO/IEC 8824-1. The identifier unambiguously identifies this document in an open information system.

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