

# SLOVENSKI STANDARD SIST EN 9300-010:2018

01-september-2018

# Aeronavtika - LOTAR - Dolgotrajno arhiviranje in iskanje digitalne tehnične dokumentacije o izdelkih, kot so podatki o 3D, CAD in PDM - 010. del: Pregled podatkov

Aerospace series - LOTAR - LOng Term Archiving and Retrieval of digital technical product documentation such as 3D, CAD and PDM data - Part 010: Overview Data Flow

Luft- und Raumfahrt - LOTAR Stangzeitarchivierung und Bereitstellung digitaler technischer Produktdokumentationen, beispielsweise 3D CAD und PDM Daten - Teil 010: Übersicht Datenfluss (standards.iten.ai)

Série aérospatiale - LOTAR Archivage Long Terme et récupération des données techniques produits numériques, telles que CAD 3D et PDM - Partie 010: Vue générale du flux de données

Ta slovenski standard je istoveten z: EN 9300-010:2018

# ICS:

01.110	Tehnična dokumentacija za izdelke	Technical product documentation
35.240.10	Računalniško podprto snovanje (načrtovanje, oblikovanje) (CAD)	Computer-aided design (CAD)
35.240.30	Uporabniške rešitve IT v informatiki, dokumentiranju in založništvu	IT applications in information, documentation and publishing
49.020	Letala in vesoljska vozila na splošno	Aircraft and space vehicles in general

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### en,fr,de

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### SIST EN 9300-010:2018

# EUROPEAN STANDARD NORME EUROPÉENNE EUROPÄISCHE NORM

# EN 9300-010

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**English Version** 

# Aerospace series - LOTAR - LOng Term Archiving and Retrieval of digital technical product documentation such as 3D, CAD and PDM data - Part 010: Overview Data Flow

Série aérospatiale - LOTAR - Archivage Long Terme et récupération des données techniques produits numériques, telles que CAD 3D et PDM - Partie 010 : Vue générale du flux de données Luft- und Raumfahrt - LOTAR - Langzeit-Archivierung und -Bereitstellung digitaler technischer Produktdokumentationen, wie zum Beispiel von 3D-, CAD- und PDM-Daten - Teil 010: Übersicht des Datenflusses

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# (standards.iteh.ai)

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EUROPEAN COMMITTEE FOR STANDARDIZATION COMITÉ EUROPÉEN DE NORMALISATION EUROPÄISCHES KOMITEE FÜR NORMUNG

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### SIST EN 9300-010:2018

# EN 9300-010:2018 (E)

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# **European foreword**

This document (EN 9300-010:2018) has been prepared by the Aerospace and Defence Industries Association of Europe - Standardization (ASD-STAN).

After enquiries and votes carried out in accordance with the rules of this Association, this Standard has received the approval of the National Associations and the Official Services of the member countries of ASD, prior to its presentation to CEN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by December 2018, and conflicting national standards shall be withdrawn at the latest by December 2018.

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

According to the CEN-CENELEC Internal Regulations, the national standards organisations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former, Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

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#### Scope 1

EN 9300-010 provides an overview description for the recommended processes for archiving of 3D product data, e.g. 3D CAD and PDM data. The processes are described in EN 9300-011 to EN 9300-016.

#### 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.

EN 9300-007, Aerospace series — LOTAR — LOng Term Archiving and Retrieval of digital technical product documentation such as 3D, CAD and PDM data — Part 007: Terms and References  $^{1}$ 

EN 9300-011, Aerospace series — LOTAR — Long Term Archiving and Retrieval of digital technical product documentation such as 3D, CAD and PDM data — Part 011: Reference process description "Data preparation"<sup>2</sup>

EN 9300-012, Aerospace series — LOTAR — Long Term Archiving and Retrieval of digital technical product documentation such as 3D, CAD and PDM data — Part 012: Reference process description "Ingest"<sup>2</sup> "Ingest"<sup>2</sup>

EN 9300-013, Aerospace series — LOTAR — Long Term Archiving and Retrieval of digital technical product documentation such as 3D, CAD and PDM data — Part 013: Reference process description "Archival Storage"<sup>2</sup> https://standards.iteh.ai/catalog/standards/sist/b7ed52fe-abc3-4f85-9e32-

EN 9300-014, Aerospace series – LOTAR – LOng Term Archiving and Retrieval of digital technical product documentation such as 3D, CAD and PDM data — Part 014: Reference process description "Retrieval"<sup>2</sup>

EN 9300-015, Aerospace series — LOTAR — Long Term Archiving and Retrieval of digital technical product documentation such as 3D, CAD and PDM data — Part 015: Reference process description "Removal"<sup>2</sup>

EN 9300-016, Aerospace series — LOTAR — LOng Term Archiving and Retrieval of digital technical product documentation such as 3D, CAD and PDM data — Part 016: Reference process description "Ingest for pre-existing data"<sup>1</sup>

ISO 14721:2003, Space data and information transfer systems — Open archival information systems — *Reference model* 

#### Terms, definitions and abbreviations 3

For the purposes of this document, the terms and definitions given in EN 9300-007 apply.

<sup>1</sup> In preparation at the date of publication.

<sup>2</sup> Published as ASD-STAN Prestandard at the date of publication of this European standard.

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

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

# 4 Applicability

This EN 9300-010 is applicable to new 3-D product data records and may be applicable to existing 3D product data records, on current and earlier products, produced using previous regulations, standards and procedures. The current version is focused on product data as defined in the domain specific parts.

# 5 Overview data flow



## Figure 1 — Overview data flow

The overview data flow is divided into several phases.

This includes the phases:

- data preparation;
- ingest;
- archival storage;
- retrieval;

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— removal.

The overview is organized along the life cycle of the data to be archived. For this the producer has to prepare the data. After data preparation the resulting Submission Information Package (SIP) will be send during an Ingest process to the archive system. Within the archival storage process the SIP will be converted into an Archival Information Package (AIP). This includes the conversion of native formatted product data into the archive format as well as the signing of the data with a digital time signature. For reuse or viewing, the data consumer has the ability to retrieve the archived data. The archiving system provides in addition the optional removal process step.

The ingest process for pre-existing data describes the automatic process of conversion and storage of an already existing archive (and data) into the recommended archive format (see EN 9300-016).

The phases "data generation" and "data usage" and process step #7 "data usage" are out of scope for EN 9300-010. The phases and the process step are integrated for process modelling reasons.

The supporting processes (for example, "data preservation", "data management", and "administration") are not identified on the Figure 1. They will be introduced, when useful, on the parts detailing the processes (EN 9300-011 to EN 9300-015).

The descriptive information is not identified on the Figure 1. It will be introduced, when useful, on the parts detailing the processes (EN 9300-011 to EN 9300-015). The descriptive information represents the set of information, consisting primarily of package descriptions, which is provided to data management to support the finding, ordering, and retrieving by consumers of archived information holdings.

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6 Detailed process steps description T EN 9300-010:2018

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## 6.1 Data preparation

The data to be archived will be prepared by the producer. This includes defined data verification, performed by a quality agent tool. The data verification will test the data against defined data quality requirements, and will provide a result report. Data preparation also includes the creation of validation properties. The sub process shall be certified.

For detailed refer to EN 9300-011 "Data Preparation".

## 6.2 Ingest

During the ingest process the data producer submits the SIP from the preparation environment into the archiving environment. The archive receives the data packages and checks if the SIP contains data of the recommended format and then generates the AIP. It is recommended that the producer' environment makes the source data read only after successful submission of the SIP to the archive. The sub process shall be certified.

For details refer to EN 9300-012 "Ingest".

## 6.3 Archival storage

The process includes the setting of digital time signatures, generation of additional Descriptive Information (DI) for AIP's (meta data for the archive), the physical storage of the data within the archive and error checking as well as the steps needed for disaster recovery of the stored data. Each

company should meet the general recommendations for an archive system and its security, as for example described in ISO 14721:2003 (OAIS). These general recommendations are out of scope. The sub process shall be certified.

For details refer to EN 9300-013 "Archival Storage".

# **6.4 Retrieval**

The process includes a recommended access check, provides functionality for a data search to select the required data (provided the consumer is allowed to see it), and the generation of a Dissemination Information Package (DIP). The generation of the DIP should meet the requirements of the consumer. The sub process shall be certified.

For details refer to EN 9300-014 "Retrieval".

## 6.5 Removal

Data removal can be initiated either by the rules management system or administrator or by an automatic request generated by the archive. The removal can be performed in two ways:

- deletion of relevant data;
- outsourcing of data, for example into a (technical) museum, which does not meet the requirements of a long term archive.

Inappropriate removal of data may cause difficulties in data path traceability. Caution should be exercised before any data removal.

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The process includes access control functionality for security reasons and data selection functionality for manual selection. The content information of the AIP will be deleted from the archive, but the deletion information remains within the archive's meta data. The removal process checks afterwards the data is correctly deleted and provides a status report. Because data may be stored on permanent media, each company has to decide if a removal process of data be implemented.

The implementation of this process is optional.

For details refer to EN 9300-015 "Removal".

## 6.6 Ingest of pre-existing data

Within the automatically controlled ingest process for pre-existing data, the pre-existing data (archive) will be converted into the recommended archiving format and stored in the long term archive. This process step is only relevant for pre-existing 3D product data, e.g. CAD and PDM data, which fulfil the defined data quality criteria of this reference process. In case of implementation, the process shall be certified.

For details refer to EN 9300-016 "Ingest for pre-existing data".