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Part 015: Reference process description ''Removal''

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Foreword

This document (EN 9300-015:2013) 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of an identical text or by endorsement, at the latest by July 2013, and conflicting national standards shall be withdrawn at the latest by July 2013.

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Introduction

This European Standard was prepared jointly by ASD-STAN and the PROSTEP iViP Association.

The PROSTEP iViP Association is an international non-profit association in Europe. For establishing leadership in IT-based engineering it offers a moderated platform to its nearly 200 members from leading industries, system vendors and research institutions. Its product and process data standardization activities at European and worldwide levels are well known and accepted. The PROSTEP iViP Association sees this standard and the related parts as a milestone of product data technology.

Users should note that all standards undergo revision from time to time and that any reference made herein to any other standard implies its latest edition, unless otherwise stated.

1 Scope

This European Standard provides a detailed description for the recommended process of deletion of the AIP, within the archive as overviewed in EN 9300-010.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 9300-003, *Aerospace series — LOTAR — LOng Term Archiving and Retrieval of digital technical product documentation such as 3D, CAD and PDM data — Part 003: Fundamentals and concepts*

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 9300-010, *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* [1)]

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

3 Terms, definitions and abbreviations

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

4 Applicability

This EN 9300-015 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.

1) Published as ASD-STAN Prestandard at the date of publication of this standard (www.asd-stan.org).

5 Removal

See Figure 1.

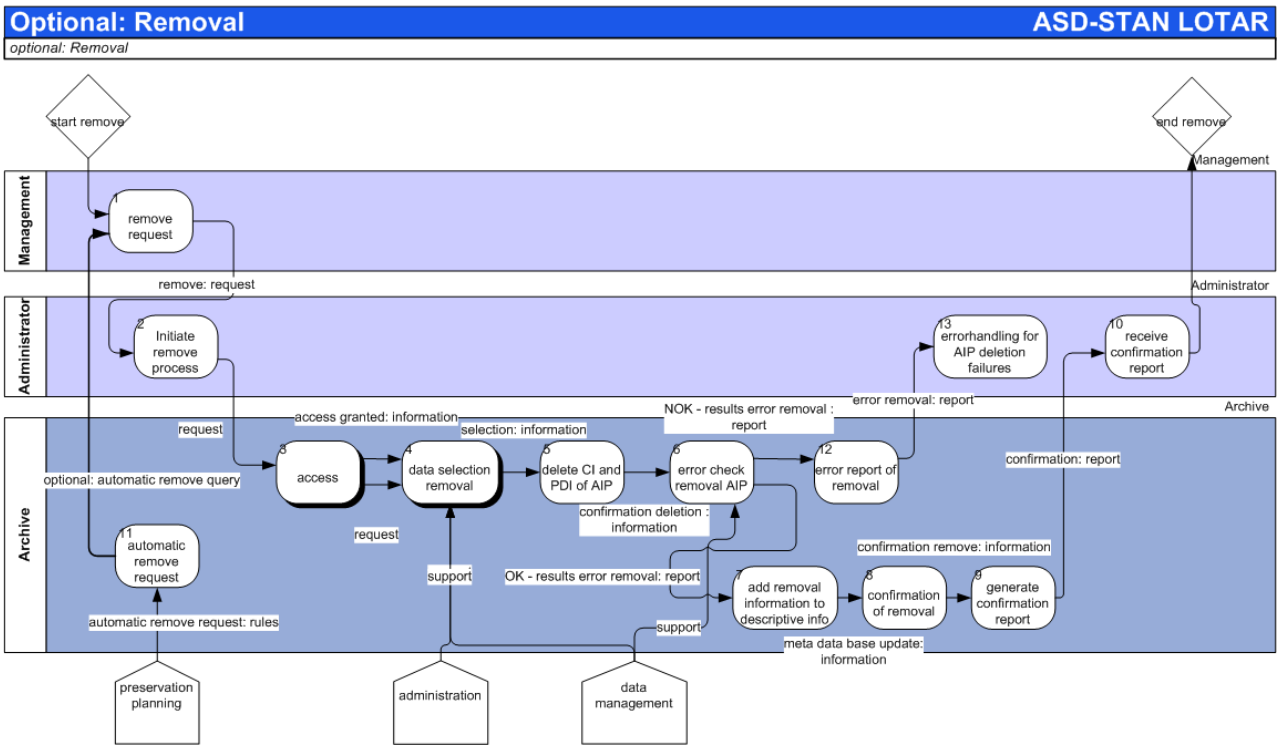

Figure 1 — Removal – Overview

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

— deletion of relevant data, or

— outsourcing of data into a e.g. (technical) museum, which does not obey the terms and conditions of a long term archive.

The process includes an access control functionality for security reasons and a data selection functionality for the manual selection. The Content Information of the AIP will be deleted form the archive, but the deletion information remains within the archives meta data. The remove process checks afterwards the correct data deletion and provides a status report. Because of the fact that data shall be stored permanently, every company has to decide if a removal process of data should be implemented.

Inappropriate Removal of data may cause difficulties in data path traceability. Caution should be exercised before any data removal is authorised and carried out.

The process steps #5 'delete CI and PDI of AIP' and #6 'error check removal AIP' are integrated for process modelling (completeness) reasons.

6 Detailed process steps description

6.1 General

Input and output data described in this standard represent the minimal requirements for the fulfilment of the process steps. Additional data may be added, but must match at a minimum the requirements for the information package. (See EN 9300-003, Section 5.3.2.1 “Definition of the core model”).

6.2 Removal request

The management should decide on the length of retention periods and should confirm the removal requirements. If data is declared as removable, the management initiates a removal request for the archive.

Input data:

— Automatic removal query (optional)

Output data:

— Removal request

6.3 Initiate removal process

The administrator has to initiate the removal process after getting the management notification of the removal of defined information.

Input data:

— Removal request

Output data:

— Request

6.4 Access

The Archive centrally supervises the access rights for each role. The supervision checks if the role has the access rights for triggered queries.

Input data:

— Removal request

Output data:

— Access granted information

— Request

6.5 Data selection removal

The Archive provides functions to search for the requested data. This includes the verification of access rights and methods of filtering the selection, according to access rights. Before removing data, a check should be made to identify any dependent data. The removal should terminate if related data is present. Removal should also be denied if such a removal breaks data continuity from an audit point of view.

Data selection removal should include a confirmation about the physical deletion of the selected data.

Input data:

— Request

— Access granted information

Output data:

— Selection information

6.6 Delete Content Information and Preservation Descriptive Information of AIP

The Archive deletes the CI and PDI from the physical storage. The AIP Descriptive Information will remain within the Archives meta database and will be updated with the deletion information of that AIP.

Input data:

— Selection information

Output data:

— Confirmation deletion information

6.7 Error check removal AIP

The Archive checks the complete deletion of Content Information and Preservation Description Information from the archives physical storage.

Input data:

— Confirmation deletion information

Output data:

— Results error report removal

6.8 Add removal information to descriptive information

The Archive logs the deletion of the Content Information, of the Preservation Description Information, and updates its meta data base. The update can contain the following entries:

— Deletion of which AIP

— Deletion date and time

— Who initiated the deletion

— …

Input data:

— Results error report removal

Output data:

— Meta data base update information

6.9 Confirmation of removal

The archive confirms the complete deletion of the AIP and the update of its meta data base for the belonging AIP.

Input data:

— Meta data base update information

Output data:

— Remove confirmation information

6.10 Generate confirmation report

The Archive generates a confirmation report, which includes the feedback information for the administrator about the removal procedures.

Input data:

— Removal confirmation information

Output data:

— Confirmation report

6.11 Receive confirmation report

The Administrator receives the removal confirmation report.

Input data:

— Confirmation Report

6.12 Automatic removal request

The Archive generates an automatic removal request. The request is based on domain dependent requirements. This can include expired archiving periods for documents e.g. 50 years. After this archiving period the data could be deleted, after review by the administration organisation or the custodian of the product data

Input data:

— Rules for automatic removal request

Output data:

— Automatic removal request

6.13 Error report of removal

In cases of partly deletion of AIP information, the archive generates an error report. The error report provides the deletion failures information.

Input data:

— Results error removal report

Output data:

— Error removal report

6.14 Error handling for AIP deletion failures

The Administrator has to perform an error handling procedure in cases of partly deletion of AIP´s. This includes the manual deletion of relevant information.

Input data:

— Error removal report

7 Support process step: Preservation Planning

The process provides services and functions for monitoring the environment of the archive, and recommendations to ensure that the information stored in the archive remains accessible to the consumer over the long term, even if the original computing environment becomes obsolete. Preservation Planning functions include developing recommendations for archive standards and policies and monitoring changes in the technology environment, archiving format and the addressed consumer.

8 Data descriptions

8.1 General

The descriptions here are informative; the definitions are found in the part EN 9300-007.

8.2 Involved Roles

8.2.1 Management

Management is the role (organisation or person), which is responsible for the management of the aircraft product. The management takes strategic decisions, e.g. Removal of data from the archive.

8.2.2 Administrator

The Administrator is the role (organisation or person), which is responsible for the management of the archive and daily operation. The role performs actions such as access control, monitoring and error handling. The role is not directly involved in the archiving and retrieval processes. The role may not be responsible for the administration of further external tools like quality agents, the evolved TDM, CAx, PDM or Data Exchange applications.

8.2.3 Archive

The Archive is the archiving system, which usual supports at least the key functions of an archiving architecture according ISO 14721:2003 (OAIS). Key functions are administration, data management, archival storage, access control, preservation planning).

8.3 Involved Data

8.3.1 Access granted information

Contains the verification of the requester's access rights.

8.3.2 Automatic removal query

Represents the trigger information for the automatic remove process.

8.3.3 Confirmation deletion Content Information

Contains the information that the removal of the AIP (´s) was performed.

8.3.4 Confirmation removal information

Contains the information that the remove process was performed successfully.

8.3.5 Confirmation report

Gives the role the information that the relevant process was performed successfully.

8.3.6 Error report removal

Represents a automatic generated list resulting from the remove process. This list contains the identified and removed Content Information of process involved AIP's.

8.3.7 Meta data base update information

Meta database update information e.g. for new entries (AIP´s) within the archive or remove information for deleted Content Information.

8.3.8 Request

Manual generated request from the Consumer, or Administrator which can consist of e.g. partly or full part number or assembly knot information. The request will be transferred to the archive frontend. The request must contain the account information, like name and /or password of the current user.

8.3.9 Removal request

Remove request represents the management information for removal of an AIP within the archive.

8.3.10 Results error removal report

Contains the information if the removal process was performed successfully or not. If the process was not performed in a correct way the error report provides to the administrator the mismatches and advises what error handling should be done.

8.3.11 Selection information

Contains a list of selected documents for removal.

8.3.12 Rules for automatic removal request

Specific rules and constraint information for the automatic generated removal of archive data.

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[5] *STEP — Towards open systems,* STEP Fundamentals & Business Benefits, Dr. Kais Al- Timini, John Mac Krell, 1999, CIMdata

[6] [BooRumJac99] — Booch, G. Rumbaugh, J. Jacobson, I. *The Unified Modeling Language, User Guide*, Addison-Wesley, 1999

[7] **BGB:** Bürgerliches Gesetz Buch — German civil code

[8] **European Union Directive 99/93/EC:** The directive is a common and comparable pan-European standard for offering and using electronic signature proceedings shall be established.

[9] **European Union Directive 98/37/EC:** The directive is a common and comparable pan-European standard which means that no machine can be placed on the EU single market or installed if it does not bear the CE Marking.

[10] **IDEF0:** is a method designed to model the decisions, actions, and activities of an organisation or system. IDEF0 was derived from a well-established graphical language, the Structured Analysis and Design Technique (SADT), introduced by Douglas T. Ross in the early 1970s. — (David A. Marca and Clement L. McGowan, SADT: *Structured Analysis and Design Techniques*. McGraw-Hill, New York, NY, 1988.)

[11] JAR 21, *Certification procedures for aircraft and related products and parts*

[12] **Unified Modelling Language, v1.4:** UML (Unified Modeling Language) represents an OMG (Object Management Group) standard for visual object oriented modeling. Introduced 1997 it became the standard modeling language for software development. UML consists of different diagram types (Class-, Object-, Statechart-, Activity-, Sequence-, Collaboration-, Use-Case-, and Component Diagram), and each diagram shows a specific static or dynamic aspect of a system [BooRumJac99].

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