SLOVENSKI STANDARD
SIST EN 9300-004:2014

01-februar-2014

Aeronavtika - LOTAR - Dolgotrajno arhiviranje in iskanje digitalne tehnične dokumentacije o izdelkih, kot so podatki 3D, CAD in PDM - 004. del: Opisne metode

Aerospace series - LOTAR - Long Term Archiving and Retrieval of digital technical product documentation such as 3D, CAD and PDM data - Part 004: Description methods

Luft- und Raumfahrt - LOTAR - Langzeit-Archivierung und -Bereitstellung digitaler technischer Produktdokumentationen, wie zum Beispiel von 3D-, CAD- und PDM-Daten - Teil 004: Beschreibungsmethoden

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Ta slovenski standard je istoveten z: **EN 9300-004:2013**

ICS:

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

SIST EN 9300-004:2014 **en**

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EUROPEAN STANDARD

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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 004: Description methods

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Foreword

This document (EN 9300-004:2013) 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of an identical text or by endorsement, at the latest by July 2013, and conflicting national standards shall be withdrawn at the latest by July 2013.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] 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, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

EN 9300-004:2013 (E)

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 European Standard and the related parts as a milestone of product data technology.

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

All EN 9300-xxx standards quoted in this document have been either published as ASD-STAN prestandards or are in preparation at the date of this European Standard.

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1   Scope

This European Standard presents methods which are divided into four main categories:

1)   scope and scenario description;

2)   process description;

3)   data;

4)   system architecture.

For scope and scenario description, the modelling methods are based on Unified Modelling Language (UML) Use Case diagrams. The process descriptions are done using Simplified Activity diagrams. Data modules are described by Express G diagrams. Rules and constraints are described via Express-Where-Rules. Further descriptions, for example, for a data dictionary, are based on tabular forms.

To support the development of a system architecture, the modelling method of UML Package diagrams is used.

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 9300-007, *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]

ISO 10303-11, *Industrial automation systems and integration — Product data representation and exchange — Part 11: Description methods: The EXPRESS language reference manual*

3   Terms, definitions and abbreviations

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

4   Applicability

EN 9300-004 provides an overview of the used methods to support an equal level of understanding of the standards context. EN 9300-004 recommends the usage of standardized methods.

If not otherwise specified by contractual requirements, EN 9300-004 is applicable to all records which provide objective evidence covering:

a)   archiving requirements;

b)   data quality requirements.

EN 9300-004 is applicable to existing records, on current and earlier products, produced using previous regulations.

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

5 Method for scope/scenario description: UML Use Case diagram

The Unified Modelling Language (UML) is an industry-standard language for specifying, visualising, constructing, and documenting software systems. It simplifies the complex process of software design by making a "blueprint" for construction. The diagrams are realised with the specification of UML version 1.4.

According to UML definitions, Use Case diagrams identify the functionality provided by the system (use cases), the users who interact with the system (actors), and the association between users and functionality. Normally Use Cases are used in the analysis phase of software development to articulate the high-level requirements of the system.

The primary goals of a Use Case diagram include:

— providing a high-level view of what the system does;

— identifying the users (actors) of the system.

Within this document, a Use Case diagram is used to apply the permutation of the requirements into specific scenarios.
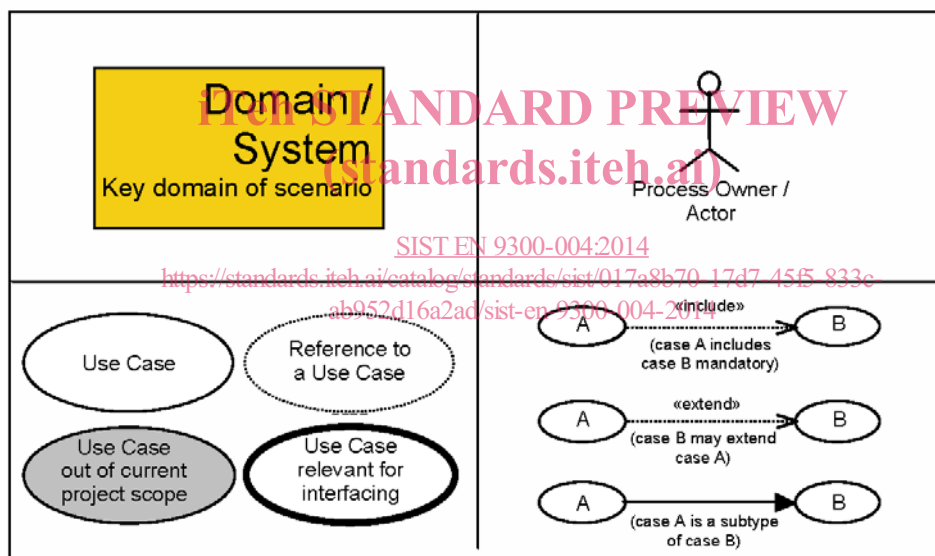
The following UML elements are used:

Figure 1 — Used UML elements

The UML Use Case diagram describes the dependencies which can occur between identified use cases and involved participants (actors) within the environment of a specific system or domain. The diagram differs in four types of use case representations:

1) use cases;

2) references to a use (further detailed descriptions);

3) use cases which are relevant within this specific domain but not relevant for the project;

4) use cases which are relevant for data exchange and interfacing (within the use case description a combination of use case representation is possible).

The dependencies between the use cases are described by different line style of arrows. Dashed line arrows describe the relationships between the use cases (include or extend). Solid line arrows describe the inheritance between the use cases. Solid lines describe the interaction between actors and use cases.

Figure 2 gives an example.
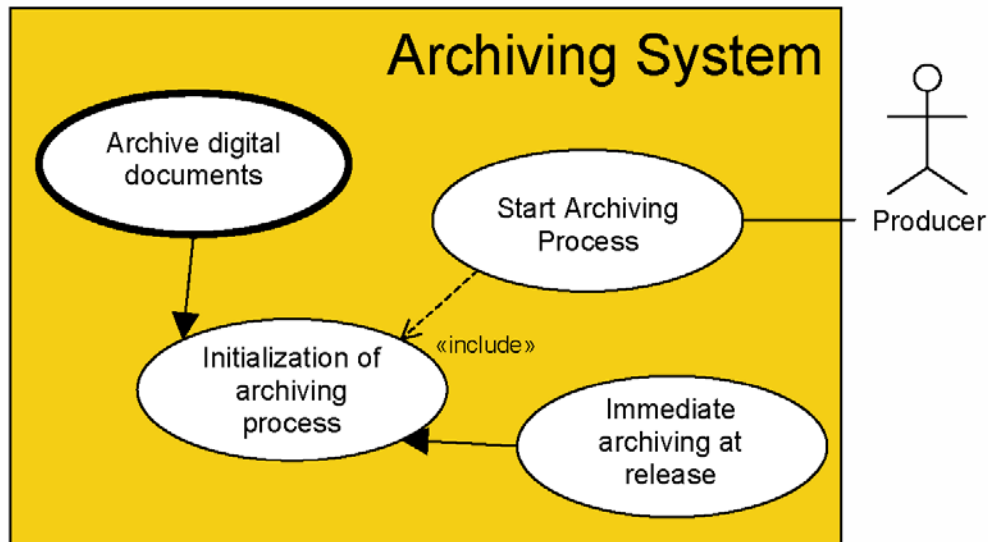
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Figure 2 — Example UML Use case diagram

The "start archiving process" is triggered by the actor "producer". The use case includes the use case "initialisation of archiving process", which inherits all functionalities of the sub cases "immediate archiving at release" and "archive digital documents". Additionally "Archive digital documents" indicates a use case which is relevant for data exchange between two systems via an interface.

6 Method for process description: Simplified activity diagram

The detailed description and analysis of scenarios and resulting processes are shown by simplified activity diagrams based on the UML and IDEF0. 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). IDEF0 models help to organise the analysis of a system and to promote good communication between the analyst and the customer. IDEF0 is useful in establishing the scope of an analysis, especially a functional analysis.