DIN EN 9300-500:2026-01 (E)

Erscheinungsdatum: 2025-12-12

Aerospace series - LOTAR -Long Term Archiving and Retrieval of digital technical product documentation such as requirements, architecture, simulation, and analytical data - Part 500: Fundamentals and Concepts for Long Term Archiving to enable Model-based Systems Engineering; English version prEN 9300-500:2025

Contents

Page

European foreword ... 4

Introduction ... 5

1 Scope ... 7
1.1 In Scope ... 7
1.2 Out of Scope ... 7

2 Normative references ... 8

3 Terms, definitions and abbreviations ... 8

4 Applicability ... 8

5 Business specifications for archiving and retrieving MBSE entities ... 8
5.1 MBSE Process and Use Cases ... 8
5.2 MBSE Use Case Examples ... 10
5.2.1 General ... 10
5.2.2 User Viewpoint ... 10
5.2.3 Company Viewpoint ... 11
5.2.4 Use Case for Requirements Management (P510) ... 11
5.2.5 Use Case for Verification and Validation (P515) ... 12
5.2.6 Use Case for Analytical Behaviour Model (P520) ... 13
5.2.7 Use Case for System Architecture Descriptions (P530) ... 14
5.2.8 Use Case for Logical Bill-of-Materials (P540) ... 15
5.2.9 Use Case for highly integrated and interrelated models (P550) ... 16

6 Essential MBSE Information and data ... 17
6.1 General ... 17
6.2 Applying basic EN 9300 principles ... 18
6.3 Using STEP – Product data representation and exchange ... 20
6.4 Data preservation is justified by business needs ... 21
6.5 Identification of essential information ... 21
6.6 Data retention during the Product Lifecycle ... 22
6.7 MBSE data retention milestones ... 23
6.7.1 General ... 23
6.7.2 Identifying mature data ... 24
6.7.3 Data Maturity Status ... 25
6.8 Domain Representations for Archival and Retrieval ... 26
6.9 Guidelines for implementing an MBSE archive ... 27
6.9.1 General ... 27
6.9.2 Data preservation planning ... 27
6.9.3 Archiving Configured Baselines ... 27
6.9.4 Process Documentation ... 28
6.9.5 Essential Data in Relation to Business Scenarios to Be Supported ... 28

7 Verification and Validation (V&V) of MBSE models ... 29
7.1 Implementing V&V ... 29
7.1.1 General ... 29
7.1.2 V&V Rules for MBSE Information ... 29
7.1.3 The Application of V&V Rules ... 29

7.2 Verification Rules for Archiving MBSE Information 30
7.2.1 General 30
7.2.2 Content verification 31
7.2.3 Package verification 31
7.2.4 Verification level 1 – Mandatory rules 31
7.2.5 Verification level 2 – Mandatory plus optional rules 32
7.3 Validation rules for MBSE Information 32
7.3.1 General 32
7.3.2 Levels of Validation 33
7.3.3 Validation Level 1 – Mandatory rules 33
7.3.4 Validation Level 2 – Mandatory plus optional rules 33
7.4 Verification and validation steps during the MBSE model archiving process 34
7.4.1 General 34
7.4.2 Model creation 34
7.4.3 Model Archiving 35
7.4.4 Model Storage 36
7.4.5 Model Consulting 36
7.4.6 Model Retrieval 36
7.4.7 Model Consumption 36

8 Preservation planning for archived MBSE information 36
8.1 General 36
8.2 The Model Manifest and Report 37
8.3 The Process Workflow 37
8.3.1 General 37
8.3.2 The Workflow Overview 39
8.3.3 The Process Roles 39
8.4 The Model Manifest 39
8.4.1 General 39
8.4.2 Manifest Rules 40
8.5 The Model Report 40
8.5.1 General 40
8.5.2 Model Report Rules 40
8.6 Designating the Credibility and Coherence of MBSE Information 41
8.7 Create an Implementation Package: The Logical Bill-of-Material (LBOM) 41
8.8 Managing Links to external MBSE Information 42
8.9 Alternative Designs for archiving MBSE information 42
8.10 Identifying risks for long term archiving of MBSE Information 43

9 Evolution of MBSE data standards 43

10 Definition of Archive Information Packages for MBSE Data 44
10.1 General 44
10.2 Content Information 44
10.3 Preservation Description Information 45

Annex A (informative) Model Metadata 47

Annex B (informative) Model Report 53

Annex C (informative) Glossary 59

Bibliography 61