



**International
Standard**

ISO/IEC 26566

**Software and systems
engineering — Methods and tools
for product line texture**

*Ingénierie logiciel et système — Méthodes et outils pour la
texture d'une ligne de produits*

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Contents

	Page
Foreword	v
Introduction	vi
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 Reference model for product line texture	2
4.1 Overview.....	2
4.2 Constituents of reference model for product line texture.....	2
5 Product line texture management	6
5.1 General.....	6
5.2 Product line texture planning.....	6
5.2.1 Principal constituents.....	6
5.2.2 Identify product line texture strategies.....	7
5.2.3 Assign responsibility for product line texture operationalization.....	7
5.2.4 Define success measures for product line texture operationalization.....	7
5.2.5 Estimate resources required to operate product line texture.....	8
5.2.6 Document product line texture plans.....	8
5.3 Product line texture enabling.....	9
5.3.1 Principal constituents.....	9
5.3.2 Enable product line texture facilitators.....	9
5.3.3 Provide guidance for product line texture operationalization.....	10
5.3.4 Enable a measurement environment for quantifying product line texture operationalization.....	10
5.4 Product line texture managing.....	11
5.4.1 Principal constituents.....	11
5.4.2 Review product line texture operationalization status with success measures.....	11
5.4.3 Control issues on product line texture operationalization.....	12
5.4.4 Perform corrective actions on product line texture operationalization.....	12
6 Product line texture operationalization	13
6.1 General.....	13
6.2 Product line texture for requirements.....	13
6.2.1 Principal constituents.....	13
6.2.2 Analyse common rules and constraints in requirements engineering.....	14
6.2.3 Define textures in requirements.....	14
6.2.4 Formulate textures in requirements.....	14
6.2.5 Verify textures in requirements.....	15
6.3 Product line texture for design.....	15
6.3.1 Principal constituents.....	15
6.3.2 Analyse common rules and constraints in design.....	16
6.3.3 Define textures in design.....	16
6.3.4 Formulate textures in design.....	17
6.3.5 Verify textures in design.....	17
6.4 Product line texture for realization.....	17
6.4.1 Principal constituents.....	17
6.4.2 Analyse common rules and constraints in realization.....	18
6.4.3 define textures in realization.....	18
6.4.4 Formulate textures in realization.....	18
6.4.5 Verify textures in realization.....	19
6.5 Product line texture for testing.....	19
6.5.1 Principal constituents.....	19
6.5.2 Analyse common rules and constraints in testing.....	20
6.5.3 Define textures in testing.....	20
6.5.4 Formulate textures in testing.....	20

ISO/IEC 26566:2026(en)

6.5.5	Verify textures in testing.....	21
6.6	Product line texture for after compilation.....	21
6.6.1	Principal constituents.....	21
6.6.2	Analyse common rules and constraints of after-compile-time activities.....	22
6.6.3	Define textures of after-compile-time activities.....	22
6.6.4	Formulate textures of after-compile-time activities.....	22
6.6.5	Verify textures of after-compile-time activities.....	23
6.7	Product line texture for configuration.....	23
6.7.1	Principal constituents.....	23
6.7.2	Analyse common rules and constraints in configuration.....	24
6.7.3	Define textures in configuration.....	24
6.7.4	Formulate textures in configuration.....	24
6.7.5	Verify textures in configuration.....	24
7	Product line texture support.....	25
7.1	General.....	25
7.2	Conformance to product line texture.....	25
7.2.1	Principal constituents.....	25
7.2.2	Objectively assure the conformance of textures in relevant domain engineering processes.....	26
7.2.3	Objectively assure the conformance of textures in relevant application engineering processes.....	26
7.2.4	Communicate quality and non-compliance issues of product line textures.....	27
7.3	Change management of product line texture.....	27
7.3.1	Principal constituents.....	27
7.3.2	Identify changes in product line texture.....	28
7.3.3	Analyse the impacts of changes on domain engineering artefacts.....	28
7.3.4	Analyse the impacts of changes on application engineering artefacts.....	28
7.3.5	Record and communicate the change status of product line textures.....	29
7.4	Traceability of product line texture.....	29
7.4.1	Principal constituents.....	29
7.4.2	Establish trace links between textures in domain artefacts.....	30
7.4.3	Establish trace links between textures and application artefacts.....	30
7.4.4	Integrate trace links in textures into other trace links in product line development lifecycle.....	30
	Annex A (Informative) Exemplary product line textures.....	31
	Bibliography.....	32

Foreword

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Introduction

Software and systems product line (SSPL) engineering and management creates, exploits, and manages a common platform to develop a family of products (e.g. software products, systems architectures) at a lower cost, with reduced time to market and better quality. As a result, it has gained increasing global attention since the 1990s.

SSPL engineering uses platforms to facilitate mass customization. To facilitate this, SSPL engineering establishes two distinct engineering processes: domain engineering and application engineering. Domain engineering process is responsible for producing a reusable platform, while application engineering process reuses the platform to derive planned member products. When application engineering derives a member product from the platform, it exploits the defined variability and adds application-specific variability not defined in domain engineering. For correct binding of variability and integrating application-specific variability, domain engineering provides detailed guidelines, rules, and restrictions, and application engineering should follow them to help ensure that the right member products will be derived. Product line textures indicates the guidelines, rules, and restrictions. They may be defined at any product line engineering processes. A texture defined at a specific domain engineering process takes effect on the subsequent processes as well as its related application engineering process. This document deals with methods and tools for product line textures that are aware of these aspects.

This document can be used in the following modes:

- by organizations that want to adopt SSPL for producing their products – to provide guidance on how to define and validate textures, and how to check conformance to textures;
- by a product line organization – to provide guidance on the evaluation and selection for methods and tools for product line textures;
- by providers of either methods or tools, or both – to provide guidance on implementing or developing either methods or tools, or both, by specifying a comprehensive set of methods and tools capabilities for supporting product line textures.

Documents on product line engineering and management developed by ISO/IEC JTC 1 address both engineering and management processes and capabilities of methods and tools in terms of the critical characteristics of product line development. This document provides processes and capabilities of methods and tools for product line textures. Standards in the ISO/IEC 26550 family include ISO/IEC 26550, ISO/IEC 26551, ISO/IEC 26552, ISO/IEC 26553, ISO/IEC 26554, ISO/IEC 26555, ISO/IEC 26556, ISO/IEC 26557, ISO/IEC 26558, ISO/IEC 26559, ISO/IEC 26560, ISO/IEC 26561, ISO/IEC 26562, ISO/IEC 26563, ISO/IEC 26564, and ISO/IEC 26565.

- Processes and capabilities of methods and tools for domain requirements engineering and application requirements engineering are provided in ISO/IEC 26551;
- Processes and capabilities of methods and tools for domain design and application design are provided in ISO/IEC 26552;
- Processes and capabilities of methods and tools for domain realization and application realization are provided in ISO/IEC 26553;
- Processes and capabilities of methods and tools for domain testing and application testing are provided in ISO/IEC 26554;
- Processes and capabilities of methods and tools for technical management are provided in ISO/IEC 26555;
- Processes and capabilities of methods and tools for organizational management are provided in ISO/IEC 26556;
- Processes and capabilities of methods and tools for variability mechanisms are provided in ISO/IEC 26557;
- Processes and capabilities of methods and tools for variability modelling are provided in ISO/IEC 26558;

ISO/IEC 26566:2026(en)

- Processes and capabilities of methods and tools for variability traceability are provided in ISO/IEC 26559;
- Processes and capabilities of methods and tools for product line product management are provided in ISO/IEC 26560;
- Processes and capabilities of methods and tools for product line technical probe are provided in ISO/IEC 26561;
- Processes and capabilities of methods and tools for product line transition management are provided in ISO/IEC 26562;
- Processes and capabilities of methods and tools for product line configuration management are provided in ISO/IEC 26563;
- Processes and capabilities of methods and tools for product line measurement are provided in ISO/IEC 26564;
- Processes and capabilities of methods and tools for product line maturity framework are provided in ISO/IEC 26565 (International Standard under development);
- Others (ISO/IEC 26567 to ISO/IEC 26599): To be developed.

Software and systems engineering — Methods and tools for product line texture

1 Scope

This document, within the context of methods' and tools' capability for supporting product line texture, defines:

- processes for product line texture management, operationalization, and support; those processes are described in terms of purpose, inputs, tasks, and outcomes;
- method capabilities to support the defined tasks of each process;
- tool capabilities that automate or semi-automate tasks and methods.

This document does not concern the processes and capabilities of tools and methods for a single system but rather deals with those for a family of products.

2 Normative references

There are no normative references in this document.

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