

STN	Zdravotnícka informatika Architektúra služieb (HISA) Časť 2: Informačná úroveň (ISO 12967-2: 2020)	STN EN ISO 12967-2 84 8106
------------	---	--

Health informatics - Service Architecture (HISA) - Part 2: Information viewpoint (ISO 12967-2:2020)

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 05/21

Obsahuje: EN ISO 12967-2:2020, ISO 12967-2:2020

Oznámením tejto normy sa ruší
STN EN ISO 12967-2 (84 8106) z augusta 2011

132801

EUROPEAN STANDARD

EN ISO 12967-2

NORME EUROPÉENNE

EUROPÄISCHE NORM

November 2020

ICS 35.240.80

Supersedes EN ISO 12967-2:2011

English Version

**Health informatics - Service Architecture (HISA) - Part 2:
Information viewpoint (ISO 12967-2:2020)**Informatique de santé - Architecture de service - Partie
2: Point de vue d'information (ISO 12967-2:2020)Medizinische Informatik - Servicearchitektur - Teil 2:
Informationssicht (ISO 12967-2:2020)

This European Standard was approved by CEN on 11 June 2020.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.

EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG**CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels**

EN ISO 12967-2:2020 (E)

Contents	Page
European foreword.....	3

European foreword

This document (EN ISO 12967-2:2020) has been prepared by Technical Committee ISO/TC 215 "Health informatics" in collaboration with Technical Committee CEN/TC 251 "Health informatics" the secretariat of which is held by NEN.

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 May 2021, and conflicting national standards shall be withdrawn at the latest by May 2021.

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.

This document supersedes EN ISO 12967-2:2011.

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

Endorsement notice

The text of ISO 12967-2:2020 has been approved by CEN as EN ISO 12967-2:2020 without any modification.

**INTERNATIONAL
STANDARD**

**ISO
12967-2**

Second edition
2020-11

**Health informatics — Service
architecture (HISA) —**

**Part 2:
Information viewpoint**

*Informatique de santé — Architecture de service —
Partie 2: Point de vue de l'information*



Reference number
ISO 12967-2:2020(E)

© ISO 2020

ISO 12967-2:2020(E)**COPYRIGHT PROTECTED DOCUMENT**

© ISO 2020

All rights reserved. Unless otherwise specified, or required in the context of its implementation, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Email: copyright@iso.org
Website: www.iso.org

Published in Switzerland

Contents

Page

Foreword	v
Introduction	vi
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 Abbreviated terms	2
5 Methodological principles	2
5.1 Language and notation adopted for the specification of the model.....	2
5.2 UML class diagram notation guidelines and profile.....	3
5.3 Clusters of objects in the information model.....	4
5.4 Operational and descriptive information: classifications, knowledge and its instantiation.....	5
5.5 Data types.....	7
5.6 General characteristics of the model.....	8
6 General characteristics of the model	8
6.1 Common structure of each information object: the GenericHisaClass.....	8
6.2 UML diagram.....	9
6.3 Specification of Generic HISA Class.....	10
6.3.1 Generic meta-class.....	10
6.3.2 Class: Set of structure attributes.....	11
6.3.3 Class: Set of class specific attributes.....	11
6.3.4 Class: Set of common attributes.....	11
6.3.5 Class: Set of system attributes.....	11
6.3.6 Class: Set of version attributes.....	12
6.3.7 Class: Extended attributes.....	12
6.3.8 Class: State changes.....	13
6.3.9 Class: Business rules.....	13
6.3.10 Class: Classification criteria.....	14
7 The reference information models	14
7.1 Classification objects.....	14
7.1.1 Aim.....	14
7.1.2 UML information model.....	14
7.1.3 Specification of the individual classes.....	15
7.2 Subject of care objects.....	18
7.2.1 Aim.....	18
7.2.2 UML information model.....	18
7.2.3 Specification of the individual classes.....	19
7.3 Activity management objects.....	23
7.3.1 Aim.....	23
7.3.2 UML information model.....	24
7.3.3 Specification of the individual classes.....	24
7.4 Clinical and health information objects.....	31
7.4.1 Aim.....	31
7.4.2 UML information model.....	31
7.4.3 Specification on the individual classes.....	32
7.5 Resource management objects.....	37
7.5.1 Aim.....	37
7.5.2 UML information model.....	37
7.5.3 Specification of the individual classes.....	37
7.6 User and authorization objects.....	43
7.6.1 Aim.....	43
7.6.2 UML information model.....	43
7.6.3 Specification of the individual classes.....	44

ISO 12967-2:2020(E)

7.7	Messaging objects.....	49
7.7.1	Aim.....	49
7.7.2	UML information model.....	50
7.7.3	Specification of the individual classes.....	50
Bibliography	54

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 215, *Health informatics*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 251, *Health informatics*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This second edition cancels and replaces the first edition (ISO 12967-2:2009), which has been technically revised. The main changes compared to the previous edition are as follows:

- use of terms, definitions and concepts from ISO 13940:2015 (Contsys), with textual alignment throughout the document including figures, to the extent possible and beneficial;
- reference to further standards, such HL7®;
- updates to the Bibliography.

A list of all parts in the ISO 12967 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

ISO 12967-2:2020(E)

Introduction

The ISO 12967 series provides guidance for the description, planning and development of new systems as well as for the integration of existing information systems, both within one enterprise and across different healthcare organizations through an architecture integrating the common data and business logic into a specific architectural layer (i.e. the service architecture), distinct from individual applications and accessible throughout the whole information system through information services, as shown in [Figure 1](#).

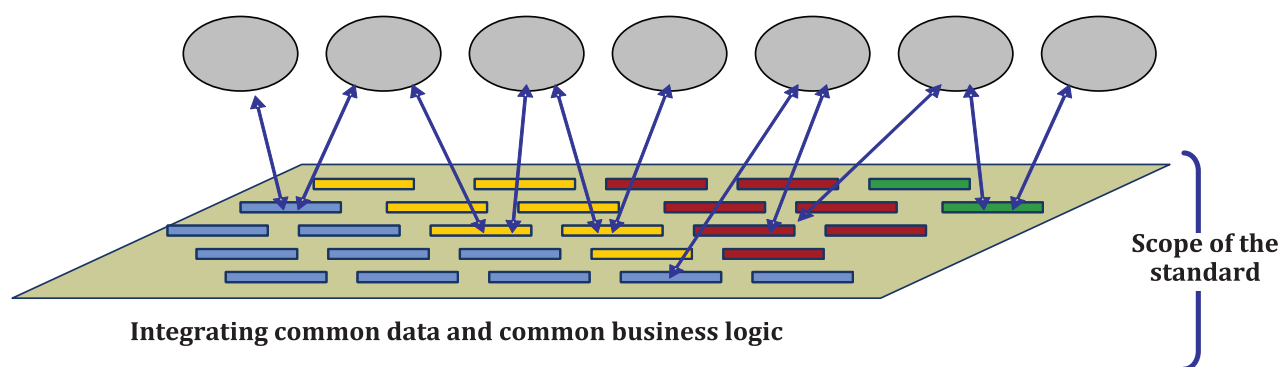


Figure 1 — Scope of the ISO 12967 series

The overall architecture is formalized according to ISO/IEC 10746 (all parts) and is therefore structured through the following three viewpoints.

- a) Enterprise viewpoint: specifies a set of fundamental common requirements at enterprise level with respect to the organizational purposes, scopes and policies that should be supported by the information and functionality of the service architecture. It also provides guidance on how one individual enterprise (e.g. a regional healthcare authority, a large hospital or any other organization where this model is applicable) can specify and document additional specific business requirements, with a view to achieving a complete specification, adequate for the characteristics of that enterprise.

Enterprise viewpoint is specified in ISO 12967-1.

- b) Information viewpoint: specifies the fundamental semantics of the information model to be implemented by the service architecture to integrate the enterprise's common data and to support the enterprise requirements formalized in ISO 12967-1. It also provides guidance on how one individual enterprise can extend the standard model with additional concepts needed to support local requirements in terms of information to be put in common.

Information viewpoint is specified in this document.

- c) Computational viewpoint: specifies the scope and characteristics of the information services that should be provided by the service architecture for allowing access to the common data as well as for the execution of the business logic supporting the enterprise processes identified in the information viewpoint and in ISO 12967-1. It also provides guidance on how one individual enterprise can specify additional information services needed to support local specific requirements in terms of common business logic to be implemented.

Computational viewpoint is specified in ISO 12967-3.

ISO 12967-1:2020, Annex C includes an explanation of ISO 23903:—¹⁾ and its relevance in regard to the ISO 12967 series, for integration with other International Standards such as ISO 13940.

1) Under preparation. Stage at the time of publication: ISO/DIS 23903:2020.

Health informatics — Service architecture (HISA) —

Part 2: Information viewpoint

1 Scope

This document specifies the fundamental characteristics of the information model implemented by a specific architectural layer (i.e. the service architecture) of the information system to provide a comprehensive and integrated storage of the common enterprise data and to support the fundamental business processes of the healthcare organization, as defined in ISO 12967-1.

The information model is specified in this document without any explicit or implicit assumption on the physical technologies, tools or solutions to adopt for its physical implementation in the various target scenarios. The specification is nevertheless formal, complete and non-ambiguous enough to allow implementers to derive an efficient design of the system in the specific technological environment that will be selected for the physical implementation.

This document does not aim at representing a fixed, complete, specification of all possible data that can be necessary for any requirement of any healthcare enterprise. It specifies only a set of characteristics, in terms of overall organization and individual information objects, identified as fundamental and common to all healthcare organizations, and that is satisfied by the information model implemented by the service architecture.

Preserving consistency with the provisions of this document, physical implementations are allowed extensions to the standard information model in order to support additional and local requirements. Extensions include both the definition of additional attributes in the objects of the standard model, and the implementation of entirely new objects.

Also, this document specification is extensible over time according to the evolution of the applicable standardization initiatives.

The specification of extensions is carried out according to the methodology defined in ISO 12967-1:2020, Clause 7.

2 Normative references

There are no normative references in this document.

koniec náhľadu – text ďalej pokračuje v platenej verzii STN