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Health informatics - Service architecture - Part 2: Information viewpoint (ISO 12967 -2:2009)

I.S. EN ISO 12967-2:2011

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Health informatics - Service architecture - Part 2: Information viewpoint (ISO 12967-2:2009)

Informatique de santé - Architecture de service - Partie 2:
Point de vue d'information (ISO 12967-2:2009)

Medizinische Informatik - Servicearchitektur - Teil 2:
Informationssicht (ISO 12967-2:2009)

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Foreword

The text of ISO 12967-2:2009 has been prepared by Technical Committee ISO/TC 215 “Health informatics” of the International Organization for Standardization (ISO) and has been taken over as EN ISO 12967-2:2011 by 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of an identical text or by endorsement, at the latest by September 2011, and conflicting national standards shall be withdrawn at the latest by September 2011.

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I.S. EN ISO 12967-2:2011
**INTERNATIONAL
STANDARD**

**ISO
12967-2**

First edition
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**Health informatics — Service
architecture —**

**Part 2:
Information viewpoint**

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



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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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

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.

ISO 12967-2 was prepared by Technical Committee ISO/TC 215, *Health informatics*, based on the European Standard EN 12967-2:2007 with minor editorial amendments.

ISO 12967 consists of the following parts, under the general title *Health informatics — Service architecture*:

- *Part 1: Enterprise viewpoint*
- *Part 2: Information viewpoint*
- *Part 3: Computational viewpoint*

Introduction

This is the second part of ISO 12967, a multi-part standard that 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 middleware), distinct from individual applications and accessible throughout the whole information system through services, as shown in Figure 1.

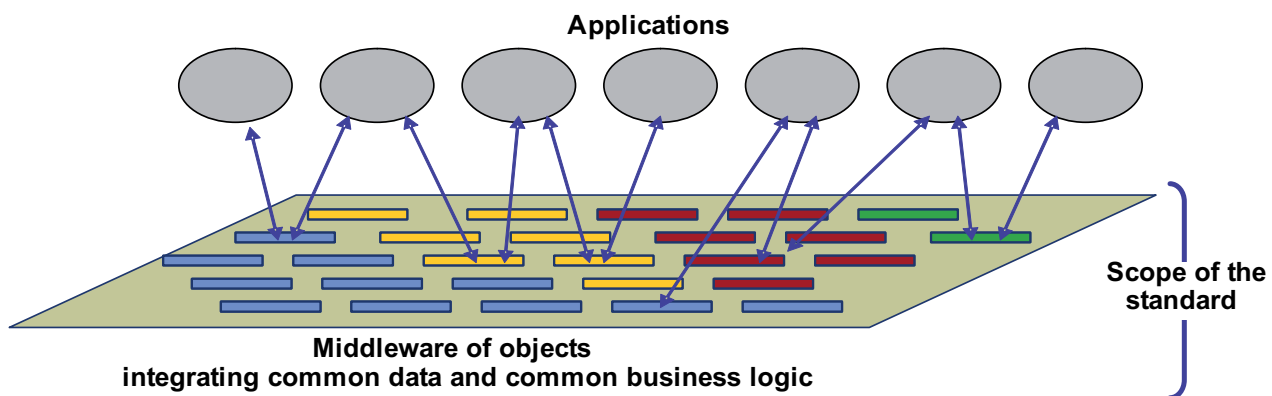


Figure 1 — Scope

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 must be supported by the information and functionality of the middleware. 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 middleware to integrate the common enterprise 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 part of ISO 12967.

- c) Computational viewpoint: specifies the scope and characteristics of the services that must be provided by the middleware for allowing access to the common data as well as 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 services needed to support local specific requirements in terms of common business logic to be implemented.

Computational viewpoint is specified in ISO 12967-3.

Health informatics — Service architecture —

Part 2: Information viewpoint

1 Scope

This part of ISO 12967 specifies the fundamental characteristics of the information model to be implemented by a specific architectural layer (i.e. the middleware) 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 without any explicit or implicit assumption on the physical technologies, tools or solutions to be adopted 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 specification 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 middleware.

Preserving consistency with the provisions of this part of ISO 12967, physical implementations allow 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 standard 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 12967-1:2009, Clause 7, "Methodology for extensions".

2 Normative references

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

ISO/IEC 11404:2007, *Information technology — General-Purpose Datatypes (GPD)*

ISO 12967-1:2009, *Health informatics — Service architecture — Part 1: Enterprise viewpoint*

ISO 12967-3:2009, *Health informatics — Service architecture — Part 3: Computational viewpoint*

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