



NSAI
Standards

Irish Standard
I.S. EN ISO 21298:2017

Health informatics - Functional and structural roles (ISO 21298:2017)

© CEN 2017 No copying without NSAI permission except as permitted by copyright law.

I.S. EN ISO 21298:2017

Incorporating amendments/corrigenda/National Annexes issued since publication:

The National Standards Authority of Ireland (NSAI) produces the following categories of formal documents:

I.S. xxx: Irish Standard — national specification based on the consensus of an expert panel and subject to public consultation.

S.R. xxx: Standard Recommendation — recommendation based on the consensus of an expert panel and subject to public consultation.

SWiFT xxx: A rapidly developed recommendatory document based on the consensus of the participants of an NSAI workshop.

This document replaces/revises/consolidates the NSAI adoption of the document(s) indicated on the CEN/CENELEC cover/Foreword and the following National document(s):

NOTE: The date of any NSAI previous adoption may not match the date of its original CEN/CENELEC document.

This document is based on:

EN ISO 21298:2017

Published:

2017-02-22

*This document was published
under the authority of the NSAI
and comes into effect on:*

2017-03-24

ICS number:

35.240.80

NOTE: If blank see CEN/CENELEC cover page

NSAI
1 Swift Square,
Northwood, Santry
Dublin 9

T +353 1 807 3800
F +353 1 807 3838
E standards@nsai.ie
W NSAI.ie

Sales:
T +353 1 857 6730
F +353 1 857 6729
W standards.ie

Údarás um Chaighdeáin Náisiúnta na hÉireann

National Foreword

I.S. EN ISO 21298:2017 is the adopted Irish version of the European Document EN ISO 21298:2017, Health informatics - Functional and structural roles (ISO 21298:2017)

This document does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

For relationships with other publications refer to the NSAI web store.

Compliance with this document does not of itself confer immunity from legal obligations.

In line with international standards practice the decimal point is shown as a comma (,) throughout this document.

This page is intentionally left blank

EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN ISO 21298

February 2017

ICS 35.240.80

English Version

**Health informatics - Functional and structural roles (ISO
21298:2017)**

Informatique de santé - Rôles fonctionnels et
structurels (ISO 21298:2017)

Medizinische Informatik - Funktionelle und
strukturelle Rollen (ISO 21298:2017)

This European Standard was approved by CEN on 20 January 2017.

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, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, 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: Avenue Marnix 17, B-1000 Brussels

EN ISO 21298:2017 (E)

Contents	Page
European foreword.....	3

European foreword

This document (EN ISO ISO 21298:2017) 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 August 2017, and conflicting national standards shall be withdrawn at the latest by August 2017.

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 organizations 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, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

Endorsement notice

The text of ISO 21298:2017 has been approved by CEN as EN ISO 21298:2017 without any modification.

This page is intentionally left blank

INTERNATIONAL STANDARD

**ISO
21298**

First edition
2017-02

Health informatics — Functional and structural roles

Informatique de santé — Rôles fonctionnels et structurels



Reference number
ISO 21298:2017(E)

© ISO 2017

ISO 21298:2017(E)



COPYRIGHT PROTECTED DOCUMENT

© ISO 2017, Published in Switzerland

All rights reserved. Unless otherwise specified, 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
Ch. de Blandonnet 8 • CP 401
CH-1214 Vernier, Geneva, Switzerland
Tel. +41 22 749 01 11
Fax +41 22 749 09 47
copyright@iso.org
www.iso.org

Contents

Page

Foreword	iv
Introduction	v
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 Abbreviated terms	5
5 Modeling roles in an architectural context	5
5.1 Roles within the Generic Component Model	5
5.2 Roles and policy aspects	8
5.3 Roles in privilege management	9
5.4 Relations of this standard to related privilege management specifications	9
5.5 Structural roles	10
5.5.1 General	10
5.5.2 Structural roles of healthcare professions from the International Labour Organization for trans-jurisdiction mapping	10
5.5.3 Healthcare specialties	11
5.6 Functional roles	12
6 Formally modelling roles	14
6.1 Roles within the Generic Component Model	14
6.2 Developing the role model	14
6.2.1 Relationships and transformation	14
6.2.2 Assignment of structural roles	15
6.2.3 Generic role specification	16
6.3 Relationships between structural and functional roles	18
7 Use cases for the use of structural and functional roles in an interregional or international context	19
Annex A (informative) ISCO-08 sample mapping	20
Annex B (informative) Sample certificate profile for regulated healthcare professional	31
Bibliography	33

ISO 21298:2017(E)

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 on 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 the following URL: www.iso.org/iso/foreword.html.

This first edition of ISO 21298 cancels and replaces ISO/TS 21298:2008, which has been technically revised.

The committee responsible for this document is ISO/TC 215, *Health informatics*.

Introduction

This document contains a specification for encoding information related to roles for health professionals and consumers. At least five areas have been identified where a model for encoding role information is needed.

- a) **Privilege management and access control:** role-based access control is not possible without an effective means of recording role information for healthcare actors.
- b) **Directory services:** structural roles are usefully recorded within directories of healthcare providers (see for example, ISO 21091).
- c) **Audit trails:** functional roles are usefully recorded within audit trails for health information applications.
- d) **Public key infrastructure (PKI):** The ISO 17090 series allows for the encoding of healthcare roles in certificate extensions, but no structured vocabulary for such roles is specified. This document identifies such a coded vocabulary.
- e) **Purpose of use:** A role specification determines for what purposes healthcare information can be used. Purposes of use are tied to specific roles in many cases (see for example, ISO 21091).

In addition to these security-related applications, there are several other possible applications of this standard, such as follows.

- **Clinical care provision:** finding and identifying the right professional for a health service.
- **Support of care:** billing of healthcare services.
- **Communication management:** directing healthcare-related messages by means of a specific role.
- **Health service management and quality assurance:** defining the purpose of use for specific data.

This document is complementary to other relevant standards that also describe and define roles for the purpose of access control. It extends the model through the separation of role and policy. This separation allows for a richer and more flexible capability to instantiate business rules across multiple domains and jurisdictions. Backward compatibility with ANSI International Committee for Information Technology Standards (INCITS) and HL7 RBAC (Role-Based Access Control) is provided through simplification by combining policy and role into a single construct.

The role concepts defined in this document are referenced and reused in many international standards created, for example, by ISO, CEN, HL7 International. Examples are ISO 22600, Reference [9], Reference [10] and Reference [11].

The European Commission and the EU Parliament have established a Professional Qualifications Directive (2005/36/EC) defining medical specialties (see <http://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:02005L0036-20140117&from=EN>).

[Annex A](#) provides ISOCO-08 sample mapping while [Annex B](#) provides sample certificate profile for regulated healthcare professionals.

Health informatics — Functional and structural roles

1 Scope

This document defines a model for expressing functional and structural roles and populates it with a basic set of roles for international use in health applications. Roles are generally assigned to entities that are actors. This will focus on roles of persons (e.g. the roles of health professionals) and their roles in the context of the provision of care (e.g. subject of care).

Roles can be structural (e.g. licensed general practitioner, non-licensed transcriptionist, etc.) or functional (e.g. a provider who is a member of a therapeutic team, an attending physician, prescriber, etc.). Structural roles are relatively static, often lasting for many years. They deal with relationships between entities expressed at a level of complex concepts. Functional roles are bound to the realization of actions and are highly dynamic. They are normally expressed at a decomposed level of fine-grained concepts.

Roles addressed in this document are not restricted to privilege management purposes, though privilege management and access control is one of the applications of this document. This document does not address specifications related to permissions. This document treats the role and the permission as separate constructs. Further details regarding the relationship with permissions, policy, and access control are provided in ISO 22600.

2 Normative references

There are no normative references in this document.

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at <http://www.electropedia.org/>
- ISO Online browsing platform: available at <http://www.iso.org/obp>

3.1

access control

means of ensuring that the resources of a data processing system can be accessed only by authorized entities in authorized ways

[SOURCE: ISO/IEC 2382-8:2015, 2126294]

3.2

attribute certificate authority

AA

authority which assigns privileges by issuing *attribute certificates* (3.3)

[SOURCE: ISO/IEC 9594-8:2014, 3.5.2, modified]

This is a free preview. Purchase the entire publication at the link below:

[Product Page](#)

-
- Looking for additional Standards? Visit Intertek Inform Infostore
 - Learn about LexConnect, All Jurisdictions, Standards referenced in Australian legislation
-