SLOVENSKI STANDARD
SIST EN 13609-1:2005

01-september-2005

Zdravstvena informatika ï Sporoļ ila za vzdrģevanje informacijske podpore pri sistemih zdravstvenega varstva ï 1. del: Obnavljanje kodirnih shem

Health informatics - Messages for maintenance of supporting information in healthcare systems - Part 1: Updating of coding schemes

Medizinische Informatik - Nachrichten für die Pflege von unterstützender Information in medizinischen Systemen - Teil 1: Aktualisierung der Kodierungsschemata

Informatique de santé - Messages pour la maintenance de l'information d'accompagnement dans les systèmes de santé -Partie 1: Mise a jour des schémas de codage

Ta slovenski standard je istoveten z: **EN 13609-1:2005**

ICS:

35.240.80	Uporabniške rešitve IT v zdravstveni tehniki	IT applications in health care technology

SIST EN 13609-1:2005 **en**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 13609-1

May 2005

ICS 35.240.80

English version

Health informatics - Messages for maintenance of supporting information in healthcare systems - Part 1: Updating of coding schemes

Informatique de santé - Messages pour la maintenance de l'information d'accompagnement dans les systèmes de santé -Partie 1: Mise à jour des schémas de codage

Einführendes Element - Haupt-Element - Teil 1: Ergänzendes Element

This European Standard was approved by CEN on 15 March 2005.

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 Central Secretariat 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 Central Secretariat has the same status as the official versions.

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

EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

Management Centre: rue de Stassart, 36 B-1050 Brussels

Ref. No. EN 13609-1:2005: E

Contents

Foreword

This document (EN 13609-1:2005) has been prepared by Technical Committee CEN/TC 251 “Health informatics”, the secretariat of which is held by SIS.

This standard consists of the following parts, under the general title *Messages for maintenance of supporting information in healthcare systems*:

- Part 1: Updating of coding schemes

- Part 2: Updating of medical laboratory specific information

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 November 2005, and conflicting national standards shall be withdrawn at the latest by November 2005.

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

Introduction

The increased use of data processing and telecommunications capabilities has made possible the interchange of information in machine readable and machine processable formats. As automated interchange of information in healthcare increases, it is essential to provide appropriate information interchange standards.

Computer systems are now used by healthcare professionals for a wide range of purposes. The healthcare specific data held on these systems is often held in a coded form, i.e. code values are used to represent particular concepts or meanings which are used to represent items of data such as diagnoses, procedures, investigations, medicinal items, organisations and professionals, etc. This European Standard defines a syntax independent specification of a message that may be used to provide a means of supplying receiving systems with sufficient information to populate a locally defined coding scheme.

The choice of coding scheme(s) used by an application will depend upon a number of factors: the supplier's policy, the nature of the application, national or regional policy, etc. When information is exchanged between applications in coded format, there is often a need to convert from code values taken from a coding scheme used in the originating application to equivalent code values from another coding scheme. The code value mapping information will generally be held in a database available to the user of the coding scheme and this European Standard provides a syntax independent description of a message that may be used to maintain the information in such a database.

This European Standard is intended for use by message developers. Its provisions are directly relevant to suppliers of computer systems for use generally within healthcare. Its provisions are also relevant to those planning, specifying, procuring or implementing information systems for use in hospitals, general practices, clinical departments and specialist clinics.

The main normative provisions in this European Standard are expressed in clauses 4, 5, 6 and 7.

Much, although not all, of the representation used in this European Standard is drawn from the Unified Modeling Language (UML). The reader should, however, interpret the representations within this European Standard according to the provisions laid out in informative Annex A.

1 Scope

1.1

This European Standard specifies messages for electronic information exchange between computer systems using coding schemes in healthcare. It describes a message that may be used to populate or update the content of a coding scheme at user applications.

1.2

This European Standard is limited to a definition of the content of a message that serves the following functions:

a) to populate a new coding scheme where individual entries are composed of a code value related to zero or more (textual) code meanings,

b) to add new entries into an existing coding scheme where these entries are composed of new code values and their associated meanings,

c) to mark existing code value entries as no longer active,

d) to mark new and existing code meanings to be of a certain status (e.g. preferred, obsolete, etc.),

e) to mark new and existing code values with dates of applicability,

f) to mark new and existing code meanings with dates of applicability.

1.3

This European Standard provides a specification of a message that may be used to populate or update a mapping between a single code value in a coding scheme and simple list of code values that together have an equivalent meaning in the same coding scheme. This meets the requirements of ENV 1614 – Healthcare informatics – Structure for nomenclature, classification and coding of properties in clinical laboratory sciences.

1.4

This European Standard provides a specification of a message that may be used to populate or update a mapping showing equivalence between code values in two different coding schemes. The specification supports mappings in which:

a) a single code value in one (source) coding scheme is mapped to a single equivalent code value within another (target) coding scheme,

b) a single code value in the source coding scheme is mapped to a set of code values which together represent an equivalent concept within the target coding scheme.

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.

ENV 1613	*Medical informatics - Messages for exchange of laboratory information*
CR 12587	*Medical Informatics – Methodology for the development of healthcare messages*
CEN/TS 14796	*Health informatics – Data types*
ISO 2382-4	*Information technology – Vocabulary – Part 4: Organisation of data*
ISO/IEC 6523-1	*Information technology – Structure for the identification of organizations and organization parts – Part 1: Identification of organization identification schemes*
ISO/IEC 8824-1	*Information technology - Abstract Syntax Notation One (ASN.1): Specification of basic notation*

3 Terms and definitions

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

3.1
association
binary predicate applied to an ordered pair of types. The first type is referred to as the *source type* and the second as the *target type*

3.2
concept
subset of knowledge constructed through combining characteristics

3.3
coded concept
element within a coded set
EXAMPLE: "Paris Charles-De-Gaulle" which is mapped on to the three-letter abbreviation "CDG" by the coding scheme for three-letter abbreviations of airport names.

3.4
coded set
set of elements that is mapped onto another set according to a code
[ISO 2382-4]
EXAMPLE: A list of the names of airports which is mapped on to a set of three letter abbreviations.

3.5
code meaning
element within a coded set

EXAMPLE "Paris Charles-De-Gaulle" which is mapped on to the three-letter abbreviation "CDG" by the coding scheme for three-letter abbreviations of airport names.

3.6
code value
result of applying a code to an element of a coded set
[ISO 2382-4]
EXAMPLE: "CDG" as the representation of "Paris Charles-De-Gaulle" in the coding scheme for three-letter representations of airport names.

3.7
coding scheme
collection of rules that maps the elements of a first set onto the elements of a second set
[ISO 2382-4]

3.8
domain information model
DIM
conceptual model describing common concepts and their relationships for communication parties required to facilitate exchange of information between these parties within a specific domain of healthcare
[ENV 1613]

3.9
general message description
GMD
subset of a domain information model prescribing the information content and semantic structure of a message used to meet one or more identified information interchange requirements
[ENV 1613]

3.10
healthcare organisation
organisation responsible for the direct or indirect provision of healthcare services
[ENV 1613]

3.11
hierarchical relation
relation between two concepts arranged in graded order
[ISO 2382-4]

3.12
message type
identified, named and structured set of functionally related information which fulfils a specific business purpose
[ENV 1613]

3.13
organisation
unique framework of authority within which a person or persons act, or are designated to act towards some purpose
[ISO/IEC 6523-1]

4 Requirements

4.1 A compliant implementation shall conform to the provisions laid out in 4.2, and to any or all of the requirements identified by message type and laid out in 4.3 and 4.4. as specified in this document.

4.2 An Update Coding Scheme Message from a coding scheme provider to the user of the coding scheme covered by the scope of this document, shall conform to the mandatory provisions defined in 7.3, 7.5 and 7.6 subject to the provisions laid out in the following sub-clauses:

- All mandatory requirements and conditions laid out in 7.6.2 and 7.6.7, shall be fully complied with.

- A conformant message implementation may, if appropriate, not include the provisions concerning Aggregate Code Value within 7.6.3. If the message does include such facilities it shall conform fully to the requirements laid out in 7.6.3 and may be described as 'Aggregate Code Value compliant'.

- A conformant message implementation may, if appropriate, not include the provisions concerning Associated Code Values within 7.6.4. If the message does include such facilities it shall conform fully to the requirements laid out in 7.6.4 and may be described as 'Associated Code Value compliant'.

- A conformant message implementation may, if appropriate, not include the provisions laid out in 7.6.5 (Code Value Group). If the message does include such facilities it shall conform fully to the requirements laid out in 7.6.5 and may be described as 'Code Value Group compliant'.

- A conformant message implementation may, if appropriate, not include the provisions laid out in 7.6.6 (Code Value Validation). If the message does include such facilities it shall conform fully to the requirements laid out in 7.6.6 and may be described as 'Code Value Validation compliant'.

- A conformant message implementation may, if appropriate, not include the provisions laid out in 7.6.8 (Mapping Term Entry). If the message does include such facilities it shall conform fully to the requirements laid out in 7.6.8 and may be described as 'Mapping Term Entry compliant'.

4.3 Implementable message specifications (IMS) shall conform to the General Message Description defined in this document. They shall support both mandatory and optional objects subject to the provisions laid out in 4.2 above. Where appropriate they shall also support the relationships between objects as defined by the General Message Description.

4.4 Implementable message specifications should be expressed in terms of a syntax which is an International standard except where the healthcare user requirements cannot be met by using such a standard syntax.

5 Communication roles and supported services

5.1 General

This clause defines the communication roles compliant with the specifications of this document when exchanging information on coding schemes within the scope. It establishes the relationships between the communication roles and the General Message Description.

5.2 Communication roles

This document defines a single message structure. Coding scheme suppliers in co-operation with their message recipients may choose their own message sub-sets or profiles depending upon their particular requirements.

The communicating parties shall adopt one of two communication roles: the *message originating role* or the *message destination role*. These roles are assumed by two types of healthcare organisations: the coding scheme provider and the coding scheme information receiver

5.3 Communication roles, services and General Message Description

5.3.1 The service that shall be supported by a communication party with a message originating role for an Update Coding Scheme Message shall be to:

issue update instances which comply with the General Message Description and which convey in a complete and exact way the information as intended by the originator and as to be understood by the receiver.

5.3.2 The service that shall be supported by a communication party with a message destination role for an Update Coding Scheme Message shall be to:

receive update instances which comply with the General Message Description and which allow the complete and exact understanding of the information by the coding scheme receiver as intended by the coding scheme provider.

6 General Message Description

6.1 Introduction

This section provides a description of the message using a hierarchical structure.
This document does not set limits on the number of repetitions of objects and attributes but implementations which do set practical limits are not by that reason alone considered to be deviating from the standard.

6.2 The modelling approach

The General Message Descriptions (GMDs) are shown in the form of a hierarchical structure indicating the objects (class instances) and their associated multiplicities that are required to implement the message. Many objects within the GMD are shown as optional and for an implementation intended for a given coding scheme these objects may be excluded. Where an object is included in the implementation, the structure of the object and the rules that apply to it shall conform to the appropriate class descriptions shown within the Domain Information Model.
The GMD has appended notes and explanations that supply additional guidance.

6.3 The Healthcare Agent in Context Sub-System

Within the General Message Description provided in 6.4, there are three classes, namely: Coding Scheme Provider, Coding Scheme Information Receiver and Coding Scheme Originator, which are specialisations of Healthcare Agent in Context. Where these classes are encountered within the General Message Description (see Figure 2), the structure shown in Figure 1 shall be substituted.

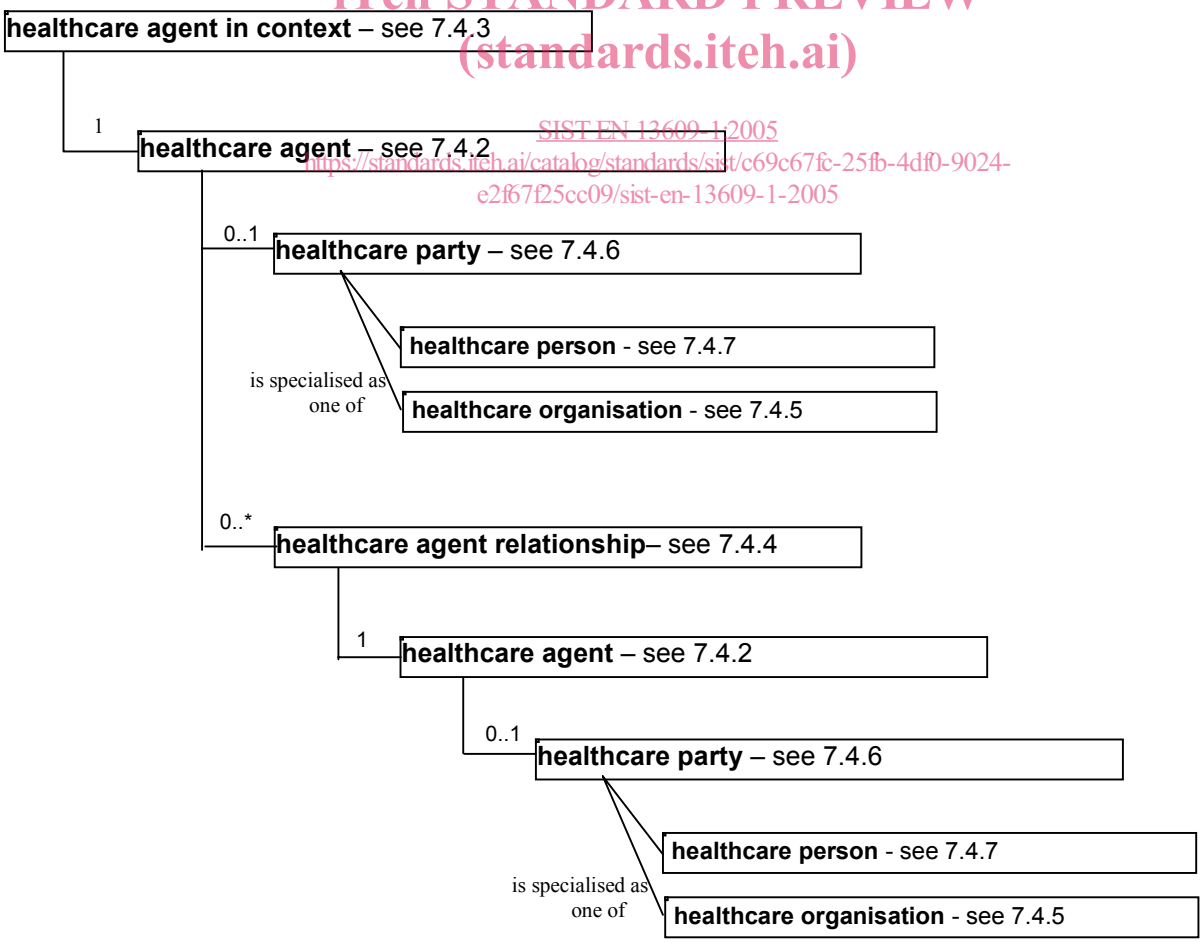

Figure 1 — Healthcare Agent in Context Sub System