# SLOVENSKI STANDARD
# SIST EN 14822-2:2006

**01-april-2006**

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**Zdravstvena informatika ï Informacijske komponente za splo÷no uporabo ï 2. del: Neklini÷ni podatki**

Health informatics - General purpose information components - Part 2: Non-clinical

Medizinische Informatik - Allgemein verwendbare Informationskomponenten - Teil 2: Nicht klinische Informationen



Informatique de santé - Unité d'information dans les messages - Partie 2: Non-clinique



**Ta slovenski standard je istoveten z:** **EN 14822-2:2005**

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**ICS:**

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

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English Version

# Health informatics - General purpose information components - Part 2: Non-clinical

Informatique de santé - Unité d'information dans les messages - Partie 2: Non-clinique

Medizinische Informatik - Allgemein verwendbare Informationskompomenten - Teil 2: Nichtklinische Informationen

This European Standard was approved by CEN on 16 August 2005.

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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.



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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
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## Foreword

This European Standard (EN 14822-2:2005) has been prepared 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of an identical text or by endorsement, at the latest by April 2006, and conflicting national standards shall be withdrawn at the latest by April 2006.

This is part two of a multipart standard under the heading:

*Health informatics - General purpose information components*:

— Part 1: Overview

— Part 2: Non-clinical

— Part 3: Clinical

This European Standard is definition of a set of non-clinical general purpose information components.



**IMPORTANT —Within this document each of the General Purpose Information Components and various sub-components are provided with identifiers, which are unique only internally within this document.**



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

Many previous messaging and information structure standards for health have overlapping parts with a number of objects being defined in separate documents, sometimes with small variations making implementation of conformant applications more difficult. It therefore makes sense to define a set of general purpose components that can be used for definition of message structures for different purposes[1]. This approach was suggested and approved as a strategy for CEN/TC 251 in the Short Strategic Study on message standards alignment in 1999 examining a set of five European prestandards for messages. This European Standard is aiming to provide such a set of components and has been developed jointly with a new European Standard for Service Request and Report messages that is using the components defined herein.

Another important background to the development of this European Standard has been the wish for a harmonisation of information models for health developed in Europe and the USA expressed in the collaboration agreement entered March 2000 between CEN/TC 251 and HL7 (Health Level Seven, Ann Arbor. Michigan). The goal was set for a maximum degree of alignment while maintaining their independence and need to serve the business requirements of the respective markets but also to make the results available to ISO for possible international standardization.

HL7 have adapted a general strategy similar to CEN/TC 251 using information modelling expressed in UML (Unified Modeling Language) for their new standards and a lot of interaction and information sharing has occurred between CEN experts and HL7 in an open spirit of collaboration.



This European Standard includes a large number of objects which are technically identical to descriptions in draft documents of HL7, although partly described differently due to the fact that CEN is following the ISO rules for drafting and presentation of standards which HL7 is not. CEN wishes to express its gratitude towards HL7 experts for generously sharing their models and other technical outputs with the European expert team.



This European Standard contains definition of a set of non-clinical General Purpose Information Components.

[1] See Annex A: Rationale for this document on General Purpose Information Components.

# 1 Scope

This European Standard specifies the definition and structuring of information relating to entities that are commonly encountered in communications with and between clinical information computer systems.

Within the scope of this European Standard is a description of components and their use. In particular, these components relate to the following sub-domains:

— Subjects of care: including persons, animals and groups of animals. This sub-domain includes descriptions of the parameters for the identification of the subjects of care.

— Subject of care related parties: including next of kin and other persons and organisations related to the subject of care (including other subjects of care).

— Healthcare agents: including healthcare professionals, organisations and devices.

— Devices: including descriptions of their settings and use within a particular use event.

— Locations: of two types:

  — care locations, for example, ward and bed where patient receive inpatient care, a clinic where physiotherapy booked, a nursing home, the patient's home etc.;

  — geographic locations: which are non-healthcare specific places that are related to laboratory investigations. For example: kitchens, shop counters, hotel air conditioning systems.

— Transport: including the transportation of persons (patient, related person), animals, or samples/body parts.



Financial: including costs associated with care services, authorisation and service agreements (contracts).

# 2 Normative references

Not applicable.

# 3 Terms and definitions

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

**3.1**
**care location**
place, often located within a healthcare organisation, where healthcare services are provided

EXAMPLES Ward, room, bed, GP surgery, clinic, patient's home, residential home.

**3.2**
**General Purpose Information Component**
**GPIC**
commonly useful information component that is a specialisation of classes in an international reference information model which is intended to be used in the specification of an information service for health or of a communication between health information systems.

**3.3**
**healthcare**
provision of health related services
[ENV 13940:2001 - modified]

NOTE 1 This includes more than performing procedures on subjects of care. It includes also, for example, the management of the information about patients, their health status and their relations within the health care framework.

NOTE 2 In this document, the term 'care' may be used as a synonym for 'health care'.

**3.4**
**healthcare agent**
healthcare person, healthcare organisation, healthcare device or that performs a role in a healthcare activity
[ENV 13940:2001]

**3.5**
**healthcare device**
device or equipment involved in the direct or indirect provision of healthcare services to an individual or to a population
[ENV 13606-4:2000]

EXAMPLES ECG machine, auto-analyser, syringe pump.

**3.6**
**healthcare organisation**
organisation involved in the direct or indirect provision of healthcare services



**3.7**
**healthcare party**
organisation or person involved in the direct or indirect provision of healthcare services to an individual or to a population
[ENV 13606-4:2000]



**3.8**
**healthcare professional**
person involved in the direct or indirect provision of healthcare services to an individual or to a population
[ENV 13606-4:2000 - revised]

**3.9**
**organisation**
unique framework of authority within which a person or persons act, or are designated to act towards some purpose

NOTE Groupings or subdivisions of an organisation may also be considered as organisations where there is need to identify them for information interchange. (see ISO/IEC 6523:1998)

**3.10**
**subject of care**
person or other living subject, or group of persons or other living subjects, scheduled to receive or receiving healthcare services

**3.11**
**transportation**
movement of a person, animal, group of animals or analysable object between two physical locations

## 4 Symbols and abbreviations

NOTE All those marked by ‡ as defined in the CEN/TS 14796:2003, “Health informatics - Data types”.

| | |
|---|---|
| BL ‡ | Boolean |
| CAG | Common Attribute Group (see Section 6) |
| CD ‡ | Concept Descriptor |
| CS ‡ | Coded Simple value |
| CV ‡ | Coded Value |
| ED ‡ | Encapsulated Data |
| GP | General Practitioner |
| GPIC | General Purpose Information Component |
| II ‡ | Instance Identifier |
| IVL ‡ | Interval |
| IVL<PQ> ‡ | Interval of Physical Quantity |
| IVL<TS> ‡ | Interval of Time |
| INT ‡ | Integer |
| PQ ‡ | Physical Quantity |
| ST ‡ | String |
| TS ‡ | Time stamp (point in time) |
| UML | Unified Modeling Language |



## 5 Rules governing the use of general purpose information components



**5.1**

When using a GPIC, a system which conforms to this document shall implement the features (classes, associations, attributes) that are described within the GPIC core[2] [3]. In particular:

— A conformant system that utilises a GPIC shall be able to receive and process information present in all classes and attributes, even where attributes are specified as being optional.

— A conformant system that utilises a GPIC design to send information shall not be obliged to populate optional attributes.

**5.2**

Each of the classes and embedded GPICs that constitute a GPIC description has a class type. These are shown as follows[4, 5]:

[2] See EN 14822-1 for explanation of ‘GPIC Core’.

[3] See Annex B: How to read the models.

[4] See Annex C: Health Level 7 (HL7) Reference Information Model.

[5] Within this document the exception is that the class ‘Language Communication’ does not have any specific type.

| | | |
|---|---|---|
| A | **Act** | These describe actions, plans, etc.<br>EXAMPLES Observations, tests, referrals, transportation etc. |
| P | **Participation** | Used as a way of linking Acts to Entities. May include information about the type of participation of the Entity. |
| R | **Role** | Used as a way of linking Entities together and provides information about the competences or qualification of the entities, for example, a person who is qualified to act as a nurse. |
| RL | **RoleLink** | Used as a way of linking two Entity/Role pairs together, for example person/employee ↔ organisation/employer. |
| E | **Entity** | The world of physical things. May be people, animals, samples, organisations, places, materials, devices etc. |
| | **None of Above** | A class that is none of the above types. Limited to the Language Communication class in this document. |



**5.3**

A GPIC description shall not include optional associations between classes within the GPIC core.

**5.4**

For each GPIC there is a definition of the type(s) of objects to which the GPIC may be attached within any external models or implementations. A conformant system will restrict GPIC use accordingly[6].

**5.5**

GPICs may be associated with other GPICs in ways which extend their functionality. These extensions are informative in nature and shall not be subject to conformance testing. The set of extensions to the GPICs shown in this document shall not be considered to be exhaustive.

**5.6**

A user community, e.g. a national body or a message development agency, may wish to 'localise' a GPIC for use in a particular circumstance. The rules which underpin such localisation are[7]:

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[6] See Annex D: Common features of the General Purpose Information Components.

[7] See Annex E: Localisation of the general purpose information components.

— All mandatory attributes shall be present in any design using the GPIC, i.e. it is not permitted to omit these features.

— A user community may:

  — specify that certain optional attributes are omitted;

  — restrict (constrain) a data type: For example, the data type ST (string) being defined in place of ED (multimedia data);

  — define constraints on the allowable values of an attribute;

  — define constraints on the vocabulary sets that may be associated with a coded attribute.

It is strongly recommended that where any of these actions are taken, that the user community provide the resulting GPIC with a new Object Identifier (i.e. register a new GPIC):

— A user community shall **not**:

  — omit mandatory attributes and associations but may restrict values and vocabulary sets as outlined above;

  — add attributes;

  — add associations except to other GPICs as external extensions.

Users may create new GPICs.



# 6 Common Attribute Groups (CAG)



## 6.1 Introduction

This clause provides groups of attributes that are commonly encountered in demographic data. It is convenient to define these once and then to refer to them as though they were complex data types.

## 6.2 Entity Name CAG

### 6.2.1 Entity Name

| **Common Attribute Group**<br>**EntityName** | | | |
|---|---|---|---|
| Description | Specifies a name of a person, organisation, place or thing. | | |
| Examples | "Leonardo da Vinci", "United Nations Organisation", "Eiffel Tower", etc. | | |
| Comments | An entity name may be as simple as a character string or may consist of several entity name parts. The entity name data type is essentially a sequence of entity name part values. | | |
| **Attributes** | **O** | **Type** | **Description** |
| entityName | M | SET<EntityNamePart> | The name data.<br>EXAMPLES<br>— Eiffel Tower (place name)<br>— Anderson (family name)<br>— John (given name) |
| use | O | CV | Code representing the purpose/primary use of the name |
| validTime | O | IVL<TS> | Interval of time associated with the entity name.<br>NOTE The valid time may provide a:<br>start date/time, or<br>an end date/time, or<br>both. |



### 6.2.2 Entity Name Part

| **Common Attribute Group**<br>**EntityNamePart** | | | |
|---|---|---|---|
| Description | Specifies a name of a person, organisation, place or thing. | | |
| Examples | "United Nations Organisation", "Thomas" | | |
| **Attributes** | **O** | **Type** | **Description** |
| entityNamePart | M | ST | The name part represented as a string. |
| namePartType | O | CS | VALUES:<br>— FAM = family<br>— GIV = given<br>— PFX = prefix<br>— SFX = suffix |

| | | | |
|---|---|---|---|
| namePartQualifier | O | CS | VALUES:<br>— AC = academic<br>— NB = nobility<br>— PR = professional<br>— W = prefix (voorvoegsel)<br>— BR = birth<br>— CL = preferred name<br>— IN = initial |

### 6.3 Postal Address CAG

#### 6.3.1 Postal Address

| **Common Attribute Group**<br>**PostalAddress** | | | |
|---|---|---|---|
| Description | Used to represent the mailing, home or business address. | | |
| Comments | Addresses are essentially sequences of address parts. | | |
| **Attributes** | **O** | **Type** | **Description** |
| postalAddress | M | SET<AddressPart> | The address lines. |
| postalCode | O | ST | The postal or zip code. |
| addressUse | O | SET<CS> | One or more codes advising a system or user which address in a set of like addresses to select for a given purpose.<br>VALUES:<br>— BIR (birthplace)<br>— H (home)<br>— HP (primary home)<br>— HV (vacation address)<br>— WP (work place) |
| validTime | O | IVL<TS> | Interval of time associated with the address.<br>NOTE The valid time may provide a:<br>start date/time, or<br>an end date/time, or<br>both. |