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Health informatics — Electronic health record communication —

Part 3: Reference archetypes and term lists

Informatique de santé — Communication du dossier de santé informatisé —

Partie 3: Archétypes de référence et listes de termes

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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 13606-3 was prepared by Technical Committee ISO/TC 215, *Health informatics*.

ISO 13606 consists of the following parts, under the general title *Health informatics — Electronic health record communication*:

— *Part 1: Reference model*

— *Part 2: Archetype interchange specification*

— *Part 3: Reference archetypes and term lists*

— *Part 5: Interface specification*

The following part is in preparation:

— *Part 4: Security*

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Introduction

0.1 Summary

This part of ISO 13606 contains two kinds of specification:

1) a normative set of (coded) term lists that each define a controlled vocabulary for a Reference Model attribute that is defined in ISO 13606-1;

2) an informative set of reference archetypes, expressed as mappings that each specify how the Reference Model in ISO 13606-1 should be used to represent information originating from

   — the set of HL7 Version 3 Acts that form part of the Clinical Statement Pattern (Draft Standard for Trial Use), and

   — the specializations of ENTRY that are defined in the *open*EHR Reference Model.

0.2 Term lists

Each term list is referenced by its corresponding attribute as an invariant constraint in ISO 13606-1, by referring to its term list name. For each term list, every code value is accompanied by a phrase and description; however, in each case it is the code that is to be used as the Reference Model attribute value. Language translations of the phrase and description will therefore not affect the instances of RECORD_COMPONENT that are communicated using this part of ISO 13606.

Should any revision to these term lists prove necessary in the future, a technical revision to this part of ISO 13606 will be required. Such a revised version must specify an updated Reference Model identifier that shall then be used as the value of the rm_id of an EHR_EXTRACT, to inform the recipient of the version of this part of ISO 13606 that was used in its creation.

A cross-mapping of the term list for LINK.role to HL7 actRelationship typecodes is also provided, for the convenience of those wishing to adopt or interface this part of ISO 13606 with HL7 Version 3. This is part of a longer-term vocabulary harmonization project between the health informatics standards development organizations (SDOs), and might therefore be extended in the future via other publications, such as the planned HL7-13606 Implementation Guide (see below). It is therefore informative in this document.

0.3 Reference archetypes

Each reference archetype is represented in this part of ISO 13606 as a mapping correspondence table to indicate the way in which the ITEM structure within an ISO 13606-1 ENTRY is to be used to represent the classes and attributes of relevant HL7 v3 and *open*EHR classes. These two external models have been chosen for inclusion as these are the most likely internationally used source models from which fine-grained clinical data may need to be transformed into this document for communication.

These reference archetypes are included as an aid to those adopting this part of ISO 13606 and wishing to transform Electronic Health Record (EHR) data from existing HL7 v3 or *open*EHR instances or messages. It is recognised that full two-way interoperability between these various representations requires more detail, including rich vocabulary and data type harmonization, and a corresponding set of technical artefacts such as eXtensible Markup Language (XML) Schemata and Extensible Stylesheet Language Transformation (XSLT) scripts. Such interoperability is very much the goal of current SDO harmonization efforts, and will be published as an HL7-13606 Implementation Guide, possibly as an open-access and regularly updated resource. However, the outstanding work required to achieve this level of interoperability might take up to another year after publication of this part of ISO 13606. It has therefore been decided to offer what does exist towards harmonization in an informative form within this part of ISO 13606, as an aid to those already needing to make such data transformations. A worked example of the HL7 v3 to ISO 13606 mapping is given in Annex B.

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Health informatics — Electronic health record communication —

Part 3: Reference archetypes and term lists

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1 Scope

This part of ISO 13606 is for the communication of part or all of the electronic health record (EHR) of a single identified subject of care between EHR systems, or between EHR systems and a centralized EHR data repository. It may also be used for EHR communication between an EHR system or repository and clinical applications or middleware components (such as decision support components) that need to access or provide EHR data, or as the representation of EHR data within a distributed (federated) record system.

This part of ISO 13606 (EHR Communications Standard Series), defines term lists that each specify the set of values that particular attributes of the Reference Model defined in ISO 13606-1 may take. It also defines informative reference archetypes that correspond to ENTRY-level compound data structures within the Reference Models of *open*EHR and HL7 Version 3, to enable those instances to be represented within a consistent structure when communicated using this part of ISO 13606.

2 Terms and definitions

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

2.1
archetype instance
individual metadata class instance of an Archetype Model, specifying the clinical concept and the value constraints that apply to one class of Record Component instance in an electronic health record extract

2.2
clinical information
information about a person, relevant to his or her health or health care

2.3
committed
information that has been persisted within an electronic health record system and which constitutes part of the electronic health record for a subject of care

2.4
committer
agent (party, device or software) whose direct actions have resulted in data being committed to an electronic health record

2.5
composer
agent (party, device or software) responsible for creating, synthesising or organizing information that is committed to an electronic health record

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