SLOVENSKI STANDARD
SIST EN ISO 18104:2004

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SIST ENV 14032:2003

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Health Informatics - Integration of a reference terminology model for nursing (ISO 18104:2003)

Medizinische Informatik - Integration eines Referenz-Terminologiemodells für die Pflege (ISO 18104:2003)

Informatique de santé - Intégration d'un modele de terminologie de référence pour les soins infirmiers (ISO 18104:2003)

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ICS:

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

SIST EN ISO 18104:2004   **en**

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EUROPEAN STANDARD

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Health Informatics - Integration of a reference terminology model for nursing (ISO 18104:2003)

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This European Standard was approved by CEN on 2 December 2003.

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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 Management Centre has the same status as the official versions.

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

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

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EN ISO 18104:2003 (E)

Foreword

Le présent document (EN ISO 18104:2003) a été élaboré par le Comité Technique ISO/TC 215 "Informatique de santé" en collaboration avec le Comité Technique CEN/TC 251 "Informatique de santé" dont le secrétariat est tenu par le SIS.

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of an identical text or by endorsement, at the latest by June 2004, and conflicting national standards shall be withdrawn at the latest by June 2004.

This document supersedes ENV 14032:2001.

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

NOTE FROM CMC The foreword is susceptible to be amended on reception of the German language version. The confirmed or amended foreword, and when appropriate, the normative annex ZA for the references to international publications with their relevant European publications will be circulated with the German version.

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Endorsement notice

The text of ISO 18104:2003 has been approved by CEN as EN ISO 18104:2003 without any modifications.

INTERNATIONAL STANDARD

ISO
18104

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Health informatics — Integration of a reference terminology model for nursing

Informatique de santé — Intégration d'un modèle de terminologie de référence pour les soins infirmiers

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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 18104 was prepared by Technical Committee ISO/TC 215, *Health informatics*. Through a work item proposal initiated by the International Council of Nurses and the Nursing Informatics Special Interest Group of the International Medical Informatics Association, the work related to this International Standard takes forward, under the Vienna Agreement, the efforts initiated in ENV 14032, *Health Informatics — System of concepts to support nursing*.

Introduction

Terminology development in nursing has been motivated by multiple factors including

- implementation of computer-based systems in clinical settings,

- quest for reimbursement for nursing services delivered,

- documentation of nursing contributions to patient care outcomes,

- teaching students, and

- enhancing the body of nursing knowledge.

Nursing terminologies, in either paper-based or computer-based form, have been designed as enumerated classifications and implemented both as interface terminologies at the point of care and as administrative terminologies to examine nursing data across settings. At the present time, many standardized terminologies exist and no single standardized terminology is complete for the domain in terms of breadth or granularity. Moreover, there is currently no concept-oriented terminology that integrates the domain concepts of nursing in a manner suitable for computer processing.

In recent years, however, significant advances have been made toward the development of concept-oriented reference terminologies that support the domain concepts of nursing. Among the remaining major challenges are the development of a reference terminology model that supports the representation of nursing concepts and the integration of the reference terminology model with other models for the health-care domain [1]. A number of efforts have focused on addressing these challenges. Prominent among these is the work within the European Standardization Committee (CEN TC 251) that brought together the efforts of the International Classification for Nursing Practice (ICNP®) Programme, Telenurse ID, and other European efforts (e.g., nursing activities within the Galen programme) into a Prestandard — ENV 14032 [2], [3], [4], [5], [6]. Also of relevance to this International Standard are activities related to the International Medical Informatics Association Nursing Informatics Special Interest Group, Nursing Terminology Summits, Systematized Nomenclature of Medicine (SNOMED®) Convergent Terminology Group for Nursing, Health Level 7, and Clinical Logical Observation Identifiers, Names, and Codes (LOINC) [3], [7], [8], [9].

In contrast to the CEN Prestandard that broadly addressed categorial structures for nursing diagnoses and nursing actions, this International Standard focuses specifically on the conceptual structures that are represented in a reference terminology model rather than in other types of information models. Moreover, toward the goal of integration with other health-care models, the reference terminology models for nursing diagnoses and nursing actions in this International Standard reflect attempts at harmonisation with evolving terminology and information model standards outside the domain of nursing.

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Health informatics — Integration of a reference terminology model for nursing

1 Scope

1.1 Main purpose

The purpose of this International Standard is to establish a nursing reference terminology model consistent with the goals and objectives of other specific health terminology models in order to provide a more unified reference health model. This International Standard includes the development of reference terminology models for nursing diagnoses and nursing actions and relevant terminology and definitions for its implementation.

The potential uses for this reference terminology model are to

- support the intensional definition of nursing diagnosis and nursing action concepts reflective of a broad range of roles and practice settings,

- facilitate the representation of nursing diagnosis and nursing action concepts and their relationships in a manner suitable for computer processing,

- provide a framework for the generation of compositional expressions from atomic concepts within a reference terminology,

- facilitate the construction of nursing terminologies in a regular form which will make mapping among them easier,

- facilitate the mapping among nursing diagnosis and nursing action concepts from various terminologies including those developed as interface terminologies and statistical classifications,

- enable the systematic evaluation of terminologies and associated terminology models for purposes of harmonization, and

- provide a language to describe the structure of nursing diagnosis and nursing action concepts in order to enable appropriate integration with other reference terminology models and with information models.

1.2 Target groups

The target groups for this International Standard are

- developers of coding systems and terminologies that include nursing diagnosis and nursing action concepts, to assist in the development, refinement, and maintenance of a particular terminology, as well as for comparisons among different systems,

- developers of reference terminology models for other health-care domains, to explicate the relationships and overlap with nursing concepts,

- information modellers, knowledge engineers, and standards developers building models for health-information management systems such as electronic health records and decision support systems, to describe the expected content of terminological value domains for particular attributes and data elements in the information models,

- developers of information systems that require an explicit system of concepts for internal organization, data warehouse management and middleware services,

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- developers of software for natural language processing, to facilitate harmonisation of their output with coding systems, and

- developers of mark-up standards for representation of health-care documents.

1.3 Topics considered outside scope

Topics considered outside the scope of this International Standard include

- a comprehensive categorial structure for nursing diagnoses and nursing interventions,

- a detailed classification, nomenclature, or reference terminology of nursing diagnoses or nursing actions,

- descriptors and guidelines to represent contextual information for the recording of information within an electronic health record,

- an exhaustive list of all the potential details that could appear in expressions of nursing diagnoses and nursing actions,

- an exhaustive thesaurus with the complete list of descriptors to be used to describe nursing diagnoses and nursing actions,

- relationships among health professionals, and

- communication of nursing diagnosis and nursing action concepts between electronic health records.

2 Normative references

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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/TS 17117:2002, *Health informatics — Controlled health terminology — Structure and high-level indicators*

ENV 12264:1997, *Medical informatics — Categorial structures of systems of concepts — Model for representation of semantics*

ENV 14032:2001, *Health Informatics — System of concepts to support nursing*

3 Terms and definitions

For the purposes of this International Standard, the following terms and definitions apply. Only key terms and definitions are provided in this section. Additional background terms and definitions from ISO 1087-1:2000 [27] are provided in Annex A. Definitions for the specific reference terminology model components are provided in Clauses 4 and 5.

3.1
domain concept model
set of formal categories, semantic links and sanctions describing potential characteristics for representing concepts in a domain

[ISO 17115]

3.2
reference terminology model
domain concept model (3.1) that is optimised for terminology management

3.3
dissection
systematic representation of a phrase according to a predefined domain concept model