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HEALTH INFORMATICS - CATEGORIAL STRUCTURE FOR TERMINOLOGIES OF HUMAN ANATOMY

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English Version

Health informatics - Categorial structure for terminologies of human anatomy

Informatique de santé - Structure catégorielle des terminologies d'anatomie humaine

Medizinische Informatik - Kategoriale Struktur für Terminologien der Anatomie des Menschen

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
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Foreword

This document (EN 15521:2007) 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of an identical text or by endorsement, at the latest by May 2008, and conflicting national standards shall be withdrawn at the latest by May 2008.

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, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

Introduction

This European standard specifies a categorial structure for terminologies of human anatomy. Computer-based processing and the interchange of medical or clinical information requires various kinds of terminological systems to represent that information, such as controlled vocabularies, classifications, nomenclatures, terminologies and thesauri, with or without coding schemes.

The specific terminological issues in the field of health informatics are:

— large number of different terminological systems are available in different clinical specialties;

— large overlap among the subject fields involved;

— large number of codes and rubrics, typically in the order of magnitude of 10 000 to 100 000 entries, in commonly used terminological systems;

— increasing need for re-use of coded data in different health-care contexts;

— poly-semia across different clinical specialties and sometimes within them.

The integration of computer-based medical records and administrative information systems in Electronic Health Records (EHR) require rationalization in the field, and a uniform way to represent the meaning of medical concepts to ensure that the receiver EHR of a message will catch the meaning introduced by the sender EHR and not only the string of characters embedded in it.

It is not possible to impose a rigid uniform standardized natural language clinical terminology on healthcare professional providers. Nevertheless standards need to be provided for guiding the development of terminologies in the different sub domains of healthcare to allow semantic interoperability between them. To this end a domain specific semantic representation has been developed (EN 12264) and applied in a series of specific initiatives including European Pre standards (ENV), European Standards (EN) and international ISO standards on various subject fields to describe a set of categorial structures in partially overlapping subject fields: Human anatomy is central to medical terminology (surgical procedures, carcinoma staging, annotation of radiological findings, disease, clinical laboratory and so forth) and also to many scientific and bio-informatics study beyond the scope of clinical medicine . In the US the University of Washington has developed in the public domain an anatomical terminology for EHR named the Digital Anatomist Foundational Model of Anatomy (FMA for short), a reference ontology for biomedical informatics.

Adequate field testing in several countries, revision and integration have provided the comprehensive basis for this European standard.