Using the CEN/ISO Standard for Categorial Structure to Harmonise the Development of WHO International Terminologies
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Harmonising International Terminologies

1 Introduction

2 WHO ICD 11 Revision

3 Categorial Structure Approach

4 Conclusion: Other International terminologies
DEFINITIONS

1 Semantic (content) interoperability a dream?
- the ability for information shared by systems to be understood at the level of formally defined entities, so that the receiving system can process the information effectively and safely

2 Healthcare Terminological systems: from divergence to harmonisation?
- set of designations within the domain of health care with, when appropriate, any associated rules, relationships and definitions. (ISO 1087 and ISO 17115: Terminologies and Classifications)
- WHO FIC (ICD 11, ICF, ICHI, ICPS, ICNP et.)
- IHTSDO (Snomed CT)
- Standards (CEN ISO 1828, ISO 18104, ISO 17115, CEN 12264 et.)
DEFINITIONS

3 Categorial Structure approach:

- A lite ontology:
  - Based on Ontology principles or models (e.g. FMA for CEN 15521)
  - Not constraining very much system developers and linguistic expressiveness
  - Evolving each 5 years to more formalism

- To bind Terminologies to Ontologies

4 WHO-FIC new cooperative web-based joint authoring process to revise and develop International Classifications.
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ICD 11 revision

- **iCamp:** 22 Sept 2009 - 2 Oct 2009
- **Alpha Draft:** 3 Oct 2009 - 10 May 2010
- **Phase I:** 3 Oct 2009 - 13 Dec 2009
- **Interim Review:** 13 Dec 2009 - 18 Jan 2010
- **Phase II:** 18 Jan 2010 - 10 May 2010
- **Alpha Draft Complete:** 10 May 2010
- **Beta I Draft Complete:** 10 May 2011
- **Beta II Draft Complete:** 10 May 2012 (Field Trials Begin)
- **Submission to WHA** Nov 2013
- **WHA Approval** May 2014
- **ICD-11 Implementation**
- **/continuous update** Jan. 2015 onwards
1 TAG Managing Editors
   - proposal generator,
   - reviewer,
   - managing editor..

2 Classification Experts (WHO-FIC Collaborating centres+ WONCA)
   - validation of the linearization (ICD10 +national adaptations +specialties
     WHO lexica, other (rare disease,UMLS,SnomedCT et..
   - coding rules and instructions (Volume II) and index (Volume III).

3 Informatics experts
   - tooling
   - workflows
   - multilingual aspects of the tooling and the products.

4 Social Networking for Beta phase
ICD 11 revision

TOOLS
1 Software ICAT (Initial Collaborative Authoring Tool)
   - Collaborative Protégé
   - Bioportal
   - Browser
2 Content model: 4 dimensions layer
   - Ontology layer
   - Foundational layer (Diagnosis morbidity criteria)
   - Linearisation layer (3 uses cases: mortality, morbidity, primary care)
   - Lexical/multilingual layer
3 Common Template to identify the semantic components of diseases definitions and their values starting from the content model (categorial structure)
Terminology to Ontology through standards

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Definition

Categorial structure for healthcare terminologies: Minimal set of domain constraints to represent a healthcare terminology in a precise domain with a precise goal.

- a) list of semantic categories: Owl classes in Protégé
- b) goal of the categorial structure
- c) list of semantic links authorised with their associated semantic categories: Owl properties in Protégé
- d) minimal constraints allowing the generation and validation of well formed terminological phrases.

Content model. 3 different uses cases
DISEASE MORTALITY
DIAGNOSTIC MORBIDITY
PATIENT FINDINGS AND PROBLEMS
PRIMARY CARE
Disease/Diagnostic:has_abnormality
Diagnostic.Has_Characteristics
Disease.Has_Etiology
Disease/Disorder.Has_Findings
Patient Findings and Problems.Has_Focus
Disease/Disorder.Has_Location
Terminology to Ontology through standards

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ICD 11 revision process is a critical shift based on
- a new organisation
- new tools available in biomedical informatics and in the web open source community.

Web social cooperation and ontology driven tools are the means to increase semantic interoperability with other international terminologies within the WHO FIC network (ICF, ICHI and ICPS) and outside (IHTSDO and SNOMED CT).

3 Different linearisations/uses cases
ICF
ICPS Incident
ICPS Action
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Grachie
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Obligado
Efcharisto
ARIGATO GOZAIMASU
Tag

Multumesc.