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Multilingual electronic cataloguing and classification in eBusiness - Classification Mapping for open and standardized product classification usage in eBusiness

S.R. CWA 16525:2012

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WORKSHOP

December 2012

AGREEMENT

ICS 01.140.20; 35.240.60

English version

**Multilingual electronic cataloguing and classification in
eBusiness - Classification Mapping for open and standardized
product classification usage in eBusiness**

This CEN Workshop Agreement has been drafted and approved by a Workshop of representatives of interested parties, the constitution of which is indicated in the foreword of this Workshop Agreement.

The formal process followed by the Workshop in the development of this Workshop Agreement has been endorsed by the National Members of CEN but neither the National Members of CEN nor the CEN-CENELEC Management Centre can be held accountable for the technical content of this CEN Workshop Agreement or possible conflicts with standards or legislation.

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Foreword

This CEN Workshop Agreement has been drafted and approved by a Workshop of representatives of interested parties on 2012-09-20, the constitution of which was supported by CEN following the public call for participation made on 2011-01-27.

A list of the individuals and organizations which supported the technical consensus represented by the CEN Workshop Agreement is available to purchasers from the CEN-CENELEC Management Centre. These organizations were drawn from the following economic sectors (ICT, eCommerce, Product Classification, Universities).

The formal process followed by the Workshop in the development of the CEN Workshop Agreement has been endorsed by the National Members of CEN but neither the National Members of CEN nor the CEN Management Centre can be held accountable for the technical content of the CEN Workshop Agreement or possible conflict with standards or legislation. This CEN Workshop Agreement can in no way be held as being an official standard developed by CEN and its members.

The final review/endorsement round for this CWA was started on 2012-04-26 and was successfully closed on 2012-06-26. The final text of this CWA was submitted to CEN for publication on 2012-10-22.

The following companies/organizations endorsed the CWA:

- AFIM (France)
- Infoterm (Austria)
- Class.Ing (Germany)
- TANGER Computersystems (Czech Republic)
- AGATHIS (Belgium)
- CESI (China)
- CETIM (France)
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- Dr. Otto Mueller Consulting (Switzerland)
- eCl@ss e.V. (Germany)
- ESG Elektroniksystem- und Logistik-GmbH (Germany)
- GS1 France (France)
- GS1 Germany GmbH (Germany)
- ICB - Institute for Computer & Business (Germany)
- IFCC GmbH (Germany)
- Institut der Deutschen Wirtschaft Köln (Germany)
- Paradine GmbH (Austria)
- Pragmeta Knowledge Clout (Belgium)
- Steinbeis Beratungszentrum Electronic Business (Germany)
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Comments or suggestions from the users of the CEN Workshop Agreement are welcome and should be addressed to the CEN-CENELEC Management Centre.

Introduction

The cMap project - Classification and Mapping for eBusiness and eProcurement - is a follow up project of the CC3P project - Classification and catalogue systems for public and private procurement - which has been closed in 2010 with CWA 16138. The CC3P project conducted an analysis about how different product classification systems can be aligned with each other to get knowledge about the possibility to map or align these different systems with each other.

The basis requirement for such an alignment was to have product data classified in one product classification system classified manually, semi-automatically or even automatically in another product classification system. Such mapping or alignment would facilitate business processes, such as electronic procurement or tendering, even if different classification systems are used enterprise-wide.

To get this knowledge, four main product classification systems have been assessed, since they are widely used within companies and by the public sector. These main product classification systems are CPV, eCl@ss, GPC and UNSPSC. A trial mapping has been undertaken for six domains to analyse differences and similarities between the product classification systems in order to extract basic rules for alignment or mapping. Those six domains (namely: Cloths, Food Beverage & Tobacco, Furniture, Electronics, Laboratory, Energy) are updated in the cMap project and available alongside with 45 files will be available.

In addition to the analysis of the structure of the four product classification systems, the maintenance processes of the different classification authorities that are responsible for the maintenance of each product classification system have been assessed. The goal was to understand the differences and similarities of the maintenance processes in order to define a possible overall maintenance process for a product classification authority that would be responsible for the alignment or mapping of the four main product classification systems.

From the main results from the CC3P project, a set of recommendations have been extracted or defined. They will serve to reach a harmonization between the product classification systems and to facilitate an alignment or mapping in the future. On the other hand, recommendations for a high-level mapping platform have been defined, which can be used to align or map the four product classification systems with each other and reach the goal of “classify once, use in different product classification systems” of product data.

The cMap project follows the CC3P project and extends the results in two main areas:

- Finishing a full mapping of all domains of the four product classification systems
- Defining an architecture and a governance mechanism for a mapping platform in terms of building blocks and its requirements.

In addition, an analysis has been carried out to investigate the methods and methodologies to fulfil a semi-automatic or even automatic mapping among the four main product classification systems used in CC3P.

This methodology can serve as the core for the classification platform and gives the glue among the four product classification authorities to support mappings among these product classification systems. Not only technical aspects but also organizational aspects are taken into account.

To reflect all these points, in CC3P the following overall harmonization strategy has been recommended to reach the goal of product classification system alignment or mapping.

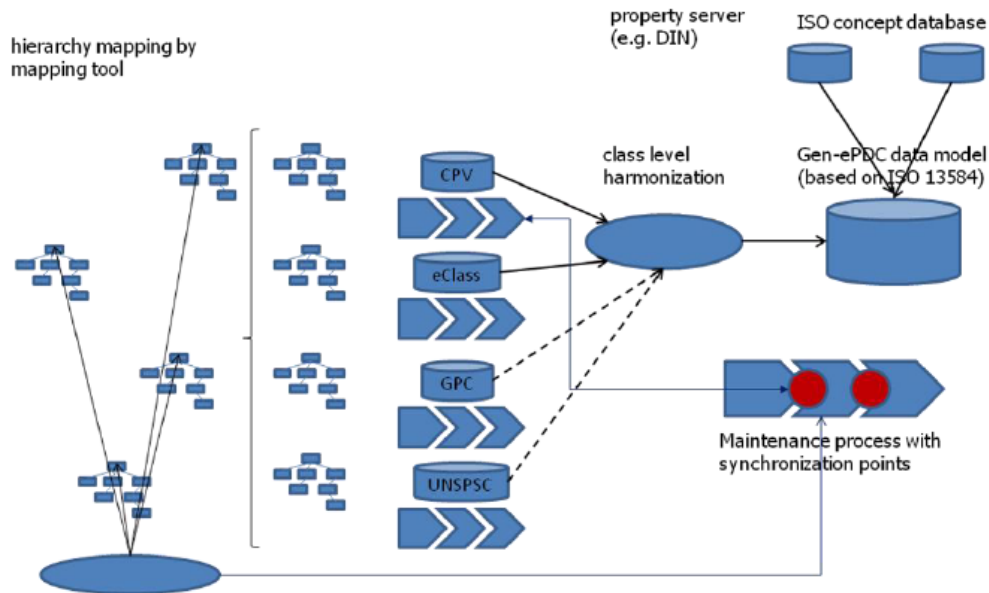


Figure 1 - Overall harmonization strategy

The different parts of this high-level, overall harmonization strategy are described inside this document.

The CWA addresses the following topics:

- Methodologies that are usable to map product classification systems
- Possible architectures for the mapping platform
- Exchange formats for import and export
- Design of the cMap methodology
- Recommended architecture for the cMap platform
- Statistics on the mappings
- Upgrade information
- Use cases, actors, roles and business requirements for the cMap platform
- Data quality recommendations
- Definition of a synchronisation process with a focus on governance models and an approach to business models.

Please note that figures between square brackets such as [1] indicate the numbers of the bibliographical references. The complete details about the references are provided in the Bibliography.

The content of the mapping tables originates from the following four classification systems and their respective classification authorities or their representative:

- CPV - European Commission
- eCl@ss - eCl@ss e.V.

- GPC - GS1
- UNSPSC - GS1 US

Users of the mapping tables have to respect the conditions of use defined by these classification authorities.

1 Scope

The present document studies four product classifications used in eBusiness in Europe (and beyond) to reach the overall goals stated in the introduction, according to the CC3P project for an initial mapping and the research in the direction of methods, methodologies and platforms.

The versions of the product classification systems used here are:

- UNSPSC v11 English
- eCl@ss 6.0.1 English
- GPC 30062008 English (As at 31 August 2009)
- CPV 2008 English

2 Normative References

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

CWA 15295:2005, *Description of References and Data Models for Classification*

CWA 16100:2010, *Guidelines for the design, implementation and operation of a product property server (ePPS)*

3 Terms and definitions and abbreviations

3.1 Terms and definitions

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

3.1.1

attribute

data element for the computer-sensible description of a (→) property, a relation or a (→) class.

EXAMPLE Creation date of a class object in a computer system

[SOURCE: ISO 22274:2012]

3.1.2

backward compatibility

ability to move data from a more advanced version of a system or software package to a less advanced version

[SOURCE: ISO Online Browsing Platform, 2012 ([http://www.iso.org/obp ui/#iso:std:iso:12651:-1:ed-1:v1:en:sec:4.14](http://www.iso.org/obp/ui/#iso:std:iso:12651:-1:ed-1:v1:en:sec:4.14)), ISO 12651-1:2012].

Alternative definition: a newer coding standard is backward compatible with an older coding standard if decoders designed to operate with the older coding standard are able to continue to operate by decoding all or part of a bitstream produced according to the newer coding standard

[SOURCE: ISO Concept Database, 2011 (<http://cdb.iso.org>), ISO/IEC 13818-3:1998].

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