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English version

**Product Description and Classification - Part 3: Results of
development in harmonization of product classifications and in
multilingual electronic catalogues and their respective data
modelling**

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Foreword

This draft CWA "Results of development in harmonization of product classifications and in multilingual electronic catalogues and their respective data modelling" is the third CWA produced within Workshop eCAT for the Gen-ePDC project. This CWA replaces the CWA "Results of development of multilingual catalogues and their respective data modeling methodology", which was agreed as 3rd CWA for the Gen-ePDC at the Workshop eCAT plenary meeting on 16 March 2005.

The reason for the change is that development of data modeling in electronic catalogues has been dealt with in CEN/ISSS Workshop eBES (project cCAT) while Workshop eCAT – Gen ePDC has focused on the issues of harmonization of product classification.

Workshop eCAT «Multilingual ecataloguing and eclassification in ebusiness» combined two different projects – one on eCataloguing – which ran in 2003 and 2004 - and another on product classification (ePDC) – which ran from March 2004 to February 2006. Only catalogues and product classification schemas used in eBusiness were taken into consideration.

The ePDC project was divided into two parts. In the first part, a modern architecture for a global, interoperable classification schema was designed. Two CWAs were published:

CWA 15294:2005 "Dictionary of Terminology for Product Classification and Description"

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

The second part – called Gen-ePDC – aimed at discussing with different organizations the possibility for their convergence towards a common base. The role of properties and attributes, the link between classification schemes and electronic catalogues were further explored.

Three CWAs summarise the findings of Gen-ePDC:

CWA «New property library»

CWA «Product classes with sets of properties»

CWA «Results of development in harmonization of product classifications and in multilingual electronic catalogues and their respective data modelling»

The public comment period runs from 1 February 2006 to 1 April 2006.

The present CWA comments the results of the preliminary harmonization of three classifications: GPC, UNSPSC and eCl@ss. It shows the way on how to proceed further, harmonizing other segments of industry or retail. It also explains the different stages that are necessary to begin the harmonization of catalogue structures.

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1 Introduction

The issue of electronic Product Description and Classification has been identified by the CEN/ISSS Workshop eCAT, as being one of the key topics requiring more coherent standardization activity over the 2003-2005 timeframe. This has been a support for dedicated activities from CEN/ISSS groups and stakeholders.

Within the CEN/ISSS Workshop eCAT, the Gen-ePDC project addresses this as a core issue, with the aim of drafting a proposal for the harmonization of existing product classification systems. This CWA contains the results achieved within the Gen-ePDC project.

The Gen-ePDC project started by analyzing the issues related to the harmonization of three classification systems (eCI@ss, UNSPSC and GPC), which are widely used in Europe for product classification in sales and procurement. These three classification systems have been examined in three industry sectors (independent automotive aftermarket, oil and gas industry and domestic appliances) in order to create some kind of best practices and develop organisational, technical and process-based recommendations to facilitate the harmonization process.

Within the product classification systems, the level of product classes and, as far as possible, the first hierarchical level above these product classes, have been taken into account. Harmonization of product classes deals with getting revised names for product classes and if needed, product class numbers. Additionally, the set of properties for the different product classes have been matched wherever possible or new properties have been introduced.

The CWA describes how good progress has been reached in the domestic appliances industry, where a first proposal for the collaborative development of a product classification could be established. Furthermore, it shows how good knowledge of the oil and gas industry standardization could be achieved: available classifications and their gaps and differences have been explored.

The CWA also describes the setting up of a process for a joint working committee dealing with harmonization of product classifications. Participating members already started discussions in November 2005 via monthly phone conferences and, where possible, dedicated meetings. In addition, three working groups have been established to implement the proposed changes in the three addressed areas. First success could be reached by implementing some proposed classes from CECED into eCI@ss.

The investigation of a software architecture for a future classification platform has been accomplished and a first version of a web site giving access to the classification systems has been developed.

1.1 Overview of Existing classification schemes

The starting point for the harmonisation activities undertaken during the ePDC project is the table of existing classification schemes that covers not only Europe but also all the other world regions. There are hundreds of classification systems available and in use within the business community. A basic distinction according to classification systems can be done as indicated in Figure 1.

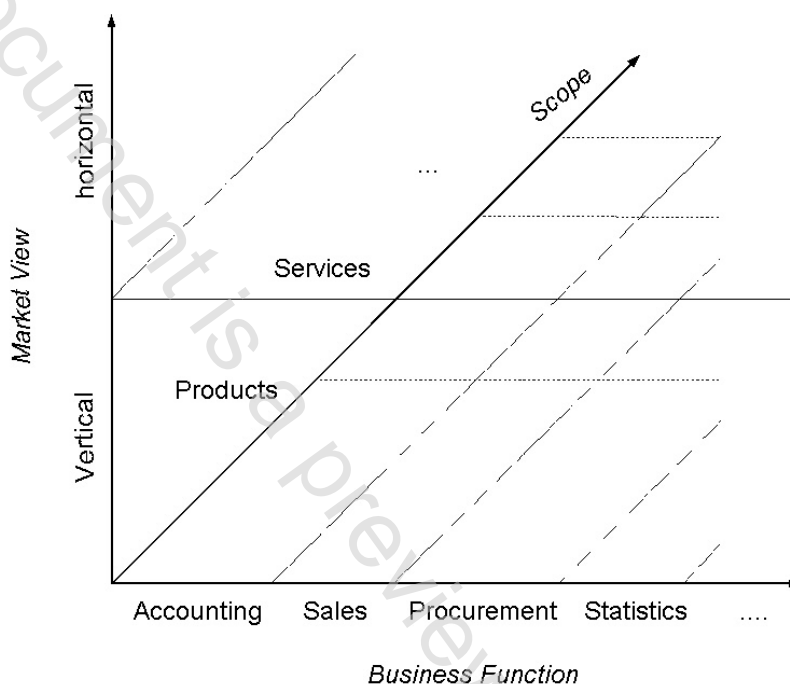


Figure 1 - Basic portfolio schema for classification systems

In Figure 1, the basic distinctions between the three dimensions about classification systems are shown:

Market View: This dimension refers to the spreading direction of product classification systems. On the one hand, product classification systems can be used within the different stages of supply chains inside a specific industry sector. These are vertical product classification systems. On the other hand, horizontal product classification systems are used across different industry sectors.

Business Function: Besides the distinction about the spreading of product classification systems in horizontal and vertical usage, there are product classification systems used for specific business functions, like procurement, sales or financial statistics.

Scope: This dimension refers to the matter of product classification systems. A basic distinction according to the scope is the usage of product classification systems for the description of products or services.

The Gen-ePDC project mainly deals with horizontal classification systems for both products and services related to no specific business function.

An investigation of relevant product classification systems led, in August 2003, to a summary of 37 classification systems relevant in the market for different purposes (see Figure 2). This table has been continuously updated and presently contains 45 classifications. The latest version, updated in February 2006, is in annex to this CWA.

The main issue arising is that the aims of the various classification systems are very different. The choice made within the Gen-ePDC project is to focus on classification systems for products and services mainly for horizontal markets in sales and procurement. Nevertheless, the results created within the ePDC project are believed to be relevant for other classification systems.



Figure 2 - The summary of 37 classification systems

The overall investigation of product classification systems has led to focus on the following horizontal product classification systems: eCI@ss, UNSPSC, and GPC which are all relevant for the European market. This result can be concluded from the market share of the investigated product classification systems and their progress in development.

The starting point in Gen-ePDC has been to recognize that a global approach for harmonization does not make sense because of many reasons, among which too much complication, too much effort, psychological and cultural barriers and most of all because it does not have sufficient business acceptance.

Therefore the Gen-ePDC project has started with three different industry sectors to set up the harmonization process and to show these evolutions as best practices for classification

harmonization. Besides the concrete harmonization of these industry sectors, the results reached are giving the direction for the harmonization of additional industry sectors.

2 References

URLs

BME: <http://www.bme.de>

BMEcat: <http://www.bmecat.org>

CECED: <http://www.ceced.org>

eCAT:

<http://www.cenorm.be/cenorm/businessdomains/businessdomains/iss/activity/wseCAT.asp>

eCl@ss: <http://www.eclasse-online.com>

ePDC: http://linux.termnet.org/index.py?level=level2&id=5&lang=_en&admin_parm

GPC: <http://www.gs1.org/gpc.html>

JBOSS: <http://www.jboss.org>

PIDX: <http://www.pidx.org>

pLIB: <http://www.plib.ensma.fr/>

TecDoc: <http://www.tecdoc.de>

Tomcat: <http://jakarta.apache.org/tomcat/>

UNSPSC: <http://www.unspsc.org>

Normative references

ISO 1584-24 *Industrial automation systems and integration – Parts library – Part 24: Logical resource: Logical model of supplier library*

ISO 1584-42 *Industrial automation systems and integration – Parts library – Part 42: Description methodology: Methodology for structuring part families (Including Cor. 1:2003)*

IEC 61360-1 *Standard data element types with associated classification scheme for electric components – Part 1: Definitions; Principles and methods*

IEC 61360-2 *Standard data element types with associated classification scheme for electric components – Part 2: EXPRESS dictionary schema*

IEC 61360-3 *Standard data element types with associated classification scheme for electric components – Part 3: Maintenance and validation procedures (to be superseded by a general maintenance procedure for standards in database format to be adopted into the ISO/IEC directives – IEC supplement*

IEC 61360-4 *Standard data element types with associated classification scheme for electric components – Part 4: IEC reference collection of standard data element types, component classes and terms*

IEC 61360-5 *Standard data element types with associated classification scheme for electric components – Part 5: Extensions to the EXPRESS dictionary schema*

3 Organisation of the Harmonization Process

3.1 Business rules to operate a joint working committee

The harmonization of product description and classification systems needs an overall coordination instance to start and lead the communication between the existing classification systems. In addition, it has to serve as an independent instance for questions on the strategic evolution of classification systems.

Two different aspects have to be taken into account for an efficient support of a harmonized evolution. On the one hand, the joint working committee should serve as the party which decides by discussion with the leading persons of the different initiatives about the segmentation of the market from a product point of view. As this, the leading maintenance organisations for the specified product areas have to be assigned. By doing this, inefficient and diverging double work can be avoided. It has to be guaranteed that descriptive work for products done by one organisation can be taken over by other initiatives.

This approach accommodates the fact that some initiatives are working on sector specific product descriptions while others are dealing with the description of all products available. The vertical initiatives bring in deep sector specific knowledge about their products and should serve as the leading organisations for their sectors. The horizontal initiatives should take over these sector specific results in product description to get a complete view of products across all segments. In addition, all segments which are not represented by a sector specific organisation should be covered by working groups within the horizontal initiatives or standardisation bodies.

Beside this strategic approach to harmonize and assemble the different directions and initiatives in description and classification of products for electronic business, the joint working committee also has to support the operational level for harmonization. The operational level deals with the calibration of the different initiative specific descriptions of products in the direction of a common architecture and data model. To make sure an efficient evolution of given differences in product description to a common model, the joint working committee investigates given classification systems from an independent point of view. As a result of this investigation, it makes proposals for gaps in describing products