CEN/ISSS/WS/ePDC Project Plan

Date: 27 October 2003
Source: Raymond Betz, CIDX
Revised by CEN/ISSS Secretariat
Status: For Approval

1 Title of the Project

"Global Multilingual Product Description and Classification for eCommerce and eBusiness"

2 Proposers (companies, organization, etc.)

CIDX (Chemical Industry Data eXchange – European contact: Ludwigshafen, Germany).
eCl@ss e.V. (Cologne, Germany).
TermNet (Vienna, Austria).
EAN International (Brussels, Belgium)
UNSPSC (Lawrenceville, USA).
ROSETTANET (Santa Ana, USA).
SEMI (San Jose, USA - European contact: Brussels, Belgium).
PIDX (Petroleum Industry Data eXchange – Houston, USA).
IAO – Fraunhofer Institute (Stuttgart, Germany).
ECC – European Content Club (Frankfurt, Germany).
ENSMA/pLIB (Poitiers, France).
Phoenix EDH (Houston, USA).
KIS – Korea Information Service (Seoul, Korea).
Paradine (Vienna, Austria).
Requisite (Westminster, USA).
Menza (Lealholm, UK).

3 Project objectives

3.1 Background

In the interconnected world of today there is an increasing emphasis on the efficient flow of goods and services through the supply chain. Information flows are designed to plan and track material within and between enterprises. Often these flows need to encompass a product's inception in R & D and continue through final disposal at the end of its lifecycle, after having passed through the manufacturing and selling activities.

During its lifetime many units of different companies deal with a product. Many humans and many computer systems need information about the product. Procurement forwards the information to (potential) suppliers and to their order processing systems. Suppliers match the information they receive with the data of their products. The appropriate item is selected. It is delivered and used, for example as a raw material in a production process. The information accompanying the material becomes part of the batch record. Concurrently purchasers perform statistical analyses to determine their market position and performance. Therefore they need information of what has been bought.

There is information flow between many people and the computer systems they use. The current situation is that many of these computer systems are not interconnected, and they store the information they have to exchange in different, often proprietary, incompatible formats and data structures. Data is often transcribed, translated and transferred manually between computer systems. Enormous amounts of time and money are wasted.

Electronic marketplaces are trying to ease multiple connections, but the work is difficult (see the latest EU report on marketplaces). They are an interface in the supply chain in which this issue is most obvious. Product descriptions, specifications, catalogue data, orders, etc., are exchanged through electronic marketplaces. A more efficient way for exchange of information is critical to achieving their business goals.

Trends in doing business:

For many years, enterprises have done business using internal proprietary identification (coding) schemes for their finished products and raw materials catalogs, which usually resided in MRP systems.

Over the past decade, nature of doing business in the industry has moved from local, single business models to global, enterprise wide models; at the same time, Information Technology has been instrumental in pushing these models to become reality by e.g. ERP systems and global networks.

Globalization of businesses, as well as fast emerging Information Technology is leading to more transparency of business processes and forcing inter-company systems integration.

Trends in Product coding/classification:

Coding of Products for internal processes for many years has been local, and, as a result, businesses and geographic areas had their own Product ID's. This causes significant duplication and inefficiencies in business processes, not only internally within an enterprise, but also outside the company (in parts of the supply chain like EH&S, Procurement, Manufacturing, etc.).

Emerging eBusiness technology is pushing the envelope even faster and accelerates the need for transparent business transactions in a B2B, B2C and marketplace environment. Even if the “hype” in eBusiness during the years 2000-2001 is now over, there is always a business case in doing commerce electronically (business automation).

Prerequisite for transparent business transaction processing is consistency in data structures and consistency in coding of Products, Customers, Locations, etc.

As result, for Product coding in eBusiness Transactions and Product Catalogs, conventions and standards have to be agreed upon for various Product levels, i.e. SKU, Trade Product, Brand, Product Family and Product Hierarchy, as well as Product Attributes which are basically used for technical Product searching. These data are assembled in a Product *Classification*.

Classification systems with sets of attributes are quite complex data systems. It takes tens of person-years to create such a system which meets the requirements of a larger enterprise. It is quite obvious that creating and maintaining only one and using it everywhere is much more efficient and economical than using multiple proprietary systems.

In addition to their own structure(s), cross-reference tables need to be created and maintained. This is a costly and time consuming effort which, in the absence of a standard, would need to be undertaken within each enterprise. These efforts provide no value to the customer and only add to the difficulty in integrating cross business processes.

However, different initiatives have arisen since a few years to try to build a global common product classification system, but none has really succeeded until now. Some of these initiatives (Rosettanet, PIDX, SEMI, eCl@ss,...) have had a partial success as they are implemented in company supply chains within certain vertical sectors (Electronics, Petroleum, Chemicals,..). At the exception of one (UNSPSC), none has a real global coverage.

It is very important, in view of the preceding arguments, that we don’t proceed much longer with the deployment of locally based classifications that have different architectures, inhomogeneous content and management problems.

3.2 Objective

Overall objective: The Project's objective is to harmonize existing standards for product description and classification into a common horizontal, i.e. cross-industry, system, then maintain, promote, and make it available to the public under a royalty-free license on an on-going basis.

Detailed objectives:

1. To propose draft documents to be endorsed by CEN/ISSS WS/ECAT, to become CEN Workshop Agreements (CWAs) containing:

a) A detailed structure of a global product classification (joint architecture)

b) Business rules to operate a joint working committee, that will manage all necessary tools for Product Classification Maintenance (Repository, data files, license terms, unified terminology, maintenance policy,…)

c) The results of a study aimed at choosing the tools necessary for Product Classification Management (repository, website, personal…) and propose a funding scheme

2. To have basic methodology documents, approved as CWAs by CEN, proposed to ISO for agreement

3. To implement all actions which have been defined in point 1 including

- setting up the working committee
- having experts that will manage the Product Classification
- discussing the conditions of use of the repository, passing the agreement to use the repository and implement the classification in it
- Maintaining and/or updating, under the working committee management, the defined functioning rules (business and maintenance rules, licence terms, terminology…)
- funding the project adequately

The project will NOT deal with *Product CODING* (e.g. GTIN, UPC…) which gives a single code to each product sold in the supply chain. It will only deal with a Classification (several levels are present, as well as attributes) of Products (and not industries!)

This Project will run as part of the eCAT workshop which was launched by CEN on 29 November 2002 and will use the same infrastructure (Secretariat, members, web pages, etc…).

It is to be noted also that this project is the formalization of a process that has started in October 2000 within the CIDX organization, and enlarged in May 2002 by inviting other organizations active in product classification to join the initial core people (PDCF- Product Description and Classification Forum). The work of the PDCF will form the starting point of the Project's activities.

4 Detailed Project contents, deliverables and timescales

4.1 CEN/ISSS WS/eCAT Working Group

The CEN/ISSS eCAT Workshop will form a voluntary Working Group (WG/Classfication) to undertake the Project, under a Convenor to be appointed by the Workshop. The WG will pursue and incorporate the technical work already accomplished by the PDCF.

Subject to the negotiation of the financial support under the eEurope 2003-5 programme, the WG will be supported by a financed Project Team to be selected by the Workshop following the usual CEN rules.

The Project Team will work under the guidance and supervision of the WG. The drafts of the CEN Workshop Agreements will be posted on the CEN website for public comment for a minimum of 60 days.

The WS/eCAT Secretariat will carry out the operational and administrative tasks required by the Project, and will report to the WG Convenor, in consultation with the CEN/ISSS Director as required.

The WG Convenor shall:

- preside the Working Group and other appropriate meetings;
- represent the Project in the Plenary meetings of the Workshop;
- in conjunction with the Project Team leader, ensure that the Project carries out the functions prescribed in the present Business Plan, and in the appropriate manner;
- represent the Project in appropriate external meetings;
- direct the focus of the Project;
- liaise with the Team Manager and as appropriate with the CEN/ISSS Director concerning the administration and strategic issues of the Project.

The Convenor will work on voluntary basis.

4.2 Work programme

Work Item 1 (W1): Months 1-18
Create and maintain a table of existing classification schemes, whether or not these are participating in the Project

➔ Deliverable 1: Excel sheet containg the table
➔ Manpower: made by the project leaders
➔ Milestone: each WS/eCAT Plenary Meeting

Work Item 2 (W2): Months 1-3
Harmonize the terminology (terms and definitions)

Currently, many different terms are used for the same concepts.
Examples:
- Classification, hierarchy, taxonomy, ontology
- Class, noun/modifier, noun/qualifier, commodity
- Attribute, property, characteristic
- This leads to numerous misunderstandings. There is an obvious need to unify the terminology in this field.

W2.1: Think through implementation scenarios, use cases. Sketch some reference models for implementation (for example using RosettaNet, Part libraries, eCl@ss...).
W2.2: Think through maintenance scenarios. Sketch one or more reference models for maintenance. Here also existing systems (RosettaNet, Part libraries, eCl@ss,...) will be used.
W2.3: Based on these two groups of reference models, develop a Terminology, which is, as far as possible, compatible with ISO 13584

➔ Deliverable 2: **CWA:** Dictionary of Terminology for Product Classification Components
➔ Manpower: 1 expert, 10 man.days
➔ Milestone: second Plenary Meeting

Work Item 3 (W3): Months 1-6
Decide on common architecture for technical dictionaries according to pertaining standards like ISO 13584.

To do this, it seems necessary to design two reference models that cover the architecture of the classification itself, when it is set up, and the maintenance once the classification has been agreed upon. They will serve as basis for the data model.

W3.1: Develop a reference model for implementation. The document will explain business processes and typical applications in which product classification plays a role. It will point out the benefits of standardization and provide guidance for the implementation of product classification.
W3.2: Develop a reference model for maintenance. The document will explain how to avoid two interoperable classifications to drift apart and ensure certain quality standards.
W3.3: Based on W2, W3.1 and W3.2 develop a data model. This model will complement the Dictionary of Terminology (Terms and Definitions) in that it demonstrates how the concepts introduced there are related among each other.
W3.4: Based on 3.1, 3.2 and 3.3, develop exchange formats (for proper interoperability).

The data model should as be much as possible be compliant with ISO 13584.

- ➔ Deliverable 3: **CWA** : Description of the references models and data model of the classification (architecture)
- ➔ Manpower: 3 experts, 118 man.days
- ➔ Milestone: Second Plenary Meeting

The completed CWA will be submitted to ISO TC37 as an input document.

Work Item 4 (W4): Months 5-6
Decide on business rules to operate a joint working committee in charge of the implementation and management of the classification

- ➔ Deliverable 4: Document describing the business rules
- ➔ Manpower: 1 expert, 2 man.days
- ➔ Milestone: Second Plenary Meeting

Work Item 5 (W5): Months 3-8
Find an appropriate toolset for maintaining the system including
W5.1 - a repository able to accommodate the classification
W5.2 - a website giving free access to the classification and to governing rules

- ➔ Deliverable 5: Document describing the toolset and funding proposals
- ➔ Manpower: 1 expert, 20 man.days
- ➔ Milestone: Second Plenary Meeting

Work Item 6 (W6): Months 7-8
Plan the transition from proprietary structures to common architecture and request agreement from all participating organizations

- ➔ Deliverable 6: Document describing the transition plan
- ➔ Manpower: 1 expert, 8 man.days
- ➔ Milestone: Third Plenary Meeting

Work Item 7 (W7): Months 7-8

- *Set up the joint working committee*
- *Search + decide for experts that will manage the Product Classification*
- *Discuss the conditions of use of the repository; pass an agreement to open the use of it*

➔ Deliverable 7: Document describing the usage conditions of the toolset
➔ Manpower: 1 expert, 20 man.days
➔ Milestone: Third Plenary Meeting

Work Item 8 (W8): Months 8-12

Harmonize the maintenance processes and policies. Propose a financial plan for the future maintenance of the classification.

➔ Deliverable 8: New process and policy documents
➔ Manpower:1 expert, 50 man.days
➔ Milestone: Fourth Plenary Meeting

Work Item 9 (W9): Months 8-12

Segment and assign domains to collaborating organizations

W9.1: Segment all goods and services into classes
W9.2: Assign classes to specific organizations
W9.3: Resolve overlap and gap in classes and attributes

➔ Deliverable 9: Data file on domain responsibility and report on accomplished reorganizations
➔ Manpower: 1 expert, 50 man.days
➔ Milestone: Fifth Plenary meeting

Work Item 10 (W10): Months 12-18

Migrate existing classifications to the common architecture

➔ Deliverable 10: Report on the results of the migration
➔ Manpower: 1 expert, 50 man.days
➔ Milestone: Fourth Plenary Meeting

Work item 11 (W11) Months 12-17

W11.1: *Write a CWA on the Attribute Library and submit it to ISO*
W11.2: *Write a CWA on Product Classes with sets of Attributes and submit it to ISO*

➔ Deliverable 11: CWA documents on “Attribute Library” and “Product Classes with sets of Attributes”
➔ Manpower: 2 experts, 40 man.days
➔ Milestone: Fifth Plenary Meeting

Work item 12 (W12) Month 18

W12.1: *Decide if Hierarchies are to be standardized*
W12.2: *If yes, write a CWA on the subject matter and submit it to ISO*

- Manpower: 1 expert, 10 man.days

Work item 13 (W13) Month 18

W13.1: *Decide if Synonyms and Keywords are to be standardized*
W13.2: *If yes, write a CWA on the subject matter and submit it to ISO*

- Manpower: 1 expert, 10 man.days

Summary of proposed CWA documents

- Dictionary of Terminology for Product Classification Components
- Description of the references models and data model of the classification (architecture)
- The Attribute Library
- Product Classes with sets of Attributes
- Hierarchies (optional)
- Synonyms and Keywords (optional)

4.3 Timescale

The overall Project Duration will be 18 months, divided into two phases. The first phase will run from the start of the project for a period of approximately six months. In the first phase, a Project Team of experts will prepare draft proposals relating to steps 1 to 7 below (Work Items 1 to 5[1]).

The remainder of the activities will be carried out over the subsequent twelve months, subject to agreement on detailed planning to be approved by the Working Group and WS/ECAT.

(Draft) Time Scale of Project Plan ePDC 2003-11 / 2005-04

1st Phase								2nd Phase											
		Month	Month	Month	Month	Month	Month	Month	Month	Month	Month	Month	Month	Month	Month	Month	Month	Month	Month
		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
W	Task	03-11	03-12	04-1	04-2	04-3	04-4	04-5	04-6	04-7	04-8	04-9	04-10	04-11	04-12	05-1	05-2	05-3	05-4
W1		MO																	
W2			M1																
W3	W3.1																		
	W3.2																		
	W3.3																		
	W3.4																		
W4																			
W5	W5.1																		
	W5.2						M2												
W6																			
W7																			
W8														M3					
W9	W9.1																		
	W9.2																		
	W9.3																		
W10																			
W11	W11.1																		
	W11.2																		
W12	W12.1																		
	W12.2																		
W13	W13.1																		
	W13.2																		M4

Word Item (W) – Deliverable (D) – Milestone (M)

[1] Please note that Work Item 5 is in part in phase one and in part in phase 2. 10 m/d are taken into account for phase one and 10 m/d are taken into account for phase 2.

4.4 Summary table including resource requirements

Steps	Activity	Paid m/d[2]
	FIRST PART	
0 – WI 1	Maintain Classification schemes list	-
1 - WI 2	Terms and Definitions	10
2 – WI 3.1	Implementation Models and Scenarios	28
3 – WI 3.2	Maintenance Model	30
4 – WI 3.3	Data Model	35
5 – WI 3.4	Exchange Formats	25
6 – WI 4	Business rules for management of the Classification	2
7 – WI 5	Toolset for maintaining the system (repository…)	10
	Secretariat (same as eCAT Workshop)	
Milestone	Decide on the necessity to manage a standard classification system. If the decision is negative, end here.	
	Subtotal	***140***
	SECOND PART[3]	
7 – WI 5	Toolset for maintaining the system (repository,…)	10
8 – WI 6	Plan the transition to new system and request agreement	8
9 – WI 7	Implement the management of the Classification	20
10 – WI 8	Harmonize the processes and policies	50
11 – WI 9	Segment and assign domains	50
12 – WI 10	Migrate existing classifications to common architecture	50
13 – WI 11.1	Write a document on the Attribute Library	20
14 – WI 11.2	Write a document on Product Classes with Sets of Attributes	20
Milestone	Decide on the necessity of a standard Hierarchy and of cross-linking to other hierarchies. If the decision is negative end here.	-
15 – WI 12	Write document on Hierarchy	10
Milestone	Decide on the necessity of a standard synonym and key word system. If the decision is negative end here.	-
16 – WI 13	Write document on Synonyms and Keywords	10
	Subtotal	***248***
TOTAL		***388***

[2] These m/days purely refer to the m/d allocated to the Project Team for preparing the documents for discussion within the Workshop and do not include voluntary work on these items done by Workshop members and/or other experts.

[3] The m/d for the second phase will be confirmed at a later stage.

5 Resource requirements

It is proposed that the project be funded by the European Commission in **two parts**:

A first part - **structure of the classification -** comprising steps 1 to 7 (WI 1-5 5 only first part) - running from November 2003 to April 2004.

After successful completion (Milestone), a second part – **implementation (May 2004-April 2005)** - will be introduced for further funding (steps 8 to 14 plus second part of step 7).

Respective total needed manpower is 140man-days for the first part and 248 man-days for the second, for a total of 388 m/d. These figures only refer to the paid m/d.

For the first phase, a Project Team of three experts will be appointed under CEN rules. The different steps will be attributed to the 3 experts as follows:

Expert A: Step 1 + 3 = 40 m/d
Expert B: Step 2 + 6 + 7 = 40 m/d
Expert C: Step 4 + 5 = 60 m/d

For the first phase, funding for the Project Team and a contribution to the Workshop Secretariat is available from European Commission/EFTA under the eEurope Initiative; the availability of this funding depends on a sufficient level of voluntary participation in the work. For this project, this requires a voluntary participation equivalent to 155 m/d.

6 Liaisons

- CEN/ISSS/WS/EC, WS/eBES and other relevant CEN/ISSS Workshops/Projects
- ISO TC37
- ISO TC184/SC4/WG2

Other appropriate liaisons will be identified with world-wide and regional industry branches and also global organizations (NATO, EU/CPV,..) **.**

7 Contact points

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