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Business Interoperability Interfaces for Public Procurement in Europe - Architecture - Part 112: Syntax Implementations Guideline for Methodology

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Business Interoperability Interfaces for Public Procurement in Europe - Architecture - Part 112: Syntax Implementations Guideline for Methodology

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European foreword

CWA 17025-112, **Syntax Implementations Guideline for Methodology** was developed in accordance with CEN-CENELEC Guide 29 “CEN/CENELEC Workshop Agreements – The way to rapid agreement” and with the relevant provisions of CEN/CENELEC Internal Regulations - Part 2. It was agreed on 2015-12-02 in a Workshop by representatives of interested parties, approved and supported by CEN following a public call for participation made on 2013-02-20. It does not necessarily reflect the views of all stakeholders that might have an interest in its subject matter.

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This CEN Workshop Agreement (CWA) has been drafted and approved by the Workshop on **Business Interoperability Interfaces for Public procurement in Europe (BII)**, phase 3.

CWA 17025 is part of a set of CWAs prepared by CEN WS/BII 3¹:

- CWA 17025:2016 Methodology and Architecture
- CWA 17026:2016 Notification profiles and transactions
- CWA 17027:2016 Tendering profiles and transactions
- CWA 17028:2016 Catalogue profiles and transactions
- CWA 17029:2016 Post-award profiles and transactions

CWA 17025 part 112 replaces CWA 16558 – Annex K Guideline Syntax Binding Methodology.

CWA 17025 consists of:

- CWA 17025-1 Overview and Architecture
- CWA 17025-101 Conformance and Customization Methodology guideline
- CWA 17025-102 Code List and Identifier Management specification
- CWA 17025-103 Business Document and Envelope guideline
- CWA 17025-104 Profile Architecture specification
- CWA 17025-105 Conformance Registry specification
- CWA 17025-106 Open Procurement Data report
- CWA 17025-107 Message Level Response guideline
- CWA 17025-108 Use of Digital Signature and Other Trust Services
- CWA 17025-109 Guideline on the Concept of Core

¹ In order to ease the reading the CWAs provided by the CEN BII initiative, they are also made available on <http://www.cenbii.eu> together with explanatory notes and supporting material. The official version is however the version as published by CEN.

CWA 17025-110 Profile Maintenance Process specification
 CWA 17025-111 Capturing Business Requirements specification
 CWA 17025-112 Syntax Implementations Guideline Methodology guideline
 CWA 17025-113 Business Rules Description Mechanism guideline
 CWA 17025-114 Attachments Handling guideline
 CWA 17025-115 Semantic Data Type guideline
 CWA 17025-116 Glossary and Business Term Vocabulary
 CWA 17025-203 BDE Syntax Implementation Guideline for Messaging Envelope
 CWA 17025-207 UBL Syntax Implementation Guideline for Message Level Response

A detailed overview of all CWA 17025 parts can be found in CWA 17025 part 1.

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Introduction

The first CEN BII Workshop was established in May 2007 with the objective of harmonising electronic procurement in Europe. The CEN BII initiative, which now comprises a further two CEN Workshops, is a standardisation activity within CEN (European Committee for Standardisation). It provides a framework for interoperability in pan-European electronic transactions expressed as a set of technical specifications.

During the second phase of the initiative (CEN WS/BII 2) a set of technical specifications – “CEN BII Profiles” – were documented and published as five CEN Workshop Agreements (CWAs), which are currently used across Europe. The profiles are designed to facilitate effective public e-procurement based on a modular approach for implementation, with a focus on global interoperability.

The CEN BII profiles can be seen as “agreements” on message contents and business processes. The profile descriptions focus on core information elements that typically cater to the majority of user requirements applicable across Europe and lower the need for detailed bilateral agreements between the trading partners.

In its third phase (CEN WS/BII 3), which began in March 2013 with the approval of the business plan, the Workshop has focused on ensuring that all relevant aspects of e-procurement are covered, including additional business requirements coming from the new Public Procurement Directives and alignment to other standardization efforts in the area of electronic invoicing, as well as ensuring wider recognition and adoption of its deliverables.

More information about the CEN BII initiative can be found on www.cenbii.eu.

In this specification, a methodology (Section 3) and template (Section 6) for the development of syntax implementation guidelines is presented. The methodology describes the requirements of the implementers, the artefacts they need and how these requirements are met in the deliverable. On the other hand, the template provides the outline of the implementation guide and how the artefacts are presented to the implementers.

CWA 17025-112:2016 (E)**1 Scope**

This document is basically an introduction document for the syntax implementation guidelines developed in Phase 3 of CEN WS/BII. It is therefore an informative document. It provides the methodology used for developing the syntax implementations guidelines. The quality is maintained through internal and external reviews as usual.

2 Goal

The goal of this document is to describe the methodology and the template for the CEN BII Phase 3 syntax implementation guidelines that will provide technical support for adopters and implementers of CEN WS/BII deliverables. In other words, syntax implementation guidelines are technical specifications providing guidance on how a given syntax message should be used and implemented in order to meet the requirements defined for a given BII transaction used in a profile. The implementation guidelines will be developed for UBL 2.1 and UN/CEFACT XML). The methodology can be used for other syntax solutions.

Furthermore, a syntax binding methodology is also provided for future possible syntax bindings (mappings).

3 Syntax Binding Methodology e.g. UBL 2.1, UN/CEFACT XML

CEN BII Phase 2 deliverable "CWA 16558 – Annex K Guideline Syntax Binding Methodology²" describes general experience on how the mapping with UBL 2.1 and UN/CEFACT XML has been achieved and the issues (see section 5) encountered during these mapping tasks. The mapping (or binding) is basically performed by binding each BII requirement to the corresponding element in the syntax implementation. The mappings are expressed through XPath expressions. For each BII transaction and target syntax there is a single document showing the mappings.

In this section the methodology used for binding a syntax (specification) to the CEN BII Core data model is presented step by step. First of all, the mapping from CEN BII core (SOURCE) to the specification of interest (TARGET) may not be a straightforward task. In such a mapping task the users may have the following challenges (It should be noted that each CEN BII requirement corresponds to one (or more) elements in the BII Core data model; therefore, the binding methodology described in this section is for mapping the BII Core data model elements to the specific syntax implementation):

- a. No corresponding element on the TARGET: It may be possible that the element in the SOURCE may not exist in the TARGET specification.
- b. Different data types: The data types of the elements may be different.
- c. Different cardinalities: The elements may have different cardinalities. The element on the SOURCE may have multiple cardinality (1..n or 0..n) whereas the element on the TARGET may have single cardinality (1..1 or 0..1).
- d. Mandatory field in the TARGET: Although there is no mapping on the SOURCE side, the element on the TARGET must exist.

This section explains how these difficulties have been handled by the CEN BII experts.

The methodology used for creating the syntax binding is based on a top-down approach and has the following steps:

² ftp://ftp.cen.eu/public/CWAs/BII2/CWA16558/CWA16558-Annex-K-BII-Guideline-SyntaxBindingMethodology-V1_0_0.pdf