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CEN/ISSS WS/BIIGL01

Data format

GUIDELINE

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1 Introduction

The CEN/ISSS Workshop on business interoperability interfaces for public procurement in Europe (CEN/ISSS WS/BII) is established in order to

- Identify and document the required business interoperability interfaces related to pan-European electronic transactions in public procurement expressed as a set of technical specifications, developed by taking due account of current and emerging UN/CEFACT standards in order to ensure global interoperability;
- Co-ordinate and provide support to pilot projects implementing the technical specifications in order to remove technical barriers preventing interoperability.

To facilitate implementation of electronic commerce in a standardized way, thereby enabling the development of standardized software solutions as well as efficient connections between business partners without case by case specification of the data interchange, the workshop agreed to document the required business interoperability interfaces as profile descriptions. The end goal is to reduce the cost of implementing electronic commerce to a level that is economical for small and medium size companies and institutions.

The main focus of the profile description and the associated transaction data models is to address generally expressed business requirements applicable throughout the European market. Although the profile description and associated transaction data model are designed to meet generally expressed requirements, it is still the responsibility of the users to ensure that the actual business transactions exchanges meets all the legal, fiscal and commercial requirements relevant to their business.

This guideline is one of a series of documents providing detailed guidance on the purpose and use of some key elements of the transaction data models developed by CEN/ISSS WS/BII.

All cardinalities shown in this document represent elements and associations at from the full data models; see ‘Profile Architecture’ for further information.

1.1 Purpose

The purpose of this guideline is to specify the use of classes and elements used to specify data format.

All datatypes are UN/CEFACT Core Component Technical Specification data types that are defined as W3 datatypes.

(see http://www.w3.org/TR/xmlschema-0/#SimpleTypeFacets).

2 Data format

2.1.1 Amount

Amount has the following attributes:

Attribute	Use	Example	Remark
CurrencyID	Mandatory	"DKK"	ISO 4217
Content	XSD:Decimal type	10000.25	decimals are given with a period ".", no separators are used for thousands. Decimal is floating up to two digits.

2.1.2 Binary objects

Binary objects are used in BII for definitive description of values

Attribute	Use	Example	Remark
format	Description of format if no mimeCode.		Not used.
mimeCode	Coded description of content.	"application/pdf"	Recommended.
encodingCode	Description of coding algorithm.	"Base 64"	Optional. If used it should be "Base 64".
characterSetCode	Description of character set used in case of text type.		Optional.
uri	Description of the location of a copy or an original of a document.		Not to be used. Use "external reference" instead.
fileName	Gives the name of a file that is used.	"drawing5.jpg"	The information must be definitive.
content	Series of bytes.		

2.1.3 Code types

Code types are used to specify allowed values in elements (BBIEs) as well as for lists of options.

Code types are different to IDs in that allowed values have standardized meanings that can be known by the recipient.

BII uses two types of codes:

- Defined codes, based on standards such as ISO or UN/CEFACT
- Bilaterally agreed codes.

Bilaterally agreed codes are usually used without attributes but standardised codes list may require metadata that can be given in attributes.

When using Code lists for code values in BII instances, the attribute listID and listAgencyID are mandatory

The following table shows the use of attributes for Code Types that are issued by third parties (other than UBL).

Attribute	Use	Example	Remark
listID	Identifier for the code list	3055	Mandatory.
listAgencyID	Identifier for the issuer of the code list	6	Mandatory.
listSchemeURI	Link to where the schema for the code list can be found		Optional.
content	xsd:normalisedString		Use exactly as shown in the code list. Note that codes are case sensitive.

2.1.4 Time

The presentation of time is according to ISO 8601 standard format “hh:mm:ss”.

In cases of transactions that traverse time zones, the following format should be used, e.g. “09:30:00+1:00” to give the time half past nine in Copenhagen.

All formats of xsd:time are allowed.

2.1.5 Dates

Dates are presented according to the ISO 8601 standard format of “YYYY-MM-DD” e.g. “2006-08-18” for the date of August 18th 2006.

Dates are based on the Gregorian calendar.

When specified in Period, Dates are inclusive i.e. a Period with a Start and End Date is inclusive of both.

All formats of xsd:date are allowed.

2.1.6 Identifiers

Identifiers (ID) are keys that are issued by either the sender or recipient of a document or by a third party.

When using identifiers that belong to either the sender or the recipient, the attribute schemeID (bilaterally agreed) is optional and the attribute schemeAgencyID is recommended.

The following table shows the use of attributes for IDs that are issued by third parties.

Attribute	Use	Example	Remark
schemeID	Identifies the ID type.	GLN	Mandatory.
schemeAgencyID	Identifier for the issuer of the ID.	9	Recommended. Should be based on UN/CEFACT 3055.
schemeAgencyName	Name for the issuer of the ID.		Recommended.
schemeVersionID	The ID version number.		Recommended.
content	xsd:token		An indicator may not contain a white space character such as a space, tab, line return etc.

2.1.7 Indicators

Indicators are of the xsd:boolean type. Values used are “true” to specify that the indicator is active, valid, or selected and “false” to specify that an indicator is invalid, inactive or not selected. Note, “false” does not have the same meaning as “rejected”, which implies a decision. Default value for indicators is “false”.

Note that indicators may be case sensitive in a given syntax. As example, in UBL indicators must be lower case.

2.1.8 Measures and quantity

Measures and quantities are defined with an xsd:decimal and have the following attributes.

When UOM for quantities are times e.g. days, hours, minutes, they are given as decimals, for example, 4 hours and 45 minutes is expressed as 4.75 hours. This is to simplify calculations.

Attribute	Use	Example	Remark
UnitCode	Mandatory	“C62”	Based on UN/CEFACT recommendation 20, revision 4.
Content	XSD:Decimal type	10000.25	Decimals are given with a period “.” No separators are used for thousands. Floating up to two decimals.

2.1.9 Percent

Percentages are based on xsd:decimal. Percentages are given as fractions of a hundred (per cent) e.g. the value 34.78% in percentage terms is given as 34.78.

Percentages are specified floating up to 4 decimals, e.g. “34.7812”.

2.1.10 Factors and rates

Factors and rates (e.g. exchange rates) are based on xsd:decimal. Factores and rates are specified with floating decimals up to 4 digits. E.g. 0.1234

2.1.11 Numeric values

Numeric values are based on xsd:decimal. In BII, elements containing numeric values are named “numeric” or “value”.

Numeric values do not use attributes. The type Numeric is also used for sequential numbers even if those do not allow decimals.

2.1.12 Text type

Text types are typically descriptions and notes. They have the following attibutes. Text types cannot contain CDATA elements.

Attribute	Use	Example	Remark
LanguageID	Optional	“en”	Only needed when more than one language is used.
Content	xsd:string	“Mary had a little lamb…”	May not be empty.

2.1.13 Name type

Name types are of type xsd:string. They have the following attibutes.

Attribute	Use	Example	Remark

Attribute	Use	Example	Remark
LanguageID	optional	“en”	Only needed when names are given in more then one language.
Content	xsd:string	“Thomas Edison”	Multiple spaces are not allowed. May not be empty and is validated as a string. Only white space character allowed is space.