

European Network of Transmission System Operators for Electricity

# **EDI BEST PRACTICES**

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- 32 E (CIM EG). Comments or remarks are to be provided at cim@entsoe.eu



## **Revision History**

Version	Release	Date	Comments	
0	0	2017-01-27	First drafting of the document based on maintenance request from WG EDI.	
1	0	2017-02-23	Add comments from WG EDI for Market Committee Approval	
1	1	2017-11-08	Delete the recommendation on UUID	
2	0	2018-01-15	Draft version of Market Committee approval for publication	
2	1	2019-09-10	Added new chapter to advise about the mRID usage and warn users about the mRID enlargement from 35 to 60 characters.	
			Added a new chapter to explain how to properly use the Harmonised Role Model (HRM)	
			Approved by MC.	

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#### **Objective** 35

The purpose of this document is to provide the ENTSO-E WG EDI best practices when using 36

XML instances. 37

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#### XML instance recommendations

- In order to ensure flexibility and independency from local implementation parameters, the 39 40 following recommendations are to be applied:
  - When providing an XML instance document to another party, it is recommended that the schema location instruction (and import of "http://www.w3.org/2001/XMLSchema-instance" namespace) be not used.
    - A default identification of the default namespace of the document should be provided to use the identification of the appropriate XML schema, see Figure 1 Example of XML instance with xmlns

```
<?xml version="1.0" encoding="UTF-8"?>
1
2
     <Acknowledgement MarketDocument xmlns="urn:iec62325.351:tc57wg16:451-1:acknowledgementdocument:7:0">
3
         <mRID>ACK-SOAM-SWI-RTE-091214-V1</mRID>
4
         <createdDateTime>2014-12-10T09:38:30Z</createdDateTime>
5
         <sender MarketParticipant.mRID codingScheme="A01">10XFR-RTE-----Q
6
         <sender_MarketParticipant.marketRole.type>A04
7
         <receiver MarketParticipant.mRID codingScheme="A01">10XCH-SWISSGRIDC</receiver MarketParticipant.mRID>
8
         <receiver MarketParticipant.marketRole.type>A04/receiver MarketParticipant.marketRole.type>
9
         <received MarketDocument.mRID>20141209 SOAM SGD RTE</received MarketDocument.mRID>
10
         <received MarketDocument.revisionNumber>1</received MarketDocument.revisionNumber>
11
         <received_MarketDocument.type>A46</received_MarketDocument.type>
         <received MarketDocument.createdDateTime>2014-12-10T09:38:30Z</received MarketDocument.createdDateTime>
12
13
         <Reason>
14
           <code>A01</code>
15
         </Reason>
       </Acknowledgement_MarketDocument>
```

Figure 1 Example of XML instance with xmlns

As all XML Schemas created with the European Style Market Profile methodology only use one namespace, there is no need to define a prefix for this namespace, but it should be accepted if included.

#### Use of local codes in codelist

- ENTSO-E provides a package with XML instance files defining the ENTSO-E codelists and an 53 54 empty local extensions to these. This enables ones to define specific local codes to be used based on bilateral agreement with other parties, e.g. specific market rules for a local market. 55
- 56 As can be seen in Figure 2 the standard codelist set is itself divided into two basic parts:
- 57 a) The list of "standard" codelists that consists of all the codes that have been approved within CIM EG. 58
- b) A list of "local" codelists that are assigned by individual TSOs for internal local market use. These codes are local to a given market and are managed by the local TSO in order to satisfy local market constraints. These codes cannot be used outside the market in which 62 they have been designed.

In order to provide a stable core component library, ENTSO-E makes available the library structure that includes an "empty" local set of codelists. This "empty" set of codelists in fact contains by default the first "standard" code that can be found within the "standard" codelist. This ensures that within the value space of the "local" codelist there is no possibility of validating codes that do not exist. This local codelist schema has a standardised name within the ENTSO-E environment which is "urn-entsoe-eu-local-extension-types.xsd".



- Each TSO then could replace the "empty" local set of codelists with the "local" codelists that are needed within its local marketplace. It is also the responsibility of the TSO to ensure the distribution of the "local" codelist to the market participants within the local market area.
- The ENTSO-E XML schema environment "merges" the two codelist sets in order to provide at the electronic document level the complete set of codes possible (i.e. the union of the "standard" and "local" codes).

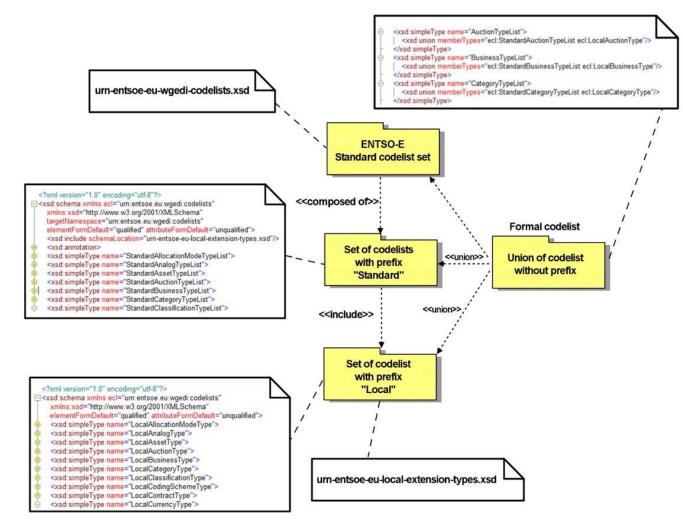


Figure 2 – Codelist schema

#### 77 **4 Time**

78 The following rules are to be used concerning the time:

- All the dates and times within the MarketDocument shall be expressed in coordinated universal time (UTC) in compliance with ISO 8601 as YYYY-MM-DDThh:mm:ssZ.
- For all time intervals, the start date and time is included in the scope of the interval whereas the end date and time is excluded from the scope of the interval, i.e. [start date and time, end date and time].
- For all time intervals, the start date and time as well as the end date and time are expressed in coordinated universal time (UTC) in compliance with ISO 8601 but without the seconds, i.e. as YYYY-MM-DDThh:mmZ.

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#### 5 mRID usage advise

89 Please, check in which identification scheme is the mRID of the object.

90 If it is an EIC coding scheme, please refer to the EIC reference manual and check the existence of the code on the CIO or LIO repositories.

mRID of Document, Series, TimeSeries, Auction and MarketAgreement

mRID of Document, Series, TimeSeries, Auction and MarketAgreement were enlarged from 35 to 60 characters, CIM EG recommends being careful with the management of the mRIDs for each specific object.

In this particular case, CIM EG recommends using ASCII characters mainly upper case and lower case letters, digits, underscore (\_) and dash (-). Although XMLs use UTF-8 codification, it can happen that some internal applications or databases are not ready to manage UTF-8 characters and can have some problems to deal with them.

#### 6 Usage of the Harmonised Role Model (HRM)

Please refer to HRM documentation. It is recommended to use as much as possible the HRM to describe the data exchanges. But experts understand that in some case (for historical reason or for discussion outside Europe) the use case of some implementation guides cannot be compliant with the last version of HRM

#### 7 Coding scheme identification

Whenever a coded value within a MarketDocument is associated with a coding scheme, the coding scheme shall always be identified. The coding scheme is an independent facet of an attribute with a size of 3 alphanumeric characters. The coding scheme is provided in Table 1 - Codelist CodingSchemeType are available in the ENTSO-E codelist.

#### Table 1 - Codelist CodingSchemeType

Code	Title	Description
A01	EIC	The coding scheme is the Energy Identification Coding Scheme (EIC), maintained by ENTSO-E.
A02	CGM	The coding scheme used for Common Grid Model Exchange Standard (CGMES).
A10	GS1	The coding scheme for the preceding attribute is the Global Location Number (GLN 13) or Global Service Relation Number (GSRN 18), maintained by GS1.
NAD	Andorra National coding scheme	The National coding scheme of the country in question.
NAL	Albania National coding scheme	The National coding scheme of the country in question.
NAM	Armenia National coding scheme	The National coding scheme of the country in question.
NAT	Austria National coding scheme	The National coding scheme of the country in question.
NAZ	Azerbaijan National coding scheme	The National coding scheme of the country in question.
NBA	Bosnia and Herzegovina National coding scheme	The National coding scheme of the country in question.
NBE	Belgium National coding scheme	The National coding scheme of the country in question.
NBG	Bulgaria National coding scheme	The National coding scheme of the country in question.



Code	Title	Description
NCH	Switzerland National coding scheme	The National coding scheme of the country in question.
NCS	Serbia and Montenegro National coding scheme	The National coding scheme of the countries in question.
NCZ	Czech Republic National coding scheme	The National coding scheme of the country in question.
NDE	Germany National coding scheme	The National coding scheme of the country in question.
NDK	Denmark National coding scheme	The National coding scheme of the country in question.
NEE	Estonia National coding scheme	The National coding scheme of the country in question.
NES	Spain National coding scheme	The National coding scheme of the country in question.
NFI	Finland National coding scheme	The National coding scheme of the country in question.
NFR	France National coding scheme	The National coding scheme of the country in question.
NGB	United Kingdom National coding scheme	The National coding scheme of the country in question.
NGE	Georgia National coding scheme	The National coding scheme of the country in question.
NGI	Gibraltar National coding scheme	The National coding scheme of the country in question.
NGR	Greece National coding scheme	The National coding scheme of the country in question.
NHR	Croatia National coding scheme	The National coding scheme of the country in question.
NHU	Hungary National coding scheme	The National coding scheme of the country in question.
NIE	Ireland National coding scheme	The National coding scheme of the country in question.
NIT	Italy National coding scheme	The National coding scheme of the country in question.
NKG	Kyrgyzstan National coding scheme	The National coding scheme of the country in question.
NKZ	Kazakhstan National coding scheme	The National coding scheme of the country in question.
NLI	Liechtenstein National coding scheme	The National coding scheme of the country in question.
NLT	Lithuania National coding scheme	The National coding scheme of the country in question.
NLU	Luxembourg National coding scheme	The National coding scheme of the country in question.
NLV	Latvia National coding scheme	The National coding scheme of the country in question.
NMA	Morocco National coding scheme	The National coding scheme of the country in question.



Code	Title	Description
NMD	Moldavia National coding scheme	The National coding scheme of the country in question.
NMK	Macedonia National coding scheme	The National coding scheme of the country in question.
NNL	Netherlands National coding scheme	The National coding scheme of the country in question.
NNN	Nordic Regional coding scheme	The coding scheme of the Nordic region which covers Denmark, Finland, Norway and Sweden.
NNO	Norway National coding scheme	The National coding scheme of the country in question.
NPL	Poland National coding scheme	The National coding scheme of the country in question.
NPT	Portugal National coding scheme	The National coding scheme of the country in question.
NRO	Romania National coding scheme	The National coding scheme of the country in question.
NRU	Russian Federation National coding scheme	The National coding scheme of the country in question.
NSE	Sweden National coding scheme	The National coding scheme of the country in question.
NSI	Slovenia National coding scheme	The National coding scheme of the country in question.
NSK	Slovakia National coding scheme	The National coding scheme of the country in question.
NTR	Turkey National coding scheme	The National coding scheme of the country in question.
NUA	Ukraine National coding scheme	The National coding scheme of the country in question.