

Minutes ETC meeting, September 5th and 6th, 2018

Date: Wednesday and Thursday September 5th and 6th, 2018

Time: 09:00 – 18:00 and 09:00 – 16:00

Place: innogy Business Services, ul. Towarowa 7A, Warsaw

Present: Jan (Convenor), SE
Kees, NL
Ove (Secretary), NO
Pawel, PL

Appendices: **Appendix A**, ebIX[®] Rules for the use of UN/CEFACT Modelling Methodology (UMM 2)
Appendix B, Agreed additions to the ebIX[®] Business Information Model 2018.A
Appendix C, Proposals for update of the ebIX[®] Business Information Model
Appendix D, TT questions
Appendix E, What levels are different “standards” covering

Attachment (see ebIX[®] file manager):

1. HRM_MR_Gateway operator & Communication Gateway - ebIX 20171116.docx: See item 5, Status: HG MR for “MP Gateway”
2. MR Party Admin - 20180227.docx: See item 6, Status: HG MR for “Party administrator”
3. Technical presentation.pptx: See item 15, Creation of an ebIX[®] technical presentation

1 Approval of agenda

The agenda was approved with the following additions:

- What to do with ETC members that have not accepted the ebIX[®] privacy policy?, see item 16.1
- Action item from HG, see item 18.1 under AOB.
- Preparations for next ebIX[®] Forum, see item 18.2 under AOB

2 Minutes from previous meetings (meeting February 2018 and May 2018)

The Minutes from ETC meeting February 2018 were approved without comments.

The Minutes from ETC meeting May 2018 were approved without comments.

3 Status: ebIX[®]/IEC project

3.1 The concept of CCs or inheritance

A discussion ended in the conclusion that ETC will propose CIM as a reference information model for the whole energy industry, hence the discussion related to “CCs or inheritance” is no longer relevant.

The item is closed.

4 Status My Energy Data

The IEC document 57_2027e_CD (iec62325-451-10) was reviewed and commented.

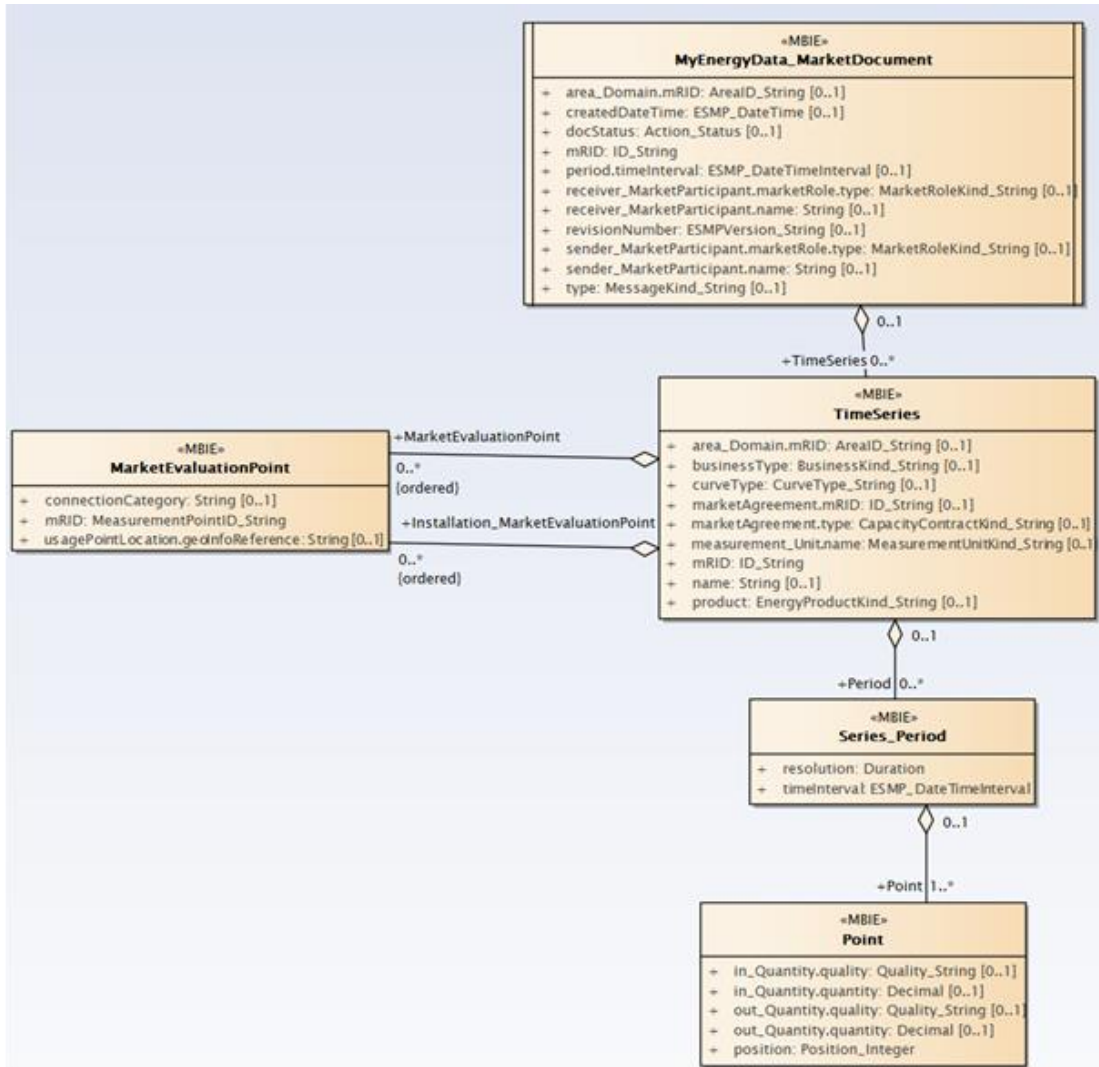


Figure 5 My Energy Data assembly model

Suggested changes:

- A. Line 692, “Figure 5, My Energy Data assembly model”:
 - a. In general, cardinalities of [0..1] and [0..*] should be avoided in assembly models (MBIEs).

Reason: An assembly model should be a clear specification and not a set of options.
 - b. Change attribute: “receiver_MarketParticipant.name” to “receiver_MarketParticipant.mRID”.

Reason: The receiver should be identified using a unique identification scheme.

- c. Change attribute “sender_MarketParticipant.name” to “sender_MarketParticipant.mRID”.
Reason: The sender should be identified using a unique identification scheme.
- d. Remove association: “Installation_MarketEvaluationPoint”.
Reason: We cannot see the reason for more than one association from the TimeSeries class to the MarketEvaluationPoint.
- e. Change the cardinality of the association: “MarketEvaluationPoint” to [1]
Reason: There should always be one MarketEvaluationPoint identifying a TimeSeries.
- f. Remove (or clarify the use of) the attribute: “area_Domain.mRID” from the “MyEnergyData_MarketDocument” class.
Reason: There is no need for an area in the header class. It is enough with the “area_Domain.mRID” in the “TimeSeries” class.
- g. Remove (or clarify the use of) connectionCategory attribute in the MarketEvaluationPoint class.
Reason: We don’t know what this is and see no reason for keeping it.
- h. Remove (or clarify the use of) marketAgreement.mRID in the TimeSeries class.
Reason: We don’t see the need for this element. This type of information should be master data.
- i. Remove (or clarify the use of) marketAgreement.type (CapacityContractKind_String) in the TimeSeries class.
Reason: We don’t see the need for sending a specification of the kind of the Capacity Contract, e.g. long term, daily contract.
- j. Remove (or clarify the use of) the attribute “name” (String) in the TimeSeries class.
Reason: We don’t see the need for sending “free human readable and possibly non unique text naming the object”, since the information is intended for automatic handling by the receiver.
- k. Remove (or clarify the use of) usagePointLocation.geoInfoReference attribute in the MarketEvaluationPoint class.
Reason: We don’t see the need for this element. This type of information should be master data.

B. Line 1293, “Annex A”:

- a. We propose to remove Annex A
Reason: The annex relates to “consumer consent”, which not is handled in the main part of the document. For a next version of the document we offer to use the ebIX® requirements for Customer consent, which is expected to be available before the end of 2018.

Comments to 62325-451-10 ED1 must be submitted before September 28th.

Actions:

- Jan and Ove will add the comments above to the IEC template “CommentsOn.docx”.
- Thereafter the comment sheet will be distributed to ebIX® ETC for submission to national IEC committees.

5 Status: HG MR for “MP Gateway” (if the concept is finally defined in the German market)

A decision in Germany is postponed until December 2018, hence the item is postponed.

6 Status: HG MR for “Party administrator”

The MR for “Party administrator” is on the agenda for next HG meeting. The item is postponed.

7 ebIX® Business Information Model 2018.A

7.1 Continue review and update of version 2018.A

Proposed updates are found in Appendix B, Appendix C and Appendix D.

7.2 MDS requests for new and updated enumerations

All were asked to review the list of Business Reason Codes and Document Name Codes, and mark codes marked for deprecation used nationally (see the document “Business Reason Codes and Document Name Codes 20171017.docx” at the ebIX® File Manager (EFM)). However, no one had done anything. Since this not is seen as critical item, the item was closed.

Ove had as action from previous meeting asked EBG to prioritise making BRSs for:

- Close down (demolition) of MP, sent from GAP to MPA to BS

Status:

- This is a part of the new “Role-to-role” (Hub) project

- Request- and response update Metering Point party

Status:

- The task has been added to the EBG list of “Potential projects”

The item is closed.

7.3 How to represent the exchange of calorific value in ABIEs

The item was added to the list of work to be done in Appendix C.

The item is closed.

7.4 QA of the ebIX® model

Handled under item 7.13.

The item is closed.

7.5 Code lists

The item was added to the list of work to be done in Appendix D.

The item is closed.

7.6 Use of XOR in combination with cardinalities

Continued action:

- Kees will make a proposal for update the “ebIX® introduction to Business Requirements and Information Models” with a chapter explaining the relationship between cardinalities and OR/XOR, including:
 - o XOR and cardinality of [1] lead to a required choice in the XML schema;
 - o XOR and cardinality of [0..1] lead to an optional choice in the XML schema.

7.7 Verify how to use the stereotype “Message Assembly” for the “standard messages” in relation to the TT.

The item was added to the list of work to be done in Appendix D.

The item is closed.

7.8 Upgrade of MagicDraw

Action:

- Jan and Ove will exchange some MD models to see if there are any problems between version 18.2 and 18.5.

7.9 “Time of Use” vs “Meter Time Frame”

The item was added to the list of work to be done in Appendix D.

The item is closed.

7.10 XML documents from TT

The questions are kept as an open issue in Appendix D.

The item is closed.

7.11 Split of MP Characteristics into Administrative- and Physical Characteristics

The item was added to the list of work to be done in Appendix D.

The item is closed.

7.12 Rules for UseCase colouring

The following proposal from EBG (MDS) was agreed:

- UseCases not further elaborated by ebIX® shall be in red colour and stereotyped «Not elaborated»;

- UseCases elaborated in another ebIX® BRS shall be in blue colour and have a parenthesis below showing the origin, e.g. (from Measure);
- Elaborated UseCases shall be in yellow colour (default MD colour).

The item is closed.

7.13 QA of the MDS model and consistency of the MDS and EMD models

There is a need to do a QA of the ebIX® model and the consistency between the Structure and the Measure models, such as verify that the MP parties are linked to the MP instead of the “document”, to be in line with BIM and CIM. The QA process was started:

- Those relations between artefacts in Structure and “Determine Meter Read” in Measure that were stored in the Structure module were moved to Measure;
- Association classes were deleted from “Contract types” class diagram;
- Hyperlinks were removed from UseCases where these were defined;
- Several rules were added to the EBG document “Rules for modelling”.

Action:

- Ove will clean up the naming of request/confirm/reject upfront Metering Point characteristics.
- Ove will contact NoMagic, asking for how to make a list over relations not used in any diagram.
- Ove will clean up the Notify Change of Supplier UseCase and activity diagram – using new and old Affected role in both diagrams and in addition add «mapsTo» to the «Harmonised Role» in the UseCase diagram. And, similar updates of all similar UseCase and activity diagrams.

8 ebIX® Rules for the use of UN/CEFACT Modelling Methodology (UMM 2)

The item was added to the list of work to be done in Appendix D.

The item is closed.

9 EBG BIMs

The item was postponed.

10 What levels are different “standards” covering

Background information is found in Appendix E.

Action:

- Ove will make a slide adding two columns to the three columns in the picture in Appendix E, one for ebIX® and one for IEC/CIM.

11 Update of ebIX® position related to addressing in business documents

The item will not be given priority in the near future.

The item is closed.

12 Code lists from Magic Draw model in Word format

Action:

- Ove will make a first proposal, to be reviewed at the next ETC meeting.

13 Planning for support for new countries that want to use the ebIX® model

The item will not be given priority in the near future.

The item is closed.

14 Status for update of the TT (Transformation Tool)

Pawel reported for a meeting between Pawel, Pawel Lacinski (in4mates) and Kees:

- Pawel Lacinski will prepare two documents:
 - Environment description, that allows to download the code compile it and execute it.
 - High level code structure documentation with information where to change the logic inside the code to do similar functionalities changes that were made by in4mates.

This completes the in4mates task. However, a status will be put on the next agenda.

15 Creation of an ebIX® technical presentation

Continued action:

- Jan will review the technical ebIX® PowerPoint presentation shown in Warsaw in November 2015 and the presentation used in Kiev in the autumn 2017 and come up with a proposal for an ebIX® technical presentation.

16 Review of “ETC Participants” (see ebIX® File manager)

16.1 What to do with ETC members that have not accepted the ebIX® privacy policy?

Alexander (DE) and Carsten (DE) was removed from the member list.

The item is closed.

17 Next meeting(s), including start and end time.

- Wednesday and Thursday November 21st and 22nd, Amsterdam, after the ebIX® Forum.

18 AOB

18.1 Action item from HG

ebIX® has as an action item from the ebIX®, EFET and ENTSO-E Harmonisation Group (HG), to discuss if the association from MGA (Metering Grid Area) should go to the System Operator (SO) or the DSO.

The item was also discussed in EBG with the following conclusion:

The association should go to the System Operator (SO), because the relation not is related to the voltage level (see definition of DSO) and because a TSO also may be responsible for a MGA.

Conclusion:

- The conclusion from EBG will be forwarded to the HG.

18.2 Preparations for next ebIX® Forum

Item #	Action Item	Responsible
2018a-04	ETC will make a short presentation (e.g. three slides) describing the TR, the aim of the project and what has been achieved.	Jan

Conclusion:

- Jan will do the preparation as homework.

Appendix A ebIX® Rules for the use of UN/CEFACT Modelling Methodology (UMM 2)

Question from Thibaut regarding the tags ebIX used on <<ENUM>> stereotype:

In the document “**ebIX® Rules for the use of UN/CEFACT Modelling Methodology (UMM) version 2**” it is written the following:

UN/CEFACT has specified profiles to be used as the meta model for UMM2:

- UMM Base Module
- UMM Foundation Module
- UML Profile for Core Components

ebIX® has additionally specified a profile.

On page 27 we find the different available/used tags for the stereotype <<ENUM>>

⌘ Rules for the use of UN/CEFACT Modelling Methodology (UMM) version 2 page 27



But I find nowhere in UMM documentation anything about these tags for <<ENUM>>. The only information I found about <<ENUM>> was in the document “**UML Profile for Core Components (UPCC) – Version 1.0 – Final Specification - 2008-01-16**” but there not any tag is mentioned.

5.1.6 ENUM

stereotype	ENUM			
base Class	Enumeration (from UML 1.4.2 / 2.0 meta-model)			
parent	N/A			
description	The ENUM (Enumeration Type) represents an enumeration type. The ENUM stereotype is used to define a restriction on either a content- or supplementary component of a QDT.			
Tag Definitions	Tag Definition	Type	Multiplicity	Description
	N/A			

5.1.7 CodelistEntry

stereotype	CodelistEntry			
base Class	EnumerationLiteral (from UML 1.4.2 / 2.0 meta-model)			
parent	N/A			
description	The CodelistEntry is used to stereotype entries of an enumeration with stereotype ENUM.			
Tag Definitions	Tag Definition	Type	Multiplicity	Description
	CodeName	String	0:1	The CodeName carries the name of a certain code (like "France" in a country code list).

So I wanted to know where does these tags comes from as some of these are unknown in UPCC nor UMM2 profile in EA Sparx and I must have a good reason to ask to SparxSystems to adapt these profiles to what we have developed with ebIX®.

Response from Ove:

I do believe these tags are used by the TT. I also agree that the usage should be added to the "ebIX® Rules for the use of UN/CEFACT Modelling Methodology (UMM) version 2". I will add the topic to the next ETC agenda.

Response from Thibaut:

Indeed, these values are used for the TTool but I assume that these tags are coming from somewhere in UN/CEFACT.

In Naming and Design Rules v3 it is specified that Code list XSD must have as file name <Code List Agency ID>_<Code List ID> (unique ID) _<Version ID> so, means that we need this information for the code list inside the model... but I did not found any place where it is mentioned where we have to place this information for an code list (under a specified stereotype or not?)

[R 8A68]	A Code List XML Schema File MUST be created to convey code list enumerations for each code list being used.	1
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[R B443]	<p>A Code List XML Schema File MUST be given a file name that represents the name of the code list and is unique within the namespace to which it belongs using the form:</p> <pre><Code List Agency Identifier>_<Code List Identifier>_<Code List Version Identifier>.xsd</pre> <p>Where:</p> <ul style="list-style-type: none"> • Code List Agency Identifier – Identifies the agency that maintains the code list. • Code List Identifier – Identifies a list of the respective corresponding codes. • Code List Version Identifier – Identifies the version of the code list. 	1
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When we do a migration test from MagicDraw to EA Sparx we have some values correctly put under the UPCC3 <<ENUM>> stereotype (in the example here under codeListName, languageCode, modificationAllowedIndicator), some values put under UPCC3 <<ValueDomain>> stereotype (uniqueID, versionID) and some values incorrectly put under the enumeration itself (codeListAgencyIdentifier, codeListIdentifier).

«ENUM»

- Ⓢ codeListAgencyIdentifier = "260"
- Ⓢ codeListIdentifier = "BEL"
- Ⓢ codeListName = "BE_MeterDisplayTechnology"
- Ⓢ languageCode = "EN"
- Ⓢ modificationAllowedIndicator = false
- Ⓢ uniqueIdentifier = "BE000012"
- Ⓢ versionIdentifier = "0.1.A"

«PRIM»

- Ⓢ languageCode = "EN"
- Ⓢ uniqueIdentifier = "BE000012"
- Ⓢ versionIdentifier = "0.1.A"

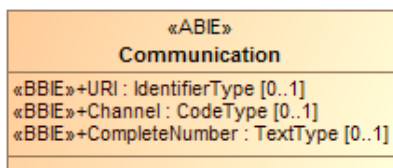
Tagged Values

Enumeration (BE_MeterDisplayTechnology)	
codeListAgencyIdentifier	260
codeListIdentifier	BEL
md_guid	_17_0_2_eac0340_1354810236249_960769_28495
UPCC3 - ENUMLibrary Abstract Syntax::ENUM (BE_MeterDisplayTechnology)	
businessTerm	
codeListAgencyID	
codeListAgencyName	
codeListID	
codeListName	BE_MeterDisplayTechnology
enumerationURI	
languageCode	EN
modificationAllowedIndic...	false
restrictedPrimitive	
status	
UPCC3 - ENUMLibrary Abstract Syntax::ValueDomain (BE_MeterDisplayTechnology)	
definition	
dictionaryEntryName	
minorVersionID	
revisionID	
uniqueID	BE000012
usageRule	
versionID	0.1.A

Appendix B Agreed additions to the ebIX® Business Information Model 2018.A

B.1 BIE changes, e.g. cardinalities

- 1) Add an attribute “Disconnection Contract” (Boolean) in MP Administrative Characteristics
- 2) Change the Country Name (text) in the MP Address class to Country (coded)
- 3) Add a new ABIE; Communication:



- 4) Rename the BBIE Unit Type in the ABIE Product Characteristics to Quantity Unit Type and add a BBIE Price Unit Type to the ABIE Product Characteristics
- 5) Verify that addition of an ASCC between the ACC Event and the ACC Address is on the list of ebIX® changes to UN/CCL
- 6) Add an ABIE Language Code to the ACC Address to the list of ebIX® changes to UN/CCL
- 7) Add a BBIE Type to the ABIE Metering Point Address

B.2 New enumerations and/or DT

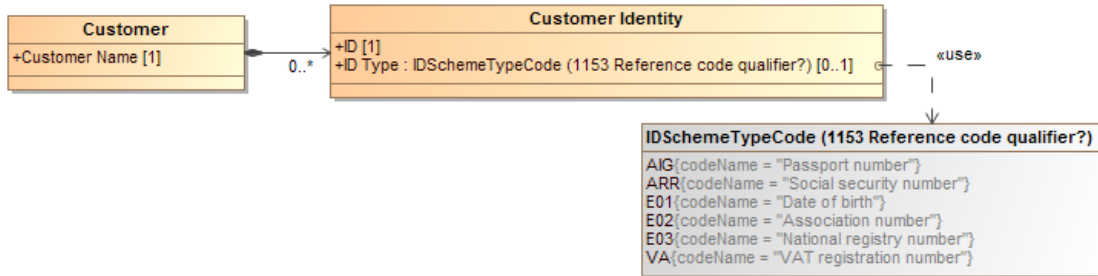
- 1) Add an enumeration for ISO Language codes, based on ISO 639-1988
- 2) Add an enumeration for Energy Label Fuel type, based on CENELEC standard, imported from Atrias implementation
- 3) Add an enumeration for Energy Label Technology type, based on CENELEC standard, imported from Atrias implementation
- 4) Add enumeration “Communication channel”, ebIX® subset with the following literals, based on 3155:
 - AL Cellular phone
 - EM Electronic mail
 - FX Telefax
 - TE Telephone
- 5) Add an enumeration “Communication channel”, ebIX® subset, based on 3131 Address type, code with the following literals:
 - 1 Postal address: The address is representing a postal address
 - 3 Physical address; The address represents an actual physical location.
- 6) Remove all predefined facets, such as maxLength
- 7) All code lists should be checked for codes without a code name. These should be given a name or deleted.

Appendix C Proposals for update of the ebIX® Business Information Model

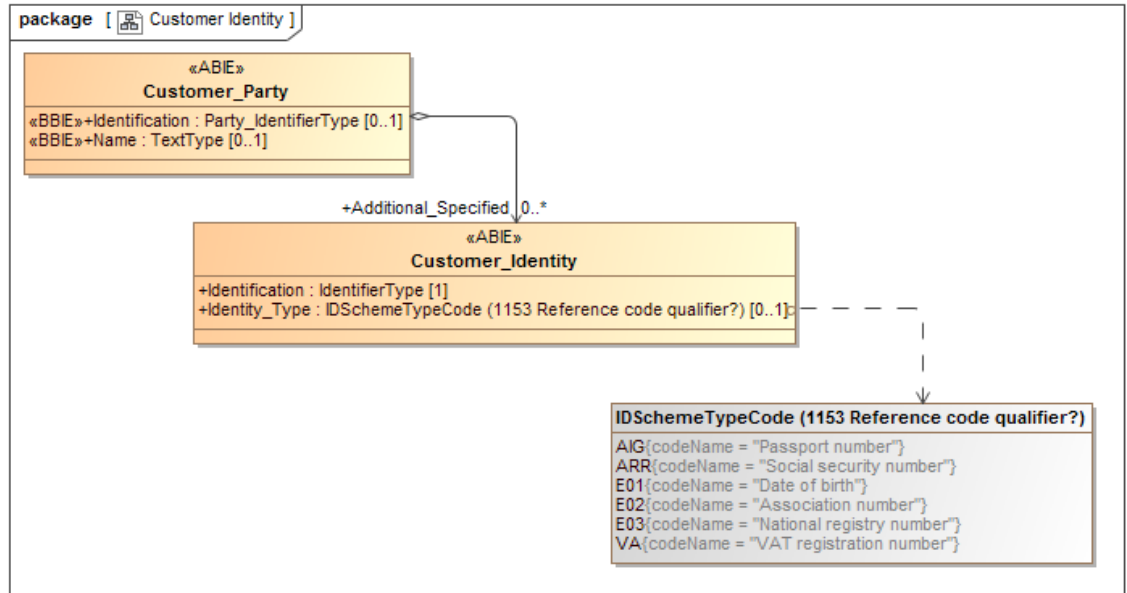
C.1 BRS for Alignment of characteristics for a Customer linked to a Metering Point

- a) Add the attribute “ID Scheme Type Code” to the ebIX® model.

As shown in the BRS:



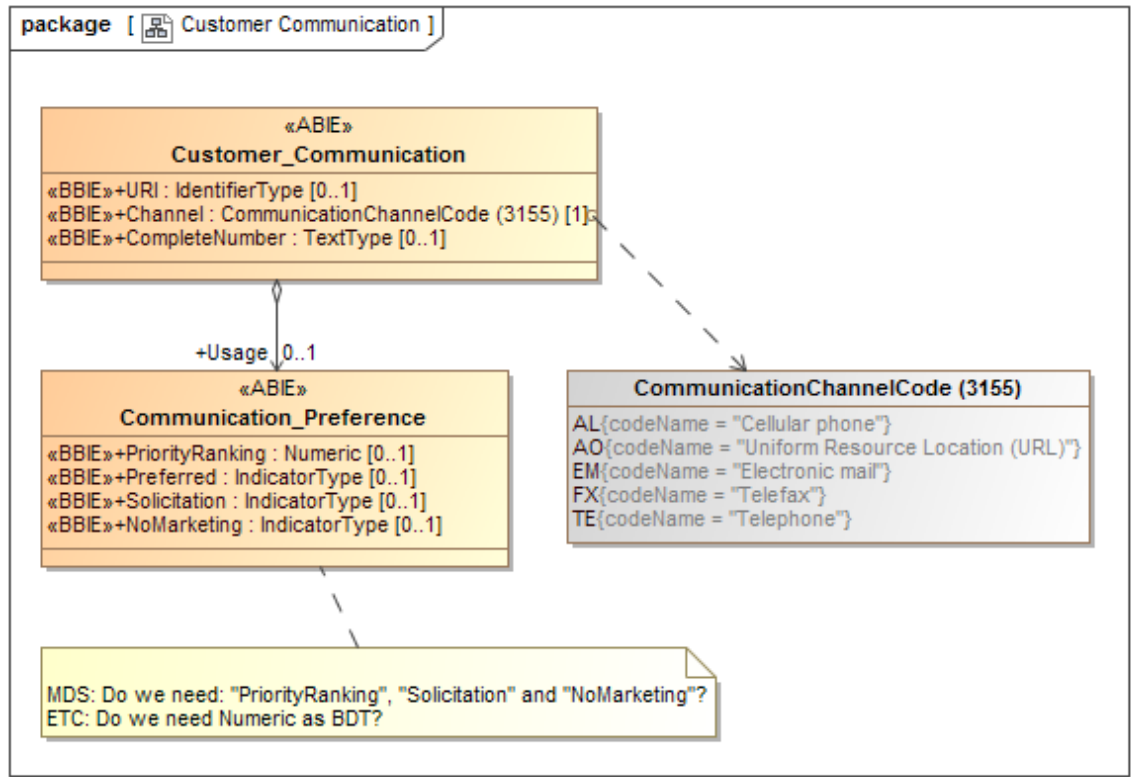
- o As shown in the ebIX® profile:



Action for ETC:

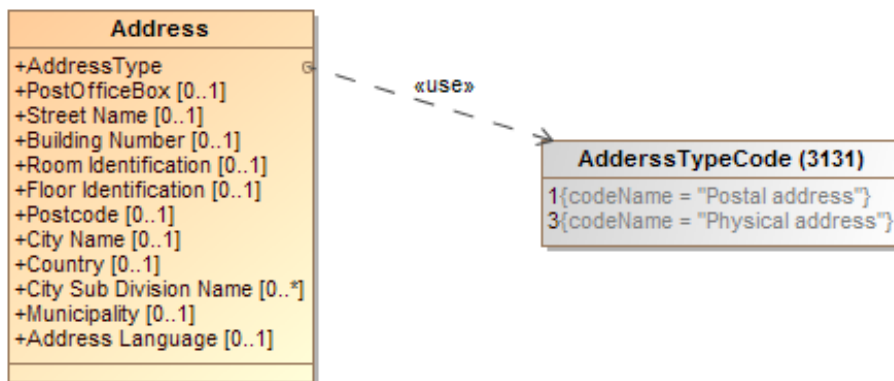
- o Approved by MDS – ETC will create the «ABIE» Customer Identity and related code list

b) Add the «ABIE» «Communication Channel Type” and the related Communication Channel Code:



Action for ETC:

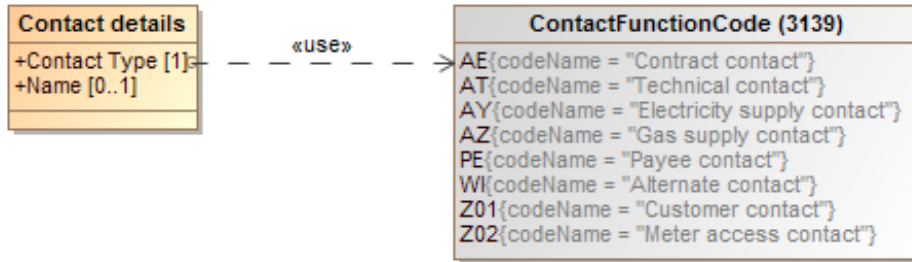
- o Approved by MDS – ETC will add the «ABIEs» Customer Communication and Communication Preference, and the related Communication Channel Code.
 - ☑ MDS will only use “Preferred” from Communication Preference
- c) Add an Address Type, based on UN/CEFACT 3131 Communication Channel Code:



Action for ETC:

- o Add Type to the «ABIE» Metering Point Address
- o Add the enumeration Address Type Code

d) Add a new enumeration “Contact function code” based on “3139 Contact function code”:



MDS requirements	3139 Contact function				
	code	name	definition	MDS comments	ETC comments
Main contact	AY	Electricity supply contact	Department/person to contact for matters regarding electricity supply		possible alternatives for “Main contact”
	AZ	Gas supply contact	Department/person to contact for matters regarding gas supply		
	BF	Service contact	Department/person to be contacted in service matters.		
	IC	Information contact	Department/person to contact for questions regarding transactions.		
	CU	Customer contact	The main department/person to contact at the customer		
Neighbour, House keeper (caretaker)	WI	Alternate contact	Alternate department or person to contact	MDS wants one combined code	
	AV	Maintenance contact	Department/person to contact for matters regarding maintenance		
Invoice contact	PE	Payee contact	Department/employee to be contacted at the payee		
Technical	AT	Technical contact	Department/person to contact for matters regarding technical issues.		
Meter reading	AQ	Quantity surveyor contact	Department/person to contact for matters regarding quantity surveying	MDS wants a new UN/CEFACT code (see below)	
	MA	Meter access contact	Department/person to contact for matters regarding meter reading, including access to the Meter		New UN/CEFACT code
Contract contact	AE	Contract contact	Department/person to contact for matters regarding contracts	NEW	

Action for ETC:

- o ETC will create the enumerations

Action for MDS:

- o The BRS will be republished when new codes have been approved by UN/CEFACT

C.2 General question for later elaboration

Can we remove the Document Name Code from the ebIX® models?

Status:

- The question will be kept for later elaboration

C.3 BRS for Request Change grid responsibility

- a) ETC is asked to find Document Name codes for:
 - o Request change grid responsibility;
 - o Response change grid responsibility;
 - o Notify change grid responsibility;
- b) And Business Reason codes for Change grid responsibility.

Status:

- o Awaiting finalisation of the BRS from MDS

C.4 Requests from EMD

- a) How to represent the exchange of calorific value in ABIEs

C.5 General model updates

- a) Replace the ACCs, BCCs etc. in the current CEFACT Profile with the “CEFACT Profile_Recast.mdzip” from Belgium and add generalisation from the “ebIX® assembled code list” to the related Belgian code list, received from Thibaut.
- b) Make the usage of “Time of Use” and “Meter Time Frame” consistent
 - o Check what is agreed with IEC in the TR
 - o Check what is the significance of “Time of Use”/“Meter Time Frame” in the proposal from Atrias
 - o Make the ebIX® model (Business requirements view and BIES) in line with the Atrias proposal
- c) At previous meeting, the ABIE MeteringPoint_Characteristic was split into AdministrativeMeteringPoint_Characteristic and PhysicalMeteringPoint_Characteristic. Due to this change, both the MDS and the EMD part of the ebIX® model must be corrected. Ove had corrected the MDS part, but noted that also the EMD document “Mapping Validated Data for Labeling for Certificate Issuer” needs to be corrected.

«ABIE» AdministrativeMeteringPoint_Characteristic
«BBIE»+MeteringPoint_Type : ebix.org::BDT::MeteringPointType_CodeType
«BBIE»+MeteringMethod_Type : ebix.org::BDT::MeteringMethod_CodeType
«BBIE»+SettlementMethod_Type : ebix.org::BDT::SettlementMethod_CodeType
«BBIE»+GridConnectionContract_Type : ebix.org::BDT::GridAgreementTypeDescription_CodeType [0..1]
«BBIE»+Tax_Type : ebix.org::BDT::CodeType [0..1]
«BBIE»+AdministrativeStatus_Type : ebix.org::BDT::Administrative_Status_CodeType [0..1]
«BBIE»+ContractedConnectionCapacity_Value : ebix.org::BDT::MeasureType [0..1]
«BBIE»+ScheduledMeterReading_Date : ebix.org::BDT::DateTimeType [0..1]
«BBIE»+MeterReadingFrequency_Duration : ebix.org::BDT::DurationType [0..1]
«BBIE»+StandardLoadProfile_Type : ebix.org::BDT::StandardLoadProfile_CodeType [0..1]
«BBIE»+MeteredDataCollectionMethodCode_Type : ebix.org::BDT::MeteredDataCollectionMethod_CodeType [0..1]
+MeteringGridArea_Used : ebix.org::ABIE::Domain_Location [0..1]
+BalanceGroup_Used : ebix.org::ABIE::Domain_Location [0..1]
+ContractedConnectionCapacity_Included : ebix.org::ABIE::Product_Characteristic [0..1]
+AggregatedReceptionStation_Used : ebix.org::ABIE::Domain_Location [0..1]
+CalorificValueArea_Used : ebix.org::ABIE::Domain_Location [0..1]
+Labelling_Included : ebix.org::ABIE::Generation_Characteristic [0..*]
☒ «BBIE»+PhysicalStatus_Type
☒ «BBIE»+VoltageLevel_Type
☒ «BBIE»+PressureLevel_Type

- d) ebIX® Rules for the use of UN/CEFACT Modelling Methodology (UMM 2) - See question from Belgium in Appendix A.

Appendix D TT questions

- 1) Verify how to use the stereotype "Message Assembly" for the "standard messages" in relation to the TT.
- 2) Concerning dates there are a lot of `<xsd:pattern value="pattern not yet to be used: [0-9]{4}-[0-1][0-9]-[0-3][0-9]T[0-2][0-9]:[0-5][0-9]:[0-5][0-9].[0-9]*"/>` in the "ebIX_MessageBusinessInformationEntities"-schemas. That does not XML Spy like. I.e. I couldn't make XML examples, so I first removed those lines.
- 3) Some schemas ends with "_2014pA.xsd", others with "_2016pA.xsd". Since I would like to publish a 2018-version, that should be changed and follow our principles for versioning.

- 4) In the file `generic\ebIX_ValidatedDataForBillingEnergy_2016pA.xsd` I read

```
xsd:schema xmlns:xsd="http://www.w3.org/2001/XMLSchema"
xmlns:rsm="un:unece:260:data:EEM" ...
```

and later

```
<xsd:element name="ValidatedDataForBillingEnergy"
type="crs:ValidatedDataForBillingEnergyType"/>...
<xsd:element ref="crs:Header" minOccurs="0" maxOccurs="1"/>
```

The namespaces doesn't match. Should be "rsm" or "crs" in both places, not different.

- 5) A typical example would be to have a file with hourly values. But in the "ebIX_MessageBusinessInformationEntities"-schemas you find

```
<xsd:complexType name="TimeSeriesPeriod">
  <xsd:sequence>
    <xsd:element name="ResolutionDuration" minOccurs="0" maxOccurs="1">
      <xsd:simpleType>
        <xsd:restriction base="mdt:DurationType_000151">
          <xsd:enumeration value="PT15M"/>
        </xsd:restriction>
      </xsd:simpleType>
    </xsd:element>
  </xsd:sequence>
</xsd:complexType>
```

...

Then the only possible resolution is 15 minutes. At least also "PT60M" should be possible.

- 6) When making schemas from the TT there is an empty catalogue called "EBO".
- 7) Under `\payload\NegativeResponseRequestValidatedDataForImbalanceSettlement` there is a subfolder `NegativeResponseRequestValidatedDataforReconciliation`, which in turn has another subfolder `NotifyChangeOfBRPToNewBRP` – These should probably not have been there

Appendix E What levels are different “standards” covering

In the report *First Interim Report of the Working Group's findings on Electricity and Gas Data Format and Procedures* (sent from Kees January 31st) there is a figure “Figure 5 – Interoperability categories as defined by GWAC”:



Questions could then be; what levels are the documents/model from ebIX® covering? And looking at other standards, what is covered by e.g. CIM?

And can different standards be combined? E.g. if two standards covers level “4+5”, can they be combined with any other standard covering level 3 and other standards covering level 6?

Example 1: Let us say that the BRS:s from ebIX® covers 5 and 6 and that the ebIX® BIM:s are covering 3 & 4 (could of course be wrong). Let us then assume that another “standard” covers 3. Then we cannot go directly from the ebIX® BRS:s to this other standard, because we are missing level 4.

Example 2: Let us assume that one standard covers levels 4-6 and another standard covers 3-4; then there might be problems trying to use both standards since both are covering level 4 (in most likely different ways).

The aim of this research would be to tell which levels is the ebIX® model covering? What should it cover? What should be covered by ebIX® BRs? What should be covered by ebIX® BIMs? What is covered by CIM? What should be covered by IEC 62325-451-x-standards?...

And how can/will/should the ebIX® model, CIM and IEC standards interact?

Or can we perhaps make another figure telling this in a better way?

Perhaps the CIM Interface Reference Model (IRM) can be put into this figure (at a high level)?

And “basic CIM” should be seen as something at a more high level, than “profiled CIM”.

Note the national implementations of e.g. ebIX®. There we are not having syntax interoperability between different implementations in different countries – only within the implementations in a

country. Partly of course because of that each country have implemented different versions of the ebIX® model, but mostly because of national rules requiring different parts of the ebIX® model to be used.