Minutes ETC meeting, September 7th, 2023	European forum for energy Business Information eXchange
September 18th, 2023	ETC – ebIX® Technical Committee

Date: Thursday September 7th, 2023
Time: 11:00 – 16:00
Place: GoToMeeting

Present: Jan (NL), EDSN
Jan (SE), Svenska kraftnät
Kees, ebIX®
Ove, ebIX®

Appendix A: ebIX® rules for how to make MRs to WG16
Appendix B: Mapping from ebIX® class diagrams for Validated measured data for continuous metered AP to CIM

Attachment:

1. Appendixes for ETC minutes (docx)
2. ETC workplan (see ebIX® file manager at https://filemanager.ebix.org/#)

1 Approval of agenda

The agenda was approved with the following additions:

- MRs related to Accounting Point Characteristics, see item 6.1.5.
- Request for new Sector Area Identification Code from NL, see item 8.1.

Prioritised items:

1) Review of non-submitted MRs from the ETC Excel sheet - focus item, see item 6.1.4.
2) MRs to discuss, see item 6.2.2.
3) Status for submission of HG MR for the new domain (or CIM object) Grid Connection, see item 9.4.

2 Approval of minutes from previous meeting

The minutes from previous meetings were approved.

3 Resolve matters related to close down of ebIX®

3.1 Plan for close down of ebIX®

The ebIX® ending plan was reviewed and a few statuses were updated.

3.2 Memo: Consequences of closure of ebIX®

The memo showing consequences of closure of ebIX® was briefly reviewed. The intention is to present it at the ebIX® Forum meeting September 20th.

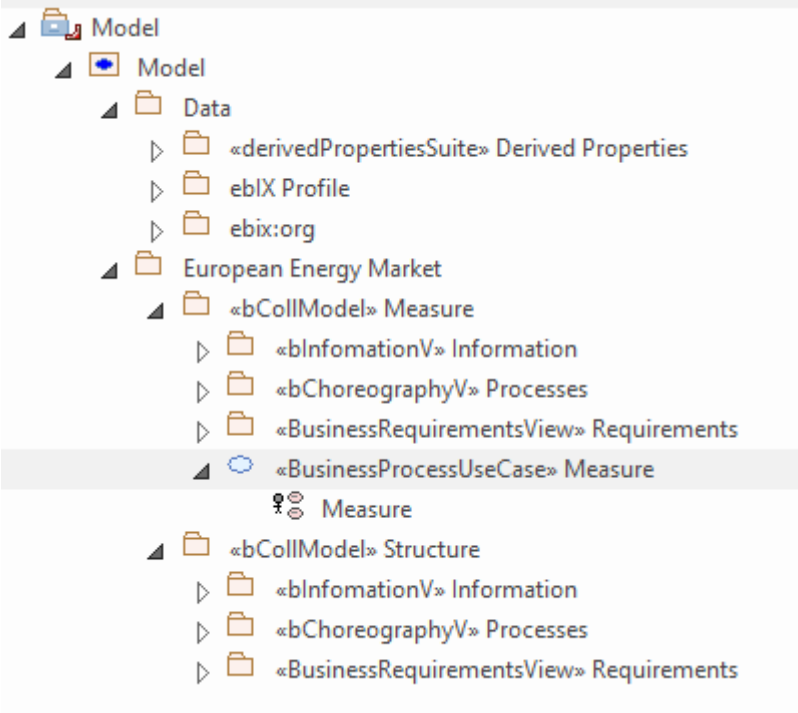
It was agreed to make a short presentation that could be presented at the coming forum meeting.

Action:

- Ove will make a PowerPoint presentation showing the table in chapter 2 and some questions to the ebIX® Forum:
  - Are there any comments to the document?
  - How to use the document?
  - To whom should it be distributed, such as IEC, UN/CEFACT, EFET, EU DSO-Entity, ENTSO-E, national stakeholders, ENTSOG, Eurelectric, CEDEC?

4 Exporting the ebIX® MD model to EA format

Ove had as homework exported most of the ebIX® MD model to EA format. The EA file is almost without any diagrams (only some test diagrams) and currently contains the following packages:



Action:

- Ove will try merging the ebIX® model with the CIM model.

5 Status for a common ebIX®, EU DSO Entity, ENTSO-E (CIM EG) and ENTSOG Area project

Jon-Egil informed at a Nordic meeting the week before that start of the "Alignment of master data for areas project" is postponed until discussed and agreed in the joint wg between EU DSO Entity and ENTSO-E (JWG).

6 Resolve ebIX®/IEC issues

6.1 Making a European Style Downstream Market Profile (ESDMP)

6.1.1 MRs to WG16 CIM modelling team and Information from IEC meetings

MRs to WG16 and their status are found in a separate common ETC Excel sheet that all ETC members may get access to. In addition, Jan (SE) is maintaining a similar spreadsheet located at the ENTSO-E extranet. The ENTSO-

E spreadsheet is however not containing the older MRs. Hence, for the time being we continue maintaining two spreadsheets.

Minutes from WG16 meetings can be found at: WG16 / Modelling-Team-Minutes.

6.1.2 Status and possible review of MRs where CIM for retail market wg need more information - focus item

1) 2023-002-v5: Add Meter to ESMP and add an association from MarketEvaluationPoint to Meter 20230322

   Status:
   - All MRs from ebIX®/2023-003 until ebIX®/2023-017, except for ebIX®/2023-016, MRs related to the Meter and the Register classes in BRS for Metering configuration characteristics, were submitted to CIM for retail market WG spring 2023, however not yet discussed in the CIM for retail market WG.

   Conclusion 1:
   - Follow up on ebIX® MR 2023-002-v5: Add Meter to ESMP will be followed up in the common Teams Excel sheet.

   Conclusion 2:
   - Related to ebIX® MR 2023-016-v5 (addition of a Register Multiplier), we will ask the EBG meeting next week if we need a Register Multiplier Kind in MR 2023/016 or if it is enough with the "Value: float" attribute. If needed, what Multiplier Kind is needed for a Meter and what Multiplier Kind is needed for a Register?

6.1.3 MRs based on Dutch requirements

The item was postponed.

Continued actions:

1) Kees will add a MR to the series of other MRs that will be sent from ebIX® based on the Dutch requirements for changing the cardinality of the association between Acknowledgement_ MarketDocument and Sender_MarketParticipant/Receiver_MarketParticipant from mandatory [1] into optional [0..1].
2) Kees will try to come up with a refined table showing the Dutch MRs, including examples.
3) Kees will investigate the usage of a reference to a related document (probably only used in the acknowledgement in the Netherlands) and see if he can find a justification of the "rename of the association named Original Market Document to something more generic".
4) Jan (NL) and Kees will go through the Dutch MRs and see if more of the MRs are MRs to 62325-351 (ESMP).
5) Jan (NL) will find a better justification for a MR for the new class Product (ebIX®/2021-035).
   - At an AccountingPoint you can have Active Energy, Reactive Energy, etc.
   - Proposal: Add a Product class, with Product type and a Measure unit and associate it with TimeSeries, MarketEvaluationPoint and RegisteredResource.
   - Currently added to the "ebIX® Excel sheet" as ebIX® MR 2021/035
6) Jan (NL) will investigate if the attributes measureUnit and priceMeasureUnit should be associations to the Unit class in 301 (MeasureUnit class in ESDMP) instead of attributes in the Product class. According to Kees the measureUnit and priceMeasureUnit should be attributes in the Product class because of normalisation rules.

7) Jan (NL) will verify if MR 2021/044 (Addition of association from Register to Product) still is valid.

6.1.4 Review of non-submitted MRs from the ETC Excel sheet - focus item

1) Shall we submit the "ebIX® MR 2022/014 Add an association from MktActivityRecord to ChargeGroup" to the CIM for retail market WG?
    - The other billing MRs submitted (2022/23, 2022/24, 2022/25 and 2022/26) depends on this MR if used in master data processes, however still valid for transaction (time series) processes.

    Action 20230907:
    - Ove will make ebIX® MR 2022/014 (Add an association from MktActivityRecord to ChargeGroup") and send it to ETC for comments before Jan (SE) submits it to the CIM for retail market wg.

2) ebIX 2023-010-v1 - Add altitudeCompensation to EndDeviceInfo and link it to Meter in ESMP.
    - Jan (SE) has added some comments. The suggested addition of altitudeCompensation is unclear, probably it follows alternative 3 that then should be stated.
      Alternative 3:
        - Convert the «Compound» IEC61968/Metering/EndDeviceCapability to a "normal" class in the IEC61968/Metering package. Add the altitudeCompensation attribute to the EndDeviceInfo class. Add an association from the new EndDeviceCapability class to the EndDeviceInfo class. Thereafter add the EndDeviceInfo and EndDeviceCapability class to ESMP, including the altitudeCompensation attribute and making an association from the new EndDeviceCapability class to the Meter class in ESMP.
    - Jan (SE) will not submit this MR before we have discussed it in ETC.
    - Submitted to CIM for retail market WG 20230626

    Conclusion 20230907:
    - will be followed up in the common Teams Excel sheet.

3) ebIX® 2023-016: Add a RegisterMultiplier class and associated it to the Register the IEC 61968/Metering package. Further Add the RegisterMultiplier class and associated it to the Register in IEC 62325-351 (ESMP).

    From discussion during ETC meeting June 26th:
    - Jan (SE) and Ove has asked EBG at their meeting June 12th, 2023, if we should add a link from Register to MeterMultiplier in the ebIX® BRS for Metering configuration characteristics, with the following conclusion:

      There is no need for adding a link from Register to MeterMultiplier in the ebIX® BRS for Metering configuration characteristics. The reason being that we already have a Constant in the Register class, which is used for a multiplier on Register level.

    - However, it may be a need for the RegisterMultiplier class from the upstream market (for large installations).
    - It is also good using the same principles for the multiplier for both Meter and Register.

    Status 20230907:
    - See item 6.1.2 above.

4) ebIX® 2023-018: Add the Channel class and the ReadingType classes from IEC 61968/Metering to IEC 62325-351 (ESMP), including the associations between the Register class and the new Channel Class, and between the new Channel class and the new ReadingType class in IEC 62325-351 (ESMP).

Comment:

- What shall we do with the AccumulationKind enumeration?
- The definitions in 4.2.4.1 are taken from CIM, hence must be reviewed!

Conclusion:

- Ove will rewrite the MR, i.e. we use the AccumulationKind enumeration with the codes none and cumulative.

Action 20230907:

- Ove will update ebIX® MR 2023-018 and send it to Jan (SE) for submission to CIM for retail market wg.

Other unresolved items:

1) Status for request from Jan (SE)/Kees to Alvaro to change the direction of the association from MarketEvaluationPoint to MktActivityRecord in ESMP, ref. MR 2022/012.

   Conclusion 20230907:

   - To be continued

2) Status for request from Jan (SE) will ask WG16 if we should change the attributes in PositionPoint to longitude, latitude, altitude, but if not agreed, add explaining text to the description.

   Action 20230907:

   - Ove will make a MR for adding explanatory text to the longitude, latitude and altitude attributes in PositionPoint, in ESMP.

3) EBG discussed at their meeting April 25th and 26th how to use the conversion factor class in BRS for metering configuration characteristics, especially for temperature, pressure and measurement – and for electricity: is this the same as the constant in the register:

   - The conversion factor for altitude is a multiplier that depends on the hight above sea-level.
   - The conversion factor for pressure is a multiplier that depends on pressure at the measure point, e.g. due to measurements at the end of long pipes.
   - The conversion factor for temperature is a multiplier that depends on the temperature.
   - The conversion factor for measurements for gas is for example used when a smaller pipe is used for the measurement to be able to measure where the flow is lower, e.g. using a conversion factor of 20.
   - The conversion factor for measurements for electricity is used similar as for gas, e.g. measuring in a “bypass” with lower current, voltage etc. It is not the same as the constant for a register.

   Should we update ebIX 2023-008, ebIX 2023-009 and ebIX 2023-010 with the information above?

   Conclusion 20230907:

   - We do nothing

6.1.5 MRs related to Accounting Point Characteristics

Should we make a mapping from the Accounting Point Characteristics class diagram (from the ebIX® BRS for Alignment of AP characteristics) to CIM, to see if any MRs are needed?

This could be like what we did for the ebIX® BRS for Alignment of metering configuration characteristics for a Metering Point.

Action:

- Ove will make a draft mapping from the Accounting Point Characteristics class diagram to CIM. Making MRs from it is a second priority after the Dutch MRs have been delt with.

6.2 Status for ENTSO-E CIM EG Retail market workgroup (follow-up item on the agenda)

6.2.1 MRs to be followed up after review by CIM for retail market WG

The following MRs are agreed in ENTSO-E CIM for retail market wg (?) - shall we move these to the "6.1.1, MRs to WG16 CIM modelling team and Information from IEC meetings"?

- MR for IEC 62325-351 - ebIX 2022-015-v1 - Add phaseCount to ESMP 20230116
  - Not yet added to ESMP.
- MR for IEC 62325-351 - ebIX 2022-016-v1 - Add ratedCurrent to ESMP 20230116
  - Not yet added to ESMP.
- MR for IEC 62325-351 - ebIX 2022/019-v3 - Add an association from MarketEvaluationPoint to MktPSRType
  - Not yet added to ESMP.
- MR for IEC 62325-351 - ebIX 2022-032-v7 - Add MeasurementMethodList to ESMP 20230113
  - Not yet added to ESMP.
- MR for IEC 62325-351 - ebIX 2023-001-v2 - Add energyFlowCategory to the Accounting Point class 20230116
  - Not yet added to ESMP.
- MR for IEC 62325-351 - ebIX 2023-003-v2 - Add Meter type to Meter in ESMP 20230413
  - Not yet added to ESMP.

Conclusion:

- The MRs above will be maintained in the Excel sheet

Item closed.

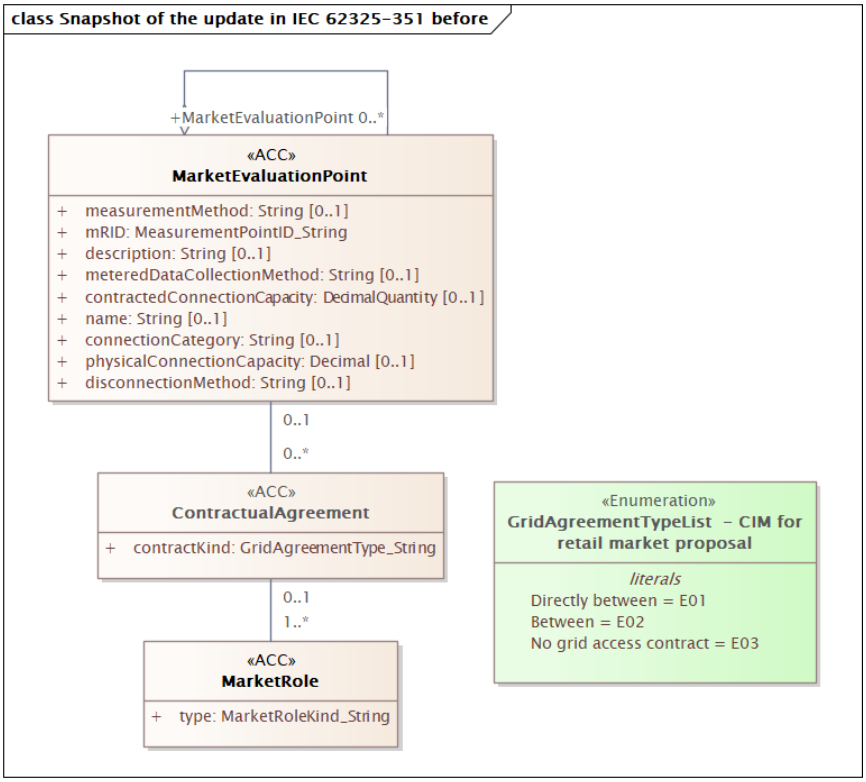
6.2.2 MRs to discuss

MR for IEC 62325-351 - ebIX 2022-030-v8 - Add GridAgreementTypeList to ESMP 20230118

- In the afternoon of January 18th, the MR was discussed in the CIM for retail market workgroup where a new proposal was raised:

  Note 2023-01-18 (Alvaro):

  > Proposal is to introduce a new class called ContractualAgreement? between MarketEvaluationPoint and MarketRole. This class shall have an attribute called contractKind? Contract kind is an enumeration with these values:
  >
  > - Directly between
  > - between
  > - No grid access contract



Conclusions from EBG meeting January 30th:

- EBG suggest keeping all four codes. **E03** (Contract between Grid operator and Customer through Supplier) is used by the Netherlands. **E04** (No net using contract) may be used for sub-Accounting Points, where the agreement is for the main Accounting Point.
- How to describe the Dutch situation where there is a contract between the Customer and the Grid via the Energy Supplier (the Customer signs the grid connection contract by signing a contract with the Energy Supplier).

Continue action:

- Jan (NL) will check how this is specified in the Netherlands today before we can decide how to respond to the proposal from Alvaro.

6.3 Preparations for coming WG16 meetings

The item was postponed.

7 EG1 status

The item was postponed.

8 Update of ebIX® code list

The item was postponed.

Continued action:

- Jan (SE) will try finding time do some QA on the code list as homework

8.1 Request for new Sector Area Identification Code from NL

Jan (NL) requests a code for "***Hydrogen supply industry***":

Code list

2.27 Sector Area Identification Code (SectorAreaIdentificationCode)

Name	Code Name
23	Electricity supply industry
27	Gas supply industry

The Netherlands will temporarily use the code **Z31**, since 31 is the next code in sequence in the UN/CEFACT code list and "Z" is used to note it as temporary.

Action:

- Ove will ask Oliver if he knows of:
  - A GS1 product code for Hydrogen, like "5410000100016 NaturalGas"
  - A UN/CEFACT 7293 Sector area identification code qualifier for Hydrogen supply industry, like

23	Electricity supply industry
27	Gas supply industry
???	Hydrogen supply industry

9 Resolve HG issues - Prioritised item on ETC meeting September 27th

9.1 BRP vs Energy Trader

The item was postponed.

9.2 Status for harmonisation of the electricity and gas markets role models

The item was postponed.

9.3 Suggestions for HEMRM extensions

The item was postponed.

9.4 Status for submission of HG MR for the new domain (or CIM object) Grid Connection

Mail sent to Svein and Chavdar during our May meeting:

> During an ebIX® meeting to day we discussed how the physical grid is linked to the market. More precise, what term is used for the "element" that links the "physical grid" and the "market" and what class from the CGM part of CIM will be used for this "element"?
>
> Do you have any views on this?

From Svein:

Sorry for the late reply, but I have been waiting for the publication of CSA/NC ENTSOE extension to CGMES on ENTSO-E website CSA/NC specifications v2.2 are now published (entsoe.eu)

The EAP file is also available https://www.entsoe.eu/Documents/CIM_documents/Grid_Model_CIM/CIM100_CGMES31v01_501-20v02_NC22v95_MM10v01.zip

From my side, the question is not that easy to answer. As you know we have a North American and a European style market. I would not be able to give any good answer based on the North American market, but since you write "from the CGM part of CIM" I assume you mean European style market. The European style market is not really a Canonical information model but rather a message structure that has arrived from CIM Canonical information model.

In ENTSOE CIM Working group (WG) we are working hard to create a Canonical information model as an extension of IEC 61970 that would meet the requirement from the European style market. It does not mean that we will create message exchanges that will replace the existing market messages, but rather complement them so that exchanges between parties with the same information model can be more efficient.

We have incorporated Bidding Zone, Registered resource (ScheduleResource) into the NC extension more detail can be found in https://eepublicdownloads.entsoe.eu/clean-documents/CIM_documents/Grid_Model_CIM/EquipmentReliability_Profile_Specification_v2.2.pdf

We have also added classes to deal with fuel source and customer flexibility. I am planning to go though this at Statnett on 5th June.

I hope this helped a bit.

The topic was also discussed at an HG meeting in June, which ended in an HG action:

Action:

- LW and BW are asked to try establishing an ENTSO-E CIM WG subgroup to discuss and come up with proposal for how to link the physical grid to the market.

Conclusion:

- The item is postponed until we get new information from the HG.

10 ebIX® Business Information Model 2022.A

The item was postponed.

11 Next meetings[1]

- Tuesday September 26th (09:00 – 17:00) and Wednesday September 27th (09:00 – 15:00) in Svenska kraftnäts offices in Sundbyberg (Stockholm).
  - If GoToMeeting, we will start 11:30 the first day and end 17:00 – the second day will be according to original times (09:00 – 15:00).
- Friday October 20th, 11:00 – 16:00, 2023, GoToMeeting
- Wednesday November 22nd, 10:00 – 15:00, 2023, GoToMeeting
- Friday December 8th, 10:00 – 15:00, 2023, GoToMeeting

[1] All Face-to-face meeting starts 09:00 the first day and end at 16:00 unless otherwise explicitly stated.

12 AOB

No items.

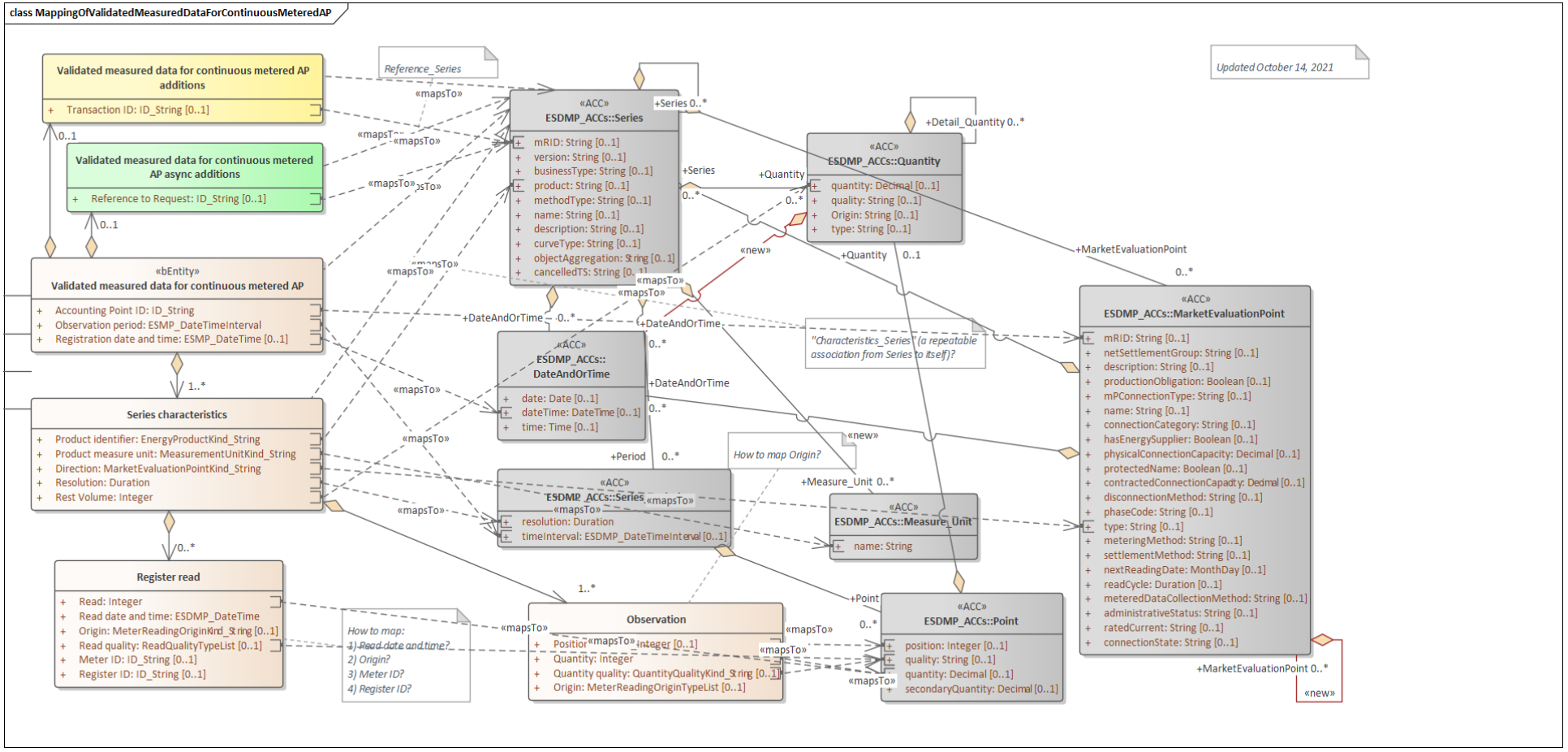
Appendix A ebIX® rules for how to make MRs to WG16

1) Artefacts used for MRs to WG16 shall be stored as separate packages in the common cloud EA model.
2) Always review existing definitions of attributes, classes etc. that are related to the MR in question and if needed propose updates to these definitions.
3) First investigate basic CIM to see if the object we intend to send an MR for already is available there.

   If yes, we should make a MR for 62325-351 (ESMP), if not we make a MR for both basic CIM and ESMP.

Appendix B Mapping from ebIX® class diagrams for Validated measured data for continuous metered AP to CIM

The mapping will be reviewed by ETC, while EBG will look into the definitions of classes and attributes to see if we need to update the ebIX® definitions or if we should send maintenance requests to IEC for update of the CIM definitions.



BRS attribute	BRS definition	CIM attribute	CIM definition
«Business entity» Validated measured data for continuous metered AP	The information set sent by a Metered Data Responsible to the Metered Data Administrator when exchanging validated measured data for continuous metered AP	Series	A set of similar physical or conceptual objects defined for the same period or point of time.
Accounting Point ID	The unique identification of the Accounting Point to which the validated measured data are attributed.	MarketEvaluationPoint / mRID	Master resource identifier issued by a model authority. The mRID is unique within an exchange context. Global uniqueness is easily achieved by using a UUID, as specified in RFC 4122, for the mRID. The use of UUID is strongly recommended. For CIMXML data files in RDF syntax conforming to IEC 61970-552, the mRID is mapped to rdf:ID or rdf:about attributes that identify CIM object elements.
Observation period	The specific period of time the validated measured data have been measured, calculated or estimated for.	Series_Period / timeInterval	The start and end date and time for a given interval.
Registration date and time	The date and time of the validation (and storage in the database) of this set of validated measured data.	DateAndOrTime / dateTime	Date and time as per ISO 8601 YYYY-MM-DDThh:mm:ss.sssZ.
Series characteristics	The characteristics of this set of validated measured data, i.e., the product and flow direction.	Series	A set of similar physical or conceptual objects defined for the same period or point of time.
Product identifier	A code specifying the energy product for the quantities in this set of validated measured data.	Series / product	The type of the product such as Power, energy, reactive power, transport capacity that is the subject of the time series.
Product measure unit	The unit of measure used for the quantities in this set of validated measured data.	Measure_Unit / name	The coded representation of the unit.
Direction	A code specifying the direction of the energy flow that was measured with this validated measured data. A flow from the Accounting Point into the Metering Grid Area is defined as production and a flow from the Metering Grid Area into the Accounting Point is defined as consumption.	MarketEvaluationPoint / type	Specifies if the Market Evaluation Point is an Exchange Point or an Accounting Point.

BRS attribute	BRS definition	CIM attribute	CIM definition
Resolution	The resolution is the time between two observations, leading to the number of observations in this timeseries (calculated from the Observation Period divided by the Resolution). The Observation Period must contain a whole number of observations as derived from the resolution. The resolution is expressed in compliance with ISO 8601 in the following format: PnYnMnDTnHnMnS. For example **PT15M** for 15 minutes resolution.	Series / resolution	The number of units of time that compose an individual step within a period.
Rest Volume	The Rest Volume is used for a volume that cannot be related to the 'normal' measured time series observations, i.e., the difference, for the Observation Period, between the start- and end meter read and the aggregated volume from the exchanged time series.	Quantity / quantity	The quantity value. The association role provides the information about what is expressed.
Register read	A read from the register of the Meter linked to the Accounting Point and characteristics of the read. This read is at the basis of the validated measured data in the Observation.	N/A	
Read[2]	The value as read from or calculated for the register, for this Read date and time in the Observation period.	Point / quantity	Principal quantity identified for a point.
Read date and time	The timestamp of the moment in time when the value was registered in the Register of the Meter or the value was calculated for.	N/A	
Origin	A code specifying the role of the party that has retrieved or calculated the read.	N/A	
Read quality	The quality of this read, such as estimated, remotely read or physically read.	Point / quality	The quality of the information being provided. This quality may be estimated, not available, as provided, etc.
Meter ID	The unique identification of the Meter linked to the Accounting Point, which contains the register that has been read.	N/A	

[2] If the Register read is missing, the Meter Reading Origin Code shall be "**E28** From Metered Data Responsible" and the Quantity Quality Code shall be "**56** Estimated".

BRS attribute	BRS definition	CIM attribute	CIM definition
Register ID	The unique identification of the Register within the Meter, where this data has been read from or is estimated for.	N/A	
Observation	One validated measured value within a timeseries.	N/A	
Position	The ordinal position of this Observation in this Observation Period for this set of validated measured data.	Point / position	A sequential value representing the relative position within a given time interval.
Quantity	The validated quantity of energy for this Observation.	Point / quantity	Principal quantity identified for a point.
Quantity quality	The quality of this quantity (volume), such as validated (default value, hence not sent), estimated, or temporary.	Point / quality	The quality of the information being provided. This quality may be estimated, not available, as provided, etc.
Origin	A code specifying the role of the party delivering the Quantity.	N/A	
Validated measured data for continuous metered AP additions	Additional information, related to validated measured data, the use of which may be agreed on a national level.	Series	A set of similar physical or conceptual objects defined for the same period or point of time.
Transaction ID	The unique identification of this set of information as given by the Metered Data Responsible.	Series / mRID	Master resource identifier issued by a model authority. The mRID is unique within an exchange context. Global uniqueness is easily achieved by using a UUID, as specified in RFC 4122, for the mRID. The use of UUID is strongly recommended. For CIMXML data files in RDF syntax conforming to IEC 61970-552, the mRID is mapped to rdf:ID or rdf:about attributes that identify CIM object elements.
Validated measured data for continuous metered AP async additions	Additional information related to validated measured data needed when using asynchronous communication.	Series	A set of similar physical or conceptual objects defined for the same period or point of time.
Reference to request	Information about the request for this set of validated measured data for continuous metered AP which uniquely identifies it.	Series / mRID	Master resource identifier issued by a model authority. The mRID is unique within an exchange context. Global uniqueness is easily achieved by using a UUID, as specified in RFC 4122, for the mRID. The use of UUID is strongly recommended. For CIMXML data files in RDF syntax conforming to IEC 61970-552, the mRID is mapped to rdf:ID or rdf:about attributes that identify CIM object elements.

class MappingOfValidatedMeasuredDataForContinuousMeteredAP