Minutes ETC meeting, April 19th, 2023	European forum for energy Business Information eXchange
April 28th, 2023	ETC – ebIX® Technical Committee

Date: Wednesday April 19th, 2023
Time: 10:00 – 12:00 and 13:00 – 15:00
Place: GoToMeeting

Present: Jan (NL), EDSN
Jan (SE), Svenska kraftnät
Kees, TenneT
Ove, Edisys

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 occurenc

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.

2 Approval of minutes from previous meetings

The minutes from previous meetings were approved after correction of a spelling error found by Jan (NL).

3 Re-review of ebIX® ending plan

The ebIX® ending plan was reviewed and updated.

Plan for close down of ebIX v0r3 2023041

Actions:

- All are asked to re-review and comment on the plan. The plan will be rediscussed at our next meeting.

4 Exporting the ebIX® MD model to EA format

Ove has started migration work but is struggling with the large size of the model – the xmi-file for structure is more than 90 MB. Exporting from MD goes fine and takes maybe 15 minutes, but the import to EA aborts – the latest import aborted after about 48 hours with an error message saying “Error: Unknown Dependency Source or Target”.

Continued action:

- Ove will continue trying to migrate the ebIX® MD model to EA format, to get an idea of how much work it will be.

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

Nothing new reported. EBG is expected to send a formal mail to Jon-Egil as the CIM WG chair, at their meeting next week.

6 Resolve ebIX®/IEC issues

6.1 Making a European Style Downstream Market Profile (ESDMP)

6.1.1 Status for governance of reference models: basic IEC CIM and ESDMP (follow-up item on the agenda)

Alvaro is maintaining the latest version of the ESMP, based on decisions in CIM EG. Hence, these updates are extensions to the CIM 62325-351 standard. Currently the ESDMP is maintained by ETC.

Jan (SE) informed that Alvaro and Becky are working on the merging the next formal CIM model that includes the latest changes from Europe.

6.1.2 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.

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

Continued action:

- Jan (SE) will ask Alvaro if the aggregations with wrong source/target should be updated, such as the aggregation from TimeSeries to FlowDirection.

6.1.3 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:

   Jan (SE) had got the following comment from CIM for retail market wg:

   Elaborate the MR with the existing association from MarketEvaluationPoint to Register – how do we want the Meter to be associated (in ESMP), both then with MarketEvaluationPoint and Register? Perhaps we will have both an association from MarketEvaluationPoint to Meter and from MarketEvaluationPoint to Register.

   From discussion:

   According to BRS for Metering configuration characteristics, there is a need for linking a Metering Point to one or more Meters and each Meter to one or more Registers. In CIM there is a link from Meter to Register via EndDeviceFunction (and via UsagePoint).

   Conclusion:

   - We must draft the MRs related to the Register class in BRS for Metering configuration characteristics before resubmitting this MR to CIM for retail market wg.

- Among others, we will make a MR for changing the cardinality of the association from EndDevice to Usage Point from [0..1] to [0..*] in both 61968 and ESMP.

  Justification: We know that Registers within a Meter may be connected to different Metering Points, such as in a department building or a department store, where there is one register for each department and a common Meter for the building.

- The resubmission of ebIX®/2023-002 will be postponed until MRs related to Register are finalised.

2) 2023-003-v2 - Add Meter type to Meter in ESMP 20230413

Jan (SE) had got the following comment from CIM for retail market wg:

Add the codes to be used.

Conclusion:

i. The MR was updated by adding an enumeration with three literals to the MR. Jan (SE) will forward it to *CIM for retail market wg*.

3) 2023-004-v3 - Add connectionCategory to Meter in ESMP 20230413

Jan (SE) had got the following comment from CIM for retail market wg:

Add the suggested codes to the MR.

But first: Check MeteringPoint (MarketEvaluationPoint) and VoltageLevel…, is it relevant to have it also at the Meter level?

From discussion:

- The following justification was proposed:

  The "connectionCategory" will be used to tell the voltage level for one of possibly more Meters in an Installation. For larger installations there may be Bays (see MR ebIX®/2023-005), transformers etc. and a set of Meters having different voltage levels, hence this MR is meant to say the voltage level for a Meter and not for the Metering Point.

  The connectionCategory is also an attribute in the MarketEvaluationPoint, earlier requested by ebIX®. However, the datatype of the connectionCategory in ESMP is currently "String".

Conclusion:

- Jan (SE) informed that it is a Voltage Level at the Metering point level in the new Swedish datahub. He will investigate how the Swedish datahub will handle the "Voltage Level" at "Meter level".
- To be finalised at our next meeting.

Action:

- Ove will make a MR for changing the cardinality of the association from EndDevice to Usage Point from [0..1] to [0..*] in both 61968 and ESMP.
- Jan (SE) will investigate how the Swedish datahub will handle the "Voltage Level" at "Meter level".

6.1.4 MRs based on Dutch requirements

The item was postponed.

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

Jan (SE) and Ove have asked EBG to review the following ChargeType MRs, however EBG has not yet had time to review the MRs. A review is expected during the EBG meeting April 25th and 26th:

- 2022/022: Add an association from Series to ChargeType in 62325-301 and 62325-351.
- 2022/023: Add an association from ChargeType to MarketParticipant in 62325-301 and 62325-351.
- 2022/024: Add an association from ChargeGroup to ChargeType in 62325-351.
- 2022/025: Add an association from ChargeType to Period (62325-301) and from ChargeType to Series_Period (62325-351)
- 2022/026: Add the attribute VATobliged (Boolean) to ChargeType in 62325-301 and 62325-351.
- 2022/035: Add the attribute VATlevel (String (may be a percentage or low/high…)) to ChargeType in 62325-301 and 62325-351.

Conclusion

- Postponed

Jan (SE) and Ove had as action drafted the MR 2022/019 (Add an association from MarketEvaluationPoint to MktPSRType), send it to ETC for one week of commenting (without any response) and finally Jan (SE) had submitted the MR to ENTSO-E retail market wg April 12th.

6.1.6 Not yet mapped attributes from the BRS for Alignment of metering configuration characteristics

- Status for submission of the following MRs to ENTSO-E has been drafted by Ove:
  - ebIX 2023-007-v1 - Add numberOfRegisters to Meter in 61968 and ESMP.
  - ebIX 2023-008-v1 - Link pressureCompensation to Meter in ESMP.
  - ebIX 2023-009-v1 - Link temperatureCompensation to Meter in ESMP.
  - ebIX 2023-010-v1 - Add altitudeCompensation to EndDeviceInfo and link it to Meter in ESMP.
  - ebIX 2023-011-v1 - Add an association from Meter to UsagePointLocation in ESMP.
  - ebIX 2023-006-v1 - Add registersRemotelySwitchable to Meter in 61968 and ESMP.

  Status:

  - To be done.

- 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.

  Status:

  - Nothing new.

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

  Status:

  - In progress within WG16 (Jan (SE) will write a Redmine issue)
  - Info. From after the meeting: the issue is added to Redmine WG14 CIM Issues #6312.

Ove has asked EBG (added the question to the EBG agenda): 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? However, EBG has not yet had time to discuss the topic.

Continued action:

- Ove will ask EBG 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?

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

6.2.1 MRs to ENTSO-E CIM EG Retail market workgroup

The item was postponed.

6.3 Status for European (ebIX® and CIM EG Retail market workgroup) MRs to CIM

Review and update of Excel sheet keeping track of the MRs sent from ebIX®, via the CIM EG Retail Market workgroup to WG 16. The Excel file is uploaded to the Teams "Team" "ebIX® ETC" where Jan (NL), Jan (SE), Kees and Ove can edit the document simultaneously.

The Excel sheet is up to date.

6.4 Preparations for coming WG16 meetings

Thursday 21st, open Redmine issues will be discussed:

- CIM Issue "#6293: Add energyFlowCategory (string) to the AccountingPoint class 0..1" was discussed:
    - This was originally a request for addition of ebIX® codes for production, consumption and combined to the FlowDirection attribute. However, this was rejected by ENTSO-E.
    - Ove thinks it would have been better to add the energyFlowCategory to the MarketEvaluationPoint, since it then is possible to use the same documents for master data for Exchange Points and for Accounting Points.
    - For time series we can use the Business Type attribute to tell if a time series is production or consumption, however it may be a better solution adding the energyFlowCategory also to time series, making the Business Type free to use for other purposes.
- CIM Issue "#5817: Associate the class MarketEvaluationPoint with the FlowDirection class (many-many-association)" was discussed:
    - The reason for this MR was to be able to send information of production, consumption and combined for an Accounting Point.
    - This MR is already agreed, however CIM Issue #6293 is meant to replace this association.
- CIM Issue "#6168: The three attributes in class Series can be deprecated":
    - The attributes in the class Series will instead be handled like this:
        - lastUpdateDate - as an association to DateAndOrTime
        - methodType - see new attributes in MarketEvaluationPoint and AccountingPoint
        - registrationDate - as an association to DateAndOrTime" was discussed:
- CIM Issue "#5856: Request for a self-association on AccountingPoint":
    - Typically used for sub-Accounting Points.

From Becky (WG16) - for information:

WG13 members has come up with a new suggestion for rename of the basic CIM packages using the term "Domain". The names would become:

- GridDomain
- SupportDomain
- MarketDomain

The argument is that the previous proposal "Communication" is overloaded and implies certain things in our space. The argument for domain captures well that everything under the package is within the "Market Domain" or the "Support Domain".

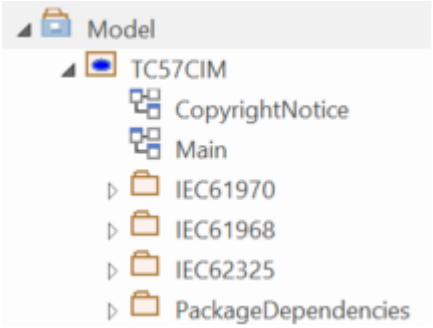
Comment from Jan (SE):

I tend to agree for the most part our models are domain models as described by Wikipedia. The only area I would say we do not get too involved in is with the rules. I would say this further confirms that the use of Domain term for our packages is a good fit.

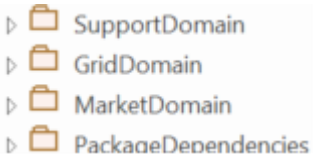
Perhaps what to consider is what is written about "Domain model", e.g. https://en.wikipedia.org/wiki/Domain_model

Will our separate packages for GridDomain, SupportDomain and MarketDomain, be seen as being "Domain models"?

Just an editorial thing in our next model. Today we have the following order of the packages.



Let us keep that order, so you **don't** end up something like this, having to click at the second package instead of the first package as today when you want to look at IEC61970/GridDomain. You know where to find things, but you do not always remember the name.



Reply from Becky (SE):

Thank you for your comments. I agree on the package ordering. This is why, we do not use the "auto sorting" in EA, which allows us the list packages (and classes and attributes) in an order that is human usable vs. a strict alpha-numeric ordering.

7 EG1 status

The item was postponed.

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

8.1 Review of HEMRM update suggestions from EBG

Ove had as action forwarded the ETC comments to the ebIX® comments to HEMRM to EBG. However, EBG has not yet had time to discuss the topic.

8.2 BRP vs Energy Trader

The item was postponed.

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

The item was postponed.

8.4 Suggestions for HEMRM extensions

The item was postponed.

8.5 HG MR for the new domain (or CIM object) Grid Connection

Ove had as action ask EBG (Gerrit) for better justification for the need for the Grid Connection. However, EBG has not yet had time to discuss the topic.

9 ebIX® Business Information Model 2022.A

9.1 Shall we align the definition in the ebIX® Business Information Model and/or ebIX® BRSs with CIM definitions for classes and attributes?

The item was postponed.

9.2 Use of XOR in combination with cardinalities

The item was postponed.

9.3 Continue review and update of version 2022.A

The item was postponed.

10 Next meetings[1]

- Monday May 15th (09:00 – 16:00) and Tuesday May 16th (09:00 – 15:00) in Edisys offices in Oslo.
- Friday June 16th, 10:00 – 12:00 and 13:00 – 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.

- Tuesday October 3rd (09:00 – 16:00) and Wednesday October 4th (09:00 – 15:00) in Svenska kraftnäts offices in Sundbyberg (Stockholm).

11 AOB

No items.

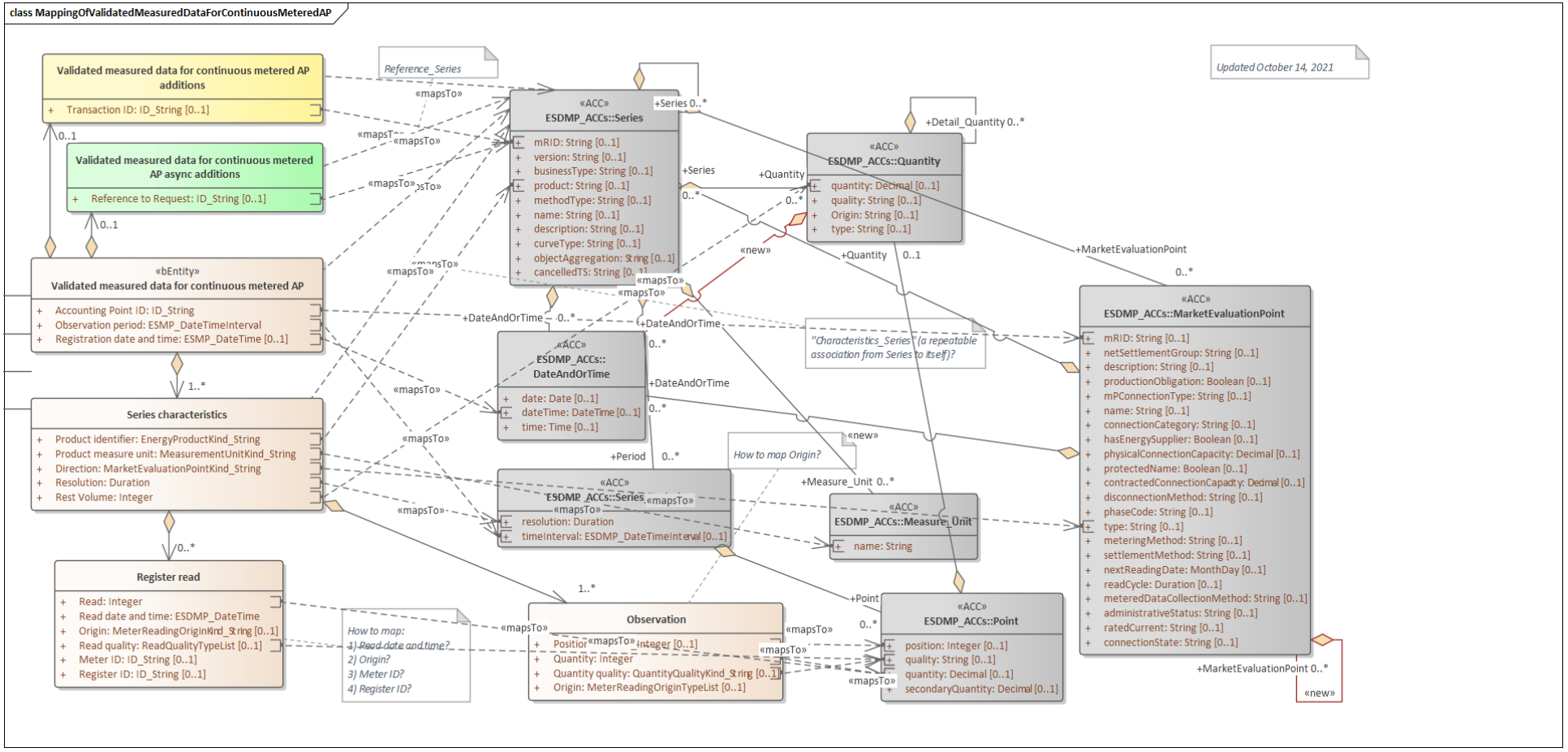
Appendix A ebIX® rules for how to make MRs to WG16

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