

European forum for energy Business Information eXchange

July 6<sup>th</sup>, 2020

ETC – ebIX<sup>®</sup> Technical Committee

## Minutes ETC meeting, June 24th and 26th, 2020

Date:	Wednesday June 24th and 26th, 2020
Time:	10:00 – 12:00 and 13:00 -15:00 June 24 <sup>th</sup> , and 13:00 – 15:30 June 26 <sup>th</sup>
Place:	GoToMeeting
Present:	Fre, TenneT (June 26 <sup>th</sup> ) Jan (NL), EDSN Jan (SE), Svenska kraftnät Kees, TenneT Ove, Edisys
Appendix A: Attachment:	Proposal for European Style Downstream Market Profile from NL ETC workplan (see ebIX <sup>®</sup> file manager at <u>https://filemanager.ebix.org/#</u> )

#### 1 Approval of agenda

The agenda was approved with the following additions:

• Procedures for how to align IEC MRs between EBG and ETC, see item 12.1 under AOB.

The most important discussion item was agreed to be the Dutch and Nordic pilot projects for migration of document exchanges to CIM, hence the only item discussed was item 3.1Making a European Style Downstream Market Profile (ESDMP)

### 2 Minutes from previous meeting

The minutes from previous meeting were approved after correction of some missing links to Appendix A and removal of Fre as a member of the Dutch working group under item item 3.1., Making a European Style Downstream Market Profile (ESDMP).

#### 3 Resolve ebIX<sup>®</sup>/IEC issues

#### 3.1 Making a European Style Downstream Market Profile (ESDMP)

Status for the Dutch and Nordic pilot projects.

Question from the Nordics: Should we reuse datatypes from ESMP when possible or should we always create our own in the ESDMP?

## Mail from Jan (SE) June 10<sup>th</sup>:

In our European Style Downstream Market Profile (ESDMP?) we would not need to rewrite everything from Basic CIM. E.g. with a goal of harmonising with European Style Market Profile (ESMP) we could reuse ACCs and datatypes from ESMP in our profile.

Looking at one detail in ESMP is the datatypes. In Basic CIM the attribute "mRID" is just a String. However, in ESMP, the datatype is elaborated further. Well not always, it could still just be a string – however, typically restricted in length (e.g. 60 characters, 35 characters or what you can find). Looking at datatypes in ESMP that are not just having a value, I found the following, but also added three datatypes (of many more) in the figure that only contains a value and no "codingScheme" or something else.

For the others the "String" has been expanded in order to tell – what kind of ID is this? Is it a national id? A GS1-id? Or an EIC-id? One problem with that: If company A has one identification of object X and company B has another identification of the same object, how can we tell whose id we are using? Both could be UUID:s and perhaps not EIC-codes. Anyhow, having a CodingScheme could help a bit - and we can then use some of these datatypes in our ebIX<sup>®</sup> work with our profile. But: note for instance, if we are having national or regional codes for "MessageKind" or "ProcessKind" we cannot tell that.



There is no codingScheme. But as long as we don't try to use a national or "bilateral code" in an exchange with someone else it would work to use "localextension" codes For identifications for MarketEvaluationPoints we should use a datatype containing a codingScheme – like the "MeasurementPointID\_String"-datatype below.

If using the ESMP datatypes, should we also use ESMP codes? If so, we can use local extensions for ebIX<sup>®</sup> codes and national codes. If not using the ESMP datatypes, when should we use "codingSchema", and what do we want to tell beside the code? And perhaps we want to continue with existing codes, and not have to change codes? Just format? And names of attributes.

### Conclusion:

• The Dutch pilot project has decided not to use CIM datatypes in the pilot project, hence the topic was not further discussed.

Jan (NL) had distributed Dutch proposals for the European Style Downstream Market Profile (ESDMP) before the meeting (June 22<sup>nd</sup>), the latest updated CIM profile class diagram is shown in Appendix A, where green and red arrows shows proposed new associations to CIM.

Jan (NL) had also submitted a draft class diagram of a measure document, see picture to the right.

The draft Dutch BRS can be downloaded from the ebIX<sup>®</sup> File Manager.

Jan (SE) had the following comments to the Dutch proposals June 22<sup>nd</sup>:

1) What is the description of the two new attributes in

Point: validationStatus and repairMethod? Are they just Dutch attributes? (if so, to be put into a national extension of CIM?)

2) Regarding the third new attribute in Point, *origin*, it was suggested in the Technical Report (TR) to map it from Register Read in the ebIX<sup>®</sup> BRS to the attribute *source* in BaseReading in CIM (inherited in the class Reading).

e.g. if we for a register was using the class Reading we would have the attribute source. But here you are not specifying anything about a register.

- 3) The class Series\_Period in ESMP has the definition "The identification of the period of time corresponding to a given time interval and resolution." and requires two attributes, one is the period. In the Dutch suggestion the period is not specified here, but as two attributes next to the TimeSeries. I would rather have specified the timeperiod in Series\_Period.
- 4) Based on available classes and associations in CIM (and ESMP) I would have used product in TimeSeries and MeasureUnit associated to TimeSeries. Further I would have used marketEvaluationPointType instead of FlowDirection in order to specify if it was production or consumption (in our out or perhaps both, i.e. a netted timeseries).

Here in the Dutch proposal it is suggested to add these attributes to the SeriesPeriod class instead of to the TimeSeries class (where they already are available).

5) Finally (for now), I note the required attribute *version* in the class TimeSeries. In the Nordic area we are not using that attribute, and if required (typically then in a MarketDocument following ESMP), we always specify it as "1".

Jan (SE) also made a proposal for a measure document, with the following comments, also June 22<sup>nd</sup>:



I have made the attached structure of a timeseries messages per market evaluation point, that tries to correspond with what you want to send in the Netherlands and also tries to correspond with what is described based on the BRS:es from ebIX<sup>®</sup>, the technical report, and the current work of updating CIM.

There are of course details here and there regarding some attributes that are missing or not should be required etcetera, but the idea is to show another way of using existing and future classes/attributes in CIM based on what we want to send.



Some notes:

- a) Most classes are "Extended", based on the maintenance requests sent to WG16. Sometimes the class is just extended with an association.
- b) Product is specified in TimeSeries. Measure\_Unit is specified once, associated to the TimeSeries. Of course, we could write a maintenance request to CIM (including ESMP) that changes this, but based on what is there, this is a possible solution.
- c) Instead of using flowDirection, here the marketEvaluationPointType will tell if it is production or consumption (or combined). I also added settlementMethod as a possible attribute for a (generic) timeseries.
- d) Instead of having an MDR\_MarketParticipant (where MarketRole also would tell "MDR"), the structure provided here gives the more general possibility to specify other roles associated with the Timeseries, like a BRP and/or the Energy supplier.
- e) The period of the timeseries is specified in the class Series\_Period
- f) Still missing is the attribute "origin", and also the (Dutch?) attributes validationStatus and repairMethod. However, we can make an ebIX<sup>®</sup> extension to Point where "origin" is included, and then a further Dutch extension.

The biggest difference between the two figures is that the Dutch suggestion uses Series\_Period to actually contain information about the different "timeseries" sent per a specified Market Evaluation Point. While the structure I provide here will result in two (or more) transactions (timeseries) for one Market Evaluation Point; one with production and another with consumption.

If to be sent together, and I suggest they should, we would use a header specifying if "electricity or gas" and containing 1..\* TimeSeries. In order to specify "electricity or gas" the suggestion would be to use the class ServiceCategory in CIM.

On Wednesday June 24<sup>th</sup>, Jan (SE) presented the Nordic European Style Downstream Market profile (ESDMP) and Jan (NL) presented the Dutch ESDMP. Thereafter different options were discussed for the rest of the meetings (both June 26<sup>th</sup> and June 28<sup>th</sup>):

- There are some "new principles" used in the Dutch proposal, such as:
  - Introduction of a Direction instead of Metering Point Type to distinguish between production and consumption.
    - Jan (SE) mentioned that the Swedish Data hub have described a common code list for "active in/out" and "reactive in/out".
  - Introduction of an extra level (class), in the BRS, between Accounting Point and Observations in the Time series, among others containing the Direction and Product – to be able to send several time series for the same AP. The attributes are mapped to the Series Period class in the CIM mapping.
    - Jan (SE) mentioned that the Swedish Data hub have described a similar principle where the Register level (instead of Series Period) can be repeated for "active in/out" and "reactive in/out".
  - Addition of a "Rest Volume" for gas a volume that cannot be related to the normal measured time series observations. The "Rest Volume" is proposed added as a new "Volume" class in parallel with the Series Period class in the CIM mapping.
  - The Dutch document header is based on the UN/CEFACT Standard Business Document Header (SBDH), which has been the case in the Netherlands for a decade.
  - The Time Interval in the Series Period is not used (required in ESMP).
  - In the first phase, the Netherlands intend skipping enumerations. Coded attributes will be of type string and possible codes will be specified in the implementation documentation.
  - o Among others, the Volume and Origin classes are additions to ESMP.
  - In the Dutch proposal the new "Volume" class is "based on" the Time Series class and uses the Quantity class for the actual volumes.
  - The Netherlands will generate non-flattened schemas, by using an ESDN EA plugin that has been in use for many years in the Netherlands. Schemas will be provided both as JASON and xml.
- During the meeting day two, Jan (SE) informed that an alternative to add characteristics to the Series Period class is to use the Series class, that is associated to itself in CIM, in-between Time Series and Series Period, which led to a longer discussion on which principles that are best.

#### **Conclusions:**

- The Netherlands will think about what principle to use, i.e.:
  - $\circ$   $\;$  Adding characteristics (Flow direction and Product) to Series Period class or
  - Using repetitions of the Series class where the root class will be a Series class with an association to Market Evaluation Point and a set of other repetitions for each set of timeseries characteristics (Flow direction and Product).
- In the ESDMP profile, the Market Evaluation Point class should be associated to the Reading class instead of the Meter Reading class.

- At the next ETC meeting in August, it will be decided what MRs to submit to WG16, including:
  - An MR to CIM EG (to the ESMP) to rename the association named Original Market Document to something more generic.
- Kees and Ove will inform EBG of the discussions

# After the meeting, Jan (SE) made a figure in Enterprise Architect showing how the Dutch class diagram may look if using Series instead of the Series Period class could almost look like.

## Note:

- some repetitions may not be the same as in the Dutch draft.
- I used the class "Period" both for the payload class and for the detail class. First for the period and secondly for the resolution. This is not the way it has to be.
- Instead of FlowDirection you may use the attribute MarketEvaluationPointType from the (future) version of MarketEvaluationPoint [Perhaps the attribute should just be "type"?]
- I used Reason to show how you could specify "ValidationStatus" from the BRS as a code + a (possible) text.
- Some qualifiers should most likely be changed in your final version.
- I didn't add a new class for Product, but here used the existing attribute in TimeSeries [and Series] + the association to Measure\_Unit. But let us



assume there will be a new class for Product.

• And, I have not added solutions for Origin and RepairMethod.

## 3.2 Energy Supplier and related Supply Start Date

Due to the priority of item 3.1, the item was postponed.

## 3.3 Status for MRs to WG16, see Appendix A in the agenda

Due to the priority of item 3.1, the item was postponed.

### 3.4 Where to put the ebIX<sup>®</sup> element Energy Industry Classification Type (Electricity or Gas)?

Due to the priority of item 3.1, the item was postponed.

### 3.5 How to add additions to CIM

Due to the priority of item 3.1, the item was postponed.

#### 3.6 How to associate readings (meter stands) with TimeSeries?

See background in minutes from ETC meeting June 5<sup>th</sup>, 2020.

#### Mail from Jan (SE) June 16<sup>th</sup>:

Some months ago, I was thinking – how could we associate Readings with TimeSeries? See earlier mails, and chapter 3.6 in the agenda for next ETC meeting. Last week I was thinking, when preparing a IEC

presentation: perhaps we don't need the Reading class? What if we can use the Quantity class that we find in the WG16 part of CIM? See the last slides in the presentation:

One problem with Register and Reading is that you also need the classes Channel and Reading type that are in between.

In the presentation my idea was to use the Quantity class for a



timeseries when just sending one single value with a time stamp. (That is actually done today between the Nordic TSO:s in something we call "Area Control Error Open Loop", however, then as an date-timeattribute to the timeseries and not to the quantity class since there is no association between Quantity and DateAndOrTime.)

The class Register is part of ESMP, associated with MarketEvaluationPoint. And if we directly associate the Register class with Quantity, instead of using the associations through Channel and Reading Type to Reading – could that help? E.g. could we end up with a solution where we always could use the Quantity class both for "normal timeseries", but also for single values directly associated with a time series, and for time series where we want to specify the Register(s) having different readings with a time stamp.

Let us assume that we want to send Energy Active out, Energy Reactive out, Energy Active in and Energy Reactive in. It could be implemented as four different timeseries.

It could also be implemented as if it was four different registers having different units and product codes for the same Market Evaluation Point - e.g. perhaps more in line with the class Register in CIM having four different Reading types. However, that is not the way we have described it in ebIX<sup>®</sup>, nor how products and units are specified per timeseries in ESMP.

Today we still (at least in Sweden) have meters that has one, two or sometimes more registers. E.g. one register with the energy for weekdays between sometime in the morning and sometime in the evening (like 7 am to 10 pm). Another register with the energy for other time (nights and weekends). And it could be more complicated, but also sometimes a register with the total energy volume. And all registers have "meter stands", readings at least at the end of the period. Today we in Sweden only send

the total energy volume, plus the different "meter stands" for each register. So, we don't send more than one energy volume (1 volume for the whole period or 24 x 31 energy values if hourly separated with a period of one month). But I understand you in the Netherlands still separate also the energy volume per "Meter time frame". We don't. We do tell a coded information about what in CIM is called "time of use" (tou). But that is then done for the register, and not for energy volume.



Trying to make a class diagram in CIM for "billing energy" with the usage of Quantity instead of Reading, might result in something like the figure below. Here touTierName is part of the class Ext\_Register (i.e. extended Register class since it has a new association). Here also Quantity is extended – with an association with DateAndOrTime. An attribute touTierName could be added to the Point class in order to specify "MeterTimeFrame" for each energy volume.

And, finally, I am curious about how you have solved this in the Netherlands. In the Nordic we have, so far, only looked upon using Register + Channel + Reading Type + Reading.

Due to the priority of item 3.1, the item was postponed. However, the item will be skipped as a separate item on later agendas – the item is a part of the discussions related to ESDMP.

Item closed.

#### 4 Problems with TT (Eclipse)

Ove had sent a reminder to Paweł at In4Mate, however without any reaction.

#### Continued action:

• Ove will send a reminder to Paweł at In4Mate.

#### 5 Review of BIMs from EBG

Due to the priority of item 3.1, the item was postponed.

#### 6 Resolve HG issues

6.1 Status for new project for alignment of Area configuration

Due to the priority of item 3.1, the item was postponed.

#### 6.2 BRP vs Energy Trader

Due to the priority of item 3.1, the item was postponed.

#### 6.3 Issues with the HRM module of the ebIX<sup>®</sup> model

Due to the priority of item 3.1, the item was not handled during the meetings.

However, as information from after the meeting:

• Ove had as action from previous meeting tested the latest HRM 2020-01 in the ebIX<sup>®</sup> model and verified that all associations from the «BusinessPartner» to the «Harmonised Roles» still are working.

#### Action closed.

#### 7 Status for harmonisation of the electricity and gas role models

Due to the priority of item 3.1, the item was postponed.

#### 8 ebIX<sup>®</sup> Business Information Model 2019.A

Due to the priority of item 3.1, the item was postponed.

#### 9 Code lists from Magic Draw model in Word format

Due to the priority of item 3.1, the item was postponed.

#### 10 Review of ETC workplan

Due to the priority of item 3.1, the item was postponed.

#### **11** Next meetings

- Tuesday August 25<sup>th</sup>, 2020, 10:00 -11:30 and 13:00 14:30, GoToMeeting
- Tuesday September 15<sup>th</sup>, 2020, 10:00 -11:30 and 13:00 14:30, GoToMeeting
- Wednesday and Thursday November 18<sup>th</sup> and 19<sup>th</sup>, 2020, BDEW's offices in Berlin.

All meeting starts 09:00 the first day and end at 16:00 unless otherwise explicitly stated.

#### **12 AOB**

#### 12.1 Procedures for how to align IEC MRs between EBG and ETC

At the EBG meeting June 15<sup>th</sup>, ETC was asked to draft procedures for how to align IEC MRs between EBG and ETC. The request is based on a MR from NMEG to EBG.

Due to the priority of item 3.1, the item was postponed.



# Appendix A Proposal for European Style Downstream Market Profile from NL