Present:	Jan (DK), Energinet
	Jan (SE), Svenska kraftnät
	Jon-Egil, Statnett (Convenor)
	Mika, eSett, FI
	Ove, Edisys (Secretary)
	Tage, Energinet
	Teemu, Fingrid
To (NMEG):	Anne Stine, Elhub
	Christian, Energinet
	Jan (DK), Energinet
	Jan (SE), Svenska kraftnät
	Jon-Egil, Statnett (Convenor)
	Miika, Fingrid
	Ove, Edisys (Secretary)
	Tage, Energinet
	Teemu, Fingrid
CC:	Audun, Elhub
	Bent Atle, Statnett (NBM)
	Fedder, Energinet
	Hans Erik, Elhub
	Minna, Fingrid
To (Invited guests):	Mika, eSett, FI
	Tommy, eSett, FI
	Tuomas L, eSett, FI
	Tuomas P, eSett, FI
Appendix A:	Mail exchange related to Weather information to be sent to Svenska kraftnät
Appendix B:	Overview of Nordic memberships in international standardisation bodies
Appendix C:	Overview of the usage of xml-schemas in the Nordic countries
Attachment:	None

1 Approval of agenda

The agenda was approved with the following additions:

- Review of BRS for Trading after update to HRM 2020-01, see item 9.2.1.

Under this item, Ove informed that Bent Atle has been added to the distribution list as a CC member.

Further Teemu informed that Miika Määttä will take Jari's place in NMEG (Miika.Maatta@fingrid.fi)

2   Approval of previous meeting minutes

The previous meeting minutes were approved without comments.

3   Status from NEX (Nordic ECP/EDX Group)

Background: NIT has taken over the responsibility for NEX (Nordic ECP/EDX Group), former "ECP/EDX Centre of Excellence". However, the group is still below NMEG in the "formal hierarchy". NMEG will be kept informed of progress in the grout.

References (links):

What to decide,   Status from NEX.
discuss or inform:

Teemu informed:

- There is a new Finish member in the group; Miika Määttä.
- The group is renamed to NEX (Nordic ECP/EDX Group), earlier "ECP/EDX Centre of Excellence".
- NEX is reporting directly to NIT (and NMEG).
- The group is still below NMEG in the "formal hierarchy".

4   NMEG-NORCAP Project

Background: NORCAP is a project run by Nordic RSC that needs a set of new CIM based documents, such as the CRAC document and the SIPS document.

References (links):   None.

What to decide,
discuss or inform: Update of the NorCap BRS.

Continued actions:

- Jon-Egil will inform Ove of which documents that will contain the new resolution (P1D)
- Thereafter Ove will update the BRS and upload it to eRoom

5   Status for a common meeting with NEAT

Background: NIT has taking over from MSC as "home" for NMEG and consequently we should have a common meeting with NEAT (Nordic Enterprise Architecture Team), e.g. half day (same time and place) to see how we can cooperate.

References (links):   None.

What to decide,   Status for a common meeting with NEAT.
discuss or inform:

Ongoing task:

- Jon-Egil will check if it still is any interest for a common meeting with NEAT and if so, schedule a common meeting.

6   Support to the NBM project

Background: The NBM-project (Nordic Balancing Model) is going forward and there is a need for a number of new CIM based documents.

References (links):   http://nordicbalancingmodel.net/

What to decide,   Status for the NBM project and possible task for NMEG.
discuss or inform:

Ove had as action from previous meeting updated the NMEG Code list with Asset type **Z04, Z05** and **Z08**, both pdf-document and code list schema.

Ove had also as action to update the Ediel ERRP Planned Resource Schedule Document in the Scheduling BRS with addition of the Reason Code and addition of MktPSRType (Asset Type) at Time Series Level, based on the MR sent to CIM EG after NMEG meeting August 2020. However, Ove had a few questions to be answered first:

- There are some questions in the BRS to resolve!
- For which usage shall this update apply; Production and consumption schedule, Ancillary services schedule, Corridor and cut corridor schedules and/or Fast Frequency Reserves schedule?
- Shall we also make an Ediel version of the xml schemas?
    - The MR is approved from CIM EG

Continued actions:

- Ove will update the Ediel ERRP Planned Resource Schedule Document in the Scheduling BRS with addition of the Reason Code and addition of MktPSRType (Asset Type) at Time Series Level, based on the MR sent to CIM EG after NMEG meeting August 2020.

New action:

- Jon-Egil will send NBM documentation to Ove for update of the NBM usage of the document

7   MR to ebIX® (EBG) for extended association between MktActivityRecord and DateAndOrTime

Background: A request for addition of an association to a "Supply Start Date" related to the Energy Supplier in an AP in the Alignment of AP characteristics process (based on Danish needs) was discussed at an ETC meeting Tuesday September 15th.

- It was agreed that the requirement should be sent to EBG and added to the ebIX® BRS(s) before a MR is sent to IEC.
- It was also noted that there already is a need for more than one association between MktActivityRecord and DateAndOrTime, according to the latest BRS for Alignment of AP characteristics. I.e. a Snapshot Date and a Validity Start Date.
- Hence, Jan (SE) and Ove got the following action from ETC:
    - Jan (SE) and Ove will investigate why we need the Supply Start Date and write a MR to EBG. The MR will include the text:

        "In the Nordic countries we need the start date for the current supplier in addition to the Validity Start Date for the set of AP characteristics".

References (links):   None.

What to decide,
discuss or inform: Making a MR to ETC.

Action:

- Finland, Norway and Sweden will investigate if a Supply Start Date related to the Energy Supplier in an AP is needed in the Alignment of AP characteristics process. If yes, NMEG will send an MR for it.

8   Status for MRs to ENTSO-E

Background: NMEG has sent several Maintenance Requests (MR) to ENTSO-E during the last years and some of these (about 10 MRs) has been postponed by WG-EDI.

References (links):   The MRs can be downloaded from Statnett's eRoom.

What to decide,
discuss or inform: Status for the MRs sent to WG-EDI.

The MR log was gone through and most of the MRs sent for the last year has been approved. Out of 25 MRs, 1 is rejected and a few has uncertain status.

However, due to lack of time a few of the MRs was postponed until next meeting.

Action:

- Jon-Egil will verify with CIM EG what the status is for MR NMEG 2019/178, where only one out of three codes have been added to the ENTSO-E code list:

NMEG 2019/178	Code List	Add new Unit Symbol codes:
		HTZ The UnitSymbol for metered frequency (HTZ unit as per UN/CEFACT recommendation 20)
		~~MVA megavolt-ampere (MVA unit as per UN/CEFACT recommendation 20)~~
		DD degree (unit of angle) (A unit of measurement of angles expressed in a 0 to 360 degree gradient)

- Ove will update the NMEG BRSs with the codes approved by CIM EG (except for NBS BRSs, we replace the old codes with the new).

9   Status and update of Nordic BRSs and other documents if needed

Background: NMEG is responsible for a set of BRSs that are published at www.ediel.org.

References (links):   None.

What to decide,
discuss or inform: Update of BRSs and other documents if needed.

9.1   *urn-entsoe-eu-local-extension-types.xsd with annotations*

Due to lack of time the item was postponed.

Due to lack of time the item was postponed.

For information:

> Ove had as action added **A46** Balancing Service Provider to all documents in the Nordic Trading System BRS where there is a BRP. Jan (SE) had come up with a set of comments to the updated BRS, which were added/corrected before publication at www.ediel.org.

Continued action:

- Jan (SE) and Jon-Egil will continue discussion in CIM EG how to cancel a bid in the Reserve Bid Document. In the IEC document 57_2196e_CDV for 62325-451-7 it is stated that when cancelling a bid all the periods below the Time Series shall be removed, which is impossible as long as the Series_Period class is required.

9.2.1   Review of BRS for Trading after update to HRM 2020-01

Due to lack of time the item was postponed.

9.2.2   Comment from Jan (SE) related to Reserve Bid Document

Due to lack of time the item was postponed.

9.3   Addition of Process Type to the Publication Document

For information:

> Ove had as action from previous meeting made an MR for a Process type in the Publication Document, needed to distinguish between the processes. The MR was forwarded to Jon-Egil for forwarding to CIM EG September 21st.

Item closed.

10   BRS for schedules

Background:	The latest version of the BRS for Schedules was published in February 2014. Since then the scheduling processes has changed and NMEG is working on updating the document.
References (links):	The draft BRS can be downloaded from NMEG working documents.
Action(s):	
What to decide, discuss or inform:	Review of updated BRS.

Due to lack of time the item was postponed.

10.1 Weather information to be sent to Svenska kraftnät

See Mail exchange related to Weather information to be sent to Svenska kraftnät in Appendix A.

11 XML schemas

Background: The NMEG set of schemas, including extended table with TSO columns, are shown in Appendix C.

References (links):

Action(s): When we start a project together with NBM (Nordic Balancing Model), everyone are asked to find what versions of xml-schemas are used to day in different projects and come up with proposals for new schemas and/or sets of schemas that should be published at www.ediel.org.

What to decide, discuss or inform: Verify the list of proposals for new schemas and/or sets of schemas, from the NMEG participants, that should be published at www.ediel.org.

Due to lack of time the item was postponed.

12 NMEG CIM-XML Subgroup

Background: At the NMEG meeting November 2019, it was agreed to establish a NMEG CIM-XML Subgroup that will make Nordic CIM based XML documents. The following tasks are prioritised (updated at NMEG meeting March 2020):

a) Update the NMEG model with the latest ebIX® extension;
b) Make a road map for making CIM documents for the Danish Datahub version 3.0;
c) Continue with NBS documents:

1. NBS ebIX® based documents;
2. NBS documents based on older ENTSO-E schemas;
3. NBS master data documents.

The members of NMEG CIM-XML Subgroup are Jan (DK), Jan (SE), Teemu and Ove.

References (links):

What to decide, discuss or inform: Status.

Due to lack of time the item was postponed. However, item 12.1 to 12.3 below are shown for information.

12.1 Report from NMEG CIM-XML Subgroup; GoToMeeting September 30th

- Participants Christian, Jan (DK), Jan (SE) and Ove.
- Jan (SE) had informed:
  At the IEC WG16 model meeting Thursday September 24th, Alvaro from ENTSO-E (liaison member of WG16) did present a suggested update of associations from TimeSeries. Today, there is an association from Series to itself, see picture below. That goes back to a suggestion

by Maurizio Monti some years ago, where ebIX® originally suggested an association from TimeSeries to itself, while Maurizio instead suggested that to be done in an inherited class. Then nothing would have to be changed in the current usage of TimeSeries. At that time also some attributes where added to this new class Series.

Now (yesterday) ENTSO-E suggested this association from Series to itself should be moved to TimeSeries. The reason would be to get associations from BidTimeSeries to other BidTImeSeries. Then the association will also be inherited by Series, so we could still use that from the Series level. However, the end association name, will – I presume – then be "TimeSeries" and not "Series". Comments to this possible change will be discussed next Thursday at the next WG16 model meeting.

It is a pity that we have not yet established a group outside ENTSO-E that could discuss and maintain the ESMP within IEC. In my opinion that group should consist of European members from WG16 regardless if they represent ENTSO-E or not. We could call that group a "part 351" group, working with the standard IEC 62325-351. With input from the European WG16 members and liaisons, and output to the whole WG16 group. Anyhow, I would join such a group. And if we would have had such a group, this suggested change should have been discussed there before going to WG16.

Since the project in the Netherlands has described how to base the exchange of metered data on Series, and not TimeSeries, I think it could be too late for them to change now And perhaps it is not needed to change, since we would still have the inheritance at the Series level. And we can also still use Series in our Danish project.
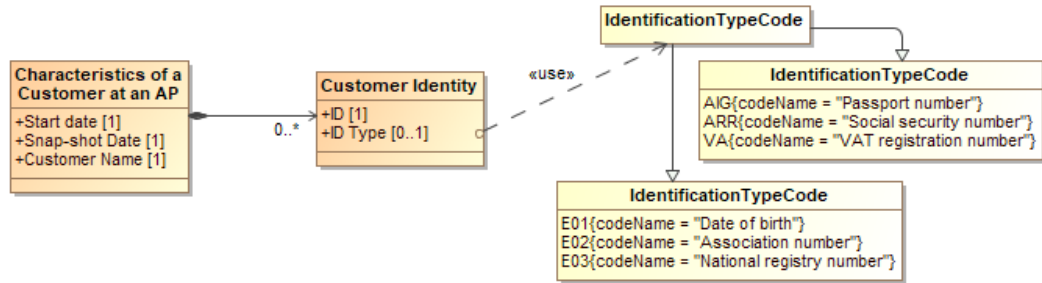
However, will there be other consequences? Beside the "end association name"?

And what about the future?

The suggestion presented yesterday came as a total surprise. I don't want this to happen again.

Conclusion:
- o We continue with Series.

- Ove had as action from previous meeting:
  - o Made CIM versions of Request, Confirm and Reject Change of Supplier based on the ebIX® model, but with all needed attributes from "RSM 001 Change of Supplier".
  - o Added the agreed CIM classes to the CIM based "RSM 028 Characteristics of a Customer at an AP".
  - o Replaced TimeSeries with Series for "RSM 012 Notify Measure Data for a Metering Point" and "RSM-014: Notify Aggregated Time Series".

- Jan (DK) has made an Excel sheet and asked for help on finding general terms to be used for attributes based on ebIX® BRSs, which was briefly reviewed. Among others with the following comments:

  - o ebIX doesn't have the attribute CPR, nor CVR. According to the ebIX® BRS, this should be two attributes; Customer Identity ID and Customer Identity ID Type, where the Customer Identity ID Type can be ARR= Social security number (CPR?) or VA=VAT registration number (CVR?):
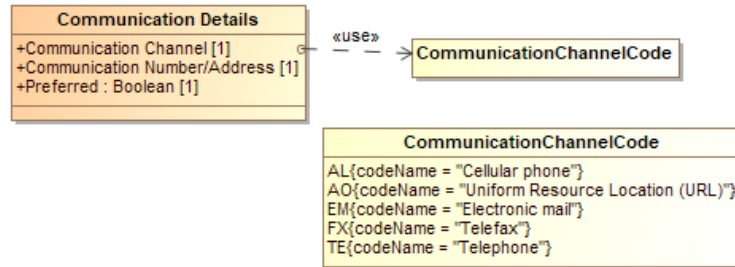
IdentificationTypeCode

Characteristics of a Customer at an AP
+Start date [1]
+Snap-shot Date [1]
+Customer Name [1]

0..*

Customer Identity
+ID [1]
+ID Type [0..1]

«use»

IdentificationTypeCode
AIG{codeName = "Passport number"}
ARR{codeName = "Social security number"}
VA{codeName = "VAT registration number"}

IdentificationTypeCode
E01{codeName = "Date of birth"}
E02{codeName = "Association number"}
E03{codeName = "National registry number"}

Currently the CPR and CVR are link to a PrivateCustomer_MarketParticipant and a CompanyCustomer_MarketParticipant to the MarketEvaluationPoint.

An alternative is using Market Role to distinguish between CPR and CVR (Person and company).

Conclusion:

- We go for a third alternative, using Customer_MarketParticipant/mRID:: PartyID_String, where the attribute codingScheme = VA (VAT number) or ARR (Social Security Number).

o Mobile and Phone is currently modelled as phone1 or phone2, of type «Compound» Common::TelephoneNumber, i.e. not according to ebIX® BRS:

Communication Details
+Communication Channel [1]
+Communication Number/Address [1]
+Preferred : Boolean [1]

«use»

CommunicationChannelCode

CommunicationChannelCode
AL{codeName = "Cellular phone"}
AO{codeName = "Uniform Resource Location (URL)"}
EM{codeName = "Electronic mail"}
FX{codeName = "Telefax"}
TE{codeName = "Telephone"}

Conclusion:
- We use phone1 or phone2 and describe in the implementation guide that phone 1 is normal telephone and phone 2 is mobile. Further we restrict the «Compound» Common::TelephoneNumber by using «Compound» Common::ESMP_TelephoneNumber.

o Email is currently modelled as electronixAddress, of type «Compound» Common:: ElectronicAddress, i.e. not according to ebIX® BRS, see Telephone/Mobile above.

Conclusion:
- We use the CIM way, but we restrict the «Compound» Common::ElectronicAddress by using «Compound» Common::ESMP_ ElectronicAddress.

o Status Type (**39** Accepted / **41** Rejected) is not used by ebIX® anymore, but added as a Reason class at header level in CIM.
o ResponseReasonType (Afvisningsårsag) is added "MktActivityRecord / reason". In addition, the attribute description was added to be used for a reason text.

- o The following elements will be investigated at the next NMEG CIM XML subgroup meeting:
  - ProtectedName (Hemmelig adresse) - not used by ebIX®.
  - SecondConsumerPartyName (Kundenavn2) - not used by ebIX®.
  - FirstConsumerPartyName (Kundenavn1) - not used by ebIX®.
  - HasBalanceSupplier (Leverandørstatus) - is not used by ebIX®.
  - The following is not yet modelled:

Antal	ChargeOccurrence
Pristype	ChargeType
Aktør ID	ChargeTypeOwnerEnergyParty
Pristype ID	PartyChargeTypeID

12.2   Report from NMEG CIM-XML Subgroup; GoToMeeting October 5th

- Participants Christian, Jan (DK), Jan (SE) and Ove.
- The first part of the meeting was used to discuss some questions from Jan (DK):
  - o QuantityQuality og QuantityMissing – Is it correct understud that QuantityMissing is a value in CIM's attribute **quality**?

    Answer:
    - The ENTSO-E code list is as follows

Code		Title
A01	Adjusted	The contents of the object have been adjusted.
A02	Not available	The contents of the object are not available.
A03	Estimated	The contents of the object are estimated.
A04	As provided	The contents of the object are as provided.
A05	Incomplete	The contents of the object are calculated based on incomplete data.

    Quantity missing can be **A02.**

  - o In time series **timeInterval** is used; Which format is time interval? Can it contain a n interval, i.e. a start and an end? Or, is it only DateTime?

    Answer:
    - It is a start and an end, e.g.

      ```
      <cim:timeInterval>
              <cim:start>2020-10-05T00:00Z</cim:start>
              <cim:end>2020-10-06T00:00Z</cim:end>
      ```

- We need to know it there are CIM attributes for:
  - o MessageReference
  - o DocumentType
  - o MessageType

    This information is found in RSM-012:

Answer:

- o This is the SOAP header and not part of our CIM mapping.

- Further, we need the following CIM attributes for the header:

  - o Identification
  - o DocumentType
  - o Creation
  - o SenderIdentification
  - o RecipientIdentification
  - o EnergyBusinessProcess
  - o EnergyBusinessProcessRole
  - o EnergyIndustryClassification
  - o These elements are for instance used in RSM-012:

Conclusion:

- o The only missing is Energy Industry Classification Code, which was agreed added by addition of a Market_ServiceCategory class associated to MarketDocument.
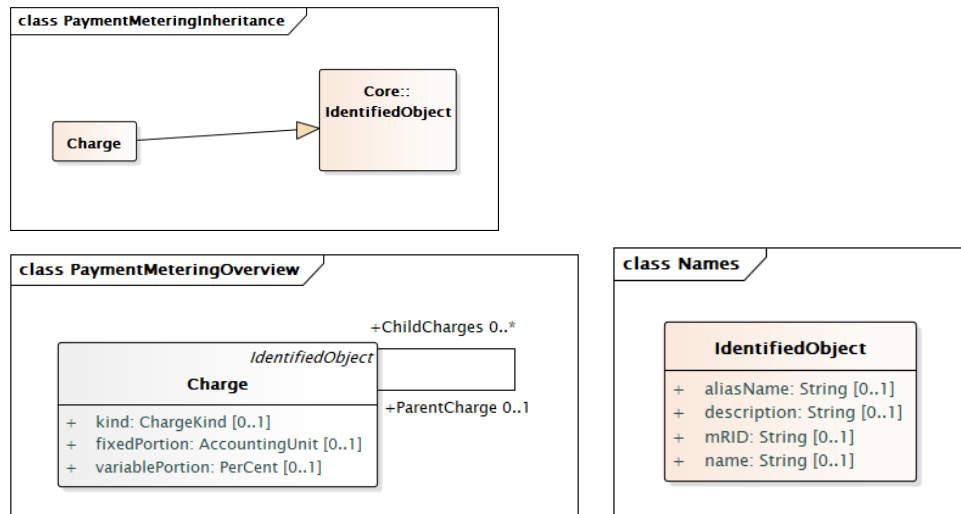
Action:

- o Ove will as homework add the Market_ServiceCategory associated to MarketDocument

- The second part of the meeting was used to discuss some questions in the Memo - Mapping of Danish downstream documents to CIM:

  - o The questions related RSM 001 and RSM 012 were solved.

Action:

- o Ove will as homework add Metering Grid Area Domain and Bidding Zone Domain to RSM 014 and try finding CIM attributes for Charge type and Party Charge Type ID - maybe to be found in PaymentMetering in CIM (?).

12.3 Report from NMEG CIM-XML Subgroup; GoToMeeting October 7th

- Participants Christian, Jan (DK), Jan (SE) and Ove.
- Ove had as homework:

  - o Added a new chapter "2 Document header – CIM Market Document", which shows the mapping between the Danish (ebIX®) Header Energy Document and the CIM Market Document.
  - o Added a Market_ServiceCategory class, associated to MarketDocument, in RSM 012Notify Measure Data for a Metering Point. This will be added also to the other documents.
  - o Investigated how a charge can be added to the MktActivityRecord class. The proposal is to add a new association between MktActivityRecord and Charge.

- Most of the meeting was used to discuss how to map RSM 033 Change of Price List to CIM, as a basis for how to map the "charge part" of "RSM 014 Notify Aggregated Time Series" to CIM.

  - o Among others it was decided to skip the Function (add, change, delete) and implement the functionality according to ebIX® principles, i.e. as Validity start date [1] and Validity end date [0..1].

  Action:

  - o Ove will as homework continue the updated of the ESDMP and the related mapping.

13 Picture at the front page of www.ediel.org

Background: At the NMEG meeting March 2020, it was agreed to add a picture to the front page of www.ediel.org.

References (links):   www.ediel.org.

What to decide,
discuss or inform: Status.

Due to lack of time the item was postponed.

14 Review of documents from CIM EG subgroups and IEC groups

Background: At the NMEG meeting August 2020 it was agreed that NMEG needs to be more proactive regarding commenting on new ENTSO-E and IEC documents. Hence it is added a fixed item on the NMEG agenda for review of documents from CIM EG subgroups and IEC groups that is of interest for the Nordic market.

References (links):

What to decide,
discuss or inform: Review of documents from CIM EG subgroups that is of interest for the Nordic market.

15 Information (if any)

None.

16 Next meetings and decide if next meeting will be a face-to-face meeting or GoToMeeting

NMEG Corona GoToMeetings:

- GoToMeeting: Tuesday and Wednesday October 27th and 28th, 10:00 – 12:00 and 13:00 – 15:00 both days.

NMEG scheduled face-to-face meetings[1]:

- December 15th and 16th, Edisys' offices in Oslo
- February 2nd and 3rd, Energinet's offices in Erritsø (?)

NMEG CIM-XML subgroup GoToMeetings:

- Monday October 19th 10:00 – 11:30 (CET);

17 AOB

No items.

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[1] Unless otherwise explicitly stated, the face-to-face meetings start at 09:00 (CET) the first day and end 16:00 (CET) the second day.

Appendix A   Mail exchange related to Weather information to be sent to Svenska kraftnät

From Jan (SE) September 10th, 2019:

I got this list (the first column) from a colleague working with SMHI (Sveriges meteorologiska och hydrologiska institut).

Let me just comment some of the items. The agreement what to get from SMHI is not yet finalized, so the list may be updated. I have asked my colleague to get definitions (or links to definitions), and some background (reasons) in order to be able to send in MRs.

Parameter	ENTSO-E code	Title
Temperatur	B49	Air temperature
Vindhastighet (vektorbeskrivning)		
Vindriktning (vektorbeskrivning)		
Byvind		
Wind Chill Index		
Global instrålning	B48	Solar irradiance
Cloud cover eller Cloud area fraction (high, medium, low)	(B50)	Cloudiness
Luftfuktighet	B51	Air humidity
Lufttryck	B52	Atmospheric pressure
Regn		
Snö		
Snödjup/nysnö ([…])		
Molnvatten		
Molnis		
Graupel (nedisning, [...])		

Currently I find the following Business types in the ENTSO-E list (could be more codes), from B46–B53 (see also above):

Wind speed
Wind direction
Solar irradiance
Air temperature
Cloudiness
Air humidity
Atmospheric pressure
Precipitation

From Jan (SE) September 3rd, 2020:

A year ago I sent the mail above related to weather information.

There is an implementation guide for Weather data (the web page would now be https://www.entsoe.eu/publications/electronic-data-interchange-edi-library/)

However, is that really based on the Environmental part of IEC CIM?

What we now would like to exchange is three values:

- The average value
- The extreme value (highest)
- The extreme value (lowest)

That I can find in the CIM class EnvironmentalAnalog with a set of attributes like maxValue, minValue and normalValue, see picture later.

But I don't find this exactly in the ENTSO-E implementation guide. There I find:
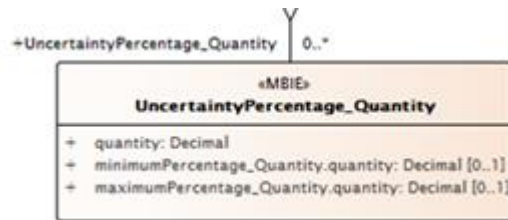
How should that be used to provide (together with the Point class) the three values we would like to exchange?
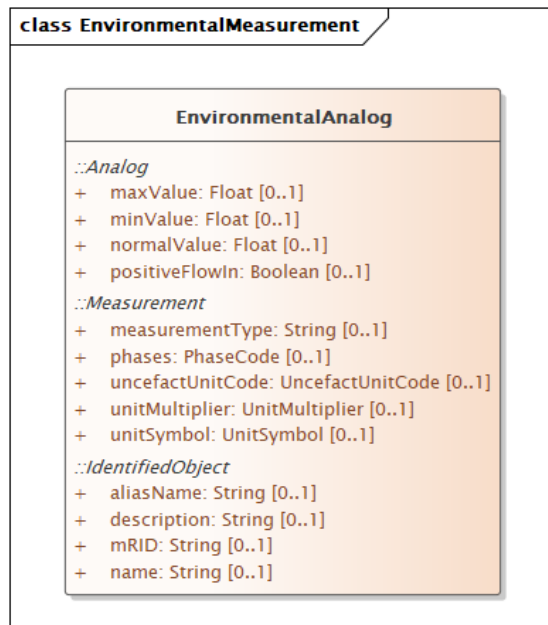
BR Jan

From Jan (SE) September 8th:

Now I have got more background on this issue.

It is not environmental information, but since it was information from a system that we mainly use for wind prognosis, I thought the data to be exchanged was wind values telling the average, the minimum and the maximum. But it is just (partly) about wind. One timeseries is a weekly load prognosis (MW) per area, resolution hour. Another timeseries is a weekly windproduction prognosis (MW) per area and hour. We want to base this exchange on CIM even if it is just sent internally within Svenska kraftnät.

And for each hour there are three values: one normal value and two extreme values. And these extreme values can be expressed as 5 and 95 percentile values.

Looking at some of the ENTSO-E implementation guides I found two more interesting than others, that is:

Energy prognosis document and Short Medium Term Adequacy Results Document.

Let me now just look at the latter. In the "SMTA_ImplementationGuide_V1.0.pdf" document I find table 6 and table 7 (dependency tables). Well, the receiver will not be RSC, otherwise table 6 looks ok. In table 7 we would use A38 (Available generation) for the windproduction and A13 (Load Profile) for the load prognosis (- to me a "load profile" sounds like something else, i.e. something we use for reconciliation…) (Domain will tell the area – however, I would not have called it "Control area" as in the table..). mktPSRType.psrType would tell the "Asset type". Probably we will here use the old Nordic code Z05 for Wind, I don't think we will distinguish between Wind onshore and Wind offshore. Looking at table 10 we will use type "05" and type "95". (But I note that those types are not part of the XML schema, it is just a string that could have any kind of value.)

So, we think Short Medium Term Adequacy Results Document will fit our needs. Have you any experience of using that document?

From Jan (SE), Thursday September 10th, 11:26:

…. Let us not discuss this specific (internal) exchange within Svenska kraftnät, but rather let us look at the "ENTSO-E packages" and see: which are relevant for us in the Nordic area?

I.e. among:

- IEC62325-451-7
- IEC62325-451-8
- Area Configuration Document
- CRAC Document
- CriticalNetworkElement Document
- FlowBasedDomain Document
- Coding schemes mapping
- CGMA
- SIPS Document
- OPC
- SMTA
- GLSK document

- RGCE process
- Weather process
- TERRE

Perhaps some are already in use or will be used soon in the Nordic area.

Do we need specific Nordic BRS:s for some of them?
Nordic codes?

And who are following the work with these packages/documents? Perhaps it is enough to know that we do have people that are part of the work or follow the work.

However, looking again at "Short Medium Term Adequacy Results Document" (within SMTA in the list above). This is a sort of energy prognosis. There is also an Energy prognosis document within the Weather process. And then we have the Schedule document (ESS) within IEC62325-451-2 Ed.1

What are actually the needs when exchanging schedules/prognosis?
Do we need to distinguish them as several different documents?
Or will there be a work to "join" them?
Or can at least the used ABIE:s and MBIE:s be more similar?

I don't say that we must use the same XML schema for all. But it is bad quality not having the same order of the attributes in the current different schemas.

From Jan (SE) September 16th:

I noted in the implementation guide for Weather data:

https://docstore.entsoe.eu/Documents/EDI/Library/cim_based/Weather_IG_V1r2.pdf

that there are also three other Business Type codes, not in my list below:

B78 = Global radiation
B79 = Diffuse radiation
B80 = Direct solar radiation

But, what is the unit? I think it is the same as for "Solar irradiance", if so, the text "Solar Irradiance" in the ENTSO-E implementation guide for unit codes should be changed to include "radiation" or "radiant energy" or something like that. And probably then also in the ebIX® list of unit codes. But, that should be verified by someone that knows more about solar power.

Response from Jon-Egil, Thursday September 10th, 11:55:

I would assume that the Energy Prognosis document is the more fitting document in this case:
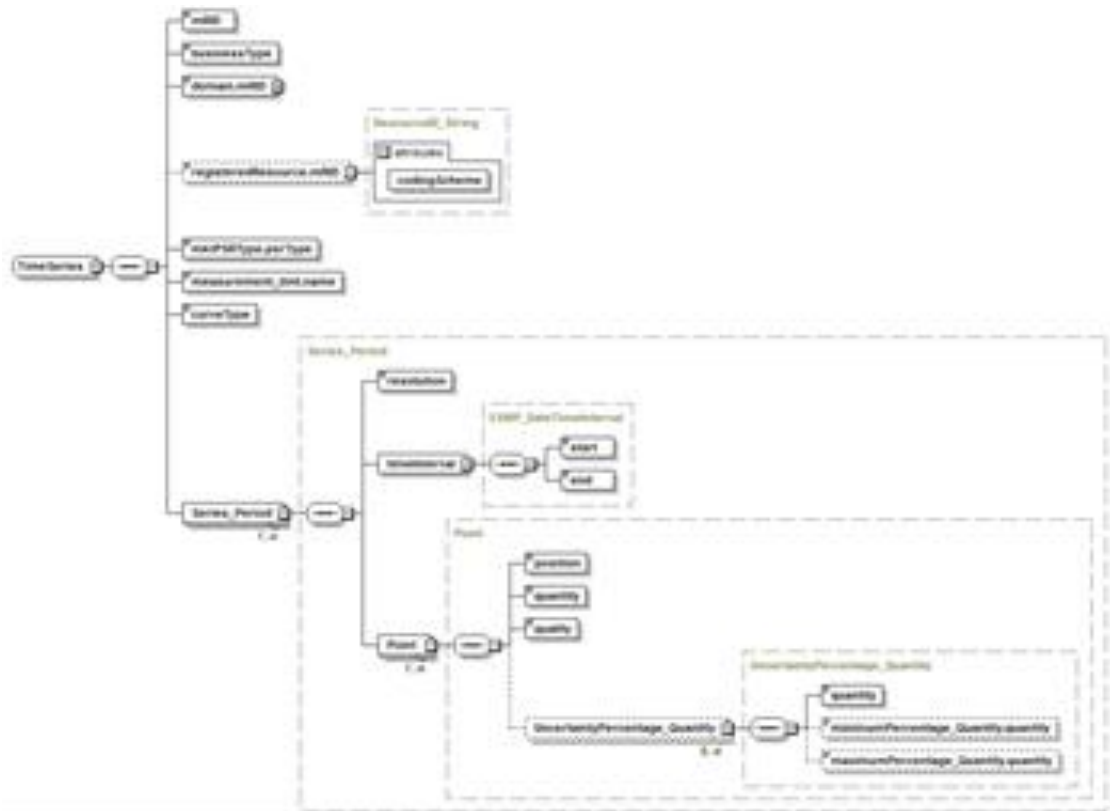
Response from Jan (SE), Thursday September 10th Thu 12:27:

Regardless if it is, I would suggest that we consider writing a Maintenance request where the order of attributes is updated in this and similar documents so that the order would be more in line with other documents.

For instance, the order within Series_Period should be timeInterval & resolution, not the opposite as here.

Response from Jon-Egil, Thursday September 10th Thu 14:09:

The intended use is to describe data ala this curve:
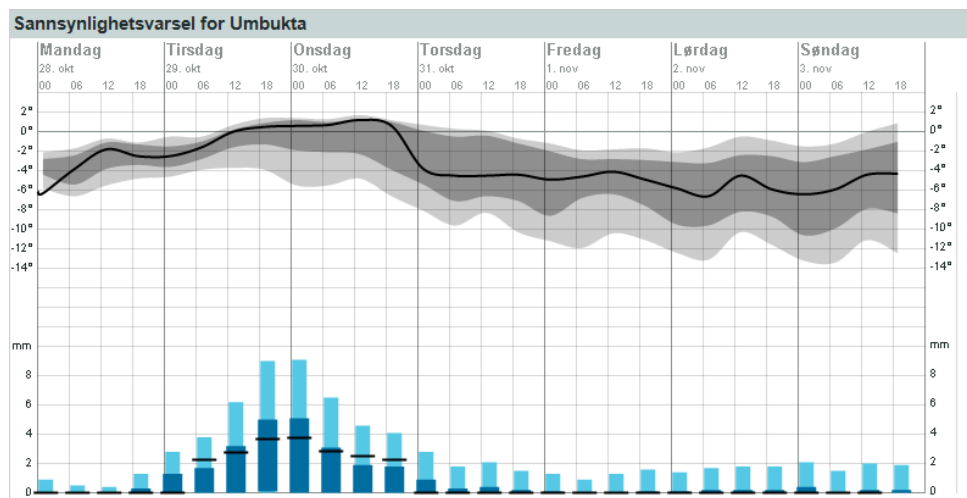
In this case the point Thursday at 00:00 will look like this in the xml:

```
<Point>
  <position>1</position>
  <quantity>3.8</quantity>
  <quality>A03</quality>
  <UncertaintyPercentage_Quantity>
    <quantity>30</quantity>
    <minimumPercentage_Quantity.quantity>-
    8.0</minimumPercentage_Quantity.quantity>
    <maximumPercentage_Quantity.quantity>0.5</maximumPercentage_Quantity
    .quantity>
  </UncertaintyPercentage_Quantity>
  <UncertaintyPercentage_Quantity>
    <quantity>80</quantity>
    <minimumPercentage_Quantity.quantity>-
    5.0</minimumPercentage_Quantity.quantity>
    <maximumPercentage_Quantity.quantity>0.0</maximumPercentage_Quantity
    .quantity>
  </UncertaintyPercentage_Quantity>
</Point>
<Point>
```

So, what you're sending is a confidence interval. If you want to send the 5th and 95th percentile the values would be in the <minimumPercentage_Quantity.quantity> and the <maximumPercentage_Quantity.quantity> of the 90 percent confidence interval, and the <quantity> element would be 90.

Response from Jan (SE) , Thursday September 11th, 16:58:

Regardless if it is, I would suggest that we consider writing a Maintenance request where the order of attributes is updated in this and similar documents so that the order would be more in line with other documents.

For instance, the order within Series_Period should be timeInterval & resolution, not the opposite as here.

Further response from Jan (SE), Thursday September 11th, 16:58:

Thanks Jon-Egil for giving an example of the usage of UncertaintyPercentage_Quantity. I will use this, if making an example based on the Energy prognosis Document. However, there are some things that suggest using Short Medium Term Adequacy Results Document:

1) The users of this talks about "P05", "P50" and "P95" values. The type codes "05" and "95" would be specified in the Short Medium Term Adequacy Results Document, not in the Energy prognosis Document where you instead would specify "90".

2) The resolution is 60 minutes. That is possible to use according to the implementation guide for Short Medium Term Adequacy Results Document. But according to Energy prognosis Document the resolution should be 1 minute (However: I have not compared this with the possible usage of curveType).

3) We will send load and wind forecast information for a week, and since the *Short Medium Term Adequacy Results Document* is intended for e.g. Week Ahead PXX Load Forecast and Week Ahead PXX Wind Offshore/Onshore Forecast, it seems to fit. PXX in the implementation guide describes the "P05" and "P95" that we want to exchange.

But still, the two documents are so similar that they should have been more equal than they actually are (looking at the order of the attributes). And perhaps they might be joined in the future.

Even more response from Jan (SE), Tuesday September 15th, 17:00:

Based on input from e.g. Jon-Egil, we will now use an updated version of the Energy Prognosis Document (version 1.1) when exchanging percentile values. There are three changes in the XSD you get here, compared with the original one from ENTSO-E. Beside namespace and name of the xsd (that probably could be something else).

1) Added ProcessType to the header
2) Changed the order of resolution & timeInterval in the SeriesPeriod class
3) Added an optional Percentile_Quantity class in parallel with UncertaintyPercentage_Quantity

The Percentile_Quantity class includes three attributes:

a) quantity (i.e. the energy value)
b) percentage_Quantity.quantity (i.e. the percentage level)
c) percentage_Quantity.type (i.e. the unit of this latter percentage quantity – default P1 = %).

The idea is that you are having (zero), one or more percentile values. It could be the 5% value, the 30%, the 50%, the 80%, the 95% or "whatever". Sent together or sent separately.

Examples:

- If you only are interested in the average expected value and the 90% percentile (P_{90}), you can send two values and use Percentile_Quantity once.
- If you also are interested in the 10% percentile (P_{10}), you can use Percentile_Quantity once more, but may then also use UncertaintyPercentage_Quantity. Using the latter option, you will specify the confidence interval as 80 and the two values as minimum + maximum.

One advantage of having a Percentile_Quantity, as suggested in what you get here, is that you express the percentile with its level. That would not be the case when using UncertaintyPercentage_Quantity where you instead specify the confidence interval.

Let me now look at the attached (draft) xml example.

> messageType = B14 = Energy prognosis document
> processType = A14 = Forecast
> businessType = A04 = Consumption
> mktPSRType.psrType = A05 = Load
> domain = SE3 (Swedish elområde 3)

So, this is a load forecast within the area SE3. The quantity is 67. Within UncertaintyPercentage_Quantity, the confidence interval is 90, and then the values for 5% and

95% are 53 and 98 respectively. Within Percentile_Quantity the same information is expressed, the P_5 value is 53 and the P_{95} value is 98.

Of course you will not send the information in both ways – the example is just showing that you can express the values in both ways, and using Percentile_Quantity you explicitly specify the percentile (5 and 95 in the example), while you with UncertaintyPercentage_Quantity instead would specify the confidence interval (90 in the example).

Is there any interest by you others of sending percentiles? If so, we can make a Nordic version of the Energy prognosis document. Making it possible to send (single or more) percentiles.

And at least we should suggest some updates to the ENTSO-E version of that document.

Appendix B   Overview of Nordic memberships in international standardisation bodies

Name	Member of
Anne Stine	NMEG, ebIX®
Bertil (SE)	EBG
Christian	NMEG, ebIX® observer (?)
Fedder	NMEG, CIM EG, IEC/WG16, CSSG, EEAT, ENTSO-E CIM tools, CIO/LIO
Jan (SE)	NMEG, HG, ebIX®, IEC/WG16+14
Jon-Egil	NMEG, CIM EG, IEC/WG16, ESMP, CCC, CIO/LIO, TPC
Martin (SE)	CCC
Oscar	CIO/LIO, ebIX®, CIM EG
Ove	NMEG, HG, ebIX®, IEC/WG16
Svein (NO)	IEC/WG14+13, CGMES
Teemu	NMEG, CIM EG, EBG, ETC, CIO/LIO

Abbreviations:

CCC	Coordinated Capacity Calculation (project under CIM EG)
CGMES	Common Grid Model Exchange Standard (subgroup under CIM EG)
CIO/LIO	Central Issuing Office / Local Issuing Office
CSSG	Communication Standards (subgroup under CIM EG)
Dc	ENTSO-E Digital committee
EBG	ebIX® Business Group
EEAT	ENTSO-E Enterprise Architecture Team (subgroup under Dc)
ESMP	European Style Market Profile (subgroup under CIM EG)
ETC	ebIX® Technical Committee
HG	ebIX®, EFET and ENTSO-E Harmonisation Group
MC	ENTSO-E Market Committee
MIT	Market Integration and Transparency (subgroup under MC)
TPC	Transparency Platform Coordinators (subgroup under MIT)

Appendix C   Overview of the usage of xml-schemas in the Nordic countries

#	XML schema	BRS	Version used by					
			NBS	NMA	Energinet	Fingrid	Statnett	Svk
1.	NEG ECAN publication document	NBS BRS for TSO/MO	1.0					
2.	NEG ERRP Reserve Allocation Result Document	a) NBS BRS for TSO/MO b) BRS for Trade	1.0					
3.	NEG Area Specification Document	a) NBS BRS for Master Data b) BRS for Trade	1.0[2]	2.0 (CIM)				
4.	NEG Bilateral Trade Structure Document	NBS BRS for Master Data	1.0					
5.	NEG Party Master Data Document	NBS BRS for Master Data	1.0					
6.	NEG Resource Object Master Data Document	NBS BRS for Master Data	1.1					
7.	ENTSO-E Acknowledgement Document	NEG Common XML rules and …	6.0					
8.	ENTSO-E ERRP Planned Resource Schedule Document	NBS BRS for TSO/MO	5.0					
9.	NEG ERRP Planned Resource Schedule Document	BRS for Schedules						
10.	ENTSO-E ERRP Resource Schedule Confirmation Report	BRS for Schedules	No NEG version					
11.	ENTSO-E ESS Anomaly Report	BRS for Schedules	No NEG version					
12.	ENTSO-E Outage document	BRS for Schedules	No NEG version					
13.	NEG ESP Energy Account Report Document	NBS BRS	1.0					
14.	ENTSO-E ESS Confirmation Report	NBS BRS	4.1					
15.	ENTSO-E ESS Schedule Document	a) NBS BRS b) NBS BRS for TSO/MO	4.1					
16.	ebIX® Aggregated Data per MGA for Settlement for Settlement Responsible	NBS BRS	2013pA					
17.	ebIX® Aggregated Data per Neighbouring Grid for Settlement for Settlement Responsible	NBS BRS	2013pA					
18.	ebIX® NEG Confirmation of Aggregated Data per Neighbouring Grid for ISR	NBS BRS	2013pA					
19.	ebIX® Validated Data for Settlement for Aggregator	NBS BRS	2013pA					
20.	NEG ECAN Allocation Result Document	BRS for Trade						
21.	NEG Currency Exchange Rate Document	BRS for Trade						
22.	NEG Auction Specification	BRS for Trade						
23.	NEG Spot Market Bid Document	BRS for Trade						
24.	ENTSO-E ERRP Reserve Bid Document	BRS for Trade						
25.	ENTSO-E ERRP Activation Document	BRS for Operate						

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[2] The NBS version 1.0 is using dateTimeType for Validity Start/End (error correction), while the MO version 1.0 is using dateType. dateTimeType will be used from version 2.0.