

<b>Minutes:</b> MDS meeting March 21 <sup>st</sup> and 22 <sup>nd</sup> 2017	 European forum for energy Business Information eXchange
<b>Date:</b> April 24 <sup>th</sup> , 2017	<b>MDS</b> (ebIX <sup>®</sup> working group for Master Data Structuring and harmonisation in the European energy market)

## Minutes – MDS project meeting

**Date:** Tuesday and Wednesday March 21<sup>st</sup> and 22<sup>nd</sup>, 2017;

**Time:** 09:00 – 17:30 and 9:00 – 16:00;

**Place:** Ljubljana, Slovenia;

**Participants:** Boštjan, SI  
Christian, DK  
Gerrit, NL  
Joachim, DE  
Kees, NL  
Minna, FI  
Ove, NO  
Preben, DK

**Appendix A** MDS Work plan;

**Appendix B** MDS proposals for update of ebIX<sup>®</sup> Business Information Model 2016.A;

**Appendix C** Language of the address - or the customer?

**Appendix D** Prosumers - balancing method;

**Attachments:** None.

### 1 Approval of agenda

The agenda was approved with the following additions:

- Metering measurement balancing method, see item 15.1 under AOB;
- Should we do anything with MDS memos etc. (e.g. publish)?, see item 15.2 under AOB;
- Versioning of ebIX<sup>®</sup> model and related XML schemas, see item 15.3 under AOB.

### 2 Approval of minutes from previous meeting

The minutes from previous meeting were approved.

### 3 Preparations for ebIX<sup>®</sup> Forum meeting March 23<sup>rd</sup>

The participants were not totally happy with the new name of MDS found at the previous meeting; “ebIX<sup>®</sup> working group for Customer faced processes for Structuring and harmonisation of the European energy market”.

A few new proposals:

- ebIX<sup>®</sup> working group for Structuring and harmonisation of Master Data in the European energy market (SMD);
- Structuring of Master Data (SMD or SoM);
- Customer Services (CuS).

The final decision was to go for SMD, to be approved by the ebIX<sup>®</sup> Forum.

### **Information from after the meeting:**

- The ebIX® Forum decided on March 23<sup>rd</sup> 2017 that the name should be **MDS**, hence the term MDS is used in this document;
- Further a proposal for how to deal with the GDPR was made, proposing that CuS (MDS) do an impact analyses on the item.

## **4 BRS for Alignment of Metering Configuration Characteristics**

Boštjan had as action from previous meeting found proposals for Communication Protocol and Carrier, see Appendix B / B.1.

The second action item; “ETC will be asked to add new codes to the ebIX® model, see Appendix B / B.1” was postponed, since there not has been any ETC meetings since previous MDS meeting.

### **Action:**

- ETC will be asked to add new codes to the ebIX® model, see Appendix B / B.1;
- Everyone is asked to try finding official code list covering the Communication Protocol and the Communication Carrier from Boštjan in Appendix B / B.1;
- Ove will send the BRS on circulation for comments to ebIX® Forum for four weeks before publishing it.

The latest working draft will be found at: [MDS documents for review](#).

## **5 Status for Maintenance Request (MR) to HRM for Gateway Operator and Gateway**

The item was postponed, since there not has been any ETC meetings since previous MDS meeting.

*Continued action from previous meeting:*

- Ove will forward the MR to ETC, before submitting it to the HG.

The MR can be found at: [MDS documents for review](#).

## **6 Recommendations for handling several Balance Suppliers in one or more Metering Point(s)**

Gerrit and Ove had as action from previous meeting updated the document. The document was renamed to “Study on handling multiple suppliers at one connection (such as for prosumers)”.

### **Action:**

- All are asked to make comments to the document within three weeks, i.e. before **April 15<sup>th</sup> 2017**;
- Thereafter Ove will send the document on circulation for comments to ebIX® Forum for four weeks before publishing it on the MDS Report page.

The latest working draft will be found at: [MDS documents for review](#).

## **7 BRS for Alignment of Customer Characteristics**

Ove had as action from previous meeting gone through all activity diagrams in all BRSs and made sure that the end (“success”) is in the same swim lane as the start.

During this item a question from IEC/TC57/WG16 (Jan Owe), regarding where to put the Language attribute(s), was discussed. Also Thibaut participated via Skype. The basis for the discussion can be found in Appendix C.

Thibaut explained that the Language code is needed for both the Customer and the Address, e.g. a MP in the Brussels region in Belgium has two entries, one in French and one in Dutch.

Kees proposed some alternatives:

- a) Making different classes or associations for the languages, such as FR\_Address and NL\_Address;
- b) Using a Language attribute in the datatype;
- c) Using a Primary Address and a Secondary Address, but could be “tricky” in Belgium, since no one wants to speak a “secondary language”.

**Conclusion:**

- Priority will be a Language attribute on both Address and Customer level;
- Second priority will be using association class role name for the Language;
- Third priority is using datatype with language code and change cardinality for some of the attributes in the Address class from [0..1] to [0..\*].

The action item from previous meeting for ETC was postponed, since there not has been any ETC meetings since previous MDS meeting.

**Action:**

- ETC is asked to add and update enumerations according to Appendix B/B.2;
- Ove will clean up the BRS – final approval at next MDS meeting.

The latest working draft will be found at: [MDS documents for review](#).

## 8 BRS for Request Change of MP Characteristics

The BRS was reviewed and updated, among others with:

- The name of the processes “Request change...” and “Request update...” was switched, i.e. “Request update...” for the optional request by an Initiator and “Request change...” for the change requested by the Content Responsible Role (BS or GAP);
- The Request change MP characteristics was split into two separate processes, one where the Balance Supplier is the Content Responsible Role and one where the Grid Access Provider is the Content Responsible Role.

The action item for ETC was postponed, since there not has been any ETC meetings since previous MDS meeting, see Appendix B/**Error! Reference source not found.**

The latest working draft will be found at: [MDS documents for review](#).

**Action:**

- ETC is asked to add and update enumerations according to Appendix B/B.2;
- Ove will clean up the BRS.

## 9 Interfering processes

It was agreed to remove the text in the cells with grey background (the text is only valid for the countries that have the same rules as the Netherlands).

### **Action:**

- Ove will remove the text in the cells with grey background (the text is only valid for the countries that have the same rules as the Netherlands);
- Thereafter the document will be published at the ebIX® web site under MDS report page.

The document can be downloaded from [MDS documents for review](#).

### **Action:**

- Ove will clean up the memo “Interfering processes” and publish it at the ebIX® web site under MDS report page.

## 10 BRS for “Request change grid responsibility”

Ove had as actions from previous meeting added a class diagram for “Notify change grid responsibility” to the BRS. The BRS was reviewed and updated.

The action item for ETC was postponed, since there has not been any ETC meeting since previous MDS meeting.

Requests to ETC for new and updated codes can be found in Appendix B/B.4;

### **Action:**

- ETC is asked to add and update enumerations according to Appendix B;
- Ove will clean up the BRS.

## 11 BRS for Alignment of Area Characteristics

The BRS was reviewed and updated.

An updated draft of the BRS will be found at: [MDS documents for review](#).

### **Action:**

- Ove will clean up the BRS.

## 12 BRS for change of BRP (bulk change of BRB)

The item was postponed

A first draft of a BRS for bulk change of BRP can be found at: [MDS documents for review](#).

*Questions/comment from Ove (postponed until next meeting):*

- a) Should we add the Old BRP also to the BRS for change of BRP?
- b) Should we add the “Type of Metering Point” also to the BRS for change of BRP?
- c) The use of MP etc. in the confirmation must be reviewed.

## 13 Lessons learned

The item was postponed.

## 14 Meeting schedule

- Tuesday and Wednesday May 30<sup>th</sup> and 31<sup>st</sup>, Arnhem, the Netherlands;
- Tuesday and Wednesday September 12<sup>th</sup> and 13<sup>th</sup>, Oslo, Austria or Croatia;
- Wednesday and Thursday November 15<sup>th</sup> and 16<sup>th</sup>, Berlin (Meeting Location: RWE Aktiengesellschaft, Office Berlin, Friedrichstraße 95 (in the International Trading Center, (Internationales Handelszentrum = IHZ)), 10117 Berlin (Near to the S+U-Bahnhof Friedrichstraße);
- Tuesday and Wednesday December 19<sup>th</sup> and 20<sup>th</sup>, Denmark, Austria or Croatia.

## 15 AOB

### 15.1 Metering measurement balancing method

See Appendix D and next item (15.2). The item is closed.

### 15.2 Should we do anything with MDS memos etc. (e.g. publish)?

What to do with MDS surveys, memos, notes, etc., such as:

- List of possibilities for a move in past;
- Metering measurement balancing method;
- Prosumers;
- Interfering processes.

#### **Action:**

- Ove will go through the minutes from the last two years and find possible interesting memos to be published;
- Thereafter Gerrit and Ove will review the result and publish relevant documents

### 15.3 Versioning of ebIX<sup>®</sup> model and related XML schemas

So far ebIX<sup>®</sup> has only used a main version, e.g. 2016.A. However, when implementing the xml-schemas at a national level, there is a need for a more detailed structure for versioning. For instance, having separate versions for code lists and documents.

The topic will be discussed at an ETC meeting end of April. The item is closed.

## Appendix A MDS Work plan

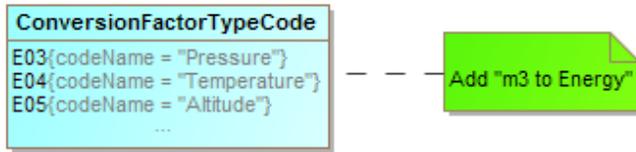
#	Activity	Priority	Start	End
A)	Master data for Customer parties, including how to handle the different attributes related to the Consumer, such as consumer contact information (e.g. address and invoice address).	1 <sup>st</sup>	Q4/2014	Q1/2017
B)	Master data for energy industry parties, such as BRPs and BSs	2 <sup>nd</sup>	Q4/2014	Q4/2017
C)	Request change of attributes connected to a MP, such as Closing and Reopening MPs, Change of Metering Method and Change of time frames	3 <sup>rd</sup>	Q1/2015	Q1/2017
D)	Combined grid and supply billing (invoicing), including MD for products, such as; grid fees, grid subscriptions, ...	4 <sup>th</sup>	Q2/2015	Q2/2018
E)	Interfering processes – a matrix of processes with priorities, when a given process is interfered by another, such as when a customer move comes in the middle of a change of supplier process.	5 <sup>th</sup>	Q2/2015	Q2/2017
F)	“Switch of grid”, for instance a part of a Metering Grid Area (MGA), such as a village, that is transferred from one GAP and MGA to another	6 <sup>th</sup>	Q3/2015	Q2/2017
G)	MPs having multiple parties with similar roles, e.g. a MP with different BRPs for production and consumption	7 <sup>th</sup>	Q4/2015	Q4/2017
H)	Master data for domains, such as which MGAs that belongs to a MBA and related characteristics of these domains (can be changed after harmonisation of HRM and new domains from the network codes from ENTSO-E)	8 <sup>th</sup>	Q4/2016	Q3/2017
I)	Change of BRP in Metering Grid Area, “Price Area” or country (not at MP level) (Proposed by DK), i.e. a “bulk change of BRP (and/or BS?)”	9 <sup>th</sup>	Q4/2016	Q4/2017
J)	“Life cycle of a MP”, including how technical events interact with administrative processes and responsibilities	10 <sup>th</sup>	Q1/2017	Q2/2017
K)	Efficient data alignment, including the possibility to request historical and/or future master data.	11 <sup>th</sup>	Q1/2017	TBD
L)	The possible role of a datahub in the processes (Proposed by DK) <ul style="list-style-type: none"> <li>• Seen from the supplier side</li> <li>• Seen from the DSO side</li> <li>• Seen from the metering side</li> </ul>	12 <sup>th</sup>	Q3/2017	TBD

	When adding a datahub to a market the datahub will replace the DSOs, to a large extent, i.e. the MPA will be the datahub. Among others, the proposal includes processes between the GAP and the MPA.			
M)	Request for services. The item concerns chargeable requests from the BS to the DSO for changes to a MP or a Meter, such as: <ul style="list-style-type: none"> <li>Request for metered data</li> </ul>	13 <sup>th</sup>	Q4/2017	TBD
N)	QA of the MDS model and consistency of the MDS and EMD models	Awaiting EMD part of the combined billing process	TBD	TBD
O)	New processes for “demand/response”, which may add new tasks for the MDA	Awaiting EMD survey and ebIX <sup>®</sup> Forum decision	TBD	TBD
P)	Review of published BRSs: <ul style="list-style-type: none"> <li>The MP parties should be linked to the MP instead of the “document”, to be in line with BIM and CIM</li> <li>The discussion must include bulk switch, where we will have one party with multiple MPs</li> </ul>	TBD	TBD	TBD
Q)	Handling of “Installation Metering Points” and/or fields (may be related to the item above)	TBD	TBD	TBD
R)	New (enhanced) processes for labelling	TBD	TBD	TBD

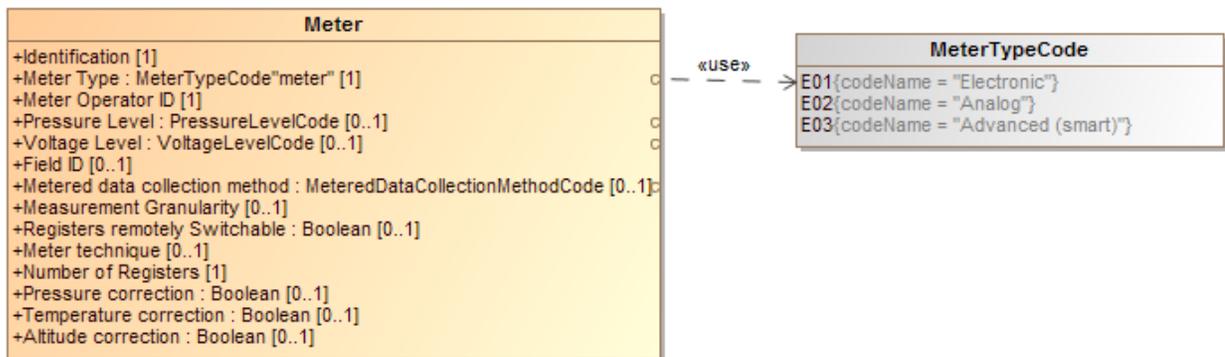
## Appendix B MDS proposals for update of ebIX® Business Information Model 2016.A

### B.1 BRS for Alignment of Metering Configuration Characteristics

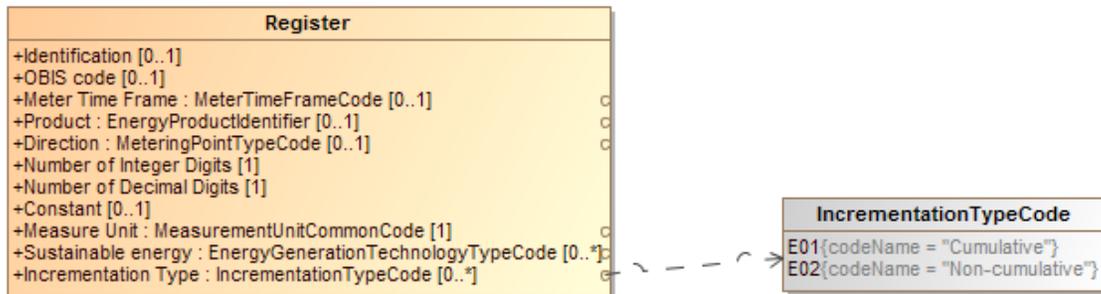
- a) Add a new code “m<sup>3</sup> to Energy” to the Conversion Factor Type Code;



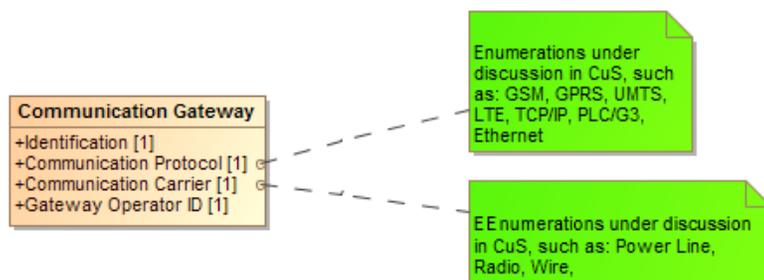
- b) Add a new enumeration Meter Type with the following literals; “Electronic”, “Analog” and “Advanced (smart)”:



- c) Add a new enumeration Incrementation Type Code with the following literals; “Cumulative” and “Non-cumulative”:



- d) Add new enumerations for Communication Protocol and Communication Carrier, when there is a proposal from MDS:



*Proposal from Boštjan:*

#### Power Line Carrier<sup>1</sup>

- Legacy NB-PLC (BPSK, FSK, CHIRP)
  - IEC 61334
- NextGen NB-PLC (OFDM)
  - G3-PLC (ITU-T G.9903)
  - PRIME (ITU-T G9904)
  - IEEE 1901.2

#### Wireless communication

- xG (Cellular Networks)
  - 2G (FDMA)
    - GSM
    - GPRS
    - EDGE
  - 3G (TDMA/CDMA)
    - UMTS
    - HSPA
    - HSPA+
  - 4G (CDMA)
    - LTE (450MHz/800MHz/1800MHz/2,6GHz)
    - LTE Advanced
  - 5G (CDMA)
- WiMax
- Mobile Networks (CDMA450)

#### Wired Communications

- POTS (Plain Old Telephone Service)
- PSTN (Public Switched Telecommunication Network)
- Ethernet
- PPP
- xDSL
- Fiber Optic (FTTH)

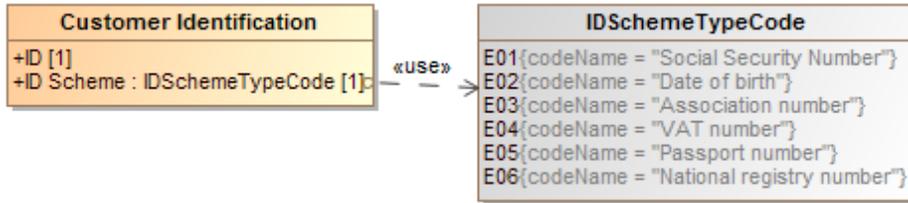
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#### <sup>1</sup> Reference:

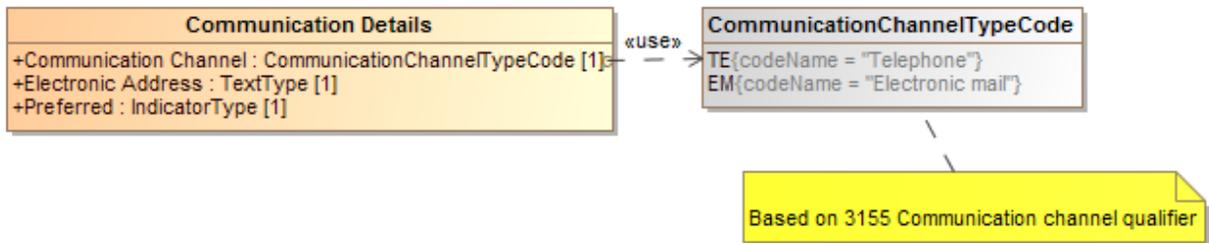
- [1] B. Sörries: Communication technologies and networks for Smart Grid and Smart Metering, CDG 450 Connectivity Special Interest Group (450 SIG), 2013.
- [2] N. Andreadou, M. Olariaga Guardiola and G. Fulli: Telecommunication Technologies for Smart Grid Projects with Focus on Smart Metering Applications, 2016.

## B.2 BRS for Alignment of Customer Characteristics

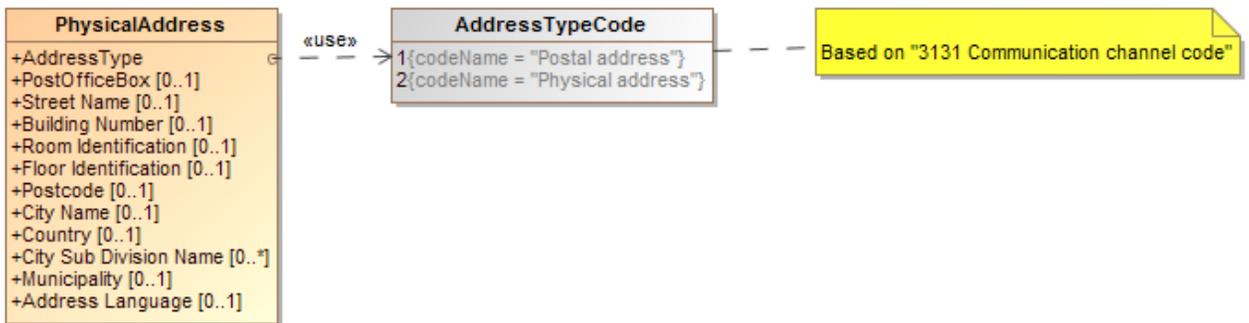
- a) Add the attribute “ID Scheme Type” to the ebIX® model:



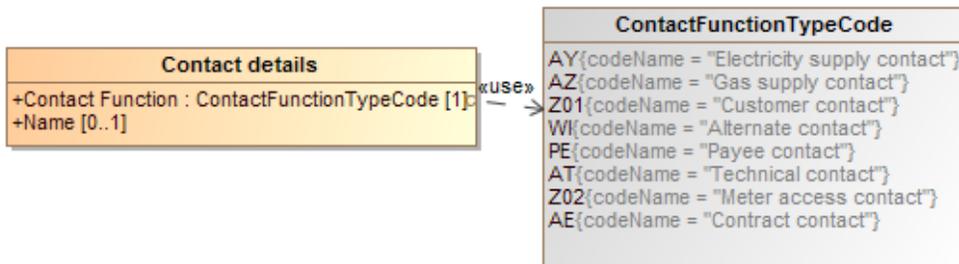
- b) Rename Document Name Code “E21 Master Data Consumer” to “E21 Master Data Customer”;  
 c) Rename Business Reason Code “E34 Update master data consumer” to “E21 Update master data Customer”;  
 d) Add a Communication Channel Type:



- e) Add an Address Type, based on UN/CEFACT 3131 Communication Channel Code:



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



MDS requirements	3139 Contact function				
	code	name	definition	MDS comments	ETC comments
Main contact	AY	Electricity supply contact	Department/person to contact for matters regarding electricity supply		possible alternatives for "Main contact"
	AZ	Gas supply contact	Department/person to contact for matters regarding gas supply		
	BF	<del>Service contact</del>	<del>Department/person to be contacted in service matters.</del>		
	IC	<del>Information contact</del>	<del>Department/person to contact for questions regarding transactions.</del>		
	Z01	<b>Customer contact</b>	The main department/person to contact at the customer		
Neighbour, House keeper (caretaker)	WI	<b>Alternate contact</b>	Alternate department or person to contact	MDS want one combined code	
	<del>AV</del>	<del><b>Maintenance contact</b></del>	<del>Department/person to contact for matters regarding maintenance</del>		
Invoice contact	PE	<b>Payee contact</b>	Department/employee to be contacted at the payee		
Technical	AT	<b>Technical contact</b>	Department/person to contact for matters regarding technical issues.		
Meter reading	AQ	<del>Quantity surveyor contact</del>	<del>Department/person to contact for matters regarding quantity surveying</del>	MDS wants a new UN/CEFACT code (see below)	
	Z02	<b>Meter access contact</b>	Department/person to contact for matters regarding meter reading, including access to the Meter		UN/CEFACT will be asked for a new code
Contract contact	AE	<b>Contract contact</b>	Department/person to contact for matters regarding contracts	NEW	

### B.3 BRS for Request Change of MP Characteristics

- a) Can we remove the Document Name Code from the ebIX® models?
- b) Add a new Document Name Code for “Request update MP characteristics”;
- c) Rename Business Reason Code E32 to “Change MP characteristics” or add a new Business Reason Code;
- d) Add a new Business Reason Code for “Response Update MP characteristics”;
- e) Make Response Reason Code E17 more generic (remove “switch” – Replace with “change”(??));
- f) Add a new Response Reason Code “Invalid requested value(s)”.

### B.4 BRS for Request Change grid responsibility

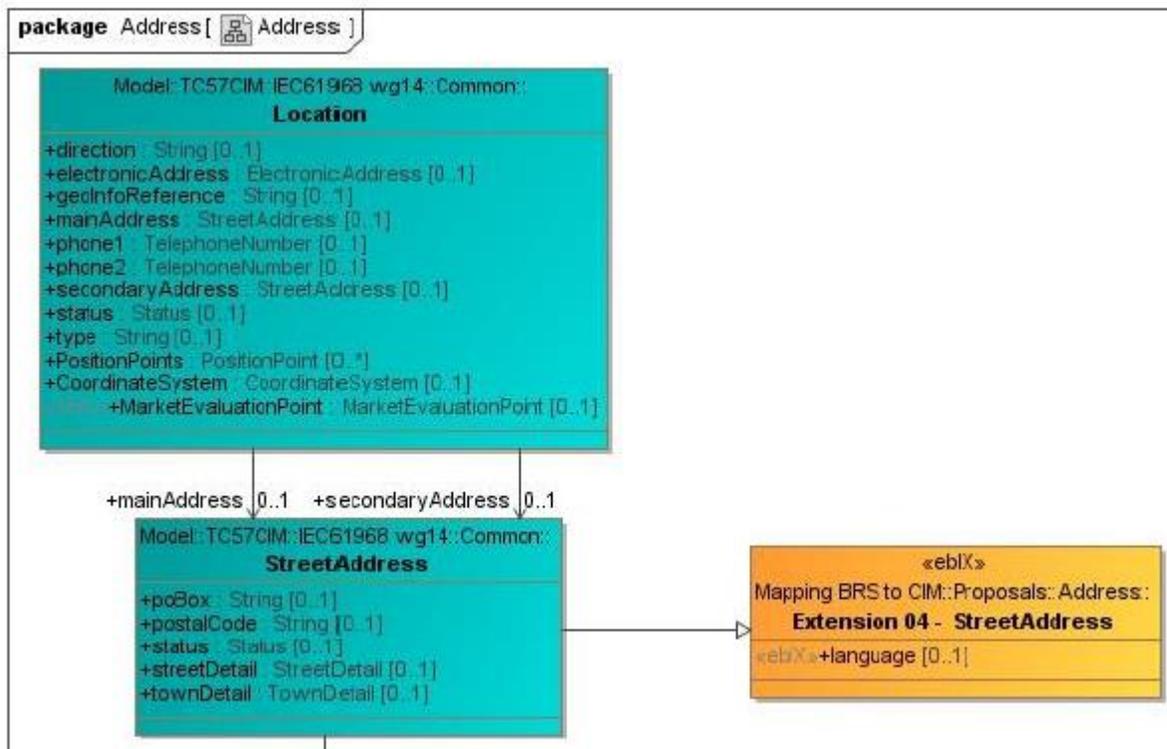
- a) ETC is asked to find Document Name codes for:
  - Request change grid responsibility;
  - Response change grid responsibility;
  - Notify change grid responsibility;
- b) And Business Reason codes for Change grid responsibility.

## Appendix C Language of the address - or the customer?

From Jan:

At the IEC meeting in Folsom, as well as at the telco last week, looking into some of the change requests for CIM provided by ebIX®, we discussed the language attribute.

The following figure shows the suggested addition into CIM to handle a language for an address.



When discussing this (and other change requests) in IEC, people want “use-cases”. I.e. where and why is this used.

In the US they can understand that a Spanish-speaking customer perhaps would like to get information to him in Spanish.

And then that a French speaking person in Brussels would like to get his information – including the address – in French. Or in Dutch if that was the language.

But then the language would be linked to the customer, and not to the address.

So, in order to discuss this detail further with IEC we (I, Fedder, Kees, Ove... - being members of IEC) would like to get an input: what is the reason linking language to the address? And is there no usage of linking language to the customer?

Customers can also have a specific language in countries like Ireland, Finland and Switzerland, where – in many times, but not always – the address also is available in this language.

Next time to discuss issues like this within IEC could be April 6<sup>th</sup>.

Answer from Thibaut:

In Belgium we have the address language and the customer language. As you know we have 3 official languages in Belgium: German, French, Dutch

Addresses languages in Belgium are defined by the law.

	FR	NL	DE
Brussels Region	X	X	
Flemish Region		X	
Walloon Region	X		X*

\* only for some part of the region where there are mainly German speakers

A French speaker living in Flemish region will have its address in flemish

Customer language is used by DGOs and Suppliers for the language of their communication. As Brussels is an international city, we have a lot of foreigner. Some suppliers can implement their communication, for example, in English but it doesn't mean that the address will be translated in English (otherwise I'm not sure that Belgian post could deliver mail for Chinese speakers).

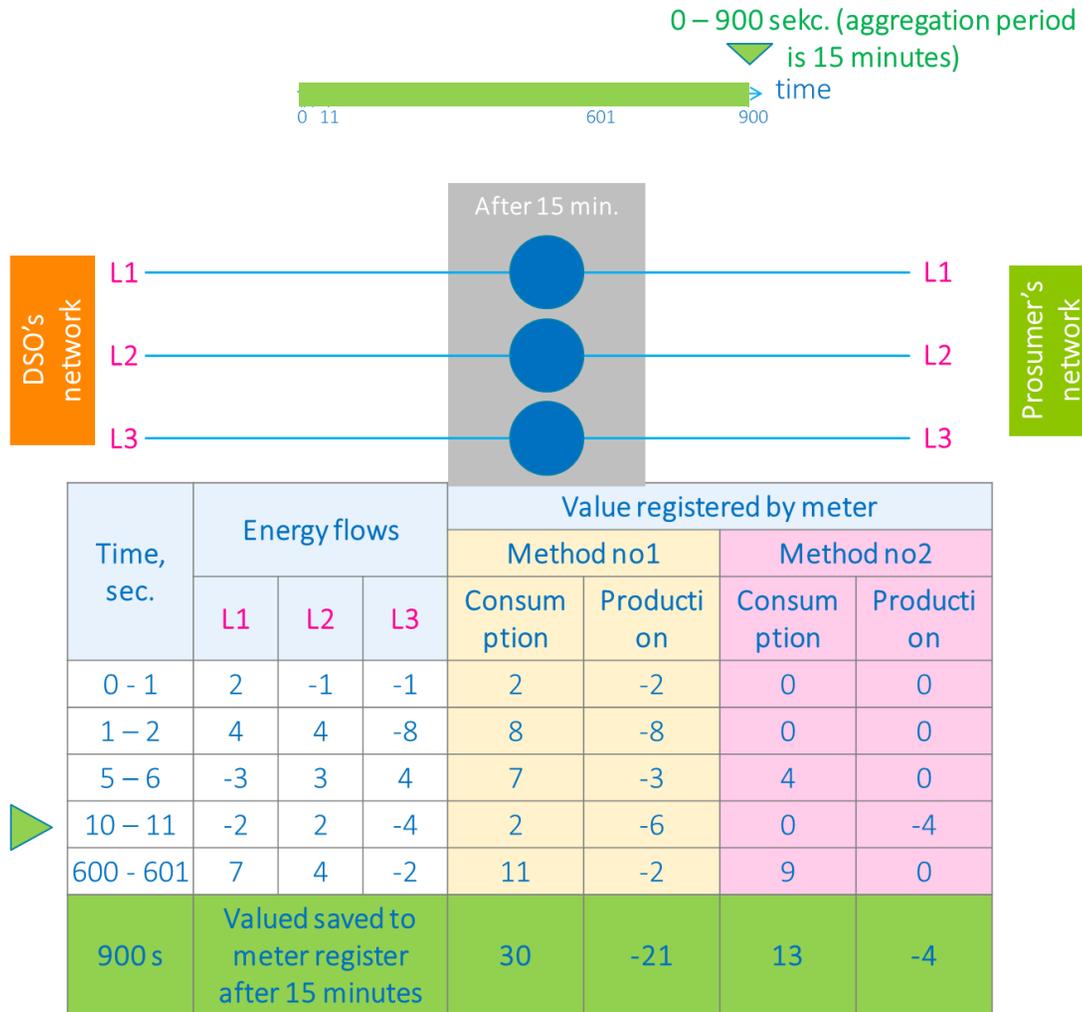
Following the language of the customer they could use one or other address language but they have to receive all the existing languages and so to be able to distinguish one address language from another one. That's why we proposed to also provide the address language as the customer language doesn't immediately implies that the address will be given in this language

## Appendix D Prosumers - balancing method

### D.1 Question from Poland and related answers

The question is: what type of method is used for calculating energy flow in prosumer's meter?

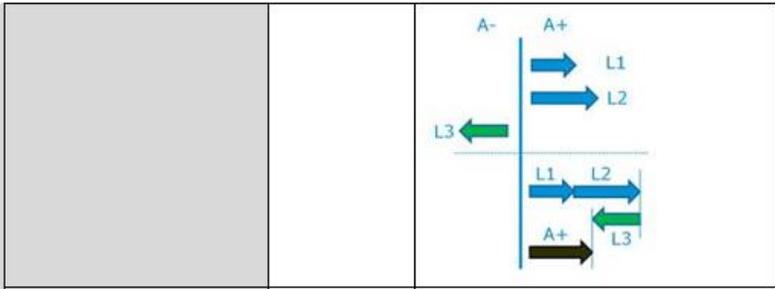
In Poland algebraic method is programmed in a meter.



Energy being consumed is marked as "+"  
Energy being produced is marked as "-"

Method no1 – algebraic method  
Method no2 – vectorial method

## D.2 Answers to questions from Poland

Country	Comment	Method 1 (algebraic)	Method 2 (vectorial)			
Denmark	In Denmark, both principles are used today, almost equally divided on the two types of meters (the principles are not regulated in legislations or regulations). But after introducing grid tariffs based on actually metered values (earlier always hourly or yearly net-settled), the prosumers complained to the regulator demanding uniform settlement. And now the authorities are considering to change the legislations – most likely stating that method 2 has to be used.	✓	✓			
Germany	Germany use Method 1	✓				
Norway	According to Hafslund's experts, method 2 (vectorial method, see figure), is used in our company. I'm not shore if other methods are used I Norway. <table border="1" data-bbox="428 869 1203 951"> <tr> <td>Energy measuring mode</td> <td>ACC</td> <td>Arithmetic sum of phase energies</td> </tr> </table> 	Energy measuring mode	ACC	Arithmetic sum of phase energies		
Energy measuring mode	ACC	Arithmetic sum of phase energies				
Poland	In Poland, in prosumer meter is programmed method no1 – algebraic method	✓				
Slovenia	Slovenia have some meters for Slovenian Market of Iskra producer with vector method and there was troubles if they measure prosumers quantities. Could be used for Type Of Metering Point just for Consumption or Production not for Combined. Now we set in the technical requirements for all new three phase meters <b>arithmetic method</b> regardless if it is customer, producer or prosumer. Se D.3 Slovenian comment	(?)	(?)			
Sweden	Vattenfall has the vectorial metering in all meters today.		✓			
The Netherlands	We in the Netherlands use the vectorial method in our smart meters to determine the quarterly values.		✓			

### D.3 Slovenian comment

We have some meters for Slovenian Market of Iskra producer with vektor metode and there was troubles if they measure prosumers quantities. Could be used for Type Of Metering Point just for Consumption or Production not for Combined.

Now we set in the technical requirements for all new three phase meters **arithmetic method** regardless if it is customer, producer or prosumer. Renovated Technical requirements for meters will be published soon. Extract is:



Slika 2: Priključitev enofaznega in trifaznega števca

#### toda registracije električne energije in moči pri trifaznih š

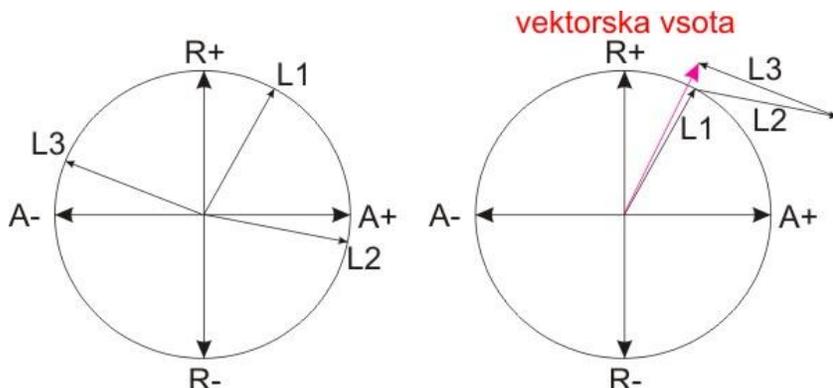
števcih je zahtevana **aritmetična metoda** registracije električne e registraciji trifazni števec istočasno beleži izmerjene količine v registri moči v primeru, da je v eni izmed faz tudi oddaja energije in moči. Z tracije je podan spodnji primer:

Some explanation in Slovenian language, but pictures are the same for understanding of methodes

#### Vektorska metoda

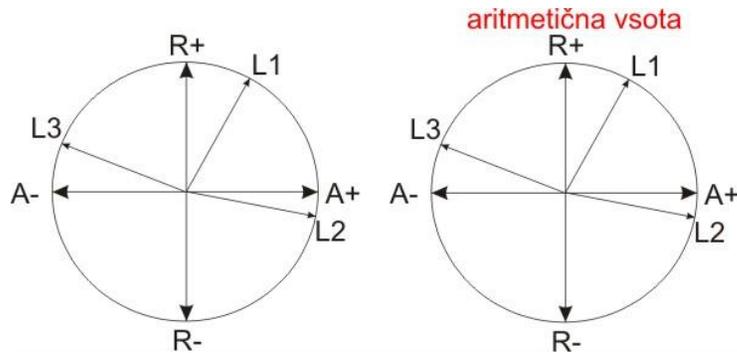
Pri vektorski metodi se smeri posameznih faz seštevajo po pravilu seštevanja vektorjev. Smer energije oz. moči je odvisna od smeri in velikosti posamezne faze.

Vektorska vsota vseh treh faz pa nam da končni rezultat. Pri tej metodi se energija lahko nahaja samo v enem kvadrantu naenkrat, posledično se lahko polni tudi samo en sumarni register za energijo oz. moč.



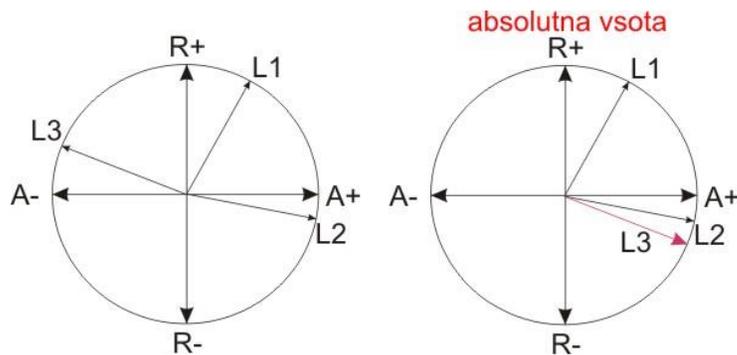
### Aritmetična metoda (se izvede v tarifni napravi)

Pri aritmetični metodi se beleži smer in velikost vsake faze posebej. Pri tej metodi se lahko polnijo sumarni registri energije oz. moči različnih smeri hkrati. Energija oz. moč se beležita za vsak kvadrant posebej.



### Absolutna metoda

Pri absolutni metodi se vrednosti energij oz. moči posameznih faz izračunavajo kot absolutna vsota faz:  $|L1| + |L2| + |L3|$ . V tem primeru ne moremo imeti energij oz. moči v 2., 3. kvadrantu. Vrednosti faz se prenesejo iz 2. kvadranta v 4. kvadrant in iz 3. kvadranta v 1. kvadrant.



Meter must record all quantities according to Type Of Metering Point. Here is OBIS code example.

Consumption

- $A+ \text{ (OBIS; 1.0.1.8.0)} = (A_{1+}) + (A_{3+})$

Production

- $A- \text{ (OBIS; 1.0.2.8.0)} = A_{2-}$