ofgem E-Serve

Meeting note

SMDG-DCG Meeting 1 – Meeting Note

Note of discussion and actions from SMDG-DCG Meeting No. 1	From	Ofgem
	Date and time of Meeting	20 December 2010 12:30-16:00
	Location	Ofgem, 9 Millbank, London

1. Present

1.1. Ofgem – Adrian Rudd (Part), Peter Morgan, Jenny Booth (Part), Dora Guzeleva (Part), Colin Sawyer

1.2. SMDG-DCG members:

AMO	Tom Chevalier	Dialled in?
British Gas	Steven Briggs	Dialled in?
Consumer Focus	Zoe Mcleod	Dialled in?
EDF Energy	Ashley Pocock	Dialled in?
ENA	Alan Claxton	Dialled in?
Engage-consulting (ERA)	Simon Harrison	
Eon-UK	Kevin Clayton	
ESTA	David Spalding	Dialled in?
First Utility	Andrew Buxton	Dialled in?
Intellect UK	Paul Archer	Dialled in?
Ofcom	Richard Moore	
RWE Npower	Chris Harris	
SBGI	Mike Buss	
Scottish Power	Graham Smith	Dialled in?
SSE	Mark Knight	
Utilita	Proshant Sharma	Dialled in?
DECC	Rob Thornes	Dialled in?
BEAMA	John Cowburn	Dialled in?

1.3. Programme invitees for specific agenda items

IDIS representative	Tony Field	Dialled in?
DLMS representative	Thomas Schaub	Dialled in?
DLMS representative	Stephen Cunningham	

1.4. SMDG DCG members that did not attend:

Good Energy		
ICOSS		

2. Introductions

2.1. Round table introductions from each member.

3. DLMS Introduction

3.1. Thomas Schaub ran through his presentation (attached).

3.2. In summary, DLMS is the only existing standard with all of the following attributes: (i) accepted by EU standardisation committees; (ii) appears to meet the majority of SMD requirements; (iii) independent of physical (data transport/network) layer; (iii) track record (been around >10 years) and extensible/flexible (ability to add new data items); and (v) with a rich enough feature set that can be adapted for GB (e.g. prepay) requirements. Alternatives that fit (i) and (ii) are SML (German standard) and meets the stated DLMS attributes and More (ENEL/Italian PLC based standards). It is imperative that these are independently verified. The main downside is that it is relatively complex, and implementation may have issues for very simple battery operated devices (e.g. gas meter). Other non EN standards include the ANSI (USA) smart meter protocol standards.

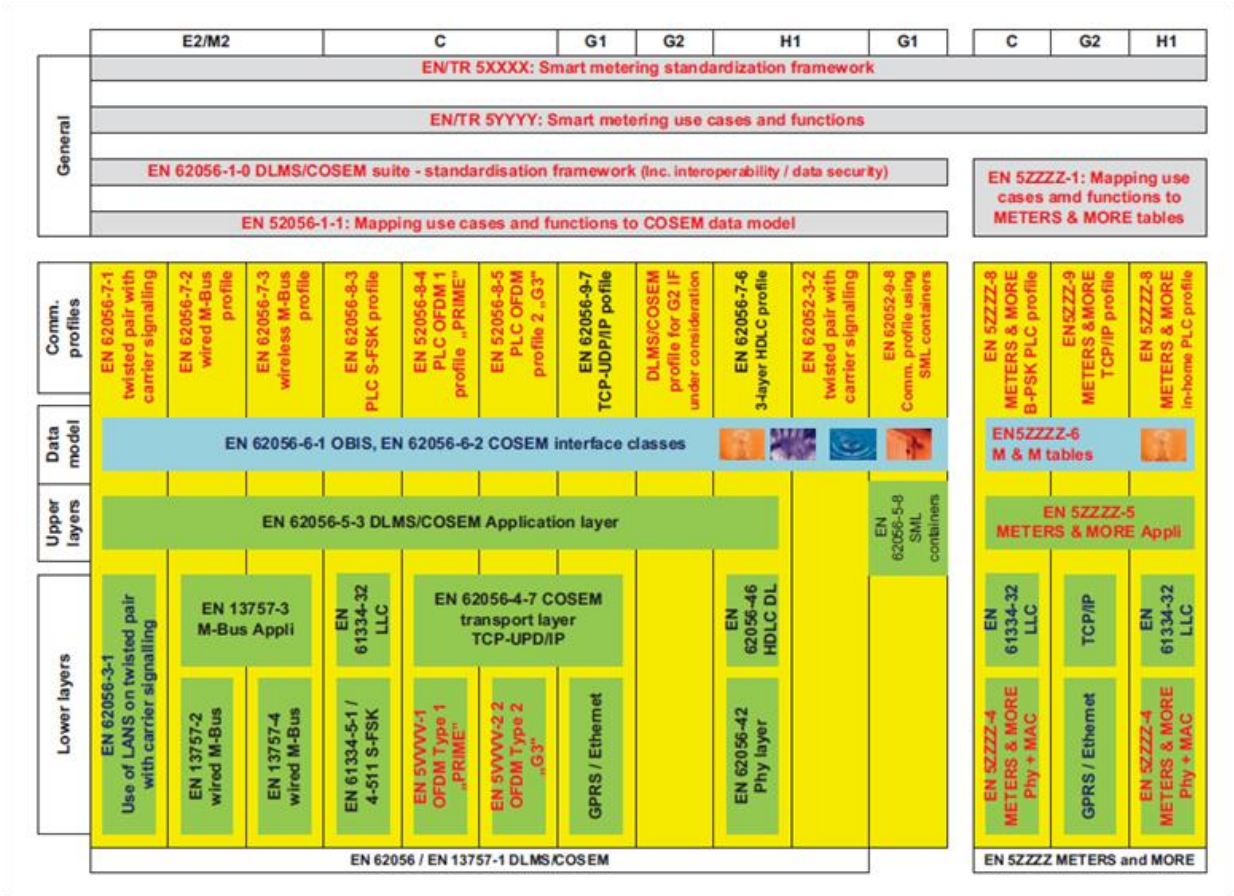
3.3. Germany is trying to define SML – rather than DLMS (work undertaken by the German utilities) but SML has now grown to reach similar complexity.

3.4. Where is DLMS currently used: (i) German commercial and industrial meters with communications using DLMS, but domestic is going to be SML for smart metering; (ii) France is using DLMS for domestic; (iii) Spain is using DLMS for domestic; (iv) Holland will use DLMS for domestic . Italy is not using DLMS as it had opted for a proprietary solution implemented before MID was in place.

3.5. In terms of interoperability a meter from France cannot be used in Spain? This is because the physical transport layer and the set of COSEM (data model) objects are not the same. ~80% of the objects are common, but interoperability needs to be agreed within a given geography / roll out. (See IDIS and DLMS below).

4. How is DLMS developing and the EU (smart meter) standards process

4.1. This was covered in Thomas's presentation. Key diagram is reproduced below.



5. IDIS and DLMS – description of the relationship

5.1. Thomas described IDIS (www.idis-association.com) as a companion specification to DLMS worked out by smart metering equipment suppliers. DLMS is a standard that deliberately leaves some options open to allow for customisation. Other organisations (private or public) that have the commitment to invest can close these options out through the drafting of a companion specification.

Other examples of companion specifications to DLMS:

- In France, ERDF has worked out such a companion standard which specifies the ERDF meter (Linky).
- In Spain Iberdrola has developed the Spanish companion specification using DLMS on PRIME-PLC.
- In the Netherlands the companion specification for the Netherlands market is called DSMR.

5.2. It would be useful to understand how other countries arrived at and took the decision to adopt DLMS.

5.3. In the UK, it could be the smart metering programme that develops the companion specification, which could be an annex in the technical specification. The cf DTG book / digital TV specification is a precedent approach that could be considered.

6. GB requirements and achievability

6.1. The justification for a common protocol was discussed. Other options include multiple protocols which could lead to multiple head ends and additional cost.

6.2. The requirements of small suppliers were also discussed and whether they would need to invest in new DLMS enabled IT or if 3rd parties would offer them a data processing services as may currently be the case for XML/DTC data formatting services.

6.3. There was also discussion around the need for agreement on areas such as prepayment in advance of any data models being developed and proposed to the DLMS user association.

6.4. No other country has the same PPM requirements as GB and as such there is no existing PPM DLMS provision to build on.

6.5. A working group for DLMS GB prepayment has been established (independent of the programme) and will be meeting in Switzerland early in 2011

6.6. Once the programme has proposed fully developed data models (and completed the gap analysis with current DLMS data objects) then the process for acceptance as finished objects by the DLMS user association should take 2 months. A further 6 months would be required for adoption into the EN DLMS standard.

6.7. Current use case work by SMDG should help to define some data objects although these will be focused on the smart metering system. It was recognised that end to end data models will need to be developed with DCG to ensure that data items are not overlooked.

7. Are there problems or compromises that cannot be resolved

7.1. No significant problems or compromises were discussed. It was recognised that running DLMS to a battery powered gas meter would be "clunky" due to the overhead DLMS adds to data items. Alternatives such as Zigbee SEP to the gas meter were discussed. This highlighted work that will also need to be done on GB data models for the HAN.

7.2. DLMS interfaces are also being designed for M-Bus and Zigbee. i.e. Tunnelling DLMS over Zigbee. Another possibility is to make an interface to Zigbee data objects. Tunnelling is not as efficient as translation, or running the HAN application layer end to end on the network.

8. How to deal with gas meters / How can DLMS work with "thick" and "thin" gas meters

8.1. It was recognised that running DLMS to a battery powered gas meter would be "clunky" due to the overhead DLMS adds to data items. Alternatives such as Zigbee SEP to the gas meter were discussed. This highlighted work that will also need to be done on GB data models for the HAN.

9. Security

9.1. DLMS allows for encryption and authentication (AES 128 based) at the application (message) layer (for cases where the transport layer is not secure). This can be turned on or off ("security suite 0") depending on the inherent security of the transport layer. Part of the registration of a DLMS device tells it what it expects with regards to security.

9.2. Unique keys are needed at the meter. DLMS allows you to select security suite 0 – i.e none, but you can turn this on. Configurable. .

9.3. France enables security in their implementations of DLMS.

10. Internet Protocol

10.1. DLMS can be sent over IP as well as other non-IP alternatives such as PLC.

11. Alternatives (to DLMS)

11.1. Alternatives are SML (German standard) and Meters and More (ENEL/Italian PLC based standards) although these may not be as technology agnostic as DLMS. It is imperative that these claims are independently verified. Other non EN standards include the ANSI smart meter protocol standards.

11.2. An analysis of these options as well as the do nothing option would be useful for the programme. It would also be useful to understand how other countries arrived at and took the decision to adopt DLMS.

12. Conclusions

12.1. There was general support for standardised messaging interfaces and data protocols.

13. Any other business

13.1. No AoB was raised.

14. Review of actions

Circulate meeting schedule for SMDG-DCG meetings	Programme
Prepare DLMS options and alternatives paper	ERA
Provide a paragraph on what DLMS (or a common protocol) means to the consumer	EoN
Understand why other countries adopted DLMS	Programme
Understand if smaller suppliers need to invest in new DLMS enabled IT or if 3rd parties would offer data processing services	To be discussed at the next meeting
Seek agreement on all areas before data models are developed	To be discussed at the next meeting

Prepare GB data models for DLMS alternatives when dealing with (Thick / thin) battery powered gas meters	To be discussed at the next meeting

15. Date of next meeting

Monday 28th February 2011 – Ofgem, 9 Millbank, London, SW1P 3GE