ofgem E-Serve

Meeting note

Smart Meter Design Sub Group 1 (SMDSG1) – Meeting Note

Note of discussion and actions from SMDSG1 Meeting No. 7	From	Shaun Scullion
	Date and time of Meeting	27 October 2010 10:00-16:00
	Location	Ofgem London SW1

1. Present

1.1. Ofgem – Peter Morgan, David Fletcher, Shaun Scullion.

1.2. SMDSG1 members:

AMO	James Evans
BEAMA	Dave Robinson
British Gas	Gareth Williams
EDF Energy	Bob Gibbs
ENA	Alan Creighton
Engage-consulting (ERA)	Simon Harrison
ESTA	David Spalding
ICoSS	Andrew Green
RWE Npower	Gary Coverson
SBGI	Jeff Cooper
Scottish Power	Grahame Weir
SSE	Neil Green
Utilita	Phil Ketless
First Utility	Dave Wurtzler

2. Apologies

2.1. SMDSG1 members:

Consumer Focus	
Intellect UK	
Gemserv	
Good Energy	
Ofcom	
Eon-UK	

3. Introductions

3.1. None required.

4. SMDG Feedback - Ofgem

4.1. Ofgem provided feedback from the last SMDG:

- SMDG are content with progress thus far.
- Of particular SMDG interest was the SG reaction to some of the more consumer-focussed aspects of the SG work and in respect of that, SMDG debated how consumer interests could be better represented at the SGs than presently and emphasised the need for SGs to evidence any conclusions to recommend removal of consumer-targeted functionality.
- SMDG was conscious of the challenging timeframe of the smart metering design work. They considered whether to seek to pull forward the SG1 deliverable on the SM Technical Specification.
- Ofgem DCC and Rollout representatives provided progress overviews of their workstreams. There was support for a proposal to hold a combined DCG/SMDG Groups meeting to look at the end-to-end system. To support that, ERA took an action to produce an end-to-end system map.

5. Review of actions

To distribute their paper on 'last gasp at the meter' to the SG1.	**BG (GW). Completed, but need an email with last meetings action items.**
Bring prepared comments to next SG1 meeting on 'last gasp at the meter' with a view to that meeting composing and proposing a narrative to support a paper to SMDG.	**All SG1. Move forward to Meeting #8.**
BEAMA to amend the report on Data Storage requirements to add a line or two on mains power.	**BEAMA. Completed, sent 26 Oct.**
To consolidate all the SG1 comments on the Data Storage Requirements and HAN Speed papers. All SG1 to send any further comments on these papers to SP. Ofgem to provide a template for the consolidated paper to SMDG.	**SP / All / Ofgem. Completed, sent 26 Oct.**
To provide to SG1 approximations of the cost of messaging functionality in the IHD based on: **Minimum option: 160 characters and 2-way messaging and,** **Enhanced option: Minimum option plus Pre-pay (i.e. replication of current Pre-pay functions).**	**BEAMA. Completed, sent 26 Oct. The cost of messaging is estimated at £2-4 with an additional £1 for Pre-Pay.**
BG to provide to SG1 a short paper on the benefits of	**BG (GW).**

messaging (to include Pre-pay) at the IHD.	**Completed (short email and briefing provided by GW).**
To distribute the SM Specifications received thus far to the SG1	**Ofgem. Completed, on meeting agenda.**
BG to distribute to the Group on why Zigbee was chosen	**Action superseded from SG3 – see SG3 Meeting #4 actions.**
To distribute to SG1 a short positional piece on Welsh Language accommodation. i.e., '…all options would add cost and it should be classed as a variant and dealt with as currently…'	**BEAMA. Not completed, by meeting #8.**
To distribute to SG1 a cost analysis of providing HAN modularity.	**BEAMA / SBGI. Completed.**
To send a reminder to those organisations yet to submit a SM technical specification for consideration, to do so by 22 Oct.	**Ofgem. Completed.**
To distribute their paper on 'last gasp at the meter' to the SG1.	**BG (GW). Completed.**

5.1. There was a discussion on how and whether to implement Pre-Pay functionality for the roll out IHD.

5.2. BEAMA confirmed that the IA meter cost model included a meter display and 2 buttons capable of delivering simple PPM functionality.

5.3. The group proposed that they were in favour of replicating minimum meter Pre-Pay functionality at the IHD. The minimum IHD Pre-Pay specification was proposed (by SSE) as:

- Debt / debt repayment rate (non-emergency debt repayment)
- Emergency credit level
- Friendly credit period and when in operation.

5.4. BEAMA confirmed that the above minimum specification for a PPM IHD would add an estimated £1 to the IHD IA cost.

6. Review of technical assessments submitted to date

6.1. Ofgem led a review of the Consolidated Technical Specifications Questionnaire Table (previously distributed to the Group).

6.2. Tech Specs received and reviewed:

- Echelon
- Smart Energy Networks (SEN)
- Elster, Landis+Gyr and Secure (ELS)
- Ember
- Orsis
- EDF (PLC spec)
- Remote Energy Networks (REM)
- EDF
- General Electric (GE)
- DLMS
- Em-lite
- CCL Universal Metering Interface (UMI)
- Z-Wave
- Sensus (paper copy held by BEAMA)

(Note: BG had presented their tech spec - at the previous meeting – and Iskraemco confirmed that they would also be providing a spec for consideration).

6.3. The proposed summary of responses to each questionnaire question were:

Q1. *Please provide the status of the technical specification (e.g. work in progress or released).*

Summary: There are a few candidate specs available – either ready or in development – but none that provides an end-to-end solution.

Q2. *Please provide an indication of the level of adoption of the technical specification (e.g. lead times, number of actual or planned deployments)*

Summary: Of the candidate specs there is world-wide adoption, but some level of customisation of all of these specs would be needed to adapt to the UK market.

Q3. *What level of interoperability exists with other manufacturers' equipment and where has this been demonstrated?*

Summary: multi-vendor environments, industry is on the cusp of achieving an ambition of interoperability but more clarity is needed at this stage. DLMS / Zigbee demonstrated.

Q4. *How long would it take to adapt existing technical specifications to the GB market?*

Summary: Some responses indicate H2 2011 for sample specifications but protracted development of a 'UK standard' may jeopardise this ambition.

Q5. *Please indicate which aspects of the technical specification are public domain information / subject to restrictions (e.g. intellectual property) and future intention with respect to any restrictions*.

Summary: Generally, there is positive intent on openness, but various interpretations of what 'open' means. Much effort to try and align with a future EU standard. Mostly no significant IPR issues.

Q6. *Please paste a high level architecture diagram (where applicable) into the "architecture diagram" worksheet for the design described by the technical specification, highlighting standards and protocols for the interfaces of the components*.

Summary: Most provided architecture diagrams which were of variable technical detail, and thus usefulness, in analysis.

Q7. *Please indicate the main areas of concern / gap / ambiguity between the technical specification and prospectus functional requirements (attached). Please focus on proving reasons for exceptions rather than areas of agreement.*

Summary: Broadly in line with suppliers findings of SGI / SMDG, e.g. last gasp, data storage.

Q8. *Please indicate whether the technical specification can be delivered at volume within the costs indicated in the impact assessment (£43 E meter, £56 G meter, £15 WAN, £15 IHD, £1 HAN E meter, £2.9 HAN G meter or an aggregation thereof). Please highlight and explain any areas within the functional requirements that incur additional costs.*

Summary: Given volume clarity and competition then IA costs should be achievable once rollout commences with the associated volumes and supplier commitment, but responses were guarded on cost. Some of the functionality in the SoDR would add cost, e.g. supply chain issues (exchange rate), HAN chips (cost likely higher than IA anticipates) and concern over WAN module costs.

Q9. *Please indicate any areas of the technical specification that are not open in terms of: proprietary protocols or single source for any components.*

Summary: Most are open and multi-source (but previous point on the interpretation of 'open' applies). Of the Tech Specs identified either in use or in development then there are assurances of open standards and protocols.

Q10. *Please indicate (where applicable) the HAN protocols (physical and application layer) that the technical specification uses.*

Summary: Zigbee mentioned most, with Zwave and Lonworks as only alternatives mentioned.

Q11. *Please indicate how the interface with different WANs can be accommodated.*

Summary: DLMS/COSEM over IP most popular but flexibility possible for WAN interchangeability.

Q12. *Please indicate any gaps or conflicts with current and emerging EU standards*.

Summary: DLMS/COSEM is EU standards-compliant (with exception of PPM requirements), Zigbee has gaps but is working towards compliance. Others no reply or equivocal. Gaps expected to be closed in 2011.

Q13*. Please indicate any security accreditation that has been undertaken of the design set out in the technical specification*

Summary: No replies and different interpretations of the question made any firm conclusions difficult.

Q14. *Please indicate what security measures are described by the technical specification*

Summary: Different types, range of solutions - some embedded some in firmware – but no clear standard emerged.

Q15. *What type of property types will not be covered by the technical specification (at the price) indicated in the impact assessment, and what measures have you considered to address this*?

Summary: A theme of the responses was that there would be limitations with using a wireless HAN.

6.4. Overall Summary of response analysis – key messages:

- Producing the first iteration of the Functional Requirements is crucial, this exercise will inform that;
- The Group may well be steered towards a hybrid solution;
- A full Technical Specification for a meter probably isn't suitable. There are additional elements to add to the SoDR though which would move it towards being a more suitable (detailed) specification;
  - interface protocols
  - use cases
  - installation procedure
  - basic architecture
  - change rules – mode, supplier, occupancy
- The Group need to re-examine the Functional Requirements (SoDR) and decide what level of augmentation of that document is required to provide a suitably detailed specification to act as a basis to proceed, i.e. what should the Functional and Technical Specifications look like? And on those functional areas of most contention identified how prescriptive should the specifications be?

7. Any other business

7.1. SG1 speaker for HAN Workshop 19th Nov. Jeff Cooper was nominated and accepted.

8. Actions

8.1. Actions brought forward

Bring prepared comments to next SG1 meeting on 'last gasp at the meter' with a view to that meeting composing and proposing a narrative to support a paper to SMDG.	**All SG1. Move forward to Meeting #8.**	**By meeting 8**
To distribute to SG1 a short positional piece on Welsh Language accommodation. i.e., '…all options would add cost and it should be classed as a variant and dealt with as currently…'	**BEAMA, by meeting #8.**	**By meeting 8**

8.2. New actions

To pull together all the SG1 submissions on IHD messaging (costs, benefits etc) in a summary paper and send to SG1	**BEAMA**	**02/11/10**
To send to SG1 fault descriptions from Zigbee and DLMS	**SBGI, ESTA**	**02/11/10**
To send the Z-Wave presentation (tech spec) to SG1	**Ofgem**	**02/11/10**
Provide a view as to what the functional requirements deliverable for December should look like and what the next "specification" documents should look like with associated time line	**All SG1**	**02/11/10**
Draft a summary of the Technical Specification Questionnaire review and distribute to SG1	**Ofgem**	**02/11/10**

9. Risks & issues

No new risks and issues identified .

10. Review of meeting

10.1. All proposed the meeting had been useful and productive.

11. Date of next meeting

3rd November 2010 – 10:00-16:00 – Location Ofgem.