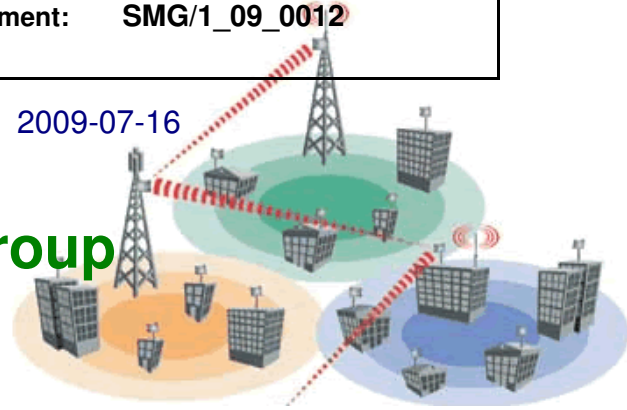


*Sustainability team***SMG/1 — BSI Smart Meter Group**Secretary: Bernard Shelley
Telephone +44 (0)20 8996 7217 e-mail: bernard.shelley@bsigroup.com**Report of the Meeting held on Monday 13th July 2009
at BSI, 389 Chiswick High Road.****Introduction**

BSI's Smart Metering (SM) initiative started several months ago and has grown rapidly. More than 40 people attended this SMG/1 meeting.

The wider SM initiative is driven by the EC Mandate M/441 to the European Standards Organizations — CEN, CENELEC, ETSI — and the formation of a European Smart Meter Co-ordination Group to oversee the development of European Standards for Smart Metering.

This SMG/1 meeting was attended by representatives of interested BSI committees, leaders and members of European technical committees and working groups and other people who had expressed an interest in the work. A list of attendees it included as Annex A.

It was noted that this would not be like a 'normal' BSI committee meeting, but would consist of presentations to outline where the European Smart Meter work had got to and where it was likely to go next. Attendees would then be able to decide whether and to what extent they and their organizations need to get involved.

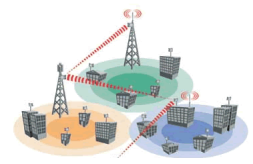
Presentations were given on what is going on in response to the EC mandate, covering the standards processes, the current position of the European SM-CG and the immediate work being undertaken in the gas and electricity fields. Related work for water metering, 'Smart Houses' and possible wider applications was also discussed.

BSI SMG/1 had been set up to establish communications channels and to help interested parties from across the UK meet and share views and ideas. These might not reflect 'normal' BSI/European standardization processes, and the procedures and terms of reference for SMG/1 will need to be adapted as necessary as the European work develops.

It was noted that the European SM-CG itself will not produce standards, but will oversee the delegation of work as appropriate to existing technical committees.

It was stressed that members of BSI committees are normally nominated by trade associations, government departments, learned bodies and the like. Attendees were advised that participation in the European technical work would be best achieved by becoming members of the appropriate BSI technical committees which feed the UK views into the European Technical committees.

A list of the relevant BSI committees relating to the European work is given in Annex B.



Presentations

The full presentations have been posted on the SMG/1 eCommittees site. A summary of each and the ensuing discussions is given below.

1 European standardization work [Alan Dick]

Document reference: SMG_1_09_0005 - SMG-1 2009-07 pres 1 Standards - A Dick

International, European and national standards bodies were described and the development processes were outlined, noting that technical committee discussions and committee work led to a series of drafts with comment and approval stages.

National comments are formulated by BSI committees which supply experts to participate in the work of International and European Technical Committees.

It was noted that BSI is obliged to adopt agreed European standards.

In the context of Smart Meter work, the European SM-CG would need to co-ordinate and 'knit' activity of many technical committees together to fulfil the Commission Mandate.

Comments:

- i) Experts need to get involved in the right BSI committees in order to contribute to the SM technical work of CEN/CENELEC/ETSI;
- ii) The CEN Sector Forum Energy Management (co-ordinating energy management within Europe) has an important role to play as SM is linked with energy management;
- iii) much of the new/suggested work could be further development of existing standards/work; it is therefore necessary to produce a list of existing standards and work in development and bring it to the attention of the interested stakeholders.

2 Smart metering and the SM-CG [Howard Porter]

Document reference: SMG_1_09_0006 - SMG-1 2009-07 pres 2 European work+SMCG - H Porter

The role and status of ESMIG was outlined, and a definition of 'Smart Metering' proposed, noting that over the next few months a consistent definition of SM has to be agreed.

A smart meter system was outlined and the European situation in regard to the Energy Services Directive described.

Developments from Directive 2003/54/EC and the European Smart Metering mandate M/441 were discussed and the timescale for development of standards noted. ESOs agreed M/441 in June and the "clock started ticking". Two deadlines had been established — nine months for the communications work and 30 months for the additional functionalities work. ESOs are expected to provide combined progress report by the autumn of 2009.

The European Standards Organizations' response to the mandate had been to set up the SM-CG and two ad hoc working groups:

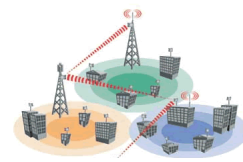
- Communication (convenor: Ralf Hoffman, ESMIG);
- Additional functionalities (convenor: David Johnson, Centrica).

It was noted that there is good representation from the UK on the SM-CG. Many of the organisations attending today's event are also represented on the SM-CG, which provides a good opportunity to convey and communicate UK interests.

It is not yet clear where the mandate stops and what can be developed outside the mandate. It was suggested that the work should extend "up to the meter" to allow the 9 month deadline for the Communications work to be met.

Regarding the second aspect of the SM work, it is intended to develop a common set of SM functionalities by assessing existing standards and filling in potential gaps. The work is likely to go through three stages:

- i) Stage 1: Definition of "functionality" (June – October '09);



- ii) Stage 2: Mapping existing standards and gaps (June – October '09).
It is widely acknowledged that many standards exist and their relevance should be assessed;
- iii) Stage 3: Standards committee work programme (October '09 – January '12). It had been suggested that If the ESOs do not take on this challenge effectively within the established timeframe, the Commission might turn to other existing standards from around the world.

The European mandate does not allow the development of national standards which are within the scope of the mandate. Therefore, it is really important to define clearly the scope of the work.

Comments:

The two SM-CG Working Groups are interlinked and the work in one of the WGs cannot take place independently from the work in the other WG.

The timescale is restrictive and there is a real risk that not everything that needs to be developed in the area of SM will be delivered. Recommendations will be made to the Commission as to what should be given priority (and can be developed) within the established timeframe. This places an emphasis on existing work/standards which could be adopted. If there are no suitable standards, then the work will need to start from scratch.

In conclusion, the potential for fully operational Smart Metering systems across Europe to act as a catalyst for other technology advances was noted.

3 What gas is doing [Jim Sibley]

Document reference: SMG_1_09_0007 - SMG-1 2009-07 pres 3 Gas - J Sibley

The work of CEN/TC 237 was reviewed, noting its structure and that early work had been done in preparation for Smart gas Meter systems, enabling CEN/TC 237 to react quickly to the standardization mandate. In particular CEN/TC 237 had responded by forming a Working Group to establish a new work item, under the control of a UK convenor, for a new overarching standard *Gas meters – Additional functionalities*, on which work was now underway. The standard will focus on gas meters and will allow for additional functionalities to be added to gas meters covered by the Measuring Instruments Directive.

There is a question whether the document should be developed as a full standard or a Technical Specification, considering the Commission's deadline.

The work of CEN/TC 237 is shadowed in the UK by GSE/25 and more influence can be exerted for UK as BSI holds the secretariat for this CEN Technical committee.

A Technical Report for smart meters will be published later this year.

4 What electricity is doing [Alan Dick]

Document reference: SMG_1_09_0008 - SMG-1 2009-07 pres 4 Electricity - A Dick

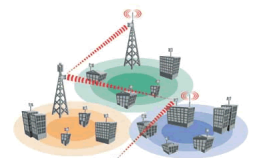
Work from 1980s on Wide Area Communications and Local Area Communications for electricity metering was reviewed and DLMS as a Variant of MMS 'reduced layer' client-server model was discussed. Work is needed on the DLMS, e.g. to check on functionality, security, implementation on other physical media.

Current standards for WAN and LAN communications were noted and concern expressed regarding how a smart meter standard should look.

There is representation through EUROELECTRIC on the SM-CG and the two ad hoc WGs.

Comments:

DLMS should be looked at very seriously as it could be a useful source of information/ideas. The useful parts of DLMS could feed into the work on functionalities.



5 What water is doing [Ian Holmes-Higgin]

Document reference: SMG_1_09_0009 - SMG-1 2009-07 Pres 5 Water - I Holmes-Higgin

An overview of the status of water metering as the 'poor country cousin' was given, "wanting to be involved, but not fully there yet!"

It was noted that water metering has historical differences from energy metering, in that water metering is seen to be 'good' but is not compulsory. Water companies are pushing for metering but UK government is unlikely to make water metering compulsory, although is recommending it for certain areas.

UK water industry is constrained by the fact that water meters are generally set away from buildings and are often buried, forcing the need for battery operation which can dictate the technology used if battery life is to be acceptable. It was further noted that water meters *per se*, let alone smart meters, have a low penetration because customers see water as a cheap commodity and meter installers opt for simple, cheap meters. AMR (automatic meter reading) and AMI (advanced meter infrastructure) have only 14% penetration.

The current systems used for automatic meter reading and data transmission, where used, was described and wireless technologies (Wavenis and Zigbee) were compared.

Comments:

Current links to SM-CG:

- i) water meter manufacturers have representation on SM-CG through AQUA;
- ii) AQUA has set up a WG to consider standardization work;
- iii) Roland Mettler represents AQUA on SM-CG;
- iv) Grabel van der Burg represents water meters on CEN Technical Committees.

6 Smart House [Alan Knight-Scott]

Document reference: SMG_1_09_0010 - SMG-1 2009-07 Pres 6 SmartHouse - A Knight-Scott

The EU SmartHouse Roadmap and recently established CENELEC project were described. The European Commission has asked CENELEC to identify all European residential standards (in liaison with all relevant European bodies), excluding National standards from the current Terms of Reference. The consultation of the draft is scheduled for April 2010.

A SmartHouse Code of Practice (CWA 50487 Nov 2005) and Interoperability Framework Requirements Specification (IFRS) (CENELEC CWA 4 IFRS) are being developed. Details of the CWA 4 IFRS are given in document SMG_1_09_0013.

Those present were invited to list all European standards/organisations and all known European SmartHouse standards (existing and in development) and to send all relevant information to alan.knight-scott@edfenergy.com.

7 Smart meters for telecare and other applications [Charles Palmer]

Document reference: SMG_1_09_0011 - SMG-1 2009-07 Pres 7 Hydra - C Palmer

'Project Hydra' and the ability to deliver value-added services using Smart Meters was discussed, using telecare as an example of a portable application with requirements similar to those for SM devices. It was suggested that 'solving the problem for telecare' would solve the problem for other applications.

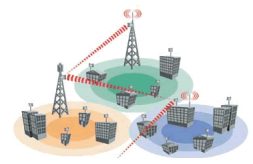
A structure for a 'properly-smart smart meter' system was shown highlighting the associated design challenges addressed by ETSI Smart Card, Java Card and Global Platform, noting that there are good standards that cover modelling devices and messaging.

There is a desire to work with the wider standards community on standards needed to support Java Card and Global Platform in smart meters.

Comments:

Such applications would be incremental to what is to be offered anyway in SM as added value.

The question is, who pays for it? Should it be free to the consumer? Whose liability will it be? One opinion was that who pays for it is not important as long as standards are written in a way that allows organisations to have different business models.



Further discussions

DECC Consultation on Smart Metering for Electricity and Gas

The current DECC Consultation was noted and the intention for BSI to submit a response stated. Those present were invited to send contributions to be included in the BSI submission.

Open discussion

- Who has responsibility for strategic design for SM? Please send comments on this to Bernard Shelley to be included in the BSI response to the DECC consultation.
- **Energy management perspective** – the SM trends have been developing over the past 15 years. The challenge with SM is to bring energy management to the household level to achieve cost reductions. Knowledge and experience that is already there should be used (i.e. learning from the energy management field).
- There is a need for a general forum where shared understanding can be developed and different models can be taken into account. Standards need to be able to work together — interoperability is of utmost importance. It is hoped that this indeed is the role of SMG/1, i.e. to provide a discussion forum and ensure interoperability.
- The audience was reminded that the timescales of the mandate are vital — we have to be mindful of the objectives of the European Commission. We need to focus on the mandate and the specifics of the work the Commissions has given us.
- It was noted that the CEN Sector Forum Energy Management is developing a new European standard on energy efficiency:

prEN 15900 *Energy efficiency services - Definitions and essential requirement*

The CEN Enquiry was completed but comments were invited by Mr Szajdzicki on behalf of BSI committee SEM/1.

- UK can offer leadership from our experience of competitive, de-regulated energy markets which are not the same as in the rest of Europe. There was a plea on behalf of retailers for representation on SM-CG to avoid standards that are unsuitable for the UK market.

Technical input through BSI Committees

The audience was again reminded that they should seek membership of appropriate BSI technical committees, noting the need for nomination through an appropriate organization. It is possible that they are a member of a trade association which is already represented on the BSI committee. Attention was drawn to the BSI website and the URL: **How we produce British Standards**

<http://www.bsigroup.com/en/Standards-and-Publications/About-BSI-British-Standards/How-we-produce-British-Standards/>

Bernard Shelley advised that he would register those present (and others) as members of SMG/1 in the BSI e-Committees system so they can gain access to SM/1 documents.

How to influence the SM-CG?

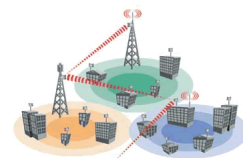
It was hoped that as a result of this SMG/1 meeting, those members of SMG/1 who represent various organizations on the SM-CG will take a wide view of UK needs, in particular what UK can offer in terms of leadership from our deregulated energy markets.

Chairmanship of SMG/1

It was agreed that there was no current need to appoint a chairman. The current format was thought to be good and appealed to all participants. Discussion of the need for a chairman should be considered at the next SMG/1 meeting.

Terms of reference

The draft terms of reference given in the Programme (and shown below) were accepted for the time being, with an invitation given to propose revisions.



Next meeting

It was agreed that a further meeting of SMG/1 should be held when current work of the European SM-CG and its ad hoc groups was further developed or if substantive issues were raised for discussion. In the meantime the documents received from the SM-CG would be posted as appropriate.

Conclusions

It was concluded that there needs to be tight focus on the specific development requirements of the Smart Meter Mandate, basing work on adapting existing standards where possible, and bearing in mind the need to future proof systems to allow wider applications where possible.

A handwritten signature in blue ink that reads "Bernard The Key". The signature is written in a cursive style and is underlined.

Secretary, SMG1

SMG/1 Terms of reference

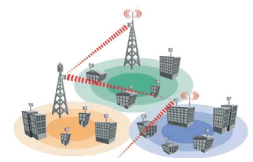
The Smart Meter Group **SMG/1** has been established to monitor the work of the CEN/CENELEC/ETSI Smart Meter Co-Ordination Group (SM-CG).

The SM-CG was set up as a Joint Advisory Group to manage standardization work in support of **European Commission Mandate M/441** for the creation of European Standards for an open architecture for utility meters enabling interoperability and to improve customer awareness of consumption.

The SM-CG is not empowered to develop standards, but to propose allocation of the work to existing CEN, CENELEC and ETSI technical committees.

The BSI SM/1 Smart Meter Group is intended to:

- act as a means of communicating the discussions of the SM-CG to interested BSI committees and other interested parties;
- to enable UK interests to be discussed and common views to be presented by UK-based members of the SM-CG.



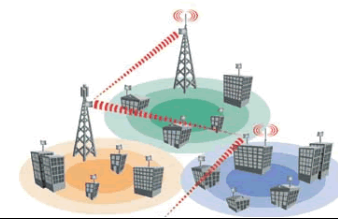
Annex A — Attendance

Stuart Archer	TAHI
Wayne Baker	GSE/25
Martin Bell	Vodafone
Howard Benn	ETSI — M2M
Mike Buss	CEN/TC 237, GSE/25, PEL/894
Malcolm Clarke	Brunel University
Peter Colebrook	PEL/205
Jeff Cooper	Elster
Alan Dick	PEL/13
Tim Evans	ETSI — M2M, <i>Smart Card</i>
Tony Field	PEL/894
Anne Fielder	Consumer Rep
Simon Gacoigne	PH Jones Limited
Neil Green	Scottish-Southern Energy
Ian Holmes-Higgin	CPI/30/7/1, AQUA
Stephen Hope	Innovits/Orange
Billy Horne	Scottish Power
Geoff Huckerby	E.ON
David Johnson	SMG/AHG: additional functionality, Eurogas
Alan Knight-Scott	IST/6/-/12, ERA
Belinda Littleton	OFGEM
Bob Loe	PEL/13
Alastair Manson	ERA
Alastair Munro	IST 006/-/12, TAHI
Nigel Orchard	SVS/7/4
Charles Palmer	Hydra
John Parsons	PEL/13, 57, 205, 894
Stephen Pattenden	IST006/-/12, TAHI
Mike Pearson	BSI, Hemel Hempstead
Howard Porter	BEAMA, ESMIG
Adrian Rudd	GSE/25, NMO, WELMEC
Jim Sibley	Chairman CEN/TC 237, GSE/25
Kris Szajdzicki	SEM/1, CEN/CLC SFEM
Jack Walles	ENA
Jack Worsnop	Siemens Metering Services
Sarah Horsfield	BSI
Simon Merriman	BSI
Danny Peacock	BSI
Bernard Shelley	BSI
Maria Varbeva-Daley	BSI

Apologies were sent by

Tom Chevalier	AMO
Richard Jeffers	GSE/25
Nigel Rix	IST/6/12

Annex B — Committees



European Committee	BSI Committee	BSI Contact	
CEN/TC 176 <i>Heat meters</i>	CPI/30/7 — <i>Volume flow-rate methods</i>	Simon Merriman	simon.merriman@bsigroup.com
CEN/TC 92 <i>Water meters</i>	CPI/30/7 — <i>Volume flow-rate methods</i>	Simon Merriman	simon.merriman@bsigroup.com
CLC/TC 8X <i>System aspects of electrical energy supply</i>	GEL/8 — <i>Systems aspects for electrical energy supply</i>	Bernard Shelley	bernard.shelley@bsigroup.com
CEN/TC 237 <i>Gas meters</i>	GSE/25 — <i>Gas meters</i>	Bernard Shelley Danny Peacock	bernard.shelley@bsigroup.com danny.peacock@bsigroup.com
CLC/TC 205 <i>Home and Building Electronic Systems</i>	IST/6 — <i>Data communications</i>	Eddie Levio	eddie.levio@bsigroup.com
CLC/TC 13 <i>Equipment for electrical energy measurement and load control</i>	PEL/13 — <i>Electricity meters</i>	Bernard Shelley	bernard.shelley@bsigroup.com
CEN/TC 294 <i>Communication systems for meters and remote reading of meters</i>	PEL/894 — <i>Remote meter reading</i>	Bernard Shelley	bernard.shelley@bsigroup.com
CEN/TC 107 <i>Prefabricated district heating pipe systems</i>	SVS/7/4 — <i>Metering and billing services</i>	Sarah Horsfield	sarah.horsfield@bsigroup.com
CEN Sector Forum <i>Energy Management</i>	SEM/1 — <i>Energy management</i>	Ian Richardson	ian.richardson@bsigroup.com
CHESSE Module 6		Brian Such	brian.such@bsigroup.com
ETSI/TC ATTM <i>Access, Terminals, Transmission and Multiplexing</i>			
ETSI/TC ERM <i>EMC and Radio Spectrum Matters</i>			
ETSI/TC M2M <i>Machine to Machine Communications</i>			
ETSI/TC PLT <i>Powerline Telecommunications</i>			
ETSI/TC TISPAN <i>Telecoms & Internet converged Services & Protocols for Advanced Networks</i>			