Hand Held Terminal

SDAG Workshop

DRAFT Minutes

Date / venue: 5th July 2013 1000 – 1400 at BIS Conference Centre, London.

1. Main Meeting: Attendees

Name	Company
Colin Sawyer (chair)	DECC
Peter Morgan	DECC
Mar Robins	DECC
Robert Cragie	DECC
Alastair Manson	Energy UK
Adrian Rudd	EON
Geoff Huckerby	EON
Alastair Manson	Energy UK
Jay Adams	Utilita
Grahame Weir	Scottish Power
Andrew Campbell	RWE npower
Colin Rowland	SSE
David Speake	British Gas
Lee Barney	British Gas
Jim Hunt	EDFE
Chris Panayi	EDFE
Nigel Orchard	ESTA
Chris Shelley	BEAMA
Chris Spence	EDFE
Tom Chevalier	AMO
Steve Pickering	BEAMA
Paul Smith	BEAMA
John Harris	EUA

2. Introduction and Objectives

2.1. DECC set out the purpose of the meeting – to discuss with stakeholders how a Hand Held Terminal (HHT)[1] could work to support installation and maintenance processes given the functionalities described in SMETS, DUGC and relevant protocols. In addition, to discuss and capture issues and actions arising.

[1] For the purposes of this minute the HHT refers to a device that, as a minimum, communicates with the smart metering equipment locally via ZigBee Interpan.

2.2. The ESTA representative expressed the view that much of the solution was uncertain and as such it would be prudent to include an optical ('FLAG') port in SMETS. There was no support for this from other SDAG members.

2.3. The ESTA representative also asked whether the meter was a fiscal instrument. EON clarified that the meter is the basis for billing. Another member clarified that the meter is not usually the primary billing engine and that this function is delivered through back office systems.

3. HHT Presentation

3.1. DECC ran through a presentation covering a number of aspects relating to HHT, principally:

- Security requirements and responsibilities
- General HHT use case
- Usage scenarios: installation and maintenance
- How ZigBee inter-PAN joining works
- Install and leave considerations
- Sending commands via both CSP and HHT

3.2. It was noted that there is a mixed approach to HHTs amongst the Supplier community with some proposing to use HHTs even when there is WAN connectivity as installation may be faster.

3.3. DECC confirmed that there is no intent to draft a DDS for an HHT.

3.4. A number of recurring themes, questions and issues were raised during the discussion which are grouped and summarised below:

3.5. **What happens if WAN and HHT installation are undertaken?** In terms of in-bound commands it was noted that the first one would be executed by the meter and the second one would be rejected (as messages would have a duplicate transaction ID). In terms of responses it was noted that a response could come back via the WAN (when it becomes available) and via the HHT. Suppliers would need to take this into account in their back office system design.

3.6. **Does an installer need to have equipment matched to a property in the event of no WAN?** There was a general discussion as to impracticability of an installer having to find a specific meter set for a given property. Potential alternative solutions include the installer using an alternative WAN (at or near the property) to get the meter details (device IDs) associated with the relevant MPAN to the Supplier back office system which would then generate the required specific commands for that property. An alternative solution would be to load the HHT with every combination of device IDs and commands for a given number of installs that day / week / month etc. One member pointed out that the MPAN on the meter is only used as a display item. The discussion highlighted that there is no benefit associated with local entry of MPAN on the meter.

3.7. **What is the security of a HHT connection compared with Type 1 and Type 2 devices?** DECC clarified that HHT joins the ZigBee network at a lower level of connection (IEEE 802.15.4) than Type 1 and 2 devices. The HHT connection is effectively firewalled at the comms Hub. Type 1 and 2 devices require further critical commands to the metering equipment they will be communicating with for them to fully join and access data / commands from that equipment. The HHT is essentially a "carrier pigeon" for supplier commands.

3.8. **How can a HHT connect on ZigBee inter-PAN and what is the function of comms hub beaconing?** The comms hub, as the network coordinator, beacons to allow other devices to join the network. In addition the comms hub can set a flag to allow inter-PAN communication in addition to ZigBee PAN joining. The flag would be set to on when the comms hub is powered up and it could either be set to off by an installer or time out after a set period of

time. Further discussion highlighted that having the flag set to 'on' all the time could potentially allow denial of service attacks where multiple spoof devices request to join and effectively slow the HAN down. In addition it could lead to installer confusion if there are multiple networks to choose from. Conversely if the flag is set to off after installation then there needs to be a way of turning it on for follow up maintenance situations where there is no WAN. This could be achieved through an "Installer-PIN" protected menu on a trusted device (ESME and GSME). EDF highlighted that in instances where the meter is inside a property and there is no WAN, maintenance may not be possible without disturbing the consumer. One possible solution would be to pair all HHTs (10,000's) to all comms hubs – this was not considered to be practical. AMO suggested that a compromise solution could be to turn the flag on when WAN is lost. ACTION: DECC to consider options for turning the beaconing flag on and off and report to SDAG.

3.9. **Will an 868 HHT be required?** The discussion highlighted that this would be driven by future SEC panel decisions with respect to single and dual band comms hubs. If a single band 868 comms hub became available then an 868 HHT would be required.

3.10. **What will the HHT be able to read and display?** It was noted that Suppliers would be free to implement Parse functionality on an HHT to allow an installer to look at the contents of all message types apart from those with sensitive data.

3.11. **How will the HHT sequence service requests and commands?** DECC indicated that commands are sequenced within service requests and that this sequence will be the same whether the service requested is delivered over the WAN or HHT. Suppliers, however, are free to sequence service requests in any order over the WAN or HHT. Additional discussion points included what would happen in the event the HHT connection was lost during transfer of a service request. DECC indicated that the meters log which commands have executed and it should therefore be possible for a process to restart where it broke off.

3.12. **What happens on CoS if the HHT was not unloaded by the previous supplier?** In this situation the details for the registered supplier on DCC may not be the same as the current supplier (eg the current supplier did not unload the HHT to update DCC). The incoming supplier would therefore have to contact the registered supplier (rather than the current supplier) to effect any change.

3.13. **How will the HHT be tested?** It is expected that the HHT can be tested as part of the testing and trialling phase. DECC indicated that the HHT interface could be certified as part of ZigBee testing.

4. No WAN discussion

4.1. A number of points were raises with respect to no WAN installs. EDF indicated that it would be useful for there to be a central register of aborted installs due to no WAN so that subsequent supplier visits are forewarned.

4.2. DECC clarified that time could be set using an HHT and that the accuracy requirement would take "under normal operating conditions" into account.

5. AOB

5.1. No AoB was raised.