Smart Metering Implementation Programme

Department of Energy & Climate Change

Solution Design Advisory Group (SDAG)

BIS Conference Centre

26 March 2013

Agenda: SDAG #5
BIS Conference Centre
10:00 Tuesday 26th March 2013

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No	Time	Subject	Lead
1	10.00 – 10.45	Minutes, Actions from previous meeting and review of RAID	Colin Sawyer
2	10.45 – 11.30	Summary of DSP and CSP Dialogue	Helen Mounsey
3	11.30 – 12.15	Parse and Correlate Update	Terry Underwood
4	12.15 – 12.45	Pre-Payment Meter Interface Device	Peter Morgan
		Lunch	
5	13.15 – 14.00	GB HAN Companion Spec	Peter Morgan
6	14.00 - 14.45	Equipment Availability and Deliverables timeline update	Colin Sawyer
7	14:45 – 15:00	AOB	

1. ACTIONS FROM PREVIOUS MEETING AND UPDATE OF RAID

Colin Sawyer

Actions

ID	Action	Due Date	Owner	Status
2.07	**User Roles Matrix;** DECC agreed to confirm the dates to discuss User Roles Matrix including which services each DCC Service User would have access (including critical commands). The URM will be part of the covered in the CWG and Core Services debate **Update**: URM was released as part of UGC pack and CWG discussing bilaterals with Suppliers/NOs w/c 11/03/12.	24.01.13	JH	**Closed**
2.11	**Billing reads:** Npower agreed to inform DECC if they have any residual concerns with billing cycle orchestration & push/pull comments once they have read the Technical Architecture document *Update: AC agreed to provide DECC with information on where processes are misaligned and a list of the risks associated. Complete* *Update: All the processes involved in Diarised Billing are contained in an Event Lifecycle Process Model that will form part of the reissued Technical Architecture.*	26.03.13	AC JH	**Closed** **Ongoing**
2.12	**Error Handling:** DECC agreed to consider error handling requirements for service orchestration & determine whether further details need to be provided in ISFT. **Update**: DCC orchestration exists only where the dependent SR flag has been selected in a request – failures are returned to DCC Service Users with relevant error code	26.02.13	JH	**Open**
2.13	**Batching of User requests:** Stakeholders were keen to get a requirement for batch updates of service requests over the DCC User Gateway. DECC agreed to consider if this fitted within the architecture. **Update**: Requirement included in Sch 2.1 for ISFT Final	26.02.13	JH	**Closed**
2.15	**Outage reporting**: DECC to talk to Alan Creighton of the ENA to discuss Outage Management requirements and confirm requirements from the ENA and ensure alignment within the CSP schedule 2.1 **Update**: Alan Creighton agreed to write to the Chairman on service levels.	24.01.13	Alan C	**Open**
3.01	DECC agreed to issue product descriptions to SDAG Members when they had been completed		CS	**Ongoing**
3.02	DECC agreed to clarify the timetable and prepare the process for GB security extensions.	26.02.13	AA	**Ongoing**
3.04	All SDAG members were to review the master issues log and provide any comments to DECC prior to the next SDAG meeting **Update**: It was agreed that the RAID issues that were closed would be sent to the originator to ensure the answer provided closed the original issue satisfactorily. **Update**: Emailed EDF and EON on the closed issued for clarification	26.03.13	ALL PH	**Ongoing**
3.05	BEAMA agreed to send their concerns on the implications of the security requirements to DECC. **Update**: This is currently being addressed by discussions between SSWG and DECC, these discussions have not yet concluded	26.03.13	Chris S	**Ongoing**

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Actions

4.01	**Parse and Correlate**: It was agreed that DECC would issue a set of questions to SDAG members to determine the preferred solution to managing and future governance of Parse and Correlate software. SDAG members were requested for their replies by 15 March 2013. **Update**: Questions issued by DECC on 5 March 2013. Responses to be discussed at SDAG 26 March 2013.	15.03.13	ALL	Closed
4.02	**HHT Interface**: It was agreed that the description of the Hand Held Terminal interface would be sent to SDAG Members as soon as it was available for review.	26.03.13	JH	Open
4.03	**Zigbee and DLMS integration testing**: Testing Strategy is to be updated to include the integration testing of Zigbee and DLMS. The Foundation Steering Group (FSG) were leading on testing – this requirement would be passed over this group for inclusion in the overall testing strategy. Update: The FSG were informed of this requirement on 6 March 2013 and acknowledged that it would be part of the integration test strategy.	26.03.13	PH	Closed
4.04	**HAN Strategy**: It was agreed that the SDAG members would review and provide comment on the HAN Strategy presented to Meeting 4. Update: EON provided useful feedback 18.03.13	15.03.13	ALL	Closed
4.06	**ICHI**: It was agreed that SDAG members were to provide comment on the BEAMA/EUA specification and that DC power only was to be the only ICHI feature to be mandated on the proposed electric meter. **Update**: Comments received – reviewed by DECC and BEAMA – responses to follow	15.03.13	ALL	Open
4.07	**Role Based Access Control:** The Events RBAC would be defined in the GB Comp Spec and feedback would be provided when available.	tbc	MB	Open
4.08	**Import/Export**: It was agreed that DECC would provide further detail on how the import/export supplies are managed. **Update**: Electricity Export tariff and prices have been considered and excluded at the SMETS2 consultation and drafting stage (i.e. there is no functionality in SMETS to manage Export tariff/price on the meter) thus the UGC will not provide this capability. Should enhanced export functionality be included in specifications in future it will be incorporated into the UGC.	26.03.13	MB	Open
4.09	**Documentation Road-map**: DECC agreed to prepare a documentation road-map (to be finalised when DSP delivery timescales are agreed)- this would include documents that will come from DCC and its service providers to allow DCC users to understand when key design documentation was to be issued.	tbc	CS	Open

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2. SUMMARY OF DSP AND CSP DIALOGUE

Helen Mounsey

Background

- Dialogue sessions designed to:
  - Reduce ambiguity of technical requirements
  - Refine commercial requirements and contracts
- Multiple rounds held with all DCC, DSP and CSP bidders over the period 18 February – 22 March 2013
- Topics covered included:

  - Solution design
  - Technical architecture
  - Schedule 2.1 requirements
  - Security architecture
  - Security governance
  - Implementation and testing
  - Comms hub spec and processes
  - CSP coverage and rollout

  - DSP SI role
  - Performance measures
  - Value for money
  - Service management
  - Solution asset management
  - Co-operation agreements
  - Foundation

- Bidder presentations also held 14 – 15 March 2013

Points of General Confirmation

- DSP:
  - Transitional CoS is still included in requirements as baseline design – switch to Enduring Cos in the future
  - Supplier X is not in scope for ISFT
  - DCC User Gateway – DSPs have suggested they will not re-use existing industry networks as part of their DCC User Gateway solution, but subject to final ISFT bids
  - DSP to provide options for DCC Service User connection based on their needs e.g. high volume connection and low volume connection options
  - Foundation design – how DSPs should treat enrolment and adoption of foundation Smart Metering Systems
- CSP:
  - key coverage, performance and communications hub requirements are materially unchanged
- General:
  - General refinement of requirements following feedback from bidders
  - Alignment of terminology with other documentation e.g. SMETS2 / CHTS / E2E Technical Architecture / E2E Security Architecture

Additions to Requirements

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- CSP:
  - Clarification of power outage notification, and incorporation of power restore notification capabilities into CSP requirements
  - Subject to final programme approval, communications hub ordering, forecasting and financing approach has been developed
  - Requirement for CSPs to provide communications hubs meeting 'intimate interface specification'
- DSP:
  - Requirements added for DSP to support CSP power outage management and power restore services

Updates to Requirements

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- DSP:
  - Anomaly Detection applies to ALL Service Requests – although thresholds will differ between critical (priority) and non-critical services
  - Access Control – initially, Critical Service Requests (1% of total SRs) will not be authorised against Industry Registration Database, but all others (99%) will. Solution must be configurable to allow revisions to this approach
  - Updates and revisions following Install and Commission workshop
- CSP:
  - Detail added to Schedule 11 (Communications Hub) relating to roles and responsibilities of all parties
  - Mechanisms added to apply LDs to communications hub failures above a threshold (including batch failure mechanism)
  - Updated requirements for CSPs to provide accurate coverage forecasts for integration by DSP, and thus visible to Suppliers
  - Coverage performance measures added to focus on installation success rate with LD mechanism applying if final coverage metric is not achieved

3. PARSE AND CORRELATE UPDATE

Terry Underwood

- Following the previous SDAG, DECC requested Industry input into its proposed approach for sourcing Parse & Correlate functionality.

- 13 responses were received

- Responses were consistent in a number of areas.

- The following slides summarise this feedback

Parse & Correlate Feedback Summary

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Question	Response Summary	Preliminary View
preference for the provision of the function as a suite of libraries or as an installable executable?	Mixed Industry views between the two presented options Other suggestions are: • a managed appliance, • separate Web Service with exposed APIs. • Windows executable.	Pursue both the installable executable and suite of libraries options.
preferences as to suitable platforms and development languages	Java, C++ and .Net support also requested. Responses for suitable platforms varied between support for Windows, AIX and Red Hat Linux.	Java was the most popular development language and is pervasive. This is supported on the platforms listed.
constraints as to development language or operating platforms?	Avoidance of platform specific languages such as VB. Development using open standards and protocols to ensure interoperability was requested.	Java JVM use will enable the software to be agnostic of platform.
Enable individual development of software or constrain it to being the same for all parties?	Only 1 response expressed a preference for separately developing the code. Other responses stated that one common central version that was managed under change control was a strong preference.	Central management of a common code set is a preference.

Parse & Correlate Feedback Summary

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Question	Response Summary	Preliminary View
Support for code and controlling change	Overwhelmingly the view was that the code should be constrained to a centrally managed version. A single development provider approach was favoured.	A centrally managed version is a preference
Suitability of Open Source	Mixed views with the majority favouring a centrally managed (by the DCC) model. Different flavours of this were proposed: • IPR owned and developed by one developer under license allowing them an assured revenue stream. • IPR owned by DCC with long term relationship with developer but the ability to change. • Open Source licensing model with development and support. being commissioned centrally. There are appropriate examples of products and support models already established within the industry, such as NHHDA and EAC/AA, which could be used.	The programme will consider commercial options for centrally managing the software that enable on-going development and support.

Parse & Correlate Feedback Summary

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Question	Response Summary	Preliminary View
Support/Warranty period	Mixed views ranging from the 3 months after Market Proving through to the length of the contract.	On-going support will be required. The commercial model for this needs considering.
Minimising change	A user group and a formal change process were favoured. However, the need for stability was emphasized with backwards compatibility built in.	A formal change process overseen by a User Group appears an appropriate mechanism. Backwards compatibility requirements will be included.
Distribution Mechanism	Distribution models already established in the industry e.g. NHHDA and EAC/AA should be followed. Distributed with appropriate security measures in order to ensure the integrity of the functionality received.	The programme will investigate and where appropriate emulate existing industry software distribution mechanisms. This will be considered in conjunction with the commercial model.

Parse & Correlate next steps

- Estimated costs for development and support of P&C

- Consideration of commercial models and procurement approach for the Programme Board

- Prepare a plan and a paper on the overall P&C approach

4. PRE PAYMENT METER INTERFACE DEVICE

Peter Morgan

Discussion Points

- DDS has been drafted to replicate key PPM functionality available on the meter interface

  - Main difference - No "enable supply" for gas

- DDS includes requirement for battery operation

  - Does a time need to be specified?

- PPMID is a Type 1 device

  - Has to support electricity and gas, electricity has critical command "enable supply" functionality

  - CPA assurance

- Same usability requirements as IHD

- Keypad not included in PPMID spec

5. GB COMPANION SPECIFICATION

Peter Morgan

- Regulated technical documents
  - GBCS
  - SMETS
  - CHTS
  - CPA
- Guidance documents
  - Technical Architecture
    - illustrates how the end to end system works in terms of logical connections and the different types of message flows
    - ties together UGC, business process models
    - also includes extended lifecycle process models that describe sequencing of messages for occasions such as installation and maintenance

GB Companion Specification

Contents

- References to ZigBee in terms of what each ZigBee device must do
- References to DLMS in terms of what the electricity meter must do
- Security
  - Description of certificates, key lengths, algorithms and related standards
  - Description of UTRN format, algorithms etc
- Message format / WAN transport
  - Description of the HAN ready message format
- Use cases
  - Translation of service requests into ZigBee / DLMS commands / responses – basis for HAN ready messages
- Events
  - List of events and default configurations

GB Companion Specification
Review cycle

- Target date of 12 April to send first draft out for review
  - Review of structure
  - Review of use cases (gas only)
  - Other content will be illustrative and excluded from review
  - Two week review cycle

6. EQUIPMENT AVAILABILITY AND DELIVERABLES TIMELINE UPDATE

Colin Sawyer

ZigBee SEP 1.2 timeline

- 0.7 Specification: ballot held - comment resolution expected by June / July

- 0.9 Interoperability Testing:
  – Invitation to participate has been issued
  – Plan to start tests from 8 April

- Security extensions: options
  – Additional ballot for inclusion in SEP 1.2, or
  – Include in GBCS and bring into SEP 1.3 later

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Revised Plan 1: E2E

SSWG — SMART SPECIFICATIONS WORKING GROUP

Date	Task
04/03/2013	Granular Planning For Blocks 1-3 (functional level) (Cspec Work Pauses 1 Week)
11/03/2013	Cspec Completion
18/03/2013	Cspec Completion
25/03/2013	Cspec Completion
01/04/2013	Cspec Completion
08/04/2013	Block 1 Comments + Block 1 Test Scripts
15/04/2013	Block 1 Comments + Block 1 Test Scripts
22/04/2013	Block 1 Comments + Block 1 Test Scripts
29/04/2013	Notification Of Block 1 Interop
06/05/2013	Block 1 Comments + Block 1 Test Scripts
13/05/2013	Block 1 Comments + Block 1 Test Scripts
20/05/2013	Block 1 Comments + Block 1 Test Scripts
27/05/2013	Block 1 Interop
03/06/2013	Block 1 Interop Resolution + Block 2 Comments + Block 2 Test Scripts
10/06/2013	Block 1 Interop Resolution + Block 2 Comments + Block 2 Test Scripts
17/06/2013	Block 1 Interop Resolution + Block 2 Comments + Block 2 Test Scripts
24/06/2013	2 week delta for input into security specifications over Block 2 Phase
01/07/2013	Notification Of Block 2 Interop
08/07/2013	Block 1 Interop Resolution + Block 2 Comments + Block 2 Test Scripts
15/07/2013	Block 1 Interop Resolution + Block 2 Comments + Block 2 Test Scripts
22/07/2013	1 Week Block For Analysis and Feed-In To Security Work
29/07/2013	Block 2 Interop
05/08/2013	Block 2 Interop Resolution + Block 3 Comments + Block 3 Test Scripts
12/08/2013	Block 2 Interop Resolution + Block 3 Comments + Block 3 Test Scripts
19/08/2013	Block 2 Interop Resolution + Block 3 Comments + Block 3 Test Scripts
26/08/2013	2 week delta for input into security specifications over Block 3 Phase
02/09/2013	Notification Of Block 3 Interop
09/09/2013	Block 2 Interop Resolution + Block 3 Comments + Block 3 Test Scripts
16/09/2013	Block 2 Interop Resolution + Block 3 Comments + Block 3 Test Scripts
23/09/2013	2 Week Block For Analysis and Feed-In To Security Work
30/09/2013	2 Week Block For Analysis and Feed-In To Security Work
07/10/2013	Block 3 Interop
14/10/2013	Block 3 Interop Resolution + Block 4 Comments + Block 4 Test Scripts + Security BuildIn
21/10/2013	Block 3 Interop Resolution + Block 4 Comments + Block 4 Test Scripts + Security BuildIn
28/10/2013	Block 3 Interop Resolution + Block 4 Comments + Block 4 Test Scripts + Security BuildIn
04/11/2013	Block 3 Interop Resolution + Block 4 Comments + Block 4 Test Scripts + Security BuildIn
11/11/2013	Block 3 Interop Resolution + Block 4 Comments + Block 4 Test Scripts + Security BuildIn
18/11/2013	Notification Of Block 4 Interop
25/11/2013	Block 3 Interop Resolution + Block 4 Comments + Block 4 Test Scripts + Security BuildIn
02/12/2013	Block 3 Interop Resolution + Block 4 Comments + Block 4 Test Scripts + Security BuildIn
09/12/2013	Block 3 Interop Resolution + Block 4 Comments + Block 4 Test Scripts + Security BuildIn
16/12/2013	Block 3 Interop Resolution + Block 4 Comments + Block 4 Test Scripts + Security BuildIn
23/12/2013	Block 4 Interop
30/12/2013	Block 4 Interop Resolution + Block 5 Comments + Block 5 Test Scripts + Security BuildIn
06/01/2014	Block 4 Interop Resolution + Block 5 Comments + Block 5 Test Scripts + Security BuildIn
13/01/2014	Block 4 Interop Resolution + Block 5 Comments + Block 5 Test Scripts + Security BuildIn
20/01/2014	Block 4 Interop Resolution + Block 5 Comments + Block 5 Test Scripts + Security BuildIn
27/01/2014	Block 4 Interop Resolution + Block 5 Comments + Block 5 Test Scripts + Security BuildIn
03/02/2014	Notification Of Block 5 Interop
10/02/2014	Block 4 Interop Resolution + Block 5 Comments + Block 5 Test Scripts + Security BuildIn
17/02/2014	Block 4 Interop Resolution + Block 5 Comments + Block 5 Test Scripts + Security BuildIn
24/02/2014	Block 4 Interop Resolution + Block 5 Comments + Block 5 Test Scripts + Security BuildIn
03/03/2014	Block 4 Interop Resolution + Block 5 Comments + Block 5 Test Scripts + Security BuildIn
10/03/2014	Block 5 Interop
17/03/2014	SEP1.2 R0.9 Achieved- Full Companion Spec Revision At This Point

Completion Date 17/3/2014
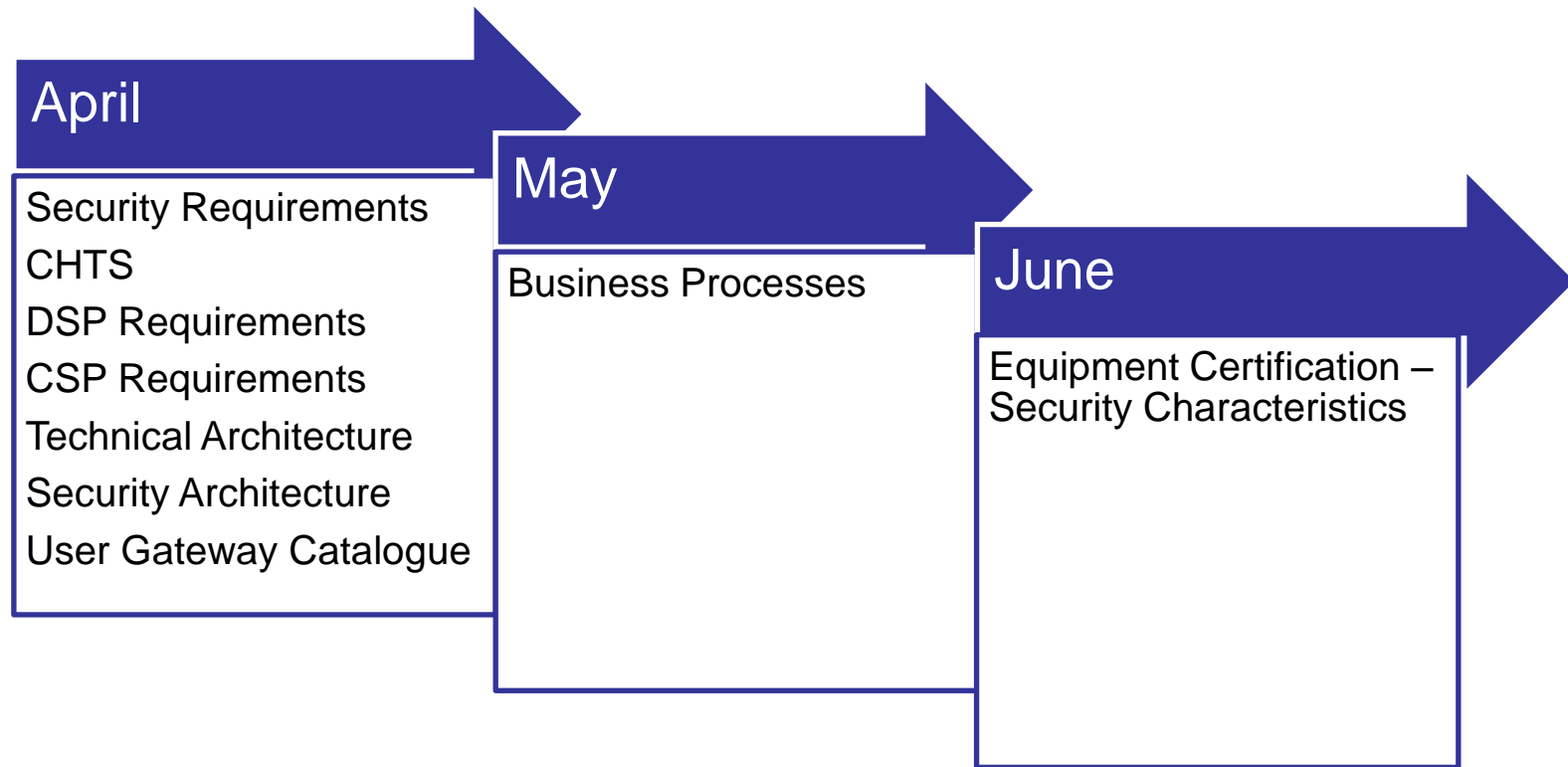
Equipment availability implications

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- Interop testing complete 17/3/2014:
  - Emulators from interop testing available for DCC Integration Testing (planned to start April 2014)
  - 'Line quality' prototypes expected from 3Q14 – ready for Market Proving

- SMETS 2 Notification (2nd iteration) – probably to follow release of SEP 1.2 (implies notification would be during 2Q14 in parallel with DCC Integration Testing)

- CPA Certification:
  - Review of design approach can proceed in parallel with interop testing
  - Certification to be finalised during Market Proving

Documents Road Map

April

Security Requirements

CHTS

DSP Requirements

CSP Requirements

Technical Architecture

Security Architecture

User Gateway Catalogue

May

Business Processes

June

Equipment Certification – Security Characteristics

7. AOB

Next Meeting

- Meeting 6 – 23 April 2013

  BIS Conference Centre, 10am–3pm,