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Paper Reference:	**SECP_73_1110_14**
Action:	**For Decision**

DP081 Problem Statement

1. Purpose

Draft Proposal DP081 'Alignment of DUIS and CHISM to reflect current DCC Processing' was raised by the DCC and has undergone the Development Stage. The Change Sub-Committee believes this Draft Proposal is ready to be converted to a Modification Proposal. This paper sets out our proposed approach for progressing this modification for the Panel's approval. We are recommending that this modification be progressed directly to the Report Phase and that the Panel approves the Modification Report, the implementation approach, and that MP081 is a Self-Governance Modification.

This paper provides a high-level summary of the key points. A copy of the problem statement submitted by the Proposer can be found in Appendix A, and the draft Modification Report can be found in Appendix B.

2. Summary of the proposal

What is the issue?

The DCC Design Release Forum and an internal DCC review identified a need to include clarification in the SEC around DCC processing. This clarification should provide a detailed explanation of current DCC processing and align the SEC to reflect this. The DCC is concerned that points of detail, not currently explained, could adversely affect User understanding of DCC Systems. If not amended, this is likely to lead to DCC Incidents which could otherwise be avoided.

What is the proposed solution?

The proposed solution is to align the SEC to accurately reflect the DCC processing. The need for clarification of the DCC processing description has been identified in two SEC Appendices: Appendix I 'CH Installation and Maintenance Support Materials' (CHISM) and Appendix AD 'DCC User Interface Specification' (DUIS). Further details can be found in the problem statement in Appendix A, and a full breakdown in the legal text in Annex A of the Modification Report (Appendix B).

3. Proposed progression

The Change Sub-Committee has agreed that this Draft Proposal is ready to be converted to a Modification Proposal. We believe that this modification should be progressed directly to the Report Phase as it is only an alignment of the SEC to what the DCC are already doing.

Determination approach

We recommend that this Proposal is determined under Self-Governance, as the Proposal does not satisfy the criteria of Section D2.6 for needing an Authority decision.

Implementation approach

We recommend an implementation approach of:

- 27 February 2020 (February 2020 SEC Release) if a decision to approve is received by 13 February 2020; or
- 25 June 2020 (June 2020 SEC Release) if a decision to approve is received after 13 February 2020 but by 11 June 2020.

4. Recommendations

The Panel is requested to:

- **AGREE** that DP081 is ready to be converted to a Modification Proposal;
- **AGREE** that MP081 should be progressed to the Report Phase;
- **APPROVE** the Modification Report;
- **APPROVE** the implementation approach; and
- **AGREE** that MP081 should be progressed as a Self-Governance Modification.

Jordan Crase

SECAS Team

4 October 2019

Attachments:

- **Appendix A:** DP081 problem statement
- **Appendix B:** MP081 Modification Report
    - **Annex A:** legal text

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DP081 'Alignment of DUIS and CHISM to reflect current DCC Processing'

Problem statement – version 1.0

About this document

This document provides a summary of this Draft Proposal, including the issue or problem identified, the impacts this is having, and the context of this issue within the Smart Energy Code (SEC).

Proposer

This Draft Proposal has been raised by Helen Metcalfe from the Data Communication Company (DCC).

What is the issue or problem identified?

Current DCC processing

Following assurance at the DCC Design Release Forum with Customers, and internal DCC review regarding incident resolution activity, a need to include clarification in the SEC around DCC processing was identified. This clarification should provide a detailed explanation of current DCC processing and align the SEC to reflect this. The DCC is concerned that points of detail that are not currently described could adversely affect User understanding of DCC Systems. If not amended, this is likely to lead to DCC Incidents which could otherwise be avoided. This proposal is intended to align the SEC to DCC System Processing and correct identified errors.

How does this issue relate to the SEC?

The need for clarification of DCC processing description has been identified in two SEC Appendices: Appendix I 'CH Installation and Maintenance Support Materials' (CHISM) and Appendix AD 'DCC User Interface Specification' (DUIS).

CHISM

When a User sends Service Request 12.1 'Request WAN Matrix' to receive Smart Metering Wide Area Network (SM WAN) Coverage, in most cases they will receive an Availability Date and WAN Variant. However, in an exception case, the Communications Service Provider (CSP) for the South and Central regions may respond to a SM WAN Coverage request (CSPM-S1 or CSPM-S2) with an Availability Date for coverage but without being able to confirm the WAN Variant that will need to be used. The Data Service Provider (DSP) will take this data and return the Availability Date and the value of the unconfirmed WAN Variant in the response to Service Request 12.1 'Request WAN Matrix'. Ensuring that SEC Subsidiary documentation defines the unconfirmed WAN Variant will require an amendment to table 3 in CHISM Annex E.

DUIS

Changes to Service Request 8.14.2

Under the description of Service Request 8.14.2 'Communications Hub Status Update – Install No SM WAN' it has been identified that text should be added to better define current DCC System Processing. This would correct the Smart Metering Inventory so that a Communications Hub fitted in a 'no WAN Install' scenario can be correctly identified.

Additional Service Requests for Organisation Certificate tracking

In the event of a Local Command delivery, the DCC requires the delivery of a number of responses to those locally delivered commands via Service Request 8.13 'Return Local Command Response'. For the DCC to track Organisation Certificates held on Devices in the case of local delivery of Service Request 6.15.1 and Service Request 6.21, these two Service Requests will need to be added to the list of Service Request Responses in DUIS Section 3.8.112.2 (Service Request 8.13).

Changes to Service Request 6.24.2

Additional information is needed under DUIS Section 3.8.77 'Retrieve Device Security Credentials (Device)' due to changes to DCC System Processing. This will describe the process where the DCC will check the contents of a response and update the Inventory and SMKI Repository if needed.

Unit error correction

There has been an incorrect unit of measurement identified in Table 59 'Gas Threshold Matrix'. Data Item 'Block Threshold' has a Unit of kWh, where this should be Wh.

What is the impact this is having?

What are the impacts of doing nothing?

Without this clarification of the current DCC Systems, customers would observe unexpected behaviour and unsuccessful System responses. In some instances, incidents may occur due to lack of User understanding. The DCC could mitigate this by publishing Guidance Notes; however, it is preferable to take the opportunity to clarify the DCC Systems within these SEC Subsidiary Documents to support efficient and successful DCC and Customer processing.

Already there have been recorded issues due to lack of a defined unconfirmed WAN Variant in table 3 in CHISM Annex E. The lack of information about the DCC Systems in DUIS have yet to create issue. However, it has been identified that if Service Request 8.14.2 does not accurately reflect the DCC Systems, then there is potential for Customer confusion. Further, Local Delivery will not work without Service Request 6.15.1 and Service Request 6.21 on the Service Request Response List for Service Request Responses.

What are the views of the industry?

Views of the DCC

The DCC is supportive of these additions to the appropriate SEC Subsidiary Documents to support the use and understanding of DCC Systems.

Views of SEC Parties

A Large Supplier has commented on this Draft Proposal and agree that this issue should be addressed.

DCC Design Release Forum attendees (technical representatives from Suppliers, Network Operators and Adaptor Providers) are generally supportive of making these changes.

Views of Panel Sub-Committees

The Technical Architecture and Business Architecture Sub-Committee (TABASC), the Security Sub-Committee (SSC), and the Operations Group agree that this Proposal should be progressed. The Smart Metering Key Infrastructure (SMKI) Policy Management Authority (PMA) also agrees that this Proposal should be progressed, and were also interested in some of the specifics around the incidences that have occurred.

Views of the Change Sub-Committee

The Change Sub-Committee commented that the DUIS version control will need to be taken into consideration for this Proposal. The Change Sub-Committee agrees the issue is clearly defined and should be converted to a Modification Proposal.

SEC
Smart Energy Code

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Smart Energy Code

MP081

‘Alignment of DUIS and CHISM to reflect current DCC Processing’

Modification Report

Version 0.1

About this document

This document is the Modification Report for MP081 'Alignment of DUIS and CHISM to reflect current DCC Processing'. It provides detailed information on the background, issue, solution, costs, impacts and implementation approach. It also summarises the discussions that have been held and the conclusions reached with respect to this Modification Proposal.

Contents

1. Summary 3
2. Background 4
3. Solution 5
4. Impacts 6
5. Costs 7
6. Implementation approach 8
7. Conclusions 9

Appendix 1: Glossary 10

This document also has one annex:

- **Annex A** contains the redlined changes to the Smart Energy Code (SEC) required to deliver the proposed solution.

1. Summary

At the Data Communications Company (DCC) Design Release Forum, and internal DCC review regarding incident resolution activity, a need for clarification of the DCC processing within the SEC has been highlighted. This clarification would align the SEC to reflect current DCC processing, mitigating possible issues arising due to DCC Users misunderstanding of the DCC Systems, and would prevent reoccurrence of already known issues.

This Modification Proposal seeks to align Appendix I 'CH Installation and Maintenance Support Materials' and Appendix AD 'DCC User Interface Specification' to reflect the processes the DCC currently perform.

This proposal will not impact on any SEC Parties, and implementation costs are limited to Smart Energy Code Administrator and Secretariat (SECAS) time and effort to update the SEC documentation. If approved, this proposal is targeted for the February 2020 SEC Release.

2. Background

Clarification of DCC processing

Following assurance at the DCC Design Release Forum with Customers, and an internal DCC review regarding incident resolution activity, a need to include clarification in the SEC around DCC processing was identified. This clarification should provide a detailed explanation of current DCC processing and align the SEC to reflect this. The DCC is concerned that points of detail that are not currently described could adversely affect User understanding of DCC Systems.

What is the issue?

Without clarification of the current DCC Systems, Customers would observe unexpected behaviour and unsuccessful System responses. In some instances, incidents may occur due to lack of User understanding. If not amended, this is likely to lead to DCC Incidents which could otherwise be avoided.

The need for clarification of DCC processing description has been identified in two SEC Appendices: Appendix I 'CH Installation and Maintenance Support Materials' (CHISM) and Appendix AD 'DCC User Interface Specification' (DUIS).

Already there have been recorded issues due to lack of a defined unconfirmed Wide Area Network (WAN) Variant in table 3 in CHISM Annex E. The lack of information about the DCC Systems in DUIS have yet to create issue. However, it has been identified that if Service Request 8.14.2 does not accurately reflect the DCC Systems, then there is potential for Customer confusion. Furthermore, Local Delivery will not work without Service Request 6.15.1 and Service Request 6.21 on the Service Request Response List for Service Request Responses.

3. Solution

Proposed Solution

CHISM

When a User sends Service Request 12.1 'Request WAN Matrix' to receive Smart Metering Wide Area Network (SM WAN) Coverage, in most cases they will receive an Availability Date and WAN Variant. However, in an exception case, the Communications Service Provider (CSP) for the South and Central regions may respond to a SM WAN Coverage request (CSPM-S1 or CSPM-S2) with an Availability Date for coverage but without being able to confirm the WAN Variant that will need to be used. The Data Service Provider (DSP) will take this data and returns the Availability Date and the value of the unconfirmed WAN Variant in the response to Service Request 12.1 'Request WAN Matrix'. WAN Variant will require an amendment to table 3 in CHISM Annex E, where it is defined as a space for CSP South & Central.

DUIS

Unit error correction

There has been an incorrect unit of measurement identified in Table 59 'Gas Threshold Matrix'. Data Item 'Block Threshold' has a Unit that needs to be changed from 'kWh' to 'Wh'.

Additional Service Requests for Organisation Certificate tracking

In the event of a Local Command delivery, the DCC requires the delivery of a number of responses to those locally delivered commands via Service Request 8.13 'Return Local Command Response'. For the DCC to track Organisation Certificates held on Devices in the case of local delivery of Service Request 6.15.1 and Service Request 6.21, these two Service Requests will need to be added to the list of Service Request Responses in DUIS Section 3.8.112.2 (Service Request 8.13).

Changes to Service Request 6.24.2

Additional information is needed under DUIS Section 3.8.77 'Retrieve Device Security Credentials (Device)' due to changes to DCC System Processing. This will describe the process where the DCC will check the contents of a response and update the Inventory and SMKI Repository if needed.

Changes to Service Request 8.14.2

Under the description of Service Request 8.14.2 'Communications Hub Status Update – Install No SM WAN' it has been identified that text should be added to better define current DCC System Processing. This would correct the Smart Metering Inventory so that a Communications Hub fitted in a 'no WAN Install' scenario can be correctly identified.

Legal text

The changes to the SEC required to deliver the proposed solution can be found in Annex A.

4. Impacts

This section summarises the impacts that would arise from the implementation of this modification.

SEC Parties

SEC Party Categories impacted			
	Large Suppliers		Small Suppliers
	Electricity Network Operators		Gas Network Operators
	Other SEC Parties		DCC

No SEC Parties will be affected by the implementation of this modification, but will benefit from the clarity it provides.

DCC System

There are no impacts on the DCC Systems as the proposed solution aligns the SEC to reflect the current DCC processes.

SEC and subsidiary documents

The following parts of the SEC will be impacted:

- Appendix I 'CH Installation and Maintenance Support Materials'
- Appendix AD 'DCC User Interface Specification'

Other industry Codes

There are no impacts on any other industry Codes.

Greenhouse gas emissions

There are no impacts on greenhouse gas emissions.

5. Costs

DCC costs

There are no DCC costs associated with this modification.

SECAS costs

The estimated SECAS implementation costs to implement this modification is two days of effort, amounting to approximately £1,200. The activities needed to be undertaken for this are:

- Updating the SEC and releasing the new version to the industry.

SEC Party costs

There are no SEC Party costs expected to be incurred in implementing this modification.

6. Implementation approach

Recommended implementation approach

SECAS is recommending an implementation date of:

- **27 February 2020** (February 2020 SEC Release) if a decision to approve is received on or before 13 February 2020; or
- **25 June 2020** (June 2020 SEC Release) if a decision to approve is received after 13 February 2020 but on or before 11 June 2020.

The Proposer is seeking for this modification to be implemented as soon as possible. The February 2020 SEC Release is the next available SEC Release that this change can be included in.

7. Conclusions

Benefits and drawbacks

The Proposer has identified the following benefits and drawbacks in implementing this modification:

Benefits

- Clarification of the DCC processing within the SEC will mitigate any potential issues that may arise from the lack of DCC Users' understanding of the DCC Systems.

Drawbacks

- The Proposer has not identified any drawbacks to this modification.

Proposer's rationale against the General SEC Objectives

Objective (a)[1]

The Proposer believes that MP081 will better facilitate SEC Objective (a) it will mitigate potential issues which could cause unexpected behaviour and unsuccessful System response.

[1] a) Facilitate the efficient provision, installation, operation and interoperability of smart metering systems at energy consumers' premises within Great Britain;

Appendix 1: Glossary

This table lists all the acronyms used in this document and the full term they are an abbreviation for.

Glossary	
Acronym	**Full term**
CH	Communications Hub
CHISM	CH Installation Maintenance and Support Materials
CSP	Communications Service Provider
DCC	Data Communications Company
DSP	Data Service Provider
DUIS	DCC User Interface Specification
SEC	Smart Energy Code
SECAS	Smart Energy Code Administrator and Secretariat
SM	Smart Metering
WAN	Wide Area Network

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MP081 'Alignment of DUIS and CHISM to reflect current DCC Processing'

Annex A

Legal text – version 0.1

About this document

This document contains the redlined changes to the SEC that would be required to deliver this Modification Proposal.

These changes have been drafted against SEC Version 6.17.

Appendix I 'CH Installation and Maintenance Support Materials'

Add the following to CHISM Annex E3

E.3 Communications Hub WAN Variant Values

E3.1 For the purpose of providing WAN Technology values for use with the 12.1 RequestWANMatrix Service Request as detailed in APPENDIX AD 'DCC User Interface Specification', Communications Hub WAN Variant values are listed in table 3

Table 3; Summary of all Communications Hub WAN Variants for use with Service Request 12.1

WAN Variant (DCC 1.3)	WAN Variant (DCC 2.0)	CSP Region
Standard 420	420	CSP North
Variant 450	450	CSP North
Cellular	Cellular	CSP South & Central
Cellular+Mesh	Cellular+Mesh	CSP South & Central
No Coverage Intended	No Coverage Intended	N/A
" " Space	" " Space	CSP South & Central

To note: on Table 3, " " Space above, CSP South & Central will respond to a SMWAN Coverage request (CSPM- S1 or CSPM-S2) with an Availability Date for coverage but without confirming the WAN Variant that will need to be used.

Appendix AD 'DCC User Interface Specification Version 3.0'

Amend the following in DUIS Section 3.8.1.2

GasThresholdMatrix Definition

Data Item	Description / Allowable values	Type	Mandatory	Default	Units
BlockThreshold	Threshold between one block and the next. Up to 3 can be defined to match the corresponding prices.	sr:GasThresholdType minOccurs = 1 maxOccurs = 3 (xs:unsignedLong)	Yes	None	~~k~~Wh
Index (Attribute of BlockThreshold)	Provides an ordering for the BlockThreshold elements. Unique and consecutive numbers starting at 1.	sr:range_1_3 (xs:positiveInteger from 1 to 3)	Yes	None	N/A

Table 1 : GasThresholdMatrix (sr:GasThresholdMatrix) data items

Add the following new DUIS Section 3.8.77.4

3.8.77.3 Specific Validation for this Request

No specific validation is applied for this Request, see clause 3.2.5 for general validation applied to all Requests.

3.8.77.4 Additional DCC System Processing

Upon receipt of the successful Response from the Device, the DCC shall check the contents of the response against the Device Certificate details held in the Inventory and will automatically update the Inventory and the SMKI Repository if that Response indicates a different set of Device Certificates are in use on the device.

Add the following to DUIS Section 3.8.106.3

3.8.106.3 Specific Validation for this Request

For this Request, the general Authorisation Checks as defined below shall not be carried out.

- a Response Code of E5 as defined in clause 3.2.4 "Verify that the Service Request or Signed Pre-Command is applicable to the Device status"

Response Code	Response Code Description

E081401	The Device Type of the Device being notified is not CHF
E081402	The install date & time supplied is a future date
W081401	The CHF Device status is not 'InstalledNotCommissioned', which is the only valid status compatible with this Service Request. Note: Status of the Device for the CHF and the associated GPF will be updated to InstalledNotCommissioned if it is still in the Pending State

Add the following to DUIS Section 3.8.104.2

3.8.112.2 Specific Data Items for this Request

ReturnLocalCommandResponse Definition

Data Item	Description / Values	Type	Mandatory	Default	Units
OriginalRequestID	Concatenation of BusinessOriginatorID, BusinessTargetID and OriginatorCounter, separated by ":" in the original Service Request RequestID	sr:RequestIDType See **Error! Reference source not found.**	Device GBCS Response is not a Device Alert: Yes Otherwise: N/A	None	N/A
DeviceGBCSResponse	Contents of the response to be returned to DCC – Contents will depend on the original command Valid Set • See Table below if the GBCSPayload contains a Response • See Table below if it contains a Device Alert	xs:base64Binary	Yes	None	N/A

Table 2 : ReturnLocalCommandResponse (sr:ReturnLocalCommandResponse) data items

The following table lists the Service Requests Responses and Device Alerts needed by the DCC Systems from Users via the return Local Command Response Service Request if these are collected from execution of Local Commands on Devices. Note that a HHT will receive all Alerts / Responses from all HAN Devices whilst it is connected; these may or may not be related to the execution of Local Commands.

Service Request Responses
3.2 - Restrict Access For Change Of Tenancy
6.8 - Update Device Configuration (Billing Calendar)
6.15.1 – Update Security Credentials (KRP)

6.15.2 - Update Security Credentials (Device)
6.21 – Regest Handover of DCC Controlled Devices
6.23 - Update Security Credentials (CoS)
8.7.1 - Join Service (Critical)
8.7.2 - Join Service (Non-Critical)
8.8.1 - Unjoin Service (Critical)
8.8.2 - Unjoin Service (Non-Critical)
8.11 – Update HAN Device Log
8.12.1 - Restore HAN Device Log
8.12.2 - Restore Gas Proxy Function Device Log
11.3 - Activate Firmware

Add the following new DUIS Section 3.8.114.4

3.8.114.3 Specific Validation for this Request

No specific validation is applied for this Request, see clause 3.2.5 for general validation applied to all Requests.

3.8.114.4 Additional DCC System Processing

Where the CHF Device status is 'Pending' and response code W081401 is returned, the DCC shall update the CHF Device status to 'InstalledNotCommissioned'. If the GPF Device status is also 'Pending' the DCC shall update the GPF Device status to 'InstalledNotCommissioned'