

SEC Modification Proposal

- **DCC Preliminary Assessment (PA)**
- **Mod Proposal Ref: SECMP 0011**
- **Mod Proposal Title: Including the MAP ID in the Smart Metering Inventory**
- **Mod Path: Path 2 - Authority determination**

Version:

1.0

Date:

16 Sep. 16

Author:

DCC

Classification:

DCC Public

1 Document purpose

The purpose of this DCC Preliminary Assessment is to provide an outline design and provisional pricing for the development of the necessary system changes and any ongoing changes to support or service management costs expected to result from the proposed modification.

2 Revision History

Revision Date	Version Number	Summary of Changes
12/09/16	0.1	Initial version – template created
16/09/16	0.2	Updated with details received from Service Provider PA Responses
16/09/16	1.0	Post review – submitted to WG

3 Overview

3.1 Modification description

Proposal to add Meter Asset Provider Identifier (MAP ID), Meter Operator Identifier (MOP ID), and Meter Asset Manager Identifier (MAM ID) in the Smart Metering Inventory to enable the efficient management of electricity and gas meters by: a) tracking energy supplier's use of meters; b) tracking the firmware upgrade of meters; c) tracking the removal of meters.

The scope of SECMP0011 was refined in the WG2 meeting on 9th May 2016. The Proposer agreed that the Modification Proposal no longer includes adding the MOP and MAM IDs to the Smart Metering Inventory.

4 Timescales to implement change

The current proposed implementation date of June 2017 is not achievable for this SEC modification.

From the DCC preliminary impact assessments received DCC considers that an **approximate lead time of 12 months is required** from any Authority Decision being made to implement the changes defined by this SEC Modification.

DCC recommends that this change is included within a Release with "SECMP004 - Inclusion of Device Serial Number data item in the Smart Metering Inventory" to gain Release efficiencies as part of the implementation approach for this modification as the changes impact broadly the same DCC System components.

5 Preliminary ROM cost range

The table below details the interim Rough Order of Magnitude costs associated with the changes required to facilitate this change.

	Lower	Upper
Base Option Cost	Circa £530,000	Circa £730,000
Ongoing annual service costs	n/a	n/a
Fixed price for Full Impact Assessment	Circa £11,000	

Please note, all ROM information provided above may change, subject to detailed Impact Assessments (IA) being carried out, ongoing refinement of the SEC modification's requirements, the allocation of a SEC modification into a Release and DCC's commercial negotiation process with its Service Providers.

<i>Estimated costs are exclusive of VAT.</i>
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6 Proposed High Level Service/Solution Impacts

The following provides a high level description of the Services and Systems that would be impacted as a result of the solution proposed from this modification. The impacts are focused on the changes to industry parties' interfaces to DCC Systems and their interactions with DCC.

DCC confirm that the changes requested are technically feasible and the changes are expected to have an impact to Users of the following Services:

- **DCC User Interface:** changes to 3 existing Service Request Variants;
- **Self Service Interface:** Addition of 'MAP ID' to 6 SSI reports; and
- **Service Management:** updates to Service Management artefacts and processes (e.g. User guides, Service forecasting, Service Desk processes and training).

The subsections below describe, in greater detail, this Modification Proposal's impact on DCC's Services and Systems.

6.1 DCC User Interface Specification (DUIS)

- All changes to SRVs will be included in a new version of the DUIS and associated DUIS XML schema which will support the updated SRVs;
- The DUIS shall be updated to modify the details of the following existing SRVs;
 - SR 12.2 Device Pre Notification
 - The change to SRV 12.2 definition is to include MAP ID as an optional parameter for all the Device types within the underlying data model. Further validation checks will be performed in the DSP system to ensure that MAP ID is a mandatory data item for ESME and GSME Devices and is invalid via the XML Schema definition to submit this value for all other Device types;
 - SR 8.4 Update Inventory
 - The definition of SRV 8.4 will be changed to include a new choice element 'UpdateMAPId' to allow the Users to update the MAP ID for existing ESME and GSME Devices;
 - SR 8.2 Read Inventory (Response section only)
 - The change to SRV 8.2 is to display the MAP ID in the response data returned to Users; however, there is no change to the input data;

- Validation checks shall be applied to ensure that the new MAP ID data item is allowed to be populated by Eligible Users only for ESME and GSME Devices;
- The MAP ID is an alpha numeric string with 3-4 characters in length (gas and electricity respectively) and this constraint will be enforced at the DUIS XML schema level. Content validation of incoming values for the MAP ID will be on length only, and will be limited to 4 alpha-numeric characters;
- It shall be noted that the RBAC rules of SRV 12.2 will remain the same and all types of authorised Users are allowed to submit this SRV as per the existing DUIS definition;
- The general attributes of the impacted SRVs are summarised in the table below and the changes discussed in this PIA has not caused any changes to the values in the table from the existing DUIS definitions:

Service Reference	Service Reference Variant	Name	Critical	Sensitive Response	Protection Against Replay	On Demand	Future Dated	DSP Scheduled	DCC Only	Eligible User Role
8.2	8.2	Read Inventory	No	No	No	No	No	No	Yes	EIS EES GIS SNA ENO GNO OU
8.4	8.4	Update Inventory	No	No	No	No	No	No	Yes	EIS EES GIS SNA ENO GNO OU
12.2	12.2	Device Pre-notification	No	No	No	No	No	No	Yes	EIS EES GIS SNA ENO GNO OU

6.2 Self Service Interface (SSI)

- SSI screens and reports concerned with Smart Metering Inventory (SMI) data will be updated to include the new “*Meter Asset Provider Participant Code (MAP ID)*” data item, and this will be dependent on Device type as above i.e. only present for ESME and GSME Device types;
- Add MAP ID to the output display items of inventory data for ESME & GSME Devices in the SSI inventory screens (UC_Inventory_001 & the subsidiary UC_Inventory_002) and the SSI reports listed below:
 - RSMI_001 Installation Status Smart Meter Report;
 - RSMI_002 Smart Metering Devices Status and Firmware Report;

- RSMI_003 Smart Metering Devices Status and Model Report;
- RSMI_004 Communications with No Attached Devices Report;
- RSMI_005 Scheduled Service Requests Report; and
- RSMI_007 Device Certificate Report.

7 Impacted Systems

The summary list below provides a summary of the main components of the DCC Total System that will be impacted by this modification.

7.1 DSP Systems

- **DCC User Interface** – Changes to support the introduction of updates to 3 of the current SRVs definitions;
- **Self Service Interface** – Changes to support the introduction of the new data item / attribute “*Meter Asset Provider Participant Code (MAP ID)*” within SSI screens and report output data items;
- **Multiple additional DSP Systems Components:**
 - Changes to the DSP Data Model to add a new data item / attribute “*Meter Asset Provider Participant Code (MAP ID)*” to the ESME and GSME Device records stored within in the SMI;
 - Changes to support the introduction of the additional and updated SRV definitions and associated validation. This will include support for both the new and previous versions of the SRVs; and
 - Infrastructure Impact – additional storage required for the Smart Metering Inventory database due to the additional data item of MAP ID for all ESME and GSME inventory records.

7.2 DCC Enterprise Systems

- **Enterprise Systems Interface** – as the SMI Device table will be updated to hold a new MAP ID data item, there will be an impact on the data items in the Device table which are delivered in ESI-034 Device Extract, as described in section 3.12 Inventory Reporting Database Extracts of the ESI reporting spec.

The impact is that the additional field will need to be documented in the ESI reporting specification, and the new field will be added to the extract query and tested.

8 Options

- None identified

9 Clarifications, Issues and Risks

The detail below provides a summary of the clarifications necessary prior to the production of a DCC Impact Assessment and any material issues and risks that have been identified during this Preliminary Assessment phase.

9.1 Clarifications Required

1. **Requirement clarification. *Scope of Business Requirements*** – The DCC advised SECAS prior to the creation of this PA that the SECAS Business Requirements used as the basis for this PA were not without ambiguity and contradiction. Various assumptions have had to be made by the DCC in order to complete this PA and these have been noted in the section below. Since this time DCC would note that further potential changes to the Business Requirements for this modification have been discussed at subsequent SEC modification Working Group 2 sessions that may further change the scope of this modification away from the details contained in this PA. DCC would require the full scope and business requirements of this CR to be clear and unambiguous prior to any potential Full Impact Assessment request for this modification.

9.2 Issues

1. **Testing scope post PIT** - The Timescales to implement change and Preliminary ROM cost range detailed in sections 4 and 5 above respectively only considers the design, build and testing of this modification implementation up to and including the Pre-Integration Testing phase (PIT).

It is assumed that some further additional System Integration Testing may be required and User Interface Testing will be required as a minimum for the changes proposed as part of this modification, but the expected timelines and costs associated with these additional testing phases cannot be estimated at this preliminary stage as these will be directly effect by the release that this modification is included within. Details of what release this modification might be included within are not known at this point in time hence why no assessment has been carried out for these activities. These time and costs will be added to the time and costs estimates provided as part of this PA in order to obtain the “true” full costs of this modification.

9.3 Dependencies

1. **DUIS versioning.** There is a dependency on the changes proposed as part of this SEC modification on the DCCs implementation of GBCS v2.0 (implemented via BEIS RFC-052 and DCC CR194) as there are a set of wider changes already identified as being required to the DCC Systems to support multiple versions of DUIS Service Requests that are associated with this change. It is therefore assumed that the DUIS Service Request changes referenced as part of this change and included within this PIA will be implemented either within the same release as this

modification or in an earlier release after these changes have been made to ensure that the generic costs for this functionality uplift are not attributed to each SEC modification that requires these global changes.

9.4 Assumptions

DCC would like to confirm prior to Full Impact Assessment the validity of assumptions listed below upon which have been used for the creation of this preliminary impact assessment. Any changes to the assumptions will be reflected within the full impact assessment.

1. **MAP ID applicability to Device Type.** This PIA assumes that MAP IDs are applicable only to the ESME and GSME Devices. If there is a need to record MAP ID values against other Devices, the impact shall be assessed separately.
2. **Validation of MAP ID values.** There is no requirement to maintain a master list of MAP IDs to check the validity of a received MAP ID against. DCC will not verify the source, validity and accuracy of the received MAP ID beyond that of format as defined by the data item DUIS XML Schema definition.
3. **MAP ID values.** This PIA assumes that there are no requirements to maintain the historic MAP ID records associated with the ESMEs and GSMEs. SRV 8.2 – Read Inventory and the SSI reports listed in this PIA will only display the current MAP ID associated with the Device.
4. **DUIS versioning approach.** This modification proposal creates changes to the above mentioned existing SRVs in a system which is live by then, and although a Working Group clarification in the CR suggests a “big bang” approach rather than backwards compatibility, DSP is contractually required to support one previous version of the DUIS interface when a change has been made, so DCC assume this support will need to be provided.
5. **DUIS XML Schema v1.0.** DCC would not prevent Users from submitting a SRV 12.2 request using the DUIS 1.0 schema, as there is no mechanism in DUIS 1.0 to inform the Users about a decision to withdraw support for a SRV.
6. **DUIS Versioning approach.** DCC is intending to support two versions of DUIS Schema simultaneously and the assumption to date has been that Users cannot be prevented from using an existing schema when a new one is introduced. Therefore If a DUIS v1.0 version of SR12.2 is received then the MAP ID data item will be set within the DSP SMI database with a default value of "UNK" if the Device type pre-notified is ESME or GSME.
7. **Implementation Approach.** As the change will be deployed as a new release to an already-live system, ESME & GSME Devices added prior to the release will need to have a default value set

within the Smart Metering Inventory database for all existing ESME & GSME Devices. DCC propose that this default value is set as 'UNK'.

- 8. Implementation Approach.** There will be no bulk upload data acquisition for the population of retrospective ESME and GSME Devices for MAP ID, and Suppliers should use SRV 8.4 Update Inventory to update individual Devices as and when required to update MAP_ID values from the default 'UNK' values to a more meaningful value.
- 9. Implementation Approach.** It is assumed that the DCC will not currently need to provide any special handling for a potential demand spike as suppliers use SRV 8.4 – Update Inventory to update MAP IDs for their Devices after go-live, and that further work may be required to be detailed as part of the FIA request to set expectations in order to spread out the load of this process. DCC presume that, if deemed appropriate, there will be SEC wording regarding obligations about fair use in this area and that there will be an implementation defined as part of the final modification business requirements to plan and control retrospective update SRs from Users to manage volumes similar to those being discussed as requirement extensions for SECMP004. No costs or time impacts have been included for this as part of this PIA. Any requirements for this will need to be included as part of the FIA request.
- 10. SSI Changes.** The MAP ID will not be enabled as an additional inventory details search criterion in the SSI inventory search function (UC_Inventory_001) since a Meter Asset Provider can own many Devices and a search using MAP ID as a criterion will result in a very high number of Device records.
- 11. SSI reporting.** It is assumed that there are no existing requirements for MAP specific reports will be introduced as part of this change.
- 12. SSI reporting.** It is assumed that there are no existing requirements for a Supplier ID to be added into any of the existing SSI reports.
- 13. SSI reporting.** All SSI reports do not validate MAP_ID as a user. All SSI RBAC is as per current solution based on SEC Party role only. All reports still available to parties as they are currently.
- 14. Requirements scope.** It is assumed that the recording of MOP and MAM identifiers are considered out of scope for this modification.
- 15. SSI Changes.** The design considerations of display (and filtering) of these records will need further analysis during production of the FIA.

- 16. Testing.** DCC have assumed that this change will be included as part of a larger package of changes (Release) which will be tested together for implementation in later releases, and analysis of those later phases of implementation and testing should be performed as and when the contents of Releases is finalised. Furthermore, DCC would expect the changes associated with this modification included within a Release to share the cost of that release testing.
- 17. SRV usage / demand volumes.** There are no explicit business requirements stated for usage / demand of these new additional or updated Service Requests and/or the expected usage patterns. Therefore making any assessment on volumes of SRs to be sent by User to the DCC as part of this Preliminary Assessment is not possible. An assumption has therefore been made that there has been no direct additional costs added for any extra capacity within the DCC solutions to support this set of changes and that all usage will fall within the existing capacity profile model.