Data Communications Company

DCC SMETS1 PROGRAMME

SMETS1 USER INTERFACE FORUM

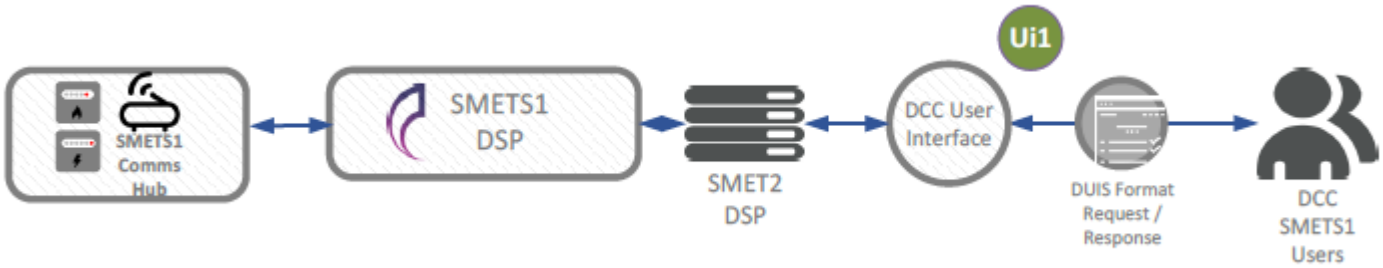
March 2017

AGENDA

Agenda Item	Times
Coffee / Breakfast	From 09:00
Welcome and introduction	10:00 (10 mins)
Agenda walkthrough	10:10 (10 mins)
UI Options Recap	10:20 (20 mins)
Breakout 1: Impact of a non-DSP UI	10:40 (40 mins)
Breakout 1 reporting	11:20 (20 mins)
Breakout 2: The fastest implementation we can imagine	11:40 (40 mins)
Breakout 2 reporting	12:20 (20 mins)
Lunch	12:40 (50 mins)
Reconvene	13:30 (10 mins)
Breakout 3: Challenges in the detail	13:40 (40 mins)
Breakout 3 reporting	14:20 (20 mins)
Conclusion and close	14:40 (30 mins)
Open surgery session	15:10 – 16:00

USER INTERFACE OPTION 1

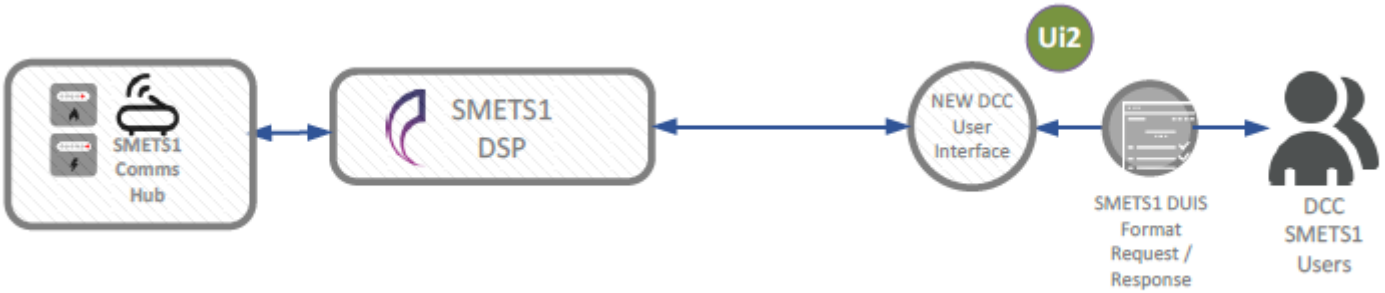
SMETS1 DCC User Interface as an extension to the DSP provided DCC UI, DUIS message format (modified)



An extension of the DCC user interface to accommodate services for SMETS1 meters, using SMETS2 DUIS format service requests (with amendments where necessary), developed and hosted by DSP, using existing network connections to Users (bandwidth permitting).

USER INTERFACE OPTION 2

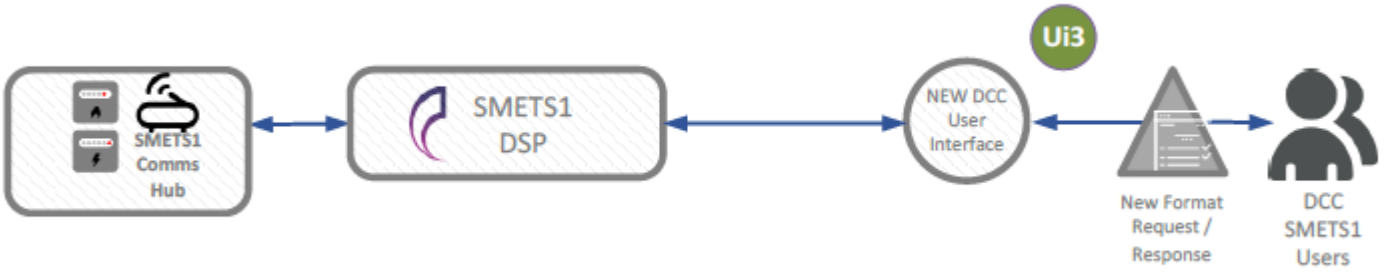
SMETS1 DCC User Interface provided by a new service provider, DUIS message format (modified)



An interface based on the SMETS2 DUIS (with amendments where necessary). Development and hosting competitively procured and with new network connections for Users.
Users would determine which interface to direct service requests to.

USER INTERFACE OPTION 3

SMETS1 DCC User Interface provided by a new service provider, new SMETS1 message format (non-DUIS)



An interface with a new SMETS1 messaging format (not based on DUIS).
Development and hosting competitively procured and with new network connections for Users.
Message format to be developed in collaboration with stakeholders.
Users would determine which interface to direct service requests to.

SUMMARY OF CONSULTATION FEEDBACK (ANONYMISED)

- Broad agreement with the range of options identified
- Variants to those options were suggested, involving continued support for SMSO interface formats along with a DUIS based interface and/or re-use of DCC network infrastructure for a new SMETS1 DCC User Interface
- Impact on Users' business systems and processes was identified as a key concern for any option involving implementation of new network connections and/or message format

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CONSOLIDATED OUTPUTS FROM BREAKOUT SESSIONS

BREAKOUT SESSION 1
IMPACT OF A NON-DSP UI

BREAKOUT SESSION 1 - IMPACT OF A NON-DSP UI

Cost (1 of 2)

- Assumptions that drive cost need to be shown
- Supplier operational processes / customer experience / cost / possibly having 2 different systems or customer journeys
- It was highlighted that the closed down/ramping down costs of SMETS1 should also be taken into account.
- Managing exit from a SMETS1 solution (as volumes decline) would involve additional cost for Suppliers if there is a separate S1 interface.
- Any new interface could place additional burden on Users in terms of Service Request forecasting and managing Anomaly Detection Thresholds.

BREAKOUT SESSION 1 - IMPACT OF A NON-DSP UI

Cost (2 of 2)

Difference in viewpoint between groups around cost:

Lower Cost

- General feeling was that UI1 is the cheapest, easiest, quickest, least complex option. However, it was necessary to have an end-to-end view first to drive these decisions.
- Standardised suite of services would keep cost down

vs

Higher cost

- Probably longer lead time
- Maintenance - Higher cost
- Management - Higher management overhead

BREAKOUT SESSION 1 - IMPACT OF A NON-DSP UI

Functionality (1 of 2)

- Different levels of functionality for SMETS1 could mean that any interface (regardless of option) is necessarily different to S2.
- A use case view of the services will be useful.
- Prefer to have a single interface as it removes routing challenge , Will there be separate routes?
- Would SMETS1 Meters have a GUID or other unique ID? Could that be used for routing purposes?
- Is the SSI going to be available for SMETS 1?
- Will there be a single Smart Metering Inventory for S1 and S2, irrespective of the UI option selected, or would Users need to query separate inventories?
- Discussions around SMETS1 meters gained through churn
- Various discussions around re-using the existing as much as possible. This includes existing SMETS2 and/or existing SMSO SMETS1 interface capabilities / functions / specifications / message formats

BREAKOUT SESSION 1 - IMPACT OF A NON-DSP UI

Functionality (1 of 2)

Difference in viewpoint between groups around routing:

- It was noted that suppliers invested in SMETS1 already have the ability to route to either SMETS1 or SMETS2

vs

- How will Users identify which interface to use if not the existing DCC UI? Registration data can only be taken as an indicator that a Meter may be SMETS1. Users need further information to determine whether it's a DCC enrolled Meter and how to communicate with it. Even for S2, on gaining a customer a User will immediately query the Smart Metering Inventory to obtain the GUIDs of the devices at that premises.

BREAKOUT SESSION 1 - IMPACT OF A NON-DSP UI

Security

- Security arrangements for any non-DSP interface need to be clarified. Do all of the requirements of the SEC apply to any SMETS1 interface too? What would be the security solution? Re-use of DCCKI, IKI and SMKI, or something equivalent, or something new? Any divergence from the current arrangements impacts users in terms of implementation, testing, user entry, ongoing management.
- Any new S1 interface would need to address CNI requirements, given the anticipated volume of S1 Meters.

BREAKOUT SESSION 1 - IMPACT OF A NON-DSP UI

Test and User Entry Process Testing (UEPT)

- New interfaces / PEPs / NEW PKI possibly SREPT
- Would need a view of what would be needed around UEPT
- How will future interface changes going to be managed

BREAKOUT SESSION 1 - IMPACT OF A NON-DSP UI

Miscellaneous

- It was suggested that another consultation on the IEPFR responses after these user fora should be conducted.
- Concerns raised around SMETS1 meters to be self-certified by the energy suppliers.
- Maintaining multiple physical connections does not have a material impact in and of itself.

BREAKOUT SESSION 2
THE FASTEST IMPLEMENTATION WE CAN IMAGINE

BREAKOUT SESSION 2 - THE FASTEST IMPLEMENTATION WE CAN IMAGINE

Actions

- As soon as possible, develop a
  - “Starter for 10” draft showing the potential changes
  - Use cases
- Scenario and/or data modelling may accelerate the design and stakeholder engagement process
- Get the right people in the room to discuss based on first draft
- The detailed UI specification is required before the scale of changes can be assessed;

BREAKOUT SESSION 2 - THE FASTEST IMPLEMENTATION WE CAN IMAGINE

Considerations (1 of 2)

- Continuous stakeholder engagement essential for any option
- Under UI options 2 and 3, minimum timescales may also be driven by network connectivity lead times.
- Security concerns and remedies for any solution will add to the costs and times.
- Phase implementation was considered as a potential accelerator. Participants questioned whether this would deliver any time savings to reach the Final Operating Capability.
- Re-use as much as possible of what exists in SMETS1 & SMETS2
- Use the least amount of resources possible.
- The need to identify and then focus on where the need is greatest.
- Take advantage of the existing interoperable providers. / Does an interface exist today that could become the DCC S1 UI?

BREAKOUT SESSION 2 - THE FASTEST IMPLEMENTATION WE CAN IMAGINE

Considerations (2 of 2)

- Support for multiple interface formats was considered to be potentially attractive to Users, but there were concerns over the complexity and ability to deliver. Would also be influenced by the Integration Path selected.
- Support existing S1 suppliers first in a phased implementation approach.
- Discussions around the makeup of SMETS1 meters' total projection.
- Explore options beyond UI1/UI2/UI3
- UI1 has lower testing requirements (possibly)
- UI1 has minimal changes to business processes

BREAKOUT SESSION 2 - THE FASTEST IMPLEMENTATION WE CAN IMAGINE

Considerations (2 of 2)

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BREAKOUT SESSION 2 - THE FASTEST IMPLEMENTATION WE CAN IMAGINE

Constraints

- It was highlighted that the more commercial arrangements we get into the more time it will take to implement.
- It was highlighted that there are a number of regulatory and wider industry changes obligations that need to be met by the industry in the same time frame. This makes resources scarce and adds risk & delays.
- Concerns were raised regarding the new entrants to the market. So as not to make any solution a barrier to entry.
- The detailed UI specification must be formalised before investment by Users in solution changes (application reconfiguration, new network connectivity etc.)
- Time for Users to build out to a SMETS1 interface is ~12 months from the point at which the interface specification is stable (irrespective of UI option)
- Need confirmation of “real” timeline for UAT environment being available
- End-to-end implementation time for UI3 is longer due to the need to design a new interface specification
- Users’ regression testing would take longer for UI2/3
- Users’ risk and need for planning contingency would be greater for UI2/3 (more unknowns)

BREAKOUT SESSION 3
CHALLENGES IN THE DETAIL

BREAKOUT SESSION 3 - CHALLENGES IN THE DETAIL

Physical Equipment

UI2/3

- UI2/3 would require new gateway hardware. This in itself may not be material. Security requirements, user entry and ongoing maintenance of separate interfaces were of greater concern.
- A service that “delivers” for the end customer
  - Customer Experience
- Physical infrastructure for UI2/3:
  - Need additional data centre equipment, e.g. network equipment, servers, firewalls etc.
  - Need to replicate in DR data centre

BREAKOUT SESSION 3 - CHALLENGES IN THE DETAIL

Security

All UI Options

- Address single points of risk:
  - Registration data
  - Security credentials
- SMETS1 security requirements need definition. Do these differ from what is already in the SEC?
- SMETS1 solution must not impact DCC security, performance or operation.
- At least maintain the risk equivalence with SMETS2 if not less.

UI2/3

- Additional Code of Connection to manage

BREAKOUT SESSION 3 - CHALLENGES IN THE DETAIL

Operational risk though period of change

All UI Options

- Delivery risk is reduced the more existing platforms or interfaces are utilised.
- It was highlighted that the DCC service delivery teams need to geared up to SMETS1 solution.

BREAKOUT SESSION 3 - CHALLENGES IN THE DETAIL

Operational risk though life of the service

UI1

- Need to consider, in the case of UI1, the impact of future changes to SMETS (new version)

UI2/3

- UI2/3 need to be maintained by Users whilst withering towards the end of life of the solution
- Ongoing testing of two services rather than one.
- Service management: possible additional cost from needing to manage, fault find etc. two separate sets of links

BREAKOUT SESSION 3 - CHALLENGES IN THE DETAIL

Response/performance times (1 of 2)

All UI Options

- Scalability of the system – e.g. Reads + Firmware Upgrades on circa 10 million meters / assets – solution must be fit for purpose
- Need to determine latency of the range of solutions (new elements + existing solutions) and whether this is acceptable.
- Need to consider performance and resilience in terms of:
  - Differences between enrolled S1 cohorts
  - Differences across S1 and S2 solutions
  - Materiality of the above given Meter volumes per cohort
  - Materiality at a message specific level
- Interface response times will impact and drive the service provider times affecting customer service.
- Service performance has an impact on end users.
- Service performance to at least match up SMETS2 standards.

BREAKOUT SESSION 3 - CHALLENGES IN THE DETAIL

Response/performance times (2 of 2)

All UI Options (continued)

- Implementation details need to be known first in order to understand and comment on performance aspects of SMETS1.
- SLA comparisons between existing SMETS1 service and New DCC SMETS1 service needs to be made.
- New DCC SMETS1 service should be at least equal to or better than SMETS2.

UI2/3

- Performance for UI2/3: Need to ensure scaled correctly to handle peak demands (e.g. daily read cycle, firmware updates etc.)

BREAKOUT SESSION 3 - CHALLENGES IN THE DETAIL

Miscellaneous (1 of 3)

- Critical Alerts – maintenance of all of these
  - e.g. Tamper / Health and Safety
  - Can the config be changed (participants thought this not possible or SR not there)?
- Functionality (all Options)
  - Standardisation of presentation of alerts and alarms across meter types
- Service to non-DCC Users – what burden does a separate interface place on new Users?
- A concern was raised regarding the existing S1 end–users and to ensure supply is maintained. That these people do not lose out or get dropped out while this transition is being made. It was assumed that different end-users may suffer different consequences as a result of the option choices made.
- COS – Meter changes within COS period
  - Considerations of what will happen (Edge case what happens when scheduled messages are for devices that churn / removed)
  - RDP data must be aligned

BREAKOUT SESSION 3 - CHALLENGES IN THE DETAIL

Miscellaneous(2 of 3)

- Compatibility of meter asset / HAN device sets and the maintenance of these e.g. IHD Firmware vs. Meter set
- Management of connected assets needs to be considered (e.g. IHD ZigBee pairing status)
- Emergency Firmware update
  - Security Patch or vulnerable customer needs PPMID functionality etc.
  - Need to target via specified batches – meter type / customer type / geographic location etc.
  - Speed of update
- Concerns were raised that the current SMSO Self-service interface (SSI) might lose functionality in the new world.
- It was highlighted that the SMETS2 SSI is different from some of the current SMSO SSI.

BREAKOUT SESSION 3 - CHALLENGES IN THE DETAIL

Miscellaneous (3 of 3)

- How to transition S1 meters into DCC was discussed. Whether it will be a big-bang or phased approach.
- How these transitioned S1 meters will be identified?
- There was a series of discussions regarding SMETS1-capable meters (but not S1 compliant yet) existing in the network.
  - How to manage these meters?
  - Should these be abandoned?
  - How to Enrol & adopt them?
  - How to upgrade these to be S1-compliant?