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MP170 'Firmware updates to Point to Point Alt HAN Devices'

August 2021 Working Group – meeting summary

Attendees

Attendee	Organisation
Bradley Baker	SECAS
Ali Beard	SECAS
Kev Duddy	SECAS
Khaleda Hussain	SECAS
Joey Manners	SECAS
Anik Abdullah	SECAS
Abhijit Pal	DCC
Chris De Asha	DCC
Remi Oluwabamise	DCC
David Walsh	DCC
Andrew Firth	AltHANCo
Sarah-Jane Russell	British Gas
Julie Geary	E.ON
David Lyons	E.ON
Daniel Davies	ESG Global
Alastair Cobb	Landis & Gyr
Chris Latchford	Money Plus Energy
Ralph Baxter	Octopus Energy
Michael Walls	Ofgem
Emslie Law	OVO Energy
Mafs Rahman	Scottish Power
Elias Hanna	Smart ADSL
Matthew Alexander	SSEN
Kelly Kinsman	WPD

Overview

The Smart Energy Code Administrator and Secretariat (SECAS) provided an overview of the issue identified by MP170 'Firmware updates to Point to Point Alt HAN Devices', the responses to the request for information (RFI), the drafted business requirements and proposed next steps.

Issue

- Without Over-The-Air (OTA) firmware updates to Alternative Home Area Network (Alt HAN) Point to Point (P2P) Devices fixes to defects can only be resolved by onsite exchanges
- Security defects would not be able to be resolved immediately
- New innovation and functionality would not be cost effective to develop

Working Group Discussion

Background

The Proposer presented slides on the Alternative Home Area Network (Alt HAN) solution, explaining that there are four different Alt HAN Point to Point (P2P) Devices which are configured together to extend the range of the HAN. The different configurations used depend on the smart metering set up at the property and which Device (In Home Display (IHD) or Gas Smart Metering Equipment (GSME)) is not within range of the HAN. A property will have two or three Alt HAN P2P Devices installed to provide the Alt HAN solution.

SECAS then presented the background and issue, stating that there are no current provisions within the SEC to support OTA updates for Alt HAN P2P Devices. Functionality being brought in by the implementation of SECMP0007 'Firmware updates to IHDs and PPMIDs' will provide OTA capability to Prepayment Meter Interface Devices (PPMID)s and HAN Connected Auxiliary Load Connection Switches (HCALCS) in November 2021. This is dependent on Communications Hubs updates which are expected to be available in Q4 2022. It is hoped that the OTA solution can utilise this functionality for MP170 to reduce costs.

A Working Group member commented that SECAS should be encouraging a solution for all OTA firmware updates to key parts of the smart metering infrastructure.

RFI responses

SECAS summarised the RFI responses that helped shape the draft business requirements. Responses had broadly been split into ‘yes’, ‘no’ and ‘cost dependent/more info needed’.

A Working Group member queried whether the costs should be separated for each requirement to assess whether each one should be included in a solution. The Data Communications Company (DCC) advised that they wouldn’t be able to split out costs for each requirement. Working Group members noted that it must be clear whether a full solution should be used, or a reduced solution that is cheaper would be more appropriate. The Working Group stated that this is only possible to be discussed if costs can be apportioned.

Responses to the RFI indicated Suppliers need to be able to confirm that firmware updates were successful, and that they need to be able to read the current firmware version on the Device. A

Working Group member highlighted that the detail in the respondents who had indicated 'no' were actually in support of the ability based on their comments.

Responses provided a split for whether Suppliers should be able to replace any Smart Metering Key Infrastructure (SMKI) credentials on Alt HAN Devices. The Proposer clarified that this requirement should have read whether SMKI credentials should be replaceable in general. A Working Group member highlighted that this changed the question and that would have resulted in a decision in favour of the requirement. The Proposer noted that the Security Sub-Committee (SSC) had been presented with this requirement and they had supported the requirement that SMKI credentials should be replaceable, but not as part of a business as usual process.

Draft business requirements

SECAS presented the draft business requirements that had been developed with the RFI responses and invited feedback from the Working Group.

One Working Group member noted that the Alt HAN P2P Devices are not alike, and one of the Alt HAN Devices relies on battery power. They questioned whether this battery powered Alt HAN Device should be able to process firmware updates without losing power and affected the Alt HAN. It is important that any firmware update for that Device should not impact the other Devices on the HAN. They also questioned the priority of the Alt HAN Device, in relation to situations where multiple OTAs are to be carried out across several Devices. The Proposer advised that the intent would be for the Alt HAN Device to mirror the priority and Service Level Agreements (SLAs) that have been defined for a PPMID.

Another Working Group member queried who is responsible for updates on split supply sites (where a premises has a separate Supplier for electricity and gas. The DCC confirmed that both responsible Suppliers shall be able to carry out firmware updates in split supply scenarios, matching SECMP0007.

A further Working Group member commented that Alt HAN is introducing an enduring additional piece of smart infrastructure, that is more embedded than In Home Displays (IHD)s and PPMIDs. They stated that the SSC should be taking a more proactive role in determining the security requirements for the Alt HAN Devices. They felt that there was potential for future situations where SSC could be faced with a security decision that would effectively cause the Alt HAN part of the smart infrastructure to fail (at a potential cost of £10m) due to there being no OTA capability. Therefore, they should have a proactive interest in making sure that they will not be compromised this way in the future by driving the security requirements. As long as any solution meets the SSC relevant requirements then additional requirements to suit Suppliers needs should build on this.

Solution options

SECAS noted that there have been two initial proposals as to how to achieve the solution. These are where the Alt HAN Device can either join the HAN as a Consumer Access Device (CAD), or as a PPMID. The final RFI question gained Parties' views on these options.

One Working Group member highlighted that they were in full support of exploring OTA updates to Devices, and questioned whether a solution using WiFi had been investigated. The Proposer advised that the Devices are Zigbee-compatible only, and therefore OTA updates can only be delivered through the DCC. This will use the basic principle to re-use the functionality from SECMP0007 to help reduce cost.

Another Working Group member noted that SECMP0007 removed Type 2 Devices from the scope due to the costs and questioned whether this modification was aiming to bring all Type 2 Devices into scope for OTA. The Proposer confirmed it would not be all Type 2 Devices, and it is to be decided whether the Alt HAN Devices remain Type 2, or become Type 1. To align with the SECMP0007 functionality they will have to be Type 1 Devices.

A Working Group member also noted that Alt HAN Devices will be installed before this modification is implemented. The Proposer advised that AltHANCo are working internally to make decisions based on MP170's progression and mitigating risk of stranded assets accordingly.

A SECAS member questioned whether Suppliers had concerns about being able to deploy the updates within the five WD SLA, and also whether the Communications Service Providers (CSPs) or Data Services Provider (DSP) would have capacity constraints to deliver these updates. The Proposer noted that the volume estimations were still being worked on by AltHANCo. A Working Group member commented that the volume of OTA updates would be far easier and cheaper to deal with than the same number of Device replacements if there was no OTA firmware update process.

Next Steps

The following actions were recorded from the meeting:

- Incorporate comments from Working Group and Sub-Committees into business requirements and solution options
- Request DCC Preliminary Assessment.