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## SECMP0007 'Firmware updates to mandated HAN devices'

4<sup>th</sup> April 2016

### Meeting 1 Minutes

#### Attendees:

Working Group 1 Members	Organisation
Mark Pitchford (SECMP0002 and SECMP0007 Proposer)	Npower
Alan Creighton (SECMP0003 Proposer Representative)	Northern Powergrid
Sam Charlton (SECMP0005 Proposer Representative)	EON
Emslie Law (SECMP0006 Proposer)	SSE
Chris Spence	EDF Energy
Gavin Brown (part)	Chameleon Technology (teleconference)
Louise Porter (part)	Utilita Energy (teleconference)
Tim Boyle	Chameleon Technology

Representing	Other attendees
DECC	Relve Spread
DCC	Stuart Scott
	Adam Pearce (part)
SECAS	Jill Ashby (Chair)
	Kevin Atkin (Technical Support)
	Ian Swanson (Technical Support)
	David Barber (Modifications Lead)
	Sebastian Rattansen (Meeting Secretary)
	Sasha Townsend (Modifications Analyst (part))
	Keith Phakoe (Modifications Analyst (part))

## Apologies:

Working Group 1 Members	Organisation
Graham Smith (SECMP0003 Proposer)	Western Power Distribution
Tim Newton (SECMP0005 Proposer)	EON

## 6. SECMP0007: Firmware updates to mandated HAN devices

### 6.1 Overview

The Proposer's representative presented a brief overview of the Modification Proposal which seeks to introduce the capability to update firmware Over-The-Air (OTA) for mandated Home Area Network (HAN) devices (In-house Display (IHD) / Prepayment Interface Devices (PPMID) / HAN Connected Auxiliary Load Control Switches (HCALCS)) via the DCC. This will address gaps for this functionality as currently laid out in the SEC Technical Specifications.

### 6.2 WG consideration of Modification Proposal

The WG discussed the outline requirements for SECMP0007, as set out below in Table 5:

Refinement	WG View
Confirmation of devices to which this Mod refers	HCALC, PPMID, IHDs is the scope confirmed in the WG (see 6.1.1. for further details).  Any others, e.g. Consumer Accessed Devices (CADs) are excluded from this Mod but can be subject to another Mod if a Proposer wishes.
Adaptability of current SEC framework as a starting point for DCC User needs	The WG decided that a workshop was required to enable further discussions on the requirements (see 6.1.1. for further details)

**Table 5: SECMP0007 outline requirements**

### 6.3 Supporting Discussion Points

A member asked if there was a plan to extend this capability to other devices not mentioned in the Proposal above, for example CADs. The discussion concluded that, as the specific format and structure of CADs are as yet unknown and are largely consumer-driven options, it was unclear how the Mod could be extended to cover them.

SECAS pointed out that there are a number of ramifications arising from extending OTA firmware management. These include device certification implications, the practicality of getting updates out to the devices, and the capacity for devices of holding larger firmware images. A Member pointed out that larger images may slow down the HAN, although typically Firmware images for non-meter devices can be smaller (in the region of 256/512kb).

The DCC also highlighted that, aside from the mechanism(s), metrics, albeit assumptions, will be needed to inform the PA. Examples included: image packet size; any rules to govern/regulate them; the capability of the end device to evaluate any updates which may result in validations by the DCC before forwarding any firmware changes.

A WG Member pointed out that the frequency of updates would be a factor, as history suggests that there may be many updates. Moreover, the packet size will be relevant, as it may give rise to fragmentation, which in turn may extend the time that some firmware updates would take to get on to the device. It was highlighted that the slots were currently set and asked if it was prudent to leave this as it was and let the Supplier manage the traffic.

The WG discussed multiple updates, e.g. Electricity Smart Metering Equipment (ESME)/Gas Smart Metering Equipment (GSME) and other devices, and the need for any priority rating. Factors might include a hierarchy to manage overwriting currently running updates with a new one considered more important or whether there was a need for capability to carry multiple images simultaneously. A Member pointed out that the mechanism was already in place. There was already a 'get out of the way' action in ESME/GSME addressing this. However, dedicated slots for each device would be a larger undertaking, and subject to the device's in-built functionality.

The WG acknowledged that currently no mechanism exists for a device to know which Supplier is eligible to send it any firmware updates. This was easier to address with HCALCS, as they had a capability to recognise an update from a responsible party. However, IHDs are not configured to a particular Supplier.

It was noted that the Mod was an appropriate starting point for the issue at hand. However other transport mechanisms should not be discounted if they came to light during the Mod Refinement process.

Depending on the direction of this Mod, there may also be security implications which the Security Sub-Committee will need to consider in light of whether a similar security model as other devices would be appropriate. It is strongly recommended that early views from the SSC as to security implications are brought to the WG in order to take these into consideration in developing the Mod

There may also be consequential impacts for the progression of the related Mod for a Centralised Firmware Library (SECMP0009).

They did note that the mechanisms used for existing SMETS1 meters and associated devices, could be looked at to aid the discussions in these areas.

A WG member asked whether, as part of Demand Management estimates, there may be any correlation between the volume of updates to ESME/GSME the DCC were expecting in the first year. It was suggested the current ESME/GSME projections could form the basis for such an estimate.

The WG were of the view that a dedicated requirements-definition workshop should be arranged before the next planned WG1 meeting, to specifically focus on the SECMP0007 matters.

The Chair concluded by noting that the questions raised during the WG discussions would provide the basis for the workshop.

#### 6.4 Decisions and next steps

The WG will meet again in a months' time, but a workshop will be arranged to work through the array of questions that the WG discussed and highlighted in greater detail.

**ACTION WG1\_01\_12:** SECAS to arrange workshop to focus on SECMP0007. The workshop will be convened before the next WG meeting, in week beginning 18<sup>th</sup> April 2016.

**ACTION WG1\_01\_13:** SECAS will draft a set of questions that would form the basis of a workshop discussion.