

Interim Options Paper

Sub Group 2

September 2010

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Executive Summary

This document provides an initial descriptive summary of the different options identified by the ERA as potential technical solutions to Interim Interoperability arrangements.

Introduction

The following sections describe a number of potential models for the implementation of an interim interoperability solution for smart meters. The following models have been considered:

- Central translation services (Supplier owned head ends)
- Standardised head end services
- Consolidated head end (Interim service owned head ends)
- Suppliers provide data services
- Gaining Supplier configures Head End on CoS

Further options which would allow for variations in the ownership and control of head ends and in the transition to the interim solution have been identified but not evaluated at this time. e.g. Suppliers could continue to use their existing smart infrastructure until CoS, at which point the meter and communications responsibility would be transferred to the interim solution.

The following themes are common to all the potential models

- The interim solution demands resource commitment from suppliers potentially at expense of the implementation of the industry programme;
- Enduring security and data privacy principles need to be embedded within the interim design, which may result in significant costs;
- Mechanisms for obtaining accurate and up to date registration data from IGTs need to be confirmed;
- Timescales for interim solutions do not lend support to the early development of a common approach to PPM;
- The Interim service is expected to have a short life but will require significant resources to establish and therefore must be delivered at a commercially viable cost;

Assumptions

An exhaustive list of the assumptions that have been made about the implementation and operation of the Interim Interoperability Arrangements is yet to be finalised. These assumptions will be provided as soon as these details are available.

Option 1 - Central Translation

Description

Suppliers retain ownership of Head Ends.

Prior to implementation of the interim solution the installing Supplier would manage the meter through its own Head End. i.e. Direct access. Once the interim solution has been established there would be potentially two ways that this model could operate:

- The installing/lead supplier could continue to manage technically compliant meters through its own Head End until CoS, at which point support for the meter is transferred to the Interim Solution
- Support for all technically compliant meters is transferred into the Interim solution from the point of implementation

Meter point and Meter Id are passed to the interim service on install and other information is transferred on CoS, or all of the information is migrated to the Interim service at start up.

Once a meter is managed through the interim service it remains so until the DCC is operational.

Interim Services – pre initial CoS

- Data Management
 - Interim Service holds installed Smart Meter details and provides this information to current and prospective suppliers via a lookup service.

Interim Service - post initial CoS/migration

- Single Point of Access to meter through interim service
- Translation services for a defined set of meter interactions
 - Web service requests to Head End specific formats
 - Head End specific formats to web service response
 - DTN/Uklink to HE specific formats
 - HE Specific format to DTN/UKLink
- Access Control
 - Determines who the registered Supplier is and restricts access
- Data Management
 - Interim Service holds installed Smart Meter details and provides this information to current and prospective suppliers via a lookup service. Also enables identification of Head end and comms requirements
 - Identifies the Head End owner to facilitate communications charging and fault resolution

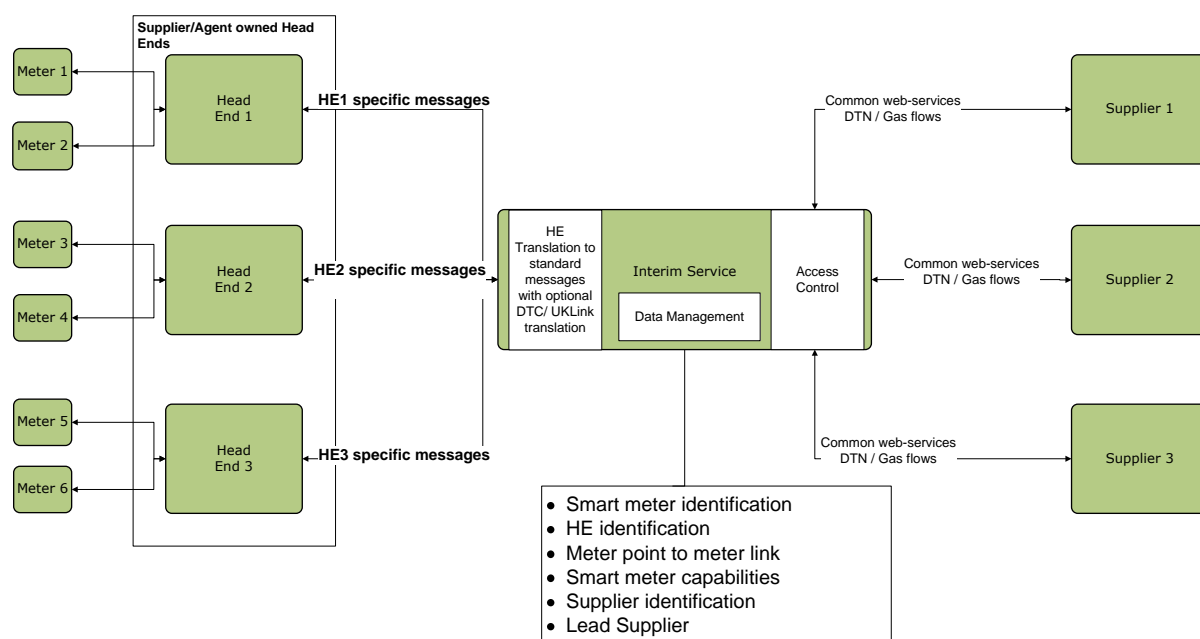
Other Interactions

- Supplier to Interim Service
 - DTN/IX and/or web services
- Interim Service to Head End
 - HE Specific messages/protocols defined by HE provider

Charging Options

- Suppliers transfer comms contracts for meter points to the interim service on CoS or on establishment of Interim service. The Interim service charges Suppliers for subsequent usage.
- Interim service charges end users, lead Supplier charges interim service provider.
- Bi-lateral arrangements between Suppliers.
- Where the interim service is used for meter communications from the point of meter installation, the interim service charges Suppliers for communications usage.

Figure 1: Central Translation



Option 2 - Standardise Head End Services

Description

Suppliers retain ownership of Head Ends.

Prior to implementation of the interim solution the installing Supplier would manage the meter through its own Head End. i.e. Direct access. Once the interim solution has been established there would be potentially two ways that this model could operate:

- The installing/lead supplier could continue to manage technically compliant meters through its own Head End until CoS, at which point support for the meter is transferred to the Interim Solution
- Support for all technically compliant meters is transferred into the interim solution from the point of implementation

Meter point and Meter Id are passed to the interim service on install and other information is transferred on CoS, or all of the information is migrated to the Interim service at start up.

Once a meter is managed through the interim service it remains so until the DCC is operational.

Interim Services – Pre initial CoS

- Data Management

Interim Service holds installed Smart Meter details and provides this information to current and prospective suppliers via a lookup service.

Interim Service - Post initial CoS/Migration

- Single Point of Access to meter provided via the interim service
- Translation services for a defined set of meter interactions
 - Web service requests to standardised Head End services (adopted and supported by all Head End providers using a common message format) Standard Head End services to web service response
 - DTN/Uklink to standard HE services
 - Standard HE services to DTN/UKLink
- Access Control
 - Determines who the registered Supplier is and restricts access
- Data Management
 - Interim Service holds installed Smart Meter details and provides this information to current and prospective suppliers via a lookup service. Enables identification of Head end and comms requirements

- Enables charging and fault resolution by identification of lead Supplier

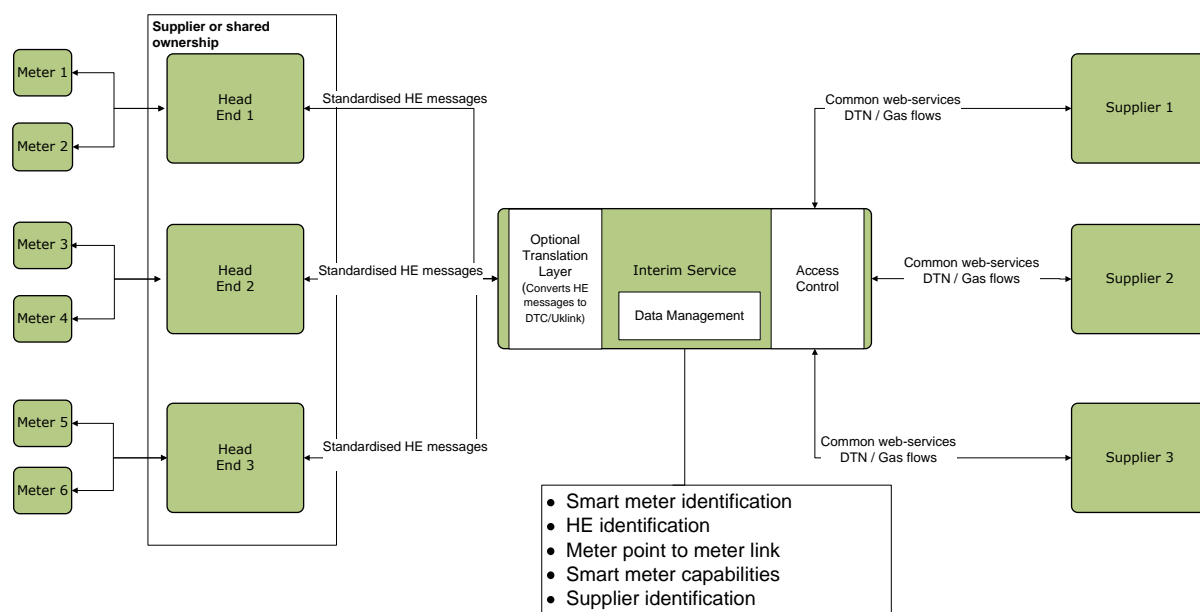
Key Interactions

- Supplier to Interim Service
 - DTN/IX and/or web services
- Interim Service to Head End
 - Standard HE specific messages/protocols defined by HE providers

Charging Options

- Suppliers transfer comms contract for meter point over to interim service on CoS or on commencement of Interim service. Interim service charges Suppliers for subsequent usage.
- Interim service charges end users, lead Supplier/Head End owner charges Interim service provider.
- Bi-lateral arrangements between Suppliers.
- Where the interim service is used for meter communications from the point of meter installation, the interim service charges Suppliers for communications usage.

Figure 2: Standardise Head End Services



Option 3 - Consolidated Head End with Common Services

Description

Interim service owns single or multiple consolidated Head Ends.

The option exists for the interim service to supersede Suppliers own arrangements on implementation. This would mean that the Interim service will need to accommodate meter installs as part of requirements to support Ofgem rollout targets.

Interim Service

- Single Point of Access to meter through interim service
- Translation services for a defined set of meter interactions
 - Web service requests to Head End specific formats
 - Head End specific formats to web service response
 - DTN/Uklink to HE specific formats
 - HE Specific format to DTN/UKLink
- Access Control
 - Determines who the registered Supplier is and restricts access
- Data Management
 - Provides smart meter lookup for Suppliers to identify Smart meters prior to taking over supply
 - Enables identification of Head end and comms requirements
 - Enables charging and fault resolution by identification of lead Supplier

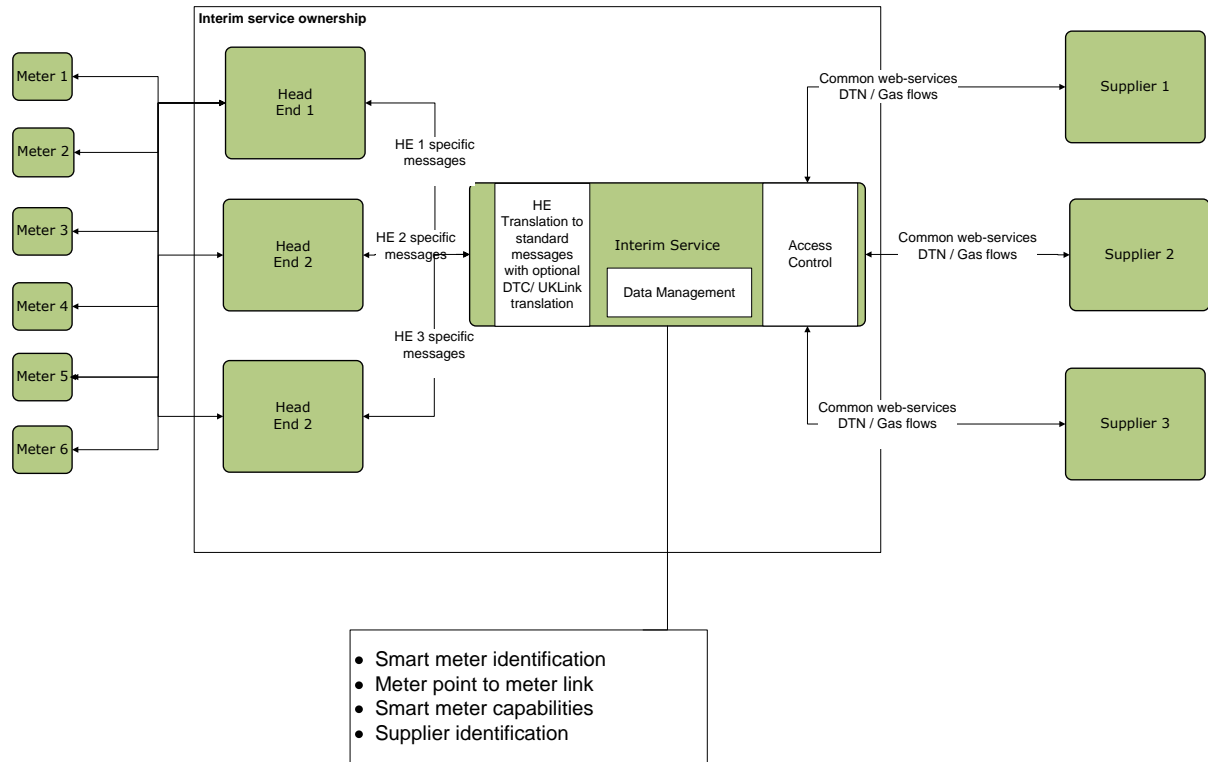
Other Interactions

- Supplier to Interim Service
 - DTN/IX or web services
- Interim Service to Head End
 - HE specific messages/protocols as defined by HE manufacturers

Charging Options

- Interim Service provider is responsible for charging users and holds comms contracts.

Figure 3: Consolidated Head Ends



Option 5 - Suppliers Provide Data Services

Description

Suppliers perform their own rollouts of Smart Meters and WAN Communications Devices.

The installing Supplier provides services on request to the current Supplier. The responsibility for access control lies with the installing Supplier.

A separate, central system (Interim Service) provides details of:

- Smart Metered Supply Points
- Head End manager
- Meter Id

This system provides a lookup facility for this information and limits access to the Smart Metering data to authorised parties. The interim service may require access to registration data.

Interim Service

- Data Management
 - Provides smart meter lookup
 - Enables identification of lead Supplier

Installing Supplier

- Single Point of Access to meter through installing Supplier
- Potential translation services
 - Web service requests to Head End specific formats
 - Head End specific formats to web service response
 - DTN/IX to HE specific formats
 - HE Specific format to DTN/IX
- Access Control
 - Determines who the registered Supplier is and restricts access

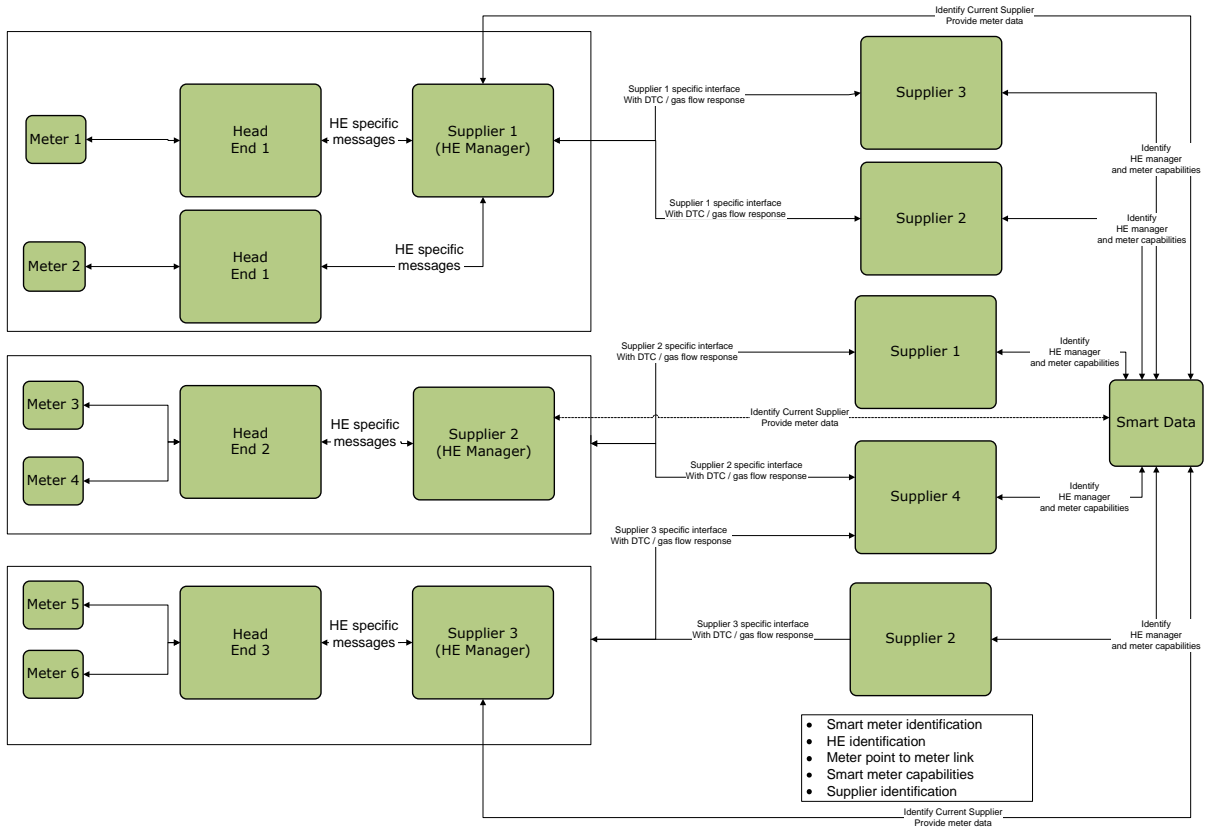
Other Interactions

- Supplier to Interim Service
 - DTN/IX or web services – identify whether a meter is smart and who the lead Supplier is
- Installing Supplier to Head End
 - HE specific messages/protocols defined by HE manufacturer

Charging Options

- Bi-lateral arrangements between Suppliers.
- Interim service charges for data management.

Figure 4: Suppliers Provide Data Services



Option 6 - Supplier Configures Meter/HE on CoS

Description

Suppliers perform their own rollouts of Smart Meters and WAN Communications Devices.

Suppliers make requests direct to the meter without going through a third party. Comms and security details are made available to a gaining Supplier on Change of Supply. This data could be made available through either a direct Supplier to Supplier exchange of access, comms, meter details and CoS read or by the losing supplier transferring those details directly to the Interim service on CoS date. Mandated provision of this data would require changes to the rules governing CoS to place the obligation on the losing supplier to provide this data.

Suppliers use their own infrastructure and comms arrangements.

Suppliers develop their own Head End translation services.

The Interim Service provides access to:

- Smart Metered Supply Points
- Head End manager
- Meter Id

This system provides a lookup facility for this information and limits access to the Smart Metering data to authorised parties. The interim service may provide access to registration data.

Interim Service

- Data Management
 - Provides smart meter lookup
 - Enables identification of Supplier
 - Receives smart meter comms and security data from losing Supplier
 - Makes available smart meter comms and security data to the gaining Supplier
- Access Control
 - Restricts access to smart meter data to the registered Supplier

Gaining Supplier

- Configures its head end provision to support smart meter
- Supplier has direct access to meter

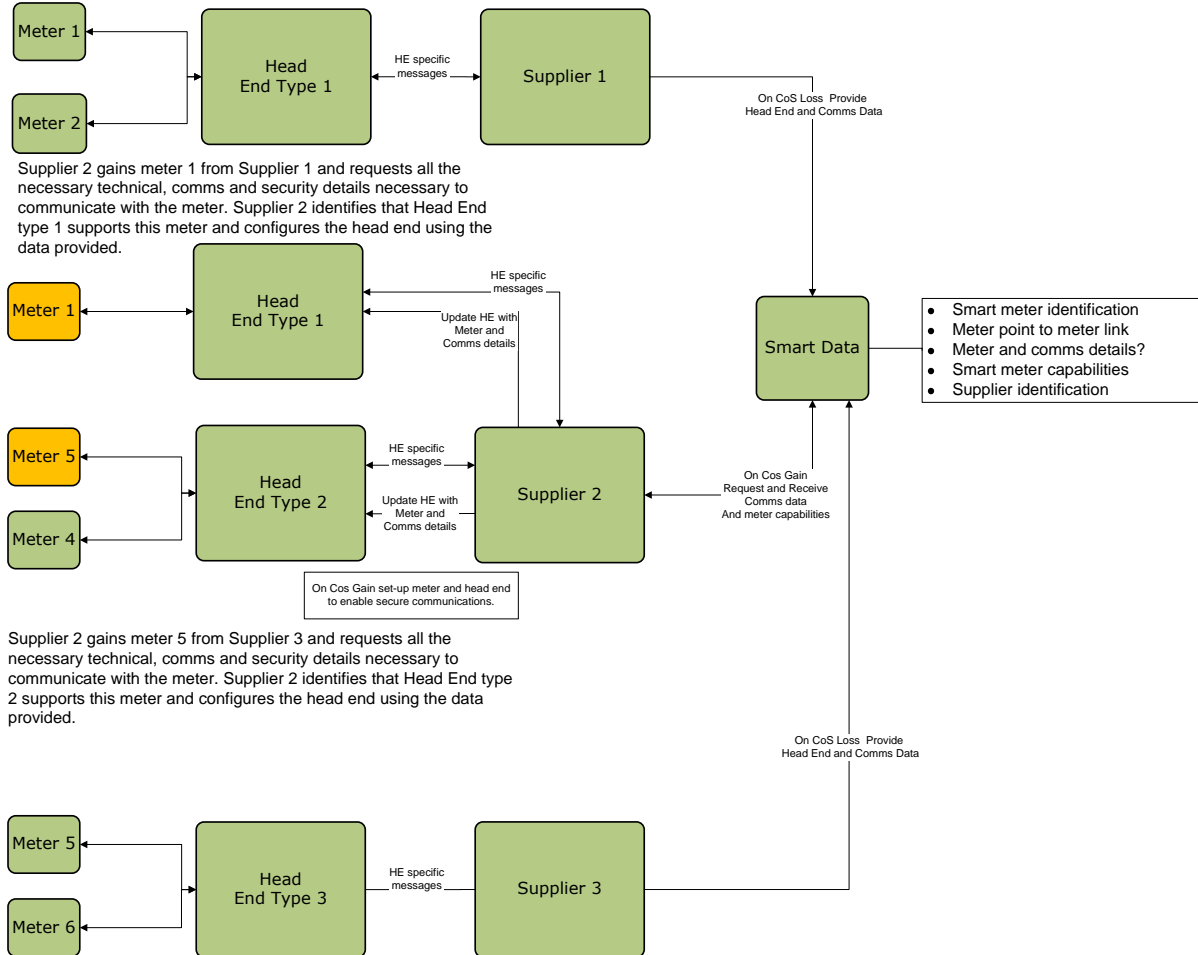
Other Interactions

- Suppliers to Interim Service
 - Web services
- Supplier to Head End
 - HE specific messages

Charging Options

- Interim service charges for data management.

Figure 5: Supplier Configures Meter/HE on CoS



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