

# **iGT-UNC Ancillary Document**

## **Data Items Relevant to Smart Metering File Flows**

**18 June 2013**  
**Version 1.0**

## Document Change History

| Version | Change      | Date      |
|---------|-------------|-----------|
| 1.0     | First Issue | June 2013 |

## Introduction

### Background

In order to facilitate the roll out of smart metering and the implementation of the Data Communications Company (DCC), in their role as the central store for supply point data, iGTs will be required to collect, store and transmit the required new data items to the DCC.

The pipeline user is the owner of much of the new data, yet there will be an element of playback from the operator to the user (i.e. at CoS). The file formats and validation below reflect this.

Under the iGT-UNC, the relevant smart data items will form part of the Supply Point Register, where a Smart Meter is installed. The file formats below will give iGTs and shippers a standard format for ensuring that the data held within the Supply Point Register is as accurate as possible, in keeping with parties' obligations under the iGT-UNC. Only data items not sent via existing flows will be sent via SMU files.

The following are descriptions and definitions of the standard file formats that must be used by pipeline operators and users to transmit the relevant smart data items.

### ASCII Characters

A list of characters for use within these flows can be found in Appendix 1.

## File Naming Convention

File naming should be as follows:

| Description  | Code   |
|--|--------|
| The MDD Short Code of the licenced entity sending the file   | CCC    |
| The "Environment" should always be "02" for iGTs             | NN     |
| Full stop to divide the environment and file type            | .      |
| Text to denote file type – "P" = Production/"T" = Test       | C      |
| Text to denote processing – "C" = Critical/"N" = Normal      | C      |
| The "Generation Number", as given in the header record       | NNNNNN |
| Full Stop to divide the file generation number and file type | .      |
| The "File Type"  | CCC    |

### Format

CCCNN.CC>NNNNNN.CCC

### Example

SOP02.PN000001.SMU

## Headers and Trailers

Each file must contain a single header record at the start/top of the file and a single Trailer record at the end/foot of each file. A file will typically contain a number of relevant other transactions and records within these but may not contain more than one header and one footer record.

### Standard Header for SMU & SMR Files

| Record/Field Name | OPT | DOM | LNG | DEC | Description/Definition  |
|-------------------|-----|-----|-----|-----|---|
| RECORD IDENTIFIER | M   | T   | 3   | 0   | "A00"   |
| ORIGINATOR_ID     | M   | T   | 3   | 0   | The abbreviated name of the Market Participant sending the flow, as per the SPAA Market Domain Data |
| FILE_TYPE         | M   | T   | 3   | 0   | Values:<br>"SMU" – where file is initial flow<br>"SMR" – where file is a response                   |
| CREATION_DATE     | M   | D   | 8   | 0   | Date of Creation of the file<br>Format: YYYYMMDD<br>For example: "20020415"                         |
| CREATION_TIME     | M   | N   | 6   | 0   | Time of Creation of the file as a 24 hour time slot<br>Format: HHMMSS<br>For Example : "203231"     |
| Generation Number | M   | N   | 6   | 0   | The "Generation Number", as given in the file name  |

#### Example:

"A00","SOG","SMU",20130208,111507,000001

### Standard Trailer for SMU & SMR Files

| Record/Field Name | OPT | DOM | LNG | DEC | Description/Definition                |
|-------------------|-----|-----|-----|-----|---------------------------------------|
| RECORD IDENTIFIER | M   | T   | 5   | 0   | "Z99"                                 |
| RECORD COUNT      | M   | N   | 10  | 0   | Counts exclude the Header and Trailer |

#### Example:

"Z99",263

## Validation & File Rules

### File Specification

1 Header  
0 to many Transaction(s) (of the same file type)  
1 Trailer

### File Padding

With the exception of the 'Generation Number', used in both the file name & header, padding is not required for any of the fields/files detailed in this ancillary document.

### File numbering

All file numbering ("Generation Number" in the file name) will be sequential, but does not need to run consecutively.

### Maximum File Size

There is no maximum file size.

### Maximum Number of Attachments

There is no maximum number of attachments, but no mixing of attachments is permitted.

### Record counts

The transaction and record counts should not include the header and trailer.

### Sensitive Personal Data

No sensitive personal data should be included in these files.

### Method of file transmission

The method of file transmission will be that as agreed by both the Pipeline User and Pipeline Operator.

Where two parties cannot agree, they must default to using IX (or the method of file transmission incorporating IX and DTN, if developed).

The method of file transmission will be subject to the data security requirements of the DCC.

### A note around file transmission

Please note that Xoserve and Electralink are in the process of producing a report (due to be released at the end of June), presenting the options for file transmission. IGT-UNC parties will meet shortly after this, in early July, to decide upon the appropriate solution.

Changes to the format of the file name and the header and footer records may be required, to allow for the network (be it IX or DTN) to route the SMU and SMR files successfully. If such changes are required, all iGT-UNC parties will be notified and have an opportunity to feed into these potential changes.

The change will be proposed under the iGT-UNC ancillary document change process (which requires majority approval from the iGT-UNC panel).

If changes to the file name/header/footer formats are not required, then the proposer shall raise a change to remove this section ("A note around file transmission") from this document. Parties developing a technical solution prior to the August iGT-UNC panel should remain flexible where the file name, headers and footers are concerned.

### **Scheduling (deadline)**

The deadline for sending SMU files to iGTs is 4:00pm. Any SMU file received after 4:00pm may be carried forward to be processed and sent in the following day's update to Xoserve.

An SMR file must be sent no later than 2 working days from receipt of the corresponding SMU file.

### **Nil Returns**

For clarity, parties are not required to send a 'nil return' for any reason.

## SMU File

### Definition

An SMU file will be sent from the shipper to the iGT and from the iGT to the shipper. There will be three record types, dependant on the originator and recipient of the file. The three record types are as follows:

| Record ID | Scenario                |
|-----------|-------------------------|
| S01       | Current Shipper to iGT  |
| S02       | IGT to Proposed Shipper |
| S03       | iGT to Current Shipper  |

Each record type will contain all the data items relevant to that scenario. Parties' systems need to be set up to accept many, one or no SMU files from any one party on any given business day.

### SMU File Validation

Validation will be carried out to ensure that:

- valid record types are being sent by the originator of the SMU;
- that the recipient is the iGT or shipper responsible for each MPRN, and;
- data items are valid against their allowable values, data type and field length.

A list of rejections codes can be found in Appendix 2 of this document.

Further validation beyond that which is detailed above will not be carried out.



## SMU S01 Record Type

A 'S01' record will be sent from a current, registered shipper to an iGT.

For example, this record will be sent (but is not limited to scenarios) where:

- A shipper's MAM installs a meter,
- A shipper changes the SMSO ID of a meter,
- A shipper changes the Meter Mechanism Code of a meter (i.e. via a firmware update),
- The IHD install status changes.

### File Format

| Record/Field Name         | OPT | DO<br>M | LNG | DEC | Description/Definition  |
|---------------------------|-----|---------|-----|-----|---|
| RECORD_IDENTIFIER         | M   | T       | 3   | 0   | "S01"   |
| MPRN                      | M   | N       | 10  | 0   | A unique identifier for the point at which a meter is, has been or will be connected to the gas network                       |
| MAM_ID                    | O   | T       | 12  | 0   | The abbreviated name of the meter asset manager, as per the SPAA Market Domain Data   |
| MAM_EFD                   | O   | D       | 8   | 0   | The date on which Meter Asset Manager is effectively responsible for the meter assets at the meter point<br>FORMAT : YYYYMMDD |
| METER_MECH_CODE           | O   | T       | 2   | 0   | The allowable values shall be consistent with those found in MDD (under SPAA)   |
| SMSO_OPERATING_ENTITY_ID  | O   | T       | 12  | 0   | The abbreviated name of the Smart Metering System Operator, as per the SPAA Market Domain Data                                |
| SMSO_OPERATING_ENTITY_EFD | O   | D       | 8   | 0   | The date on which the current SMSO enrolled the meter at the supply point<br>FORMAT : YYYYMMDD                                |
| IHD_INSTALL_STATUS        | C*  | T       | 1   | 0   | Values:<br>"I" – Installed<br>"E" – Existing<br>"D" – Declined  |

\*Mandatory on the installation of the SMETS compliant meter, optional thereafter (as per UK Link)

### Example

"S01",1045820366,"ECS",20130213,"S1","DCC",20110310,"I"

## SMU S02 Record Type

A 'S02' record will be sent from an iGT to the proposed shipper.

This record will be sent to the proposed shipper on the same day that the confirmation acceptance is sent by the iGT.

### File Format

| Record/Field Name                   | OPT | DO<br>M | LNG | DEC | Description/Definition   |
|-------------------------------------|-----|---------|-----|-----|--|
| RECORD_IDENTIFIER                   | M   | T       | 3   | 0   | "S02"  |
| MPRN                                | M   | N       | 10  | 0   | A unique identifier for the point at which a meter is, has been or will be connected to the gas network.                       |
| MAM_ID*                             | O   | T       | 12  | 0   | The abbreviated name of the meter asset manager, as per the SPAA Market Domain Data  |
| MAM_EFD*                            | O   | D       | 8   | 0   | The date on which Meter Asset Manager is effectively responsible for the meter assets at the meter point.<br>FORMAT : YYYYMMDD |
| METER_MECH_CODE                     | O   | T       | 2   | 0   | The allowable values shall be consistent with those found in MDD (under SPAA)  |
| SMSO_OPERATING_ENTITY_ID*           | O   | T       | 12  | 0   | The abbreviated name of the Smart Metering System Operator, as per the SPAA Market Domain Data                                 |
| SMSO_OPERATING_ENTITY_EFD*          | O   | D       | 8   | 0   | The date on which the current SMSO enrolled the meter at the supply point<br>FORMAT : YYYYMMDD                                 |
| DCC SERVICE FLAG                    | O   | T       | 1   | 0   | Values:<br>"A" – Active<br>"S" – Suspended<br>"W" – Withdrawn  |
| DCC SERVICE FLAG_EFD                | O   | D       | 8   | 0   | The date on which the DCC Service Flag was last updated<br>FORMAT : YYYYMMDD   |
| IHD_INSTALL_STATUS                  | O   | T       | 1   | 0   | Values:<br>"I" – Installed<br>"E" – Existing<br>"D" – Declined<br>SMS installed yet  |
| FIRST_SMETS_METER_INSTALLATION_DATE | O   | D       | 8   | 0   | The date on which the first smart gas meter was installed  |

|  |  |  |  |  |                   |
|--|--|--|--|--|-------------------|
|  |  |  |  |  | FORMAT : YYYYMMDD |
|--|--|--|--|--|-------------------|

\*For clarity, these data items should not be 'blanked out' in iGT registration systems during a change of supply.

**Example**

"S02",1045820366,"ESS",20110310,"S1","DCC",20110310,"A",20110310,"I",20110310

## SMU S03 Record Type

A 'S03' record will be sent from an iGT to a current, registered shipper.

This record will be sent where the DCC updates the DCC Service Flag Status and requires the iGT to flow the change back to the registered shipper.

### File Format

| Record/Field Name    | OPT | DO<br>M | LNG | DEC | Description/Definition   |
|----------------------|-----|---------|-----|-----|--|
| RECORD_IDENTIFIER    | M   | T       | 3   | 0   | "S03"  |
| MPRN                 | M   | N       | 10  | 0   | A unique identifier for the point at which a meter is, has been or will be connected to the gas network. |
| DCC SERVICE FLAG     | O   | T       | 1   | 0   | Values:<br>"A" – Active<br>"S" – Suspended<br>"W" – Withdrawn  |
| DCC SERVICE FLAG_EFD | O   | D       | 8   | 0   | The date on which the DDC Service Flag was last updated<br>FORMAT : YYYYMMDD                             |

### Example

"S03",1045820366,"A",20160310

## SMR Response File (containing the R04 Record Type)

### Definition

The SMR file is the response file a shipper or iGT will return after receiving an SMU file.

It will be triggered in all instances where either a shipper or an iGT receives an SMU file from a corresponding iGT or shipper.

### File Format

| Record/Field Name | OPT | DOM | LNG | DEC | Description/Definition   |
|-------------------|-----|-----|-----|-----|--|
| RECORD IDENTIFIER | M   | T   | 3   | 0   | "R04"  |
| MPRN              | M   | N   | 10  | 0   | A unique identifier for the point at which a meter is, has been or will be connected to the gas network. |
| OUTCOME_CODE      | M   | T   | 5   | 0   | Values:<br>"ACCPT" – Accepted<br>"REJCT" - Rejected  |
| REJECTION_CODE    | C   | T   | 8   | 0   | "CCCNNNNN"   |

### Example

"R04",1045820366,"ACCPT",""

"R04",1045820366,"REJCT","SMU00001"

### SMR File Validation and Rules

Where the SMR signifies a rejection, a rejection code for that record will be mandatory.

### Rejection Codes

A list of rejection codes can be found in Appendix 2.

## Appendix 1 - ASCII Characters

The following table provides the valid ASCII character set for use in files.

|                        |        |
|------------------------|--------|
| Letters, upper case    | A to Z |
| Letters, lower case    | a to z |
| Numerals               | 0 to 9 |
| Space character        |        |
| Full stop              | .      |
| Hyphen / minus sign    | -      |
| Opening parenthesis    | (      |
| Closing parenthesis    | )      |
| Oblique stroke / slash | /      |
| Apostrophe             | '      |
| Plus sign              | +      |
| Colon                  | :      |
| Equals sign            | =      |
| Question mark          | ?      |
| Exclamation mark       | !      |
| Quotation mark         | "      |
| Percentage sign        | %      |
| Ampersand              | &      |
| Asterisk               | *      |
| Semi-colon             | ;      |
| Less-than sign         | <      |
| Greater-than sign      | >      |
| Underscore             | _      |

With regards to Line Feeds and Carriage Returns each recipient must be able to deal with an incoming file in either UNIX or DOS format.

## Appendix 2 – Rejections Codes

|          |  |   |
|----------|--|---|
| SMR00001 | Invalid record type received by iGT              | Returned when an iGT receives a record with an identifier of “S02” or “S03”             |
| SMR00002 | Invalid record type received by current shipper  | Returned when a current shipper receives a record with an identifier of “S01” or “S02”  |
| SMR00003 | Invalid record type received by proposed shipper | Returned when a proposed shipper receives a record with an identifier of “S01” or “S03” |
| SMR00004 | iGT is not responsible for the MRPN              |   |
| SMR00005 | Shipper ID is not the responsible shipper        |   |
| SMR00006 | Invalid MPRN format                              |   |
| SMR00007 | Invalid MAM_ID format                            |   |
| SMR00008 | Invalid MAM_EFD format                           |   |
| SMR00009 | Invalid METER_MECH_CODE format                   |   |
| SMR00010 | Invalid SMSO_OPERATING_ENTITY_ID format          |   |
| SMR00011 | Invalid SMSO_OPERATING_ENTITY_EFD format         |   |
| SMR00012 | Invalid IHD_INSTALL_STATUS format                |   |
| SMR00013 | Invalid DCC SERVICE FLAG format                  |   |
| SMR00014 | Invalid DCC SERVICE FLAG_EFD format              |   |