

RGMA Baseline Document

Annex A Specification and Standards

25 June 2021

Introduction

- A1 This annex describes the specification and standards used to define data flows and data items. It is structured as follows:
- a) overview of specification;
 - b) logical data model;
 - c) entity definitions;
 - d) domain picture definitions; and
 - e) data flow structure notation.

Overview of specification

- A2 This version of the RGMA Baseline includes both:
- a) a data flow catalogue, consisting of data flows; and
 - b) a data item catalogue, consisting of data items and domains.

Logical Data Model

A3 The entities used to describe flows and data items, and their relationships are shown in Figure 1. The definition and attributes of each are described in detail below.

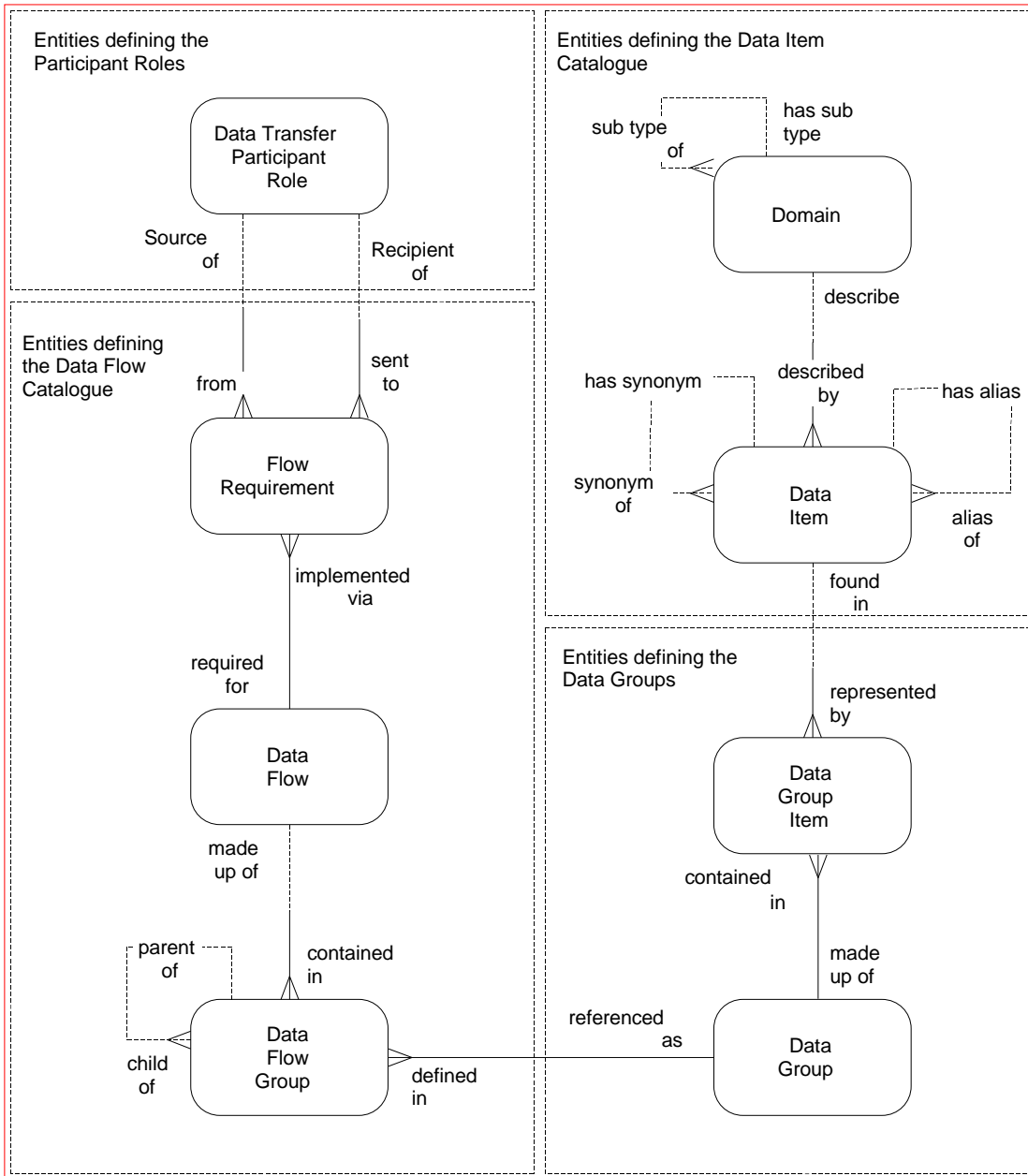


Figure 1: Logical Data Model

Entity definitions

Data Flow

- A4 This entity provides a description of a data flow between parties. A data flow is a logical flow of information between parties and is defined in terms of its constituent data items. The definition of the data will include its name, description and other details.
- A5 The flow will be further defined through the details held in other entities such as:
- who will be the source and recipient of the flow;
 - what the data flow contains in terms of data items and data flow groups; and
 - how those items and groups are structured within the data flow.
- A6 Note that header information is not provided within the data flow definition.

Attribute	Description	Valid Set
Flow Reference	Unique reference for the data flow (e.g. G0001)	
Flow Version Number	The current version number for the data flow	
Flow Version Description	The current usage of the data flow	Operational or Test
Flow Name	The unique name for the data flow	
Flow Description	The description of the data flow	
Flow Ownership	Specifies the ownership of the data flow	SPAA: RGMA Data Flows are owned by SPAA Ltd
Notes	Lists any assumptions that have been made in the definition of the data flow	

Data Flow Group

- A7 This entity describes an instance of the use of a specific data group within a specific data flow. A flow may be constructed from many data groups. The attributes defining a data flow group are as follows:

Attribute	Description	Valid Set
Flow Reference	Unique reference for a data flow (e.g. G0100).	Exists in 'Data Flow'
Flow Version Number	Current version of the data flow.	Exists in 'Data Flow'
Data Group Reference	3 character reference for a data group (e.g. '032').	Exists in 'Data Group'
Data Group Range	This specifies the number of times that this group <i>instance</i> can be repeated within a parent group in a flow. See below for a description of the notation used.	A range of integers (where * represents an unspecified number greater than 0), such as 0-*, 1, and 1-*
Data Group Condition	This specifies the condition on which the group <i>instance</i> will be sent and thus received.	Must be a valid condition that can either be TRUE or FALSE.

Data Group Parent	This specifies the parent group instance (the group in the level above found above the current group within the flow structure).	Must be a group instance existing within this particular data flow.
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For instances where Flow Version Numbering is used, modifications to data groups across different versions of the same flow will require a new group to be created within the latest version of the flow.

For all data flows where Flow Version Numbering is used, modifications to data items across different versions of the same flow may require a new data item to be created and used within the latest version of the data flow.

Data Group

A8 This entity describes the data groups:

Attribute	Description	Valid Set
Data Group Reference	Reference for a data group (e.g. '032').	
Data Group Description	A description of the data group.	

Data Group Item

A9 This entity describes the data items that are found within each group. Note that each group must contain at least one data item:

Attribute	Description	Valid Set
Data Group Reference	Reference for a data group (e.g. '032').	Exists in 'Data Group'
Data Item Reference	Unique reference for a data item (e.g. A0022).	Exists in 'Data Item'
Data Item Optionality	This specifies whether the instance of this data item in this group is optional, mandatory, or 'not required'.	Optional Mandatory Not Required

Data Item

A10 A data item is the lowest level of data specification used in the definition of a flow (e.g. 'Serial Number').

Attribute	Description	Valid Set
Data item reference	Unique reference for the data item (e.g. A0022).	
Data item name	Unique name for the data item (e.g. Serial Number).	
Description	The description of the data item.	
Units	The unit of measurement of the data item.	
Valid Set	The set of valid values for the data item.	

Validation	The validation which is applied to the data item.	
Domain	The domain that the data item belongs to. The data item may inherit attribute defaults from this domain.	Refer to Annex D
Logical format	The format of the data item. For formats INT(<i>n</i>) and NUM (<i>n,m</i>): ' <i>n</i> ' specifies the total number of digits. ' <i>m</i> ' specifies the number of digits after the decimal point. Note that signed numbers are represented by an initial '±'. For example the logical format of a real number that can take values between -99.99 and +99.99 (i.e. has 2 decimal places) is ± NUM (4,2).	CHAR (<i>n</i>) DATE INT (<i>n</i>) ±INT (<i>n</i>) NUM (<i>n,m</i>) ±NUM(<i>n,m</i>) TIME
Physical length*	The length of the data item (<i>including the space for a decimal place or negative sign if required</i>) For example, the number specified above (-99.99) will have a physical length of 6.	
Has Synonyms	List of data items that are exactly the same as this data item. N.B. Only this (the master) data item will be defined in full.	
Has Aliases	List of data items that have the same attributes as this data item but have a different description and thus a different usage to this master data item (such as Scottish equivalents). The aliases listed will be found in flows.	
Item Ownership	Specifies the ownership of the data item.	SPAA: RGMA Data Flows are owned by SPAA Ltd.
Notes	Lists assumptions that have been made in the definition of the data item and any other details.	

* The rules to calculate the physical length from the logical format are summarised below (note that 'm' and 'n' are integers greater than 0):

Logical Format	Physical length
DATE	8
TIME	6
CHAR(<i>n</i>)	<i>n</i>
INT(<i>n</i>)	<i>n</i>
± INT(<i>n</i>)	<i>n</i> +1
NUM(<i>n,m</i>) where <i>n</i> > <i>m</i>	<i>n</i> +1
± NUM(<i>n,m</i>) where <i>n</i> > <i>m</i>	<i>n</i> +2
NUM(<i>n,n</i>)	<i>n</i> +2 (to allow for the 0 before the decimal point)
±NUM(<i>n,n</i>)	<i>n</i> +3 (to allow for the 0 before the decimal point)

Data Transfer Participant Role

A11 This entity describes the types of party within the gas industry who may be responsible as the source or recipient of an information flow. Common industry definitions of the data transfer participant roles have been determined and are included in Market Domain Data.

Attribute	Description
Market Participant role code	An indicator used to identify the role of the Market Participant.
Market Participant role name	The name of the Market Participant role.
Market participant role description	The description of the Market Participant role.

Domain

A12 This entity describes a set of attribute values, which may be taken by a data item. A domain is a classification that can be applied to data items that share common attributes (e.g. 'Date', 'Integer' and 'Time' are domains).

Attribute	Description	Valid Set
Domain name	Unique name for the domain	
Domain description	The description of the domain	
Units	The unit of measurement of the domain	
Valid Set	The set of valid values for the domain	
Validation	The validation which is applied to the domain	As Valid Set As format As picture
Sub type of	Cross reference to a domain for which this domain is a subset	Domain name
Picture	The character map that the domain takes	See Domain Picture Definitions below
Logical format	The character of the domain (please refer to this definition in A10 above for further details).	Logical format valid set in Section A10 above
Physical length	The <i>physical</i> length of the domain (please refer to this definition in A10 above for further details).	
Notes	Lists the assumptions that have been made in the definition of the domain or any other details.	

Flow Requirement

This entity holds the source and destination of a data flow.

Attribute	Description	Valid Set
Flow Reference	Unique reference number for the flow	
Flow Version Number	The current version number for the data flow	
From	The data transfer participant role responsible for sending the data	Exists in Data Transfer Participant Role
To	The data transfer participant role that receives the data	Exists in Data Transfer Participant Role

Domain picture definitions

Abbreviation	Description

A	Alphanumeric character
dd	Day
hh	Hours
mm	Minutes
mm	Month
yyyy	Year
N	Numeric digit
ss ss.ss...	Seconds
X	Any character
D	Delimiter
<Space>	Space
.	Decimal Point
+	Signed

Data flow structure notation

A13 Each data flow is described using a Data Structure Definition (DSD). The DSD shows how the data items within the flow are organised. The flow structure is comprised of a number of groups each of which comprises one or more data items. The flow structure will also identify, for example how often that group can be repeated within the parent group (see A17 below), in what conditions a group is not to be included in the flow and whether any items are mandatory or optional.

A14 The data structure definition comprises:

- a) group Id and description;
- b) group range;
- c) group condition;
- d) levels; and
- e) data items.

A15 The level column is further broken down into levels 1 to 8.

A16 The following sections describe how to use the five sections of each DSD table.

DSD Level

Levels 1 to 8

A17 The levels within this section show the hierarchy of the components of the structure. The contents of any level belong to the immediately preceding group with a higher level (the **parent group**). The level numbering only denotes hierarchy, where 1 is high and 8 is low.

Symbols used

A18 Various symbols are used to add additional meaning to the structure. The following table shows the symbols in use.

Symbol	Meaning
G	Specifies that the object is a group.
1	The data item is mandatory.
O	The data item can be optional (see A21 below).
X	The data item is not required in that flow, however flows should not be rejected if data items marked with X are populated

Group Id and Description

A19 These two columns specify the Id and the description of the group. Note that generally for MRA owned flows a group is used once and only once in all flows, in BSC owned flows a group may be used in many flows (hence the logical data model described above).

Group Range

A20 This specifies the number of times the group *instance* can be repeated within a parent group *instance*. Some typical values are specified in the table below, where ‘*’ represents any positive integer greater than zero.

Range	Meaning
0-*	The group is optional and can be repeated any number of times within the parent group.
1-*	The group is mandatory and can be repeated any number of times within the parent group.
1	The group must be included once within the parent group.
10	The group must be repeated 10 times within the parent group.

Group and Item Optionality

A21 Participants are advised to populate ALL data items and groups where the data is available and the business reason for sending the flow indicates that the data is relevant to the recipient if it is provided.

Group Condition

A22 If the condition for the group *instance* is specified, the group should *not* be sent if the condition is *false*. Note that if the condition is true, the group might not be sent if its range implies it is optional (see above). The data item that determines the condition should be found in a group of which the conditional group is a descendant, or should be a value known to the recipient.

Data Item Section of the RGMA Baseline

A23 This section of the catalogue identifies the data items used to hold the detail of the flows. It is limited to only those data items listed in the data items section of the data flows, synonyms, and those items in the flow header.

A24 In this catalogue, a Data Item **synonym** is an item that differs from its parent (the item it is a synonym of) *only in name*. Any data items that are similar in form but different in description (such as From and To Market Participant Ids) are known as **aliases**.