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Supply Chain Efficiency & Integrity

Dentsu Aegis Network

DATA DICTIONARY AND LIST OF SPECIFICATIONS FOR ECONOMIC OPERATORS
CHANGES v1.1 TO v1.2

This document details the Data Dictionary and List of Specifications changes v1.1 to v1.2 of the EU Secondary Repository and Router.

Summary of changes

Date	Version	Done by	Comment
28.03.2019	1.0	Dentsu Aegis Network	First release

Distribution

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1 Introduction

1.1 Purpose

This document describes the changes proposed to the Data Dictionary version 1.1 and the List Of Specifications version 1.1.

1.2 Type of updates

In order to provide a better understanding of the proposed updates, each change is categorized as following.

- **Cosmetic:** the change corrects typo or wording elements without changing the feature purpose
- **Technical:** The change completes the current feature or correct minor omissions.
- **Functional:** the change adds or modifies the initial feature.

2 List Of Specifications 1.2 Updates

2.1 [Cosmetic] Typo SU2AC to SU2CA

Section: 3.4 “System Architecture”

Description of the change: typo SU2AC to SU2CA

Action: Correct

2.2 [Technical] Automatic Deactivation of Unique Identifiers

Section: 4.2.5 “Automatic deactivation of Unique Identifiers”

Description of the change: Clarification of the processing of the automatic deactivation of UI

Action: This text description was added.

The automatic deactivation of Unique Identifiers is be performed on the Primary repository or the Distributors and Wholesalers. The deactivation messages will be sent to the Secondary repository or the Router.

2.3 [Technical] Hash Mechanism rollback to version 1.0

Section: 5.2.8 “Message integrity and hash.”

Description of the change: Update the has mechanism in order to roll back to the initial version. Update the Error Code list with error code INVALID_SIGNATURE

Action: This text was updated.

The Repository system will verify the message checksum to ensure that the data was not tampered with between parts of the whole Repository system. Messages where the hash is not valid shall not be accepted.

This integrity check ensures that the messages making up traffic cannot be altered in transit or within the parts of the Repository system, neither can messages be added or removed from the sequence, without detection.

The client adds a MD5 hash to the X-OriginalHash HTTP header. This structure is then added to the message

Message Header

X-OriginalHash	1234567890abcdefghijklmnopqrstuvwxyz
Content-Type	application/json
Authorization	<Token>

HTTP status	Error Code
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401	INVALID_SIGNATURE	"The message signature does not match"
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2.4 [Cosmetic] Messages Size

Section: 5.2.9 "Message size."

Description of the change: Rewording

Action: This text was updated

The maximum message size is 8MB.
The limit on the HTTP header size is 10'240 bytes.

2.5 [Functional] Additional description of the II2MN II2DW interfaces

Section: 5.7 "II2MN II2DW interfaces."

Description of the change: Additional description of the II2MN II2DW interfaces. These interfaces are responsibility of the ID issuer.

Action: This text was updated

II2MN II2DW interfaces

Overview

The ID Issuer defines the communication between the EO and the ID issuer corresponding to interfaces II2MN and II2DW.

Interface

Interface acronym	Hosting system	Description
II2MN	ID issuer System	Secure interface published to Manufacturers and Importers
II2DW	ID issuer System	Secure interface published to Distributors and Wholesalers

Synchronous and asynchronous support

The interface presented allows the implementation a synchronous version, where the ID Issuer system will return the result within the same call. This approach is recommended when the business process and internal validation are fully automated.

The interfaces present the option of an asynchronous implementation where the initial call will trigger a request. The ID Issuer system will return a request code for each of these requests and a subsequent message will be initiated by the ID Issuer to transmit the response on the original request. This message will contain the reference to the initial request.

Extensibility

The interface presents an extensibility field in all messages corresponding to the interfaces II2MN and II2DW.

2.6 [Cosmetic] Unique Identifier from ID Issuers Clarification

Section: 6.1.2 “UI from ID issuers”

Description of the change: Rewording

Action: This text was updated

The upUI and aUI provided by the ID Issuers during the UI requests (2.1 and 2.2) must contain the UI information that will be used as is by the EO during the application process. When applied by the EO, **only** a timestamp will be added to the UI in order to create the applied UI.

During the application validation, The Router compares the UI (without the timestamp) provided by the ID issuer with the UI (with timestamp) provided by the EO excluding the Timestamp. **Any subsequent validations (e.g. the aggregation validation) will be based on the full length of the UI comprising the Timestamp.**

2.7 [Technical] Aggregate Unique Identifier from ID Issuers Clarification

Section: 6.1.2 “aUI from distributors”

Description of the change: Rewording

Action: This text was updated

The aUI provided by the Economic Operator must comply with the invariant character set of ISO/IEC 646. Note that the “invariant character set of ISO/IEC 646” supports the FNC1 character(s) **(as used in the GS1 application of the relevant ISO/IEC standards).**

For sake of clarity, the Secondary repository supports both UI with or without FNC1 character(s). In case the Economic Operator generates an aUI that contain FNC1 character(s), the subsequent messages relative to the aUI should also contain the FNC1 character(s) otherwise the message will be rejected. And at the opposite, in case the Economic Operator generates an aUI without FNC1 character(s), the subsequent messages relative to the aUI shouldn't contain the FNC1 character(s) otherwise the message will be rejected.

Action: This text was added

Recommendation about GS1 aUI

In order to improve interoperability, the GS1 aUI exchanged with the different systems should contain all characters including the FNC1 character(s). All scanning devices should be configured in order to capture all characters. FNC1 characters is encoded as described in the ISO/IEC 646.

2.8 [Technical] Additional Recall Code validation

Section: 8.2.6 “Recall Validation.”

Description of the change: New recall code validation

Action: This text was updated

Control	Description	Scope
VAL_MSG_RECALL	Check if RecallCode exists	RCL

2.9 [Technical] Update the Validation Scope on the secondary

Section: 8.3 “Validation Responsibility.”

Description of the change: Align the validation scope of the secondary to the main principle that validation should be performed by the first system that processes the messages.

Action: This text was updated

	Primary repository	Router	Secondary repository
Technical validation			
VAL_SEC_HASH	X	X	X
VAL_SEC_TOKEN	X	X	X
VAL_MSG_JSON	X	X	X
VAL_MSG_TYPE	X	X	X
VAL_FIE_MAN	X	X	X
VAL_FIE_FORMAT	X	X	X
VAL_FIE_REF	X	X	X
Business rule validation			
VAL_UI_MULT_MSG	X	X	
VAL_UI_EXIST_APP	X	X	
VAL_UI_EXIST_TIME	X	X	
VAL_UI_EXPIRY	X	X	
VAL_UI_ORD_REACTIVATION	X	X	
VAL_UI_ORD_DEACTIVATED	X	X	
VAL_EVT_TIME	X	X	
VAL_EVT_RECALL	X	X	
VAL_ENT_EXIST_EOID		X	
VAL_ENT_EXIST_FID		X	
VAL_ENT_EXIST_MID		X	
VAL_ENT_ACTIVE_EOID		X	
VAL_ENT_ACTIVE_FID		X	
VAL_ENT_ACTIVE_MID		X	
VAL_ENT_REL_EOID_FID		X	
VAL_ENT_REL_FID_MID		X	

2.10 [Functional] Optional Transition Period Validation

Section: 8.4 “Transition Period Validation.”

Description of the change: Description of the transition period refined optional validation. The systems are allowed to implement this enhanced validation mechanism instead of the strict message validation mechanism.

Action: This text was updated

Transition Period Validation

It has been recognized that during the transition period (20 May 2019 – 19 May 2020), as provided for under Article 37(1) of Implementing Regulation (EU) 2018/574, a number of UI, which were generated before the 20th of May 2019 and therefore not-registered in the system, might be present in the supply chain and could be accidentally scanned and included in product movement messages. In an effort to avoid full rejection of messages that may also contain valid UIs and non-valid legacy UIs, the following validation rule will be applied.

- 1.- The receiving system (Primary repository, Router) identifies valid and non-registered UIs as per “VAL_UI_EXIST_TIME” validation in the original message.
- 2.- In case non-valid legacy UIs are identified, the system (Primary repository, Router) ONLY processes the valid UIs.
- 3.- An error message is sent to the requesting system containing the list of non-valid legacy UIs. The error code indicates that message in question contains non-valid legacy UIs, which will not be processed by the system. Only valid UIs will be processed.
- 4.- The requesting system, by receiving the validation result with the list of non-valid legacy UIs, have the possibility to recall the message.

3 Data Dictionary 1.2 Updates

3.1 [Technical] Product Definition Update

Section: 2.4 “Product”

Description of the change: Align definition and Field Names with regulation .

3.2 [Technical] Economic Operator Update

Section: 2.5.1 “Economic Operator”

Description of the change: Align definition and Field Names with regulation

3.3 [Technical] Facility Definition Update

Section: 2.5.2 “Facility”

Description of the change: Align definition and Field Names with regulation

3.4 [Technical] Machine Definition Update

Section: 2.5.3 “Manufacturing Machine”

Description of the change: Align definition and Field Names with regulation

3.5 [Technical] nullable Code

Section: 3.2.1 “Basic information block concerning the request”

Description of the change: Confirm that the Code is nullable. The Code information should only be populated when the message is forwarded. This is the case for the Router and the Primary repository

Code	The internal code of acknowledgment of the message. Used for recall too.	Text	S	M	property is nullable
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3.6 [Technical] Error Code SECURITY_INVALID_OR_EXPIRED_TOKEN

Section: 3.3.2 “Common Error Code”

Description of the change: Update error code list by merging the SECURITY_INVALID_TOKEN and the SECURITY_EXPIRED_TOKEN into one error code.

HTTP status	Error Code	Error Description
401	SECURITY_INVALID_OR_EXPIRED_TOKEN	Invalid or Expired security token Please note that in this case the code or internal ID is not returned, as the message has not reached the processing service yet.

3.7 [Technical] Extensibility fields in I12MN I12DW interfaces

Section: 3.3 “Identifier Codes for economic operators”

Description of the change: Addition of the optional extensibility field for the interfaces I12MN I12DW interfaces

Extensibility	Optional extensibility field	Text	S	O	
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3.8 [Technical] Optional REO RFA synchronous response

Section: 3.3 “Identifier Codes for economic operators”

Description of the change: Addition of the optional synchronous responses in the REO. This allows the ID Issuers to synchronously provide the information.

REO - (1.1) Registration of an Economic operator

Field	Description	Data Type	Cardinality	Priority	Values
BasicInfo_Resp	Block of basic information elements	Component << Basic Information Response >>	S	M	Message_Type = REO
EO_ID	Economic operator's registered ID	EOID	S	O	
EO_CODE	Economic operator's confirmation code provided in response to the registration of economic operator	Text	S	O	
Extensibility	Optional extensibility field	Text	S	O	

RFA – (1.4) Request for a facility identifier code

registration of facility – response					
Field	Description	Data Type	Cardinality	Priority	Values
BasicInfo_Resp	Block of basic information elements	Component << Basic Information Response >>	S	M	Message_Type = RFA
F_ID	Facility's identifier registered	FID	S	O	Present if synchronous implementation

Extensibility	Optional extensibility field	Text	S	O	
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RMA – (1.7) Request for a machine identifier code

registration of manufacturing machine – response					
Field	Description	Data Type	Cardinality	Priority	Values
BasicInfo_Resp	Block of basic information elements	Component << Basic Information Response >>	S	M	Message_Type = RMA
M_CODE	Economic operator's confirmation code provided in response to the registration of Machine Identifier	Text	S	M	
Extensibility	Optional extensibility field	Text	S	O	

3.9 [Technical] Original Code to asynchronous response

Section: 3.3.2.2 “Identifier Codes for economic operators”

Description of the change: Addition of the optional synchronous responses in the REO

REOD - Data Registration of an Economic operator

Original_Code	The Code of the Original request	Text	S	M	
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