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INTRODUCTION	

1 Introduction

This appendix describes the detailed structure of each Functional Message Structure (FMS) for ICS Phase 1 messages.

The FMSs are organised into data groups that contain data items. A data group is not necessarily the equivalent of a database entity. The data items are grouped together in such a way that they build up coherent logical blocks within the scope of each FMS.

The detailed structures are listed from the CSE database, comprising:

- The characteristics of the data groups belonging to the FMS:
sequence, number of repetitions, status value to indicate if the data group is mandatory (R: Required), optional (O: Optional) or conditional (D: Dependent);
- The characteristics of the data items belonging to a data group: sequence, number of repetitions, type, length and a value to indicate if a data item is mandatory (R: Required), optional (O: Optional) or conditional (D: Dependent);
- Data group indentation to indicate that the data group may contain not only data items but also other groups of data;
- Rules and Conditions applying.

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2 Representation of FMSs

IE015		DECLARATION DATA		(E_DEC_DAT)	
B					
HEADER		1x	R		
(AUTHORISED CONSIGNEE) TRADER		1x	O	R015	
CONTROL RESULT		1x	O		
GUARANTEE		9x	R		
---GUARANTEE REFERENCE		99x	D	C085	
-----VALIDITY LIMITATION EC		1x	O		
GOODS ITEM		999x	R	R095	
---CONTAINERS		99x	D	C055	
---PACKAGES		99x	O		
C					
HEADER					
Reference number		R	an	..22	Rule 123
Type of declaration		R	an..9		Cond 234
Number of loading lists		O	n..5		TR900
Total number of packages		D	n..7		

The IE model is divided into three parts:

- A** The identification part, each IE is identified by:
- A unique number that consists of the two characters 'IE' followed by 3 digits **a**;
 - The title of the message **b**;
 - A unique reference **c** in a one to one relationship with the unique number of the IE; each IE is prefixed with 'E_' (external domain), 'C_' (common domain).
- B** The structure part provides the following:
- The sequence of the data groups in the IE;
 - A data group name **a**;
 - A number followed by the character 'x' **b** indicating how many times the data group is repeated in the IE;
 - A value **c** indicating whether the data group is (R)equired, (O)ptional or conditional (D: Dependent);
 - When any Rules or Conditions apply, a reference **f** is provided;

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- Data group indentation ^d indicates that the data group depends on lower indent data group.

^c The 'data group' detail part provides for each attribute the following:

- The sequence of attributes within a data group;
- A data group name ^a, as in the structure part;
- The attribute name ^b within the data group;
- A value ^c indicating whether an attribute is (R)equired, (O)ptional or conditional (D: Dependent);
- The data type of a data item ^d: (a)lphabetic and/or (n)numeric;
- The attribute length ^e (the optional 2 dots before the length indicator mean that a data item has no fixed length, but it can have up to a number of digits, as specified by the length indicator); it must be noted that the data type/attribute length of fields representing a date is always 'n8' in order to be year 2000 compliant (e.g. 19980220); also, a comma in the data item length (e.g. 11,3), means that a data item can hold decimals, the digit before the comma indicates the maximum total length of a data item, the digit after the comma indicates the maximum number of digits after the decimal point;
- The FSS - AIS ADDENDUM [A2] Rules and Conditions ^f or Technical Rule (TR) applying.

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3 Documented amendments

The IEs were aligned with the Single Administrative Message (SAM) Mapping Guide, where relevant. As the SAM Mapping Guide covers import (ICS) changes have been made to an IE in some cases. In other cases, more details need to be added.

3.1 SAM Mapping guide alignment

The FMS specified in Appendix B1 of FSS – AIS ADDENDUM [A2] is changed on the following aspects for the various reasons mentioned:

- To align with SAM, the data group ‘IMPORT OPERATION’ is renamed into ‘HEADER’ to support import (ICS);
- In the following cases the mentioned data groups are renamed as the ‘HEADER’ data group:
 - In message IE302 the data group ‘DECLARATION REQUEST’;
 - In message IE303 the data group ‘DECLARATION RESPONSE’;
 - In IE323 the data group ‘DIVERSION REQUEST’.
- The data item HEADER.Document/reference number equals MRN (Movement Reference Number). It is mapped to SAD box number A (Document/reference number) in line with the SAM Mapping Guide. [Note that the mapping of the MRN to the SAD box A is for the purpose of alignment of FMS with SAM mapping to UN/EDIFACT and not for printing purposes];
- The data item HEADER.Identity of means of transport crossing border although the proposed format in the FSS – AIS ADDENDUM [A2] was proposed as an..31, it was changed to an..27 to be in line with SAM;
- The data item GOODS ITEM - PACKAGES.Kind of packages although set as an2 in the FSS-AIS ADDENDUM [A2], it was changed to an..3 in order to be in line with SAM;
- All the LNG data items (i.e. declaration place LNG) that are used to define the language of the corresponding data item in any data group, are considered Optional and are checked against TR0099¹ (changed from Required or Optional as defined in FSS - AIS ADDENDUM [A2]);

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- The NAD LNG field that is used to define the language of name and address fields in the TRADER groups, is considered Optional and is checked against TR0099 (changed from Required as defined in FSS - AIS ADDENDUM [A2]);
- In the version 13.00, the TR0099 was removed from all the messages exchanged on the Common Domain that are always in XML/UTF-8 format.
- The condition C012 used in the FSS – AIS ADDENDUM [A2] was removed from the DDNIA due to conflict with NCTS P4;
- The condition C016 used in the FSS – AIS ADDENDUM [A2] was changed to C019 due to conflict with NCTS P4;
- The rule R876 used in the FSS – AIS ADDENDUM [A2] was removed due to conflict with ECS;
- The rule R893 used in the FSS – AIS ADDENDUM [A2] was changed to R843 due to conflict with ECS;
- The rule R665 used in the FSS – AIS ADDENDUM [A2] was changed to R666 due to conflict with NCTS P4;
- The data item HEADER. Amendment acceptance date and time, was removed from message IE301 since there was a conflict with the actual business functionality;
- The conditions C564, C565 and C566 used in the FSS – AIS ADDENDUM [A2] were removed due to the implementation of EORI;
- The C518 applies on the “Conveyance reference number” item in the FSS – AIS ADDENDUM [A2], it was changed to TR0518 in DDNIA Q2.
- The rule R230 used in the FSS AIS ADDENDUM before the update in [A2] and also used in DDNIA v12.50 is removed as from DDNIA v13.00 (as defined in RFC-List.29#395) and is implemented by applying only the Codelist CL027 on the relevant data item.

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3.2 Further Changes

Various data item names are aligned with the SAM Mapping Guide. Furthermore, other data item names have been made consistent throughout all FMS, e.g. all data items referring to language codes end with 'LNG'.

These changes are listed in the Appendix Q2 – part 2, at the start of the detailed FMS Structure Report in the tables:

- FORMAT DIFFERENCES;
- NAMING DIFFERENCES.

3.2.1 Explanatory Notes

The following applies to the FORMAT DIFFERENCES table:

1. The reasons for changes are:
 - Alignment with the SAM Mapping Guide (SAM);
 - Agreement to implement changes with EC/DGXXI/B3 (agreed);
 - Subsets to be used by ICS.
2. Specification of the codelist to be used will constrain the format of the following data items to that shown in the 'FMS format' column:
 - Kind of packages;
 - Unit of measure.
3. Format of Commodity code should be characters, rather than numeric, to avoid suppression of leading zeroes. Entry validation, however, will accept only characters 0-9 with trailing spaces.

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3.3 From FMS to TMS

The following details have been added to the IEs:

3.3.1 Message group

The MESSAGE group has been added for every IE. This message group corresponds to a number of XML header fields.

In general, exchange of messages requires the control information. This control information, which is basically the information contained in the XML segments, is added to all FMS by the data group MESSAGE. The control information is of a technical nature and as such not specified.

Not all control information is relevant to an ICS application. The following elements are at least required to an ICS application for processing IEs:

Data item	Reason
Message sender	required for detecting the proper sender at reception
Message recipient	required for sending a message to its proper Destination
Message identification	unique reference of a message within a MRN assigned by the sender of that message
Message type	string identifying the number of the IE, the domain in which it is used, and the version
Test indicator	to indicate the difference between testing using an testing tool

Table 1: Control data items required by an ICS application

It is up to each application developer and NA to decide on the use of the other elements of the MESSAGE data group.

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3.3.2 Expansion of IEs including other IEs

Two alternative approaches are possible:

1. Completely include the “sub”-IE.
This may however pose some problems with duplication of information.
2. Merge some of the “sub”-IE information with the “master”-IE.

The second solution has been followed as much as possible. The following paragraphs explain how each case of “IE inside IE” was handled to arrive at a unique and consistent representation.

3.3.2.1 IE301 (C_ENS_SND)

The C_ENS_SND includes the whole of IE315 (E_ENS_DAT) plus 4 more data items included in the HEADER section of the C_ENS_SND, as well as the RISK ANALYSIS fields which include the risk analysis results communicated from the OoLdg to OoFEnt.

3.3.2.2 IE313 (E_ENS_AMD)

The E_ENS_AMD will include the original IE315 (E_ENS_DAT) as a whole while at the same time incorporating the changes suggested by R115, R829, R834, R841, R842 and R886.

3.3.2.3 IE319 (C_ENS_SUB)

The message C_ENS_SUB includes a whole IE301 (C_ENS_SND) plus the data item ‘information type’.

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3.4 Implementation of FSS Rules and Conditions

The FMS specified in Appendix B2 of FSS – AIS ADDENDUM [A2] contains rules and conditions. The conditions are not implemented in the DDNIA, because they refer to the content of exchanged messages.

The following rules are implemented by the structure of an FMS:

Rule number	IE no.	IE Name
123	IE305	Entry Summary Declaration Amendment Rejection
	IE316	Entry Summary Declaration Rejected
	IE324	Diversion Request Rejected
115	IE313	Entry Summary Declaration Amendment
829	IE313	Entry Summary Declaration Amendment

Table 2: Rules implemented in an FMS structure

The following Codelists implemented, have been changed to meet the needs for every domain (NCTS, ECS and ICS)

Codelist number	Codelist Name	Change Implemented
45	Amendment Rejection Motivation Code	Common Code values for AIS/ICS Value 4 = Other Reasons Value 9 = Goods under Control
58	Import Operation State Type	Transit Operation State Types
95	Risk Analysis Result Code	Format change to an1

Table 3: Changes implemented in Codelists

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3.5 Technical Rules and Conditions

Technical Rules have been introduced to cater for particular situations:

- Optional contents of a message dependent on whether the request can be positively answered (e.g. the declaration data sent to the requester) or negatively (an error code returned by the system or explanatory text from a Customs Officer);
- Attributes Required or not dependent on the message direction (to/from Central Services);
- Rules applicable to Technical Messages;
- Improved wording of a rule.