APERAK

Application Error and Acknowledgement Message

Danish EDI Message Implementation Guide

October 2011

Version 3.0

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		CCO	LRO	MEH		NAME
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1. Change log

Actual version: 3.0

Date	Description of change	Version	Changed by
12-01-2011	Update of class diagram Error corrections	2.0	Ove Nesvik
01-10-2011	Updated document in accordance with the RSM document	3.0	Christian Odgaard

2. Introduction and general principles

This document is an Implementation Guide (IG) for the Application Error and Acknowledgement Message, to be used in the energy industry. The IG describes the EDIFACT-message APERAK (the Application Error and Acknowledgement Message) in detail. The message is sent between parties in the energy industry. The message can be used sending errors or acknowledgements for received messages.

The EDIFACT specification in the following chapters is based on the UN/EDIFACT directory, D.09B, http://www.unece.org/trade/untdid/welcome.htm [1].

Detailed explanations of the individual segments are not provided in this specification, but are to be found in the above-mentioned document Danish restrictions and validations can be found in paragraph 4 of the RSM document (ref 4).

In *chapter 9, Mapping table for* APERAK, an occurrence is stated for each segment, showing the cardinality for the segment. E.g. a cardinality of [1] means that the segment is required once, a cardinality of [0..1] means that the segment is optional once and a cardinality of [1..*] means that the segment is required at least once.

If a segment is repeated within a segment group there are no requirements for a specific sequence of the segments.

3. General description of the APERAK message

3.1 Functional Definition

The function of this message is:

a) to inform a message issuer that his message has been received by the addressee's application and has been rejected due to errors encountered during its processing in the application.
b) to acknowledge to a message issuer the receipt of his message by the addressee's application.

3.2 Field of application

The Application error and acknowledgement message may be used for both national and international applications. It is based on universal practice related to administration, commerce and transport, and is not dependent on the type of business or industry.

3.3 Principles

A message being first controlled at system level (CONTRL) to detect syntax errors and to acknowledge its receipt is then transmitted to the application process to be processed.

If an error is detected at the application level, which prevents its complete processing, an APERAK message is sent to the original message issuer giving details of the error(s) encountered. If no error has been detected and when an acknowledgement is necessary (when no dedicated answer to the original message exists) an APERAK message is sent precising the reasons of acknowledgement. In case of application error, the APERAK message will need manual processing e.g. when the underlying reason is a programming error.

In case of acknowledgement the APERAK message may be automatically or manually processed at recipient's discretion.

3.4 Message terms and definitions

None.

4. References

This Implementation guide is based on the following documents.

[1] UN/EDIFACT directory, D.09B, http://www.unece.org/trade/untdid/welcome.htm

[2] ebIX common rules and recommendations, http://www.ebix.org

[3] ebIX Code list, www.ebix.org

[4] EDI transaktioner for det danske elmarked (EDI guide - RSM'erne)

5. Precedence

If there should be any conflict regarding this Implementation guide or between this Implementation guide and other documents, the following precedence shall be used:

1 UN/EDIFACT directory, D.09B [1]
2 The ebIX common rules and recommendations [2]
3 This Implementation guide.

In this Implementation guide the EDIFACT message type is described in different ways. If there should be any conflict regarding the different descriptions, the detailed description in the last chapter should be used.

6. Quality assurance

This document is written by Ove Nesvik, EdiSys AS on behalf of Energinet.dk.

6.1 Version number

The Implementation Guide will have 2 levels of version numbering. This will be Version and Release. In addition there will be a Revision number.

- The Version number (first number) will be updated when there have been major changes like new versions of the message type.
- The Release number will be updated when there have been small changes to the IG, like adding new segments, new data elements etc. within the EDIFACT directory. These changes shall not influence existing implementations.
- The Revision number will be updated when there have been minor changes, like correction of examples, adding new codes etc. These changes shall not influence existing implementations.

6.2 Coded values

The following principles are used for codes and qualifiers:

- Codes defined and maintained by ebIX will have a preceding E or Z, e.g. E05 or Z14
- Codes defined and maintained by Denmark will have a preceding D, e.g. D02

If ebIX codes (Enn or Znn codes) are used the code list responsible agency *260 (ebIX)* shall be used in the related data element 3055. If Danish codes (Dnn) are used the code list *DK (Danish ebIX group)* shall be used in related data element 1131 in addition.

7. Data model for APERAK

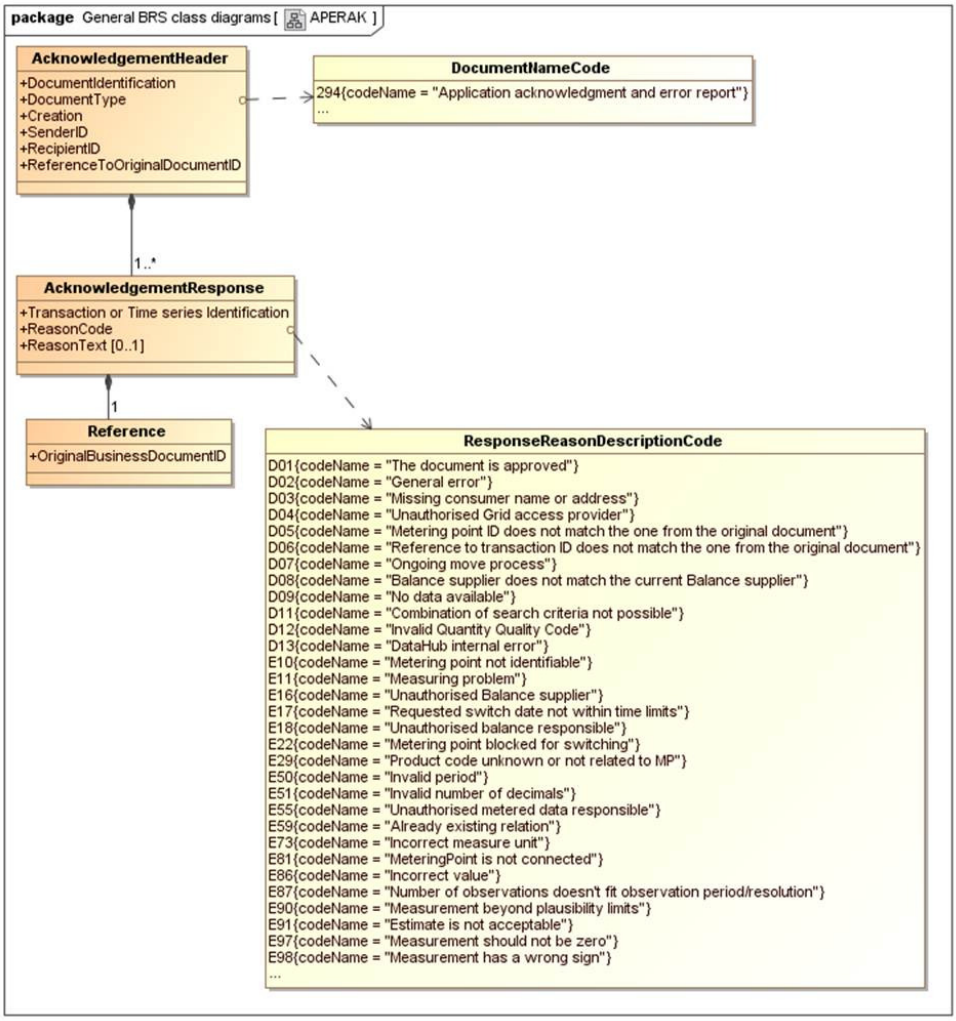

Figure 1: Common data model for APERAK

8. Cue list

Below is a table describing the EDIFACT message and the relationships to the attributes in the class diagram, as used in Denmark.

Message header					
		UNH	M	1	
		BGM	M	1	Document type Message identification Function
		DTM	C	9	Creation Time zone (EDIFACT requirement)
		FTX	C	9	Not used
		CNT	C	9	Not used
	Document details				
		SG 1	C	99	Not used
		DOC	M	1	Not used
		DTM	C	99	Not used
	References				
		SG 2	C	9	
		RFF	M	1	Reference to original Message Identification
		DTM	C	9	Not used
	Document parties and roles				
		SG 3	C	9	
		NAD	M	1	Recipient ID Sender ID Business process role
		CTA	C	9	Not used
		COM	C	9	Not used
	Business document (message details)				
		SG 4	R	99999	
		ERC	M	1	Reason code
		FTX	C	1	Reason text
	References				
		SG 5	C	9	
		RFF	M	1	Original Document Identification
		FTX	C	9	Not used
Message trailer					
		UNT	M	1	Message trailer

9. Mapping table for APERAK

Segment	Data Element		Description	Attribute
	Identification	Content		
SG 0 **UNH** Occurrence 1	0062	Message reference, e.g. '1'	A unique reference for the message within the interchange.	
	S009 0065 S009 0052 S009 0054 S009 0051 S009 0057	'APERAK' 'D' '09B' 'UN' 'E5DK03'	The version number of this guide should be stated here. The number consists of "E5" for Ediel version 5, "DK" for Danish and "03" for version number 3.	
	0068	Not used		
	S010 0070 S010 0073	Not used Not used		
Example	UNH+1+APERAK:D:09B:UN:E5DK03'			
SG 0 **BGM** Occurrence 1	C002 1001	294 Application acknowledgment and error report	EDIFACT or ebIX code for the identification of the message in relation to the actual business transaction.	Document Type
	C002 1131 C002 3055 C002 1000	Not used Not used Not used		
	C106 1004	Message id, e.g. 'SPH1234'	A unique (business related) reference for the message over time.	Message Identification
	C106 1056 C106 1060	Not used Not used		
	1225	27 Not accepted 34 Accepted with amendment		Function
	4343	Not used		
Example	BGM+294+SPH1235+34'			
SG 0 **DTM** Occurrence 1	C507 2005 C507 2380 C507 2379	137 Message date and time Actual date and time 203 Format: CYYMMDDHHmm	Date and the time for composition of the message.	Creation
Example	DTM+137:201005251233:203'			
SG 0 **DTM** Occurrence 1	C507 2005 C507 2380 C507 2379	735 Deviation from UTC +0000 UTC 406 Format ZHHMM	Defines the offset to UTC used for all dates, times and periods in the message. The offset must be expressed in the format ZHHMM, where Z is plus (+) or minus (-). In this guide only '+0000' must be used The time zone should always be UTC format.	
Example	DTM+735:?+0000:406'			

Segment	Data Element		Description	Attribute
	Identification	**Content**		
SG 2 **RFF** Occurrence 1	C506 1153 C506 1154 C506 1156 C506 1056 C5061060	ACW Reference number to previous message Reference To Original Business Message ID Not used Not used Not used	Reference to the message identification number of the message, which APERAK is answer to.	Reference To Original Document ID
Example	RFF+ACW+DK3245R13'			
SG 3 **NAD** Occurrence 1	3035	MR Message recipient	The party id of the recipient of the document. Both GS1 and EIC schemas can be used.	Recipient ID
	C082 3039	Recipient's party id		
	C082 1131	Not used		
	C082 3055	9 GS1 Identification scheme 305 ENTSO-E Identification Code (EIC) scheme		
	Rest of segment	Not used		
Example	NAD+MR+1234567890123::9'			
SG 3 **NAD** Occurrence 1	3035	MS Message sender	The party id of the sender of the document. Both GS1 and EIC schemas can be used.	Sender ID
	C082 3039	Sender's party id		
	C082 1131	Not used		
	C082 3055	9 GS1 Identification scheme 305 ENTSO-E Identification Code (EIC) scheme		
	Rest of segment	Not used		
Example	NAD+MS+9876543210987::9'			

Segment	Data Element		Description	Attribute
	Identification	Content		
SG 4 **ERC** Occurrence 1	C901 9321	D01 The document is approved. D02 General error. D03 Missing consumer name or address. D04 Unauthorised Grid access provider D05 Metering point ID does not match the one from the original document D06 Reference to transaction ID does not match the one from the original document D07 Ongoing move process D08 Balance supplier does not match the current Balance supplier D09 No data available D11 Combination of search criteria not possible D12 Invalid Quantity Quality Code D13 DataHub Internal error E10 Metering point not identifiable E11 Measuring problem E16 Unauthorised Balance supplier E17 Requested switch date not within time limits E18 Unauthorised Balance responsible party E22 Metering point blocked for switching E29 Product code unknown or not related to MP E50 Invalid period E51 Invalid number of decimals E55 Unathorised metered data responsible E59 Already existing relation (rejection) E73 Incorrect measure unit E81 Metering Point is not connected E86 Incorrect value E87 Number of observations doesn't fit observation period/resolution	A code describing the reason for sending the APERAK document. << The code list is not final >> When *Dnn* codes are used in C901 9321, '*DK Danish ebIX Group* must be stated as the code list identification code in C556 1131, otherwise not used. C901 3055 is always used.	Reason code

Segment	Data Element			Description	Attribute
	Identification	Content			
		E90	Measurement beyond plausibility limits		
		E91	Estimate is not acceptable		
		E97	Measurement should not be zero		
		E98	Measurement has a wrong sign		
	C901 1131	DK	Danish ebIX Group		
	C901 3055	260	ebIX		
Example	ERC+D06:DK: 260'				

Segment	Data Element		Description	Attribute
	Identification	Content		
SG 4 **FTX** Occurrence 0..1	4451	AAO Error description	The reason for not accepting a message is described here. The description must be in both English and Danish.	Reason text
	4453	Not used		
	C107 4441	Not used	Will not be used every time, because of alignment with xml Error description. Consists of up to 5 parts of 512 characters separated by ':'	
	C107 1131	Not used		
	C107 3055	Not used		
	C108 4440	Free text		
	C108 4440	Free text		
	C108 4440	Free text		
	C108 4440	Free text		
	C108 4440	Free text		
	3453	Not used		
	4447	Not used		
	Rest of segment	Not used		
Example	FTX+AAO+Free text 1:Free text 2'			
SG 5 **RFF** Occurrence 0..1	C506 1153	LI Reference to *Transaction ID* (UTILMD) AES Reference to *Time series ID* (UTILTS, MSCONS, DELFOR)	Not used when message function = '27'. If there are no *Original Document ID,* use 'MISSING' as *Original Document ID*	Reference To Original Document ID
	C506 1154	Reference to *Original Document ID* (*Original Transaction Id* or *Time series ID*		
	C506 1156	Not used		
	C506 1056	Not used		
	C5061060	Not used		
Example	RFF+LI+DK3245R13'			
SG 0 **UNT** Occurrence 1	0074	Number of segments in the message	The message reference should be equal to SG 0 UNH 0062. Not specified in the dependency matrix, but must be included in the message	
	0062	Message reference number		