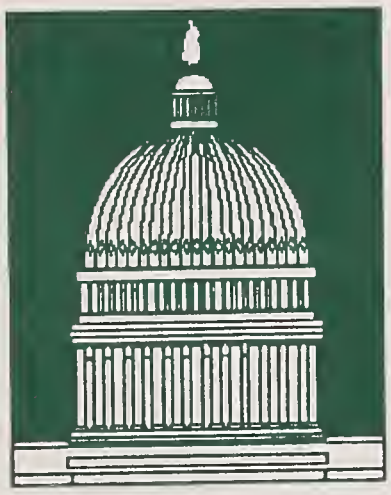
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Federal Implementation Guideline for Electronic Data Interchange

ASC X12 003050 Transaction Set 997 Functional Acknowledgment

Implementation Convention

U.S. DEPARTMENT OF COMMERCE
Technology Administration
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Electronic Commerce Acquisition Program Management Office
Standard Management Committee - Secretariat
National Institute of Standards and Technology
Gaithersburg, MD 20899-0001

Editor: Dr. Jean-Philippe Favreau

March 1997



U.S. DEPARTMENT OF COMMERCE
William M. Daley, Secretary

Technology Administration
Mary L. Good, Under Secretary for Technology

National Institute of Standards and Technology
Arati Prabhakar, Director

Reports on Information Technology

The National Institute of Standards and Technology (NIST)'s Information Technology Laboratory (ITL) develops standards and guidelines, provides technical assistance, and conducts research for computers and resources. As part of the overall federal effort to establish a single face to industry for conducting electronic commerce, ITL has been designated as the organization responsible for coordinating the development of Federal Implementation Conventions (ICs) for Electronic Data Interchange (EDI). ICs are defined by functional-area experts who create and select options from standard EDI Transaction Sets to yield the implementations to be used for practical EDI. These ICs are made available to federal agencies and industry by electronic means and this Special Publication Series.

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FOREWORD

In a memorandum of October 26, 1993, the President sought to stimulate the Federal Government's deployment of Electronic Commerce in order to simplify and streamline the acquisition process. In this regard, the President set forth the following objectives:

- Exchange acquisition information electronically between the private sector and the Federal Government to the maximum extent practicable.
- Provide businesses, including small, small disadvantaged, and woman-owned businesses, with greater access to Federal acquisition opportunities.
- Ensure that potential suppliers are provided simplified access to the Federal Government's EC system.
- Employ nationally and internationally recognized data formats that serve to broaden and ease the interchange of data.
- Use agency and industry systems and networks to enable the government and potential suppliers to exchange information and access Federal acquisition data.

As part of the Federal Government wide effort to implement EC, NIST has been given the responsibility of coordinating the development and promulgation of Implementation Conventions for the functional areas of EC which will be deployed across the Agencies.

Various Agencies have been actively pursuing Electronic Data Interchange (EDI) for several years - the DoD, GSA, Customs and HHS, for instance, have been particularly active in adopting ANSI X12 standards, and looking ahead to EDIFACT. There became a danger that with fragmentation of usage across the Federal Government a significant burden would be placed on many small businesses to support an unnecessary profusion of formats and conventions.

In the Presidential Memorandum, President Clinton required Federal agencies to implement the use of electronic commerce in Federal purchases as quickly as possible. As the initial step, the President's Management Council (PMC) Electronic Commerce Task Force (ECTF), chaired by the Administrator, Office of Federal Procurement Policy (OFPP), chartered the Federal Electronic Commerce Acquisition Team (ECAT) to complete the first milestone of the President's memorandum. The PMC assigned the Electronic Commerce Acquisition Team, composed of representatives from various Federal departments and agencies, the task of defining the architecture for the government electronic commerce acquisition system and identifying the executive departments or agencies responsible for developing, implementing, operating, and maintaining the Federal electronic system.

Another key step in the implementation of EDI in the Federal Government relies on the definition of Implementation Conventions (ICs). EDI syntax standards, both ASC X12 and UN/EDIFACT, accommodate a full range of business activities for all industries. A standard is the result of a consensus among a large number of users, each with its own set of needs. It is a superset intended to meet the diverse requirements of all users. Standards commonly contain more data elements and structure options than any one user or industry needs. Far too many opportunities exist for inefficient, or ambiguous transactions. Therefore, actual EDI business processes require implementation conventions (ICs) to fully define transactions. ICs do that by tailoring the use of the standards' segments, data elements, and code values and providing a subset menu of those distinct parts. This Special Publication defines a Federal IC based on ASC X12 Version 3050 and is the result of coordinated development and adoption within the Federal Government.

997 Functional Acknowledgment

Functional Group ID=FA

Introduction:

This Draft Standard for Trial Use contains the format and establishes the data contents of the Functional Acknowledgment Transaction Set (997) for use within the context of an Electronic Data Interchange (EDI) environment. The transaction set can be used to define the control structures for a set of acknowledgments to indicate the results of the syntactical analysis of the electronically encoded documents. The encoded documents are the transaction sets, which are grouped in functional groups, used in defining transactions for business data interchange. This standard does not cover the semantic meaning of the information encoded in the transaction sets.

Notes:

1. Use this implementation convention to acknowledge receipt, and acceptance or rejection of a functional group and the transaction set(s) contained within it based upon EDI translation software syntax edits.

2. Trading partners should limit the scope of the data provided in the case of transaction set receipt and rejection notification to the transaction set level, i.e., the 1/AK3/040 loop should not be used. However, if separate arrangements with trading partners or flexibility within the translation software do not permit this level of response, the procedures identified herein, as applicable to the 1/AK3/040 loop should be followed.

Pos. No.	Seg. ID	Name	Req. Des.	Max.Use	Loop Repeat	Notes and Comments
010	ST	Transaction Set Header	M	1		n1
020	AK1	Functional Group Response Header	M	1		n2
		LOOP ID - AK2			999999	
030	AK2	Transaction Set Response Header	O	1		n3
		LOOP ID - AK3			99	
040	AK3	Data Segment Note	O	1		c1
050	AK4	Data Element Note	O	99		
060	AK5	Transaction Set Response Trailer	M	1		
070	AK9	Functional Group Response Trailer	M	1		
080	SE	Transaction Set Trailer	M	1		

Transaction Set Notes

1. These acknowledgments shall not be acknowledged, thereby preventing an endless cycle of acknowledgments of acknowledgments.
   The Functional Group Header Segment (GS) is used to start the envelope for the Functional Acknowledgment Transaction Sets. In preparing the functional group of acknowledgments, the application sender's code and the application receiver's code, taken from the functional group being acknowledged, are exchanged; therefore, one acknowledgment functional group responds to only those functional groups from one application receiver's code to one application sender's code.
   There is only one Functional Acknowledgment Transaction Set per acknowledged functional group.
2. AK1 is used to respond to the functional group header and to start the acknowledgement for a functional group. There shall be one AK1 segment for the functional group that is being acknowledged.
3. AK2 is used to start the acknowledgement of a transaction set within the received functional group. The AK2 segments shall appear in the same order as the transaction sets in the functional group that has been received and is being acknowledged.

Transaction Set Comments

1. The data segments of this standard are used to report the results of the syntatical analysis of the functional groups of transaction sets; they report the extent to which the syntax complies with the standards for transaction sets and functional groups. They do not report on the semantic meaning of the transaction sets (for example, on the ability of the receiver to comply with the request of the sender).

Segment: **ST** **Transaction Set Header**
Position: 010
Loop:
Level:
Usage: Mandatory
Max Use: 1
Purpose: To indicate the start of a transaction set and to assign a control number
Syntax Notes:
Semantic Notes: 1 The transaction set identifier (ST01) used by the translation routines of the interchange partners to select the appropriate transaction set definition (e.g., 810 selects the invoice transaction set).
Comments:

Data Element Summary

	Ref. Des.	Data Element	Name	Attributes		
Must Use	**ST01**	**143**	**Transaction Set Identifier Code** Code uniquely identifying a Transaction Set. 997 X12.20 Functional Acknowledgment	**M**	**ID**	**3/3**
Must Use	**ST02**	**329**	**Transaction Set Control Number** Identifying control number that must be unique within the transaction set functional group assigned by the originator for a transaction set *Use to transmit a unique number assigned by the originator of the transaction set. The number may be system generated. This same number will be cited in SE02.*	**M**	**AN**	**4/9**

Segment: **AK1** **Functional Group Response Header**
Position: 020
Loop:
Level:
Usage: Mandatory
Max Use: 1
Purpose: To start acknowledgment of a functional group.
Syntax Notes:
Semantic Notes:
1 AK101 is the functional ID found in the GS segment (GS01) in the functional group being acknowledged.
2 AK102 is the functional group control number found in the GS segment in the functional group being acknowledged.
Comments:
Notes: *1. Use to identify the unique identification number of the functional group in which the transaction set(s) being acknowledged was received.*

2. Only one functional group may be referenced in a single 997 acknowledgment transaction set.

Data Element Summary

	Ref. Des.	Data Element	Name	Attributes		
Must Use	**AK101**	**479**	**Functional Identifier Code** Code identifying a group of application related Transaction Sets. *Use any code.*	**M**	**ID**	**2/2**
Must Use	**AK102**	**28**	**Group Control Number** Assigned number originated and maintained by the sender. *Use to identify the number cited in GS06 of the functional group being acknowledged.*	**M**	**N0**	**1/9**

Segment: **AK2** **Transaction Set Response Header**
Position: 030
Loop: AK2
Level:
Usage: Optional
Max Use: 1
Purpose: To start acknowledgment of a single transaction set.
Syntax Notes:
Semantic Notes:
1 AK201 is the transaction set ID found in the ST segment (ST01) in the transaction set being acknowledged.
2 AK202 is the transaction set control number found in the ST segment in the transaction set being acknowledged.
Comments:
Notes: *Use to identify the unique identification number of the transaction set being acknowledged.*

Data Element Summary

	Ref. Des.	Data Element	Name	Attributes		
Must Use	**AK201**	**143**	**Transaction Set Identifier Code** Code uniquely identifying a Transaction Set. Refer to 003050 Data Element Dictionary for acceptable code values.	**M**	**ID**	**3/3**
Must Use	**AK202**	**329**	**Transaction Set Control Number** Identifying control number that must be unique within the transaction set functional group assigned by the originator for a transaction set *Use to identify the number cited in SE02/ST02 of the transaction set being acknowledged.*	**M**	**AN**	**4/9**

Segment: **AK3** **Data Segment Note**
Position: 040
Loop: AK3
Level:
Usage: Optional
Max Use: 1
Purpose: To report errors in a data segment and to identify the location of the data segment.
Syntax Notes:
Semantic Notes:
Comments:
Notes: *1. Use the 1/AK3/040 loop only when a trading partner agreement or translation software do not limit receipt and rejection reporting to the group or transaction set level.*

2. This 1/AK3/040 loop is used only to identify one or more segments containing syntactical errors resulting in rejection of the transaction set or functional group. This loop is not used when transaction set and functional group receipt and acceptance is being acknowledged.

Data Element Summary

	Ref. Des.	Data Element	Name	Attributes		
Must Use	**AK301**	**721**	**Segment ID Code** Code defining the segment ID of the data segment in error. See Appendix A - Number 77. *Use to identify the segment containing syntactical errors, as it appears in the ASC X12 Data Segment Dictionary, e.g., DTM, N1, REF, etc.*	**M**	**ID**	**2/3**
Must Use	**AK302**	**719**	**Segment Position in Transaction Set** The numerical count position of this data segment from the start of the transaction set: the transaction set header is count position 1. *Use to identify the segment's sequential position within the data stream of the transaction set as transmitted. This number is not the segment's position number portrayed in the transaction set structure. For example, if the segments used in an 810 request for progress payment were as follows: ST, BIG, REF, N1, N1, PER, ITD, DTM, IT1, IT1, SLN, SLN, SLN, TDS, CTT, SE, and there was a syntax error in the second use of the N1 segment, the number cited would be 5. If the syntax error was in the third use of the SLN segment, the number cited would be 13.*	**M**	**N0**	**1/6**
	AK303	**447**	**Loop Identifier Code** The loop ID number given on the transaction set diagram is the value for this data element in segments LS and LE	**O**	**AN**	**1/4**
	AK304	**720**	**Segment Syntax Error Code** Code indicating error found based on the syntax editing of a segment *1. Use only when a segment is being rejected, to identify the basis for rejection. Do not use when the error is in a data element within the segment and editing is being done at least to that level.* Refer to 003050 Data Element Dictionary for acceptable code values.	**O**	**ID**	**1/3**

Segment: **AK4** **Data Element Note**
Position: 050
Loop: AK3
Level:
Usage: Optional
Max Use: 99
Purpose: To report errors in a data element and to identify the location of the data element.
Syntax Notes:
Semantic Notes:
Comments:
Notes: *Use to identify an error with a data element. When used, there must be a use of the AK3 segment citing the segment in which the data element with the error appears. Use multiple occurrences of this segment to identify all data element errors within the segment specified in the preceding AK3 segment.*

Data Element Summary

	Ref. Des.	Data Element	Name	Attributes		
Must Use	AK401	C030	**Position in Segment** Code indicating the relative position of a simple data element, or the relative position of a composite data structure combined with the relative position of the component data element within the composite data structure, in error; the count starts with 1 for the simple data element or composite data structure immediately following the segment ID	M		
Must Use	C03001	722	**Element Position in Segment** This is used to indicate the relative position of a simple data element, or the relative position of a composite data structure with the relative position of the component within the composite data structure, in error; in the data segment the count starts with 1 for the simple data element or composite data structure immediately following the segment ID *Use to indicate the position of the data element, within the segment, containing the error, e.g., 3, 12, etc.*	M	N0	1/2
	C03002	1528	**Component Data Element Position in Composite** To identify the component data element position within the composite that is in error	O	N0	1/2
	AK402	725	**Data Element Reference Number** Reference number used to locate the data element in the Data Element Dictionary. *Use to identify the data element number as it appears in the ASC X12 Data Element Dictionary, for example, the data element number for N101 is 98, the data element number for N103 is 66.*	O	N0	1/4
Must Use	AK403	723	**Data Element Syntax Error Code** Code indicating the error found after syntax edits of a data element. Refer to 003050 Data Element Dictionary for acceptable code values.	M	ID	1/3
	AK404	724	**Copy of Bad Data Element** This is a copy of the data element in error.	O	AN	1/99

Segment: **AK5** **Transaction Set Response Trailer**
Position: 060
Loop: AK2
Level:
Usage: Mandatory
Max Use: 1
Purpose: To acknowledge acceptance or rejection and to report errors in a transaction set.
Syntax Notes:
Semantic Notes:
Comments:
Notes: *Use to indicate whether the transaction set indicated in the corresponding AK2 segment was accepted or rejected. If the transaction set is being rejected, use this segment to identify up to five (5) syntax errors at the transaction level.*

Data Element Summary

	Ref. Des.	Data Element	Name	Attributes		
Must Use	AK501	717	**Transaction Set Acknowledgment Code** Code indicating accept or reject condition based on the syntax editing of the transaction set. Refer to 003050 Data Element Dictionary for acceptable code values.	M	ID	1/1
	AK502	718	**Transaction Set Syntax Error Code** Code indicating error found based on the syntax editing of a transaction set. *1. Use only when a transaction set is being rejected, to identify the basis for rejection. If multiple codes apply, they may be carried in AK503 through AK506, as necessary. No individual code may be used more than once in a single use of this segment.* *2. Use code 5 when the 1/AK3/040 loop is not used and syntactical errors occurred below the transaction set level.* Refer to 003050 Data Element Dictionary for acceptable code values.	O	ID	1/3
	AK503	718	**Transaction Set Syntax Error Code** Code indicating error found based on the syntax editing of a transaction set. Refer to 003050 Data Element Dictionary for acceptable code values.	O	ID	1/3
	AK504	718	**Transaction Set Syntax Error Code** Code indicating error found based on the syntax editing of a transaction set. Refer to 003050 Data Element Dictionary for acceptable code values.	O	ID	1/3
	AK505	718	**Transaction Set Syntax Error Code** Code indicating error found based on the syntax editing of a transaction set. Refer to 003050 Data Element Dictionary for acceptable code values.	O	ID	1/3
	AK506	718	**Transaction Set Syntax Error Code** Code indicating error found based on the syntax editing of a transaction set. Refer to 003050 Data Element Dictionary for acceptable code values.	O	ID	1/3

Segment: **AK9** **Functional Group Response Trailer**
Position: 070
Loop:
Level:
Usage: Mandatory
Max Use: 1
Purpose: To acknowledge acceptance or rejection of a functional group and report the number of included transaction sets from the original trailer, the accepted sets, and the received sets in this functional group.
Syntax Notes:
Semantic Notes:
Comments: 1 If AK901 is 'A' or 'E', then the transmitted functional group is accepted. If AK901 is 'R', then the transmitted group is rejected.
Notes: *1. Use only to indicate whether the functional group was accepted or rejected based on syntax errors in the functional group header or trailer.*

2. If the functional group is being rejected, use to identify up to five (5) syntax errors at the functional group level.

Data Element Summary

	Ref. Des.	Data Element	Name	Attributes		
Must Use	AK901	715	**Functional Group Acknowledge Code** Code indicating accept or reject condition based on the syntax editing of the functional group. Refer to 003050 Data Element Dictionary for acceptable code values.	M	ID	1/1
Must Use	AK902	97	**Number of Transaction Sets Included** Total number of transaction sets included in the functional group or interchange (transmission) group terminated by the trailer containing this data element.	M	N0	1/6
Must Use	AK903	123	**Number of Received Transaction Sets** Number of Transaction Sets received.	M	N0	1/6
Must Use	AK904	2	**Number of Accepted Transaction Sets** Number of accepted Transaction Sets in a Functional Group.	M	N0	1/6
	AK905	716	**Functional Group Syntax Error Code** Code indicating error found based on the syntax editing of the functional group header and/or trailer. *1. Use only when a functional group is being rejected to identify the basis for rejection.* *2. Codes may also be carried in AK906 through AK909, but no individual code may be used more than once in a single iteration of this segment.* Refer to 003050 Data Element Dictionary for acceptable code values.	O	ID	1/3
	AK906	716	**Functional Group Syntax Error Code** Code indicating error found based on the syntax editing of the functional group header and/or trailer. Refer to 003050 Data Element Dictionary for acceptable code values.	O	ID	1/3
	AK907	716	**Functional Group Syntax Error Code** Code indicating error found based on the syntax editing of the functional group header and/or trailer. Refer to 003050 Data Element Dictionary for acceptable code values.	O	ID	1/3
	AK908	716	**Functional Group Syntax Error Code** Code indicating error found based on the syntax editing of the functional group header and/or trailer. Refer to 003050 Data Element Dictionary for acceptable code values.	O	ID	1/3

AK909	**716**	**Functional Group Syntax Error Code**	**O**	**ID**	**1/3**

Code indicating error found based on the syntax editing of the functional group header and/or trailer.
Refer to 003050 Data Element Dictionary for acceptable code values.

Segment: **SE** **Transaction Set Trailer**
Position: 080
Loop:
Level:
Usage: Mandatory
Max Use: 1
Purpose: To indicate the end of the transaction set and provide the count of the transmitted segments (including the beginning (ST) and ending (SE) segments).
Syntax Notes:
Semantic Notes:
Comments: **1** SE is the last segment of each transaction set.

Data Element Summary

	Ref. Des.	Data Element	Name	Attributes		
Must Use	**SE01**	**96**	**Number of Included Segments** Total number of segments included in a transaction set including ST and SE segments.	**M**	**N0**	**1/10**
Must Use	**SE02**	**329**	**Transaction Set Control Number** Identifying control number that must be unique within the transaction set functional group assigned by the originator for a transaction set *Use the same number cited in ST02.*	**M**	**AN**	**4/9**

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