



# An EIDX Convention for Electronic Data Interchange

Transaction Set

# 997

## Functional Acknowledgment

Functional Group ID = FA  
X12 Version 004 Release 010

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Contents	Page
<b><i>Introduction</i></b> .....	<b>4</b>
Hyperlinks in this document.....	4
Abbreviations and Notations .....	5
General Recommendations and Best Practices .....	5
Additional References.....	5
<b><i>Overview</i></b> .....	<b>6</b>
1. Functional Definition.....	6
2. Considerations.....	6
3. Trading Partners .....	6
4. EIDX Business Models.....	6
5. Field of Application .....	6
6. Format .....	7
7. Attributes.....	8
8. Changes from version 3020 .....	9
<b><i>Segment Tables</i></b> .....	<b>10</b>
997 Functional Acknowledgment – List of Used and Not Used Segments .....	10
Segment: ST Transaction Set Header .....	11
Segment: AK1 Functional Group Response Header .....	12
Segment: AK2 Transaction Set Response Header .....	13
Segment: AK3 Data Segment Note .....	14
Segment: AK4 Data Element Note .....	15
Segment: AK5 Transaction Set Response Trailer .....	17
Segment: AK9 Functional Group Response Trailer .....	20
Segment: SE Transaction Set Trailer.....	23
<b><i>997 Functional Acknowledgment Examples</i></b> .....	<b>24</b>
997 Example 1 – Functional Acknowledgment, all Sent Transaction Sets Accepted.....	24
997 Example 2 – Functional Acknowledgment – Mixed Acceptance and Rejection of Sent Transaction Sets, No Details .....	26
997 Example 3 – Functional Acknowledgment – Mixed Acceptance and Rejection of Sent Transaction Sets With Segment Level Details .....	28
997 Example 4 – Functional Acknowledgment – Mixed Acceptance and Rejection of Sent Transaction Sets With Data Element Level Details .....	30

## INTRODUCTION

This section provides the necessary information to enable trading partners to utilize the ASC X12 standards for the exchange of electronic business documents within the electronics industry.

### Hyperlinks in this document

This document contains hyperlinks to pages on the EIDX web site as well as hyperlinks to off-site web pages.

**EIDX Site Pages.** EIDX makes every effort to keep the structure of the site stable and to keep hyperlinks working. However, content does change, and some hyperlinks to [www.eidx.org](http://www.eidx.org) in this document may not work; hyperlinks may not work in the Portable Document Format (.pdf) representations. Navigation aids are provided on the site that may help you to find what you are looking for, as well as a search form. Go to the Publications link on the home page to get started. Use the link on the web site to contact EIDX for further information.

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## Abbreviations and Notations

The navigation menu in the EIDX web site Publications area includes links to [Methodology and Legends for EIDX Models](#), the [EIDX Glossary](#) and the [EIDX Acronyms and Abbreviations](#)<sup>1</sup> collection.

## General Recommendations and Best Practices

Recommendations and best practices that apply to all business processes, including recommendations for product identification and partner identification, are found in [EIDX Business Models – General Support](#)

## Additional References

N/A

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<sup>1</sup> <http://www.eidx.org/publications/abbrev/>

## OVERVIEW

### 1. FUNCTIONAL DEFINITION

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.

### 2. CONSIDERATIONS

The Functional Acknowledgment (FA) is used to report to the sender the results of the syntactical analysis of a functional group of transaction sets. The FA does not acknowledge the ability of the receiver to comply with the request of the sender.

### 3. TRADING PARTNERS

1. Any sender to any receiver.

### 4. EIDX BUSINESS MODELS

The 997 transaction is a service transaction. Its use is implied in all business models.

### 5. FIELD OF APPLICATION

This transaction may be applied for both national and international trade. It is based on universal commercial practice and is not dependent on the type of business or industry.

## 6. FORMAT

The transmission in the ASC X12 format uses two required envelopes. One is the ISA Interchange Control Header Segment, which starts and identifies an interchange of zero or more functional groups and interchange-related control segments. The ISA includes the sender's mailbox address and a receiver's mailbox address, and specifies which delimiter (a/k/a control, service) characters (data element separator, component element separator and data segment terminator) are being used.

There are no default service characters reserved for use in ASC X12. Allowable service characters should be discussed between trading partners.

The second required envelope is GS Functional Group Header, which indicates the beginning of a functional group and provides group level control information. The GS segment includes functional group level sender and receiver addresses, typically used by the trading partner(s) for internal routing. The GS also includes the GS08 ASC X12 Version/Release/Industry Identifier Code. EIDX does not recommend the use of an Industry Identifier code.

The functional groups are analogous to batches of like documents, i.e. purchase orders, invoices, etc. Each functional group contains one or more transaction sets (electronic documents).

Each transaction set is an ordered collection of segments.

Each segment is an ordered collection of data elements. Each segment has been assigned a two or three character identifier. This identifier marks the beginning of each segment. Each element within the segment is separated by a data element delimiter. EIDX recommends the use of the asterisk (\*) character as a data element delimiter. A segment terminator character is used to mark the end of a segment.

Any shaded areas indicate EIDX recommended usage and comment.

7. ATTRIBUTES

Each data element has three ANSI attributes: Element usage, element type and minimum/maximum length. EIDX has additional usage indicated for optional segments and elements which are noted in the following table.

MARGIN	ATTRIBUTE	DE NOTE	MEANING
Must Use	M (Mandatory)	N/A	If a segment, composite, or stand alone data element is mandatory according to the standard, EIDX cannot change the mandatory status on that component.  <i>DATA ELEMENT within a COMPOSITE:</i> A data element within a composite is mandatory only if the composite is used.
X	C or X (Conditional) or O (Optional)	No note or NOT USED	EIDX has determined no value in supplying the composite or data element; hence, it need not be generated.
Blank	C or X (Conditional) or O (Optional)	REQUIRED	EIDX members agree that the data concerned must be sent.
Blank	C or X (Conditional) or O (Optional)	No note	Indicates that EIDX makes no recommendation regarding usage. The trading partners must agree on usage.
Blank	C or X (Conditional) or O (Optional)	ADVISED	EIDX has determined value in supplying the data element; hence, it should be generated.
Blank	C or X (Conditional) or O (Optional)	DEPENDING	Data must be sent if a particular defined condition or set of conditions exist. The associated conditions must be explained at the appropriate level of detail.

## 8. CHANGES FROM VERSION 3020

Only segments, elements or codes used by EIDX are listed. Some fields which have increased in maximum length are not listed.

- All date fields changed from 6/6 (YYMMDD) to 8/8 (CCYYMMDD)
- AK305 through AK308 deleted from the standard. These were repetitions of DE 720 Segment Syntax Error Code on this segment. AK304 remains on the segment for reporting this data.
- For AK401, simple DE 722 Element Position in Segment replaced by composite DE C030 Position in Segment. DE C030 is made of of DE 722 Element Position in Segment and DE 1528 Component Data Element Position.
- Max length of DE 96 Number of Included Segments in SE01 changed from 6 to 10.
- New codes available in 4010 were not used by EIDX previously and are now added to EIDX code list:
  - AK304, DE 720 (Segment Syntax Error Code): Added codes 6, 7 and 8
  - AK403, DE 723 (Data Element Syntax Error Code): Added codes 8, 9, and 10
  - AK501, DE 717 (Transaction Set Acknowledgment Code): Added codes M, W, and X
  - AK502, DE 718 (Transaction Set Syntax Error Code): Added codes 6 thru 27
  - AK901, DE715 (Functional Group Acknowledge Code): Added codes M, W, and X
  - AK905, DE716 (Functional Group Syntax Error Code): Added codes 6 and 10 thru 26

## SEGMENT TABLES

### 997 Functional Acknowledgment – List of Used and Not Used Segments

	<u>Pos. No.</u>	<u>Seg. ID</u>	<u>Name</u>	<u>Req. Des.</u>	<u>Max.Use</u>	<u>Loop Repeat</u>	<u>Notes and Comments</u>
Must Use	010	ST	Transaction Set Header	M	1		n1
Must Use	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			999999	
	040	AK3	Data Segment Note	O	1		c1
	050	AK4	Data Element Note	O	99		
Must Use	060	AK5	Transaction Set Response Trailer	M	1		
Must Use	070	AK9	Functional Group Response Trailer	M	1		
Must Use	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. Nor shall a Functional Acknowledgment be sent to report errors in a previous Functional Acknowledgment.  
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 syntactical 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) is 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**

	<u>Ref. Des.</u>	<u>Data Element</u>	<u>Name</u>	<u>Attributes</u>
<b>Must Use</b>	ST01	143	<b>Transaction Set Identifier Code</b>	<b>M ID 3/3</b>
			Code uniquely identifying a Transaction Set 997 Functional Acknowledgment	
<b>Must Use</b>	ST02	329	<b>Transaction Set Control Number</b>	<b>M AN 4/9</b>

Identifying control number that must be unique within the transaction set functional group assigned by the originator for a transaction set

The control number is assigned by the sender. It should be sequentially assigned within each functional group to aid in error recovery and research. The control number in the SE segment (SE02) must be identical to the control number in the ST segment for each transaction.

**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:**

**Data Element Summary**

	<u>Ref. Des.</u>	<u>Data Element</u>	<u>Name</u>	<u>Attributes</u>
<b>Must Use</b>	AK101	479	<b>Functional Identifier Code</b>	<b>M ID 2/2</b>
			Code identifying a group of application related transaction sets See semantic note #1. Refer to 004010 Data Element Dictionary for acceptable code values.	
<b>Must Use</b>	AK102	28	<b>Group Control Number</b>	<b>M N0 1/9</b>
			Assigned number originated and maintained by the sender Control number as it appears in the GS06 if the functional group being acknowledged.	

**Segment:** **AK2** Transaction Set Response Header

**Position:** 030

**Loop:** AK2 Optional

**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:**

EIDX USAGE: Recommended when any error condition is detected (if AK901 does not equal "A").

**Data Element Summary**

	<u>Ref. Des.</u>	<u>Data Element</u>	<u>Name</u>	<u>Attributes</u>
<b>Must Use</b>	AK201	143	<b>Transaction Set Identifier Code</b>	<b>M ID 3/3</b>
			Code uniquely identifying a Transaction Set See semantic note #1. Refer to 004010 Data Element Dictionary for acceptable code values.	
<b>Must Use</b>	AK202	329	<b>Transaction Set Control Number</b>	<b>M AN 4/9</b>
			Identifying control number that must be unique within the transaction set functional group assigned by the originator for a transaction set Control number as it appears in the ST02 of the transaction being acknowledged.	

**Segment:** **AK3** Data Segment Note

**Position:** 040  
**Loop:** AK3 Optional  
**Level:**  
**Usage:** Optional  
**Max Use:** 1  
**Purpose:** To report errors in a data segment and identify the location of the data segment

**Syntax Notes:**

**Semantic Notes:**

**Comments:**

**Notes:** EIDX USAGE: Optional. If multiple errors per segment need to be identified then the entire AK3 loop should be repeated for each segment error condition with that error being properly reported in AK304.

**Data Element Summary**

	<u>Ref. Des.</u>	<u>Data Element</u>	<u>Name</u>	<u>Attributes</u>
<b>Must Use</b>	AK301	721	<b>Segment ID Code</b>	<b>M ID 2/3</b>
			Code defining the segment ID of the data segment in error (See Appendix A – Number 77)	
<b>Must Use</b>	AK302	719	<b>Segment Position in Transaction Set</b>	<b>M N0 1/6</b>
			The numerical count position of this data segment from the start of the transaction set: the transaction set header is count position 1	
	AK303	447	<b>Loop Identifier Code</b>	<b>O AN 1/6</b>
			The loop ID number given on the transaction set diagram is the value for this data element in segments LS and LE	
	AK304	720	<b>Segment Syntax Error Code</b>	<b>O ID 1/3</b>
			Code indicating error found based on the syntax editing of a segment	
			If the code is a single character in length, any space before or after the single character will not be considered to be an equivalent value. For example, this means that "1" is valid, and " 1" (blank-1) and "1 " (1-blank) are not valid.	
		1	Unrecognized segment ID	
		2	Unexpected segment	
		3	Mandatory segment missing	
		4	Loop Occurs Over Maximum Times	
		5	Segment Exceeds Maximum Use	
		6	Segment Not in Defined Transaction Set	
		7	Segment Not in Proper Sequence	
		8	Segment Has Data Element Errors	

**Segment:** **AK4** Data Element Note

**Position:** 050  
**Loop:** AK3 Optional  
**Level:**  
**Usage:** Optional  
**Max Use:** 99  
**Purpose:** To report errors in a data element or composite data structure and identify the location of the data element

**Syntax Notes:**

**Semantic Notes:** 1 In no case shall a value be used for AK404 that would generate a syntax error, e.g., an invalid character.

**Comments:**

**Notes:** EIDX USAGE: Optional.

**Data Element Summary**

	<u>Ref. Des.</u>	<u>Data Element</u>	<u>Name</u>	<u>Attributes</u>
<b>Must Use</b>	AK401	C030	<b>Position in Segment</b>	<b>M</b>
			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	
<b>Must Use</b>	C03001	722	<b>Element Position in Segment</b>	<b>M N0 1/2</b>
			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	
	C03002	1528	<b>Component Data Element Position in Composite</b>	<b>O N0 1/2</b>
			To identify the component data element position within the composite that is in error	
	AK402	725	<b>Data Element Reference Number</b>	<b>O N0 1/4</b>
			Reference number used to locate the data element in the Data Element Dictionary	

<b>Must Use</b>	<b>AK403</b>	<b>723</b>	<b>Data Element Syntax Error Code</b>	<b>M ID 1/3</b>
			Code indicating the error found after syntax edits of a data element	
			1 Mandatory data element missing	
			2 Conditional required data element missing.	
			3 Too many data elements.	
			4 Data element too short.	
			5 Data element too long.	
			6 Invalid character in data element.	
			7 Invalid code value.	
			8 Invalid Date	
			9 Invalid Time	
			10 Exclusion Condition Violated	
	<b>AK404</b>	<b>724</b>	<b>Copy of Bad Data Element</b>	<b>O AN 1/99</b>
			This is a copy of the data element in error	

**Segment: AK5 Transaction Set Response Trailer**

**Position:** 060  
**Loop:** AK2 Optional  
**Level:**  
**Usage:** Mandatory  
**Max Use:** 1  
**Purpose:** To acknowledge acceptance or rejection and report errors in a transaction set

**Syntax Notes:**  
**Semantic Notes:**  
**Comments:**

**Data Element Summary**

	<u>Ref. Des.</u>	<u>Data Element</u>	<u>Name</u>	<u>Attributes</u>
<b>Must Use</b>	AK501	717	<b>Transaction Set Acknowledgment Code</b>	<b>M ID 1/1</b>
			Code indicating accept or reject condition based on the syntax editing of the transaction set	
			A	Accepted The transmitted transaction set is accepted.
			E	Accepted But Errors Were Noted The transmitted transaction set is accepted, but errors are noted. This means that the sender must not resend the data.
			M	Rejected, Message Authentication Code (MAC) Failed
			R	Rejected The transmitted transaction set is rejected. Depending on the error reason, the sender may resend the data.
			W	Rejected, Assurance Failed Validity Tests
			X	Rejected, Content After Decryption Could Not Be Analyzed
	AK502	718	<b>Transaction Set Syntax Error Code</b>	<b>O ID 1/3</b>
			Code indicating error found based on the syntax editing of a transaction set	
			EIDX USAGE: Optional	
			1	Transaction Set Not Supported This indicates that a trading partner agreement has not been made for this transaction type, or the value provided is invalid.
			2	Transaction Set Trailer Missing Self-explanatory.
			3	Transaction Set Control Number in Header and Trailer Do Not Match

			The transaction set control number in the header and trailer do not match. The value from the header is used in the acknowledgment.
	4		Number of Included Segments Does Not Match Actual Count
	5		One or More Segments in Error
			This code is used as the general response when detail of the actual error is provided in the AK3 and/or AK4 segments.
	6		Missing or Invalid Transaction Set Identifier
	7		Missing or Invalid Transaction Set Control Number
	8		Authentication Key Name Unknown
	9		Encryption Key Name Unknown
	10		Requested Service (Authentication or Encrypted) Not Available
	11		Unknown Security Recipient
	12		Incorrect Message Length (Encryption Only)
	13		Message Authentication Code Failed
	15		Unknown Security Originator
	16		Syntax Error in Decrypted Text
	17		Security Not Supported
	19		S1E Security End Segment Missing for S1S Security Start Segment
	20		S1S Security Start Segment Missing for S1E Security End Segment
	21		S2E Security End Segment Missing for S2S Security Start Segment
	22		S2S Security Start Segment Missing for S2E Security End Segment
	23		Transaction Set Control Number Not Unique within the Functional Group
	24		S3E Security End Segment Missing for S3S Security Start Segment
	25		S3S Security Start Segment Missing for S3E Security End Segment
	26		S4E Security End Segment Missing for S4S Security Start Segment
	27		S4S Security Start Segment Missing for S4E Security End Segment
<b>AK503</b>	<b>718</b>	<b>Transaction Set Syntax Error Code</b>	<b>O ID 1/3</b>
		Code indicating error found based on the syntax editing of a transaction set	
		See code values in AK502.	
<b>AK504</b>	<b>718</b>	<b>Transaction Set Syntax Error Code</b>	<b>O ID 1/3</b>
		Code indicating error found based on the syntax editing of a transaction set	
		See code values in AK502.	

<b>AK505</b>	<b>718</b>	<b>Transaction Set Syntax Error Code</b>	<b>O ID 1/3</b>
		Code indicating error found based on the syntax editing of a transaction set	
		See code values in AK502.	
<b>AK506</b>	<b>718</b>	<b>Transaction Set Syntax Error Code</b>	<b>O ID 1/3</b>
		Code indicating error found based on the syntax editing of a transaction set	
		See code values in AK502.	

**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 contains the value "A" or "E", then the transmitted functional group is accepted.

**Data Element Summary**

	<u>Ref. Des.</u>	<u>Data Element</u>	<u>Name</u>	<u>Attributes</u>
<b>Must Use</b>	AK901	715	<b>Functional Group Acknowledge Code</b>	<b>M ID 1/1</b>
			Code indicating accept or reject condition based on the syntax editing of the functional group	
		A	Accepted	The transmitted functional group is accepted. An acceptance of a functional group is an acceptance of all transaction sets in that functional group.
		E	Accepted, But Errors Were Noted.	The transmitted functional group is accepted, but errors are noted. This means that the sender must not resend this data.
		M	Rejected, Message Authentication Code (MAC) Failed	
		P	Partially Accepted, At Least One Transaction Set Was Rejected	Part of the transmitted functional group is accepted by transaction set.
		R	Rejected	The transmitted functional group is rejected. A rejection of a functional group is a rejection of all transaction sets in that functional group. Depending on the error reason, the sender may resend this data.
		W	Rejected, Assurance Failed Validity Tests	
		X	Rejected, Content After Decryption Could Not Be Analyzed	

Must Use	AK902	97	<b>Number of Transaction Sets Included</b>	<b>M</b>	<b>N0 1/6</b>		
			Total number of transaction sets included in the functional group or interchange (transmission) group terminated by the trailer containing this data element Total number of transaction sets included in the functional group as indicated in the GE01 of the original transmission.				
Must Use	AK903	123	<b>Number of Received Transaction Sets</b>	<b>M</b>	<b>N0 1/6</b>		
			Number of Transaction Sets received Number of transaction sets received as calculated by the receiving system.				
Must Use	AK904	2	<b>Number of Accepted Transaction Sets</b>	<b>M</b>	<b>N0 1/6</b>		
			Number of accepted Transaction Sets in a Functional Group Number of transaction sets received without error.				
Must Use	AK905	716	<b>Functional Group Syntax Error Code</b>	<b>O</b>	<b>ID 1/3</b>		
			Code indicating error found based on the syntax editing of the functional group header and/or trailer EIDX USAGE: OPTIONAL.				
			1			Functional Group Not Supported The value sent in the GS01 of the group being acknowledged is not supported.	
			2			Functional Group Version Not Supported The value specified in the GS08 is not supported by the receiver.	
			3			Functional Group Trailer Missing	
			4			Group Control Number in the Functional Group Header and Trailer Do Not Agree The functional group control number in the header and trailer do not match. The value from the header is used in the acknowledgment.	
			5			Number of Included Transaction Sets Does Not Match Actual Count	
			6			Group Control Number Violates Syntax	
			10			Authentication Key Name Unknown	
			11			Encryption Key Name Unknown	
			12			Requested Service (Authentication or Encryption) Not Available	
			13			Unknown Security Recipient	
			14			Unknown Security Originator	
			15			Syntax Error in Decrypted Text	
			16			Security Not Supported	
			17			Incorrect Message Length (Encryption Only)	
			18			Message Authentication Code Failed	
			19			S1E Security End Segment Missing for S1S Security Start Segment	
			20			S1S Security Start Segment Missing for S1E End Segment	
			21			S2E Security End Segment Missing for S2S Security Start Segment	

		22	S2S Security Start Segment Missing for S2E Security End Segment	
		23	S3E Security End Segment Missing for S3S Security Start Segment	
		24	S3S Security Start Segment Missing for S3E End Segment	
		25	S4E Security End Segment Missing for S4S Security Start Segment	
		26	S4S Security Start Segment Missing for S4E Security End Segment	
<b>AK906</b>	<b>716</b>		<b>Functional Group Syntax Error Code</b>	<b>O ID 1/3</b>
			Code indicating error found based on the syntax editing of the functional group header and/or trailer Refer to 004010 Data Element Dictionary for acceptable code values.	
<b>AK907</b>	<b>716</b>		<b>Functional Group Syntax Error Code</b>	<b>O ID 1/3</b>
			Code indicating error found based on the syntax editing of the functional group header and/or trailer Refer to 004010 Data Element Dictionary for acceptable code values.	
<b>AK908</b>	<b>716</b>		<b>Functional Group Syntax Error Code</b>	<b>O ID 1/3</b>
			Code indicating error found based on the syntax editing of the functional group header and/or trailer Refer to 004010 Data Element Dictionary for acceptable code values.	
<b>AK909</b>	<b>716</b>		<b>Functional Group Syntax Error Code</b>	<b>O ID 1/3</b>
			Code indicating error found based on the syntax editing of the functional group header and/or trailer Refer to 004010 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**

	<u>Ref. Des.</u>	<u>Data Element</u>	<u>Name</u>	<u>Attributes</u>
<b>Must Use</b>	SE01	96	<b>Number of Included Segments</b>	<b>M N0 1/10</b>
			Total number of segments included in a transaction set including ST and SE segments	
<b>Must Use</b>	SE02	329	<b>Transaction Set Control Number</b>	<b>M AN 4/9</b>
			Identifying control number that must be unique within the transaction set functional group assigned by the originator for a transaction set	
			The control number is assigned by the sender. It should be sequentially assigned within each functional group to aid in error recovery and research. The control number in the SE segment (SE02) must be identical to the control number in the ST segment (ST02) for each transaction.	

## 997 FUNCTIONAL ACKNOWLEDGMENT EXAMPLES

### 997 Example 1 - Functional Acknowledgment, all Sent Transaction Sets Accepted

This is an example of a 997 (FA) to a PO functional group containing five transaction sets. All five sets were accepted.

#### Example 1 Summary

ST*997*12345'	The transaction is a 997, with a transaction set control number of 12345.
AK1*PO*125'	A functional group of type 'PO' is being acknowledged; the control number of the group being acknowledged is 125.
AK9*A*5*5*5'	All transaction sets in the functional group are accepted; 5 transaction sets were included in the functional group, 5 transactions sets were actually received, and 5 transaction sets were accepted.
SE*4*12345'	There are 4 segments in this transaction set, and the transaction set control number is 12345.

#### Example 1 Explanation

ST*997*12345'	<b>ST Transaction Set Header</b>
	ST01/143 Transaction Set Identifier Code [M/ID 3/3]: 997 (Functional Acknowledgment)
	ST02/329 Transaction Set Control Number [M/AN 4/9]: 12345
AK1*PO*125'	<b>AK1 Functional Group Response Header</b>
	AK101/479 Functional Identifier Code [M/ID 2/2]: PO (Functional Group type PO being acknowledged)
	AK102/28 Group Control Number [M/N0 1/9]: 125 (Control number of the functional group being acknowledged)
AK9*A*5*5*5'	<b>AK9 Functional Group Response Trailer</b>
	AK901/715 Functional Group Acknowledge Code [M/ID 1/1]: A (All transaction sets in the functional group are accepted)
	AK902/97 Number of Transaction Sets Included [M/N0 1/6]: 5 (from the GS01 of the functional group being acknowledged)
	AK903/123 Number of Received Transaction Sets [M/N0 1/6]: 5 (sets actually received)
	AK904/2 Number of Accepted Transaction Sets [M/N0 1/6]: 5 (sets accepted)

SE*4*12345'	<b>SE Transaction Set Trailer</b>
	SE01 /96 Number of Included Segments [M/N0 1 /10]: 4 (count of segments in this transaction set including ST and SE)
	SE02/329 Transaction Set Control Number [M/AN 4/9]: 12345

## 997 Example 2 – Functional Acknowledgment – Mixed Acceptance and Rejection of Sent Transaction Sets, No Details

This is an example of a 997 (FA) to a PO functional group containing five transaction sets. Four of the five transaction sets were accepted and one was rejected. This 997 identifies the transaction set that contained the fatal error.

NOTE: The minimum requirement is to indicate the set(s) that were rejected. The assumption is that those not indicated are accepted. Some software may require that an AK2 and AK5 be returned for each set that was received.

### Example 2 Summary

ST*997*12345'	The transaction is a 997, with a transaction set control number of 12345.
AK1*PO*125'	A functional group of type 'PO' is being acknowledged; the control number of the group being acknowledged is 125.
AK2*850*9876'	Acknowledgment detail is included for an 850 with transaction set control number of 9876.
AK5*R*5'	The transaction is rejected because one or more segments is in error.
AK9*P*5*5*4'	The functional group was partially accepted (some but not all transaction sets accepted); 5 transaction sets were included in the functional group, 5 transactions sets were actually received, and 4 transaction sets were accepted (1 was rejected).
SE*6*12345'	There are 6 segments in this transaction set, and the transaction set control number is 12345.

### Example 2 Explanation

ST*997*12345'	<b>ST Transaction Set Header</b>
	ST01/143 Transaction Set Identifier Code [M/ID 3/3]: 997 (Functional Acknowledgment)
	ST02/329 Transaction Set Control Number [M/AN 4/9]: 12345
AK1*PO*125'	<b>AK1 Functional Group Response Header</b>
	AK101/479 Functional Identifier Code [M/ID 2/2]: PO (Functional Group type PO being acknowledged)
	AK102/28 Group Control Number [M/NO 1/9]: 125 (Control number of the functional group being acknowledged)

AK2*850*9876'	<b>AK2 Transaction Set Response Header</b>
	AK201/143 Transaction Set Identifier Code [M/ID 3/3]: 850 (Transaction type being acknowledged)
	AK202/329 Transaction Set Control Number M/AN 4/9]: 9876 (control number of the transaction set being acknowledged)
AK5*R*5'	<b>AK5 Transaction Set Response Trailer</b>
	AK501/717 Transaction Set Acknowledgment Code [M/ID 1/1]: R (Transaction set referenced in AK2 is rejected)
	AK502/718 Transaction Set Syntax Error Code [O/ID 1/3]: 5 (One or more segments in error)
AK9*P*5*5*4'	<b>AK9 Functional Group Response Trailer</b>
	AK901/715 Functional Group Acknowledge Code [M/ID 1/1]: P (Functional group partially accepted)
	AK902/97 Number of Transaction Sets Included [M/N0 1/6]: 5 (from the GS01 of the functional group being acknowledged)
	AK903/123 Number of Received Transaction Sets [M/N0 1/6]: 5 (sets actually received)
	AK904/2 Number of Accepted Transaction Sets [M/N0 1/6]: 4 (sets accepted - implies 1 set rejected)
SE*6*12345'	<b>SE Transaction Set Trailer</b>
	SE01/96 Number of Included Segments [M/N0 1/10]: 6 (count of segments in this transaction set including ST and SE)
	SE02/329 Transaction Set Control Number [M/AN 4/9]: 12345

### 997 Example 3 – Functional Acknowledgment – Mixed Acceptance and Rejection of Sent Transaction Sets With Segment Level Details

This is an example of a 997 (FA) to a PO functional group containing five transaction sets. Four of the five transaction sets were accepted and one was rejected. This 997 identifies the transaction set and the segment that contained the fatal error.

#### Example 3 Summary

ST*997*12345'	The transaction is a 997, with a transaction set control number of 12345.
AK1*PO*125'	A functional group of type 'PO' is being acknowledged; the control number of the group being acknowledged is 125.
AK2*850*9876'	Acknowledgment detail is included for an 850 with transaction set control number of 9876.
AK3*PO1*10'	The PO1 segment in the 850 (transaction set referenced in the AK2 segment) contains an error; it is the 10 <sup>th</sup> segment in that transaction set.
AK5*R*5'	The transaction is rejected because one or more segments is in error.
AK9*P*5*5*4'	The functional group was partially accepted (some but not all transaction sets accepted); 5 transaction sets were included in the functional group, 5 transactions sets were actually received, and 4 transaction sets were accepted (1 was rejected).
SE*7*12345'	There are 7 segments in this transaction set, and the transaction set control number is 12345.

#### Example 3 Explanation

ST*997*12345'	<b>ST Transaction Set Header</b>
	ST01/143 Transaction Set Identifier Code [M/ID 3/3]: 997 (Functional Acknowledgment)
	ST02/329 Transaction Set Control Number [M/AN 4/9]: 12345
AK1*PO*125'	<b>AK1 Functional Group Response Header</b>
	AK101/479 Functional Identifier Code [M/ID 2/2]: PO (Functional Group type PO being acknowledged)
	AK102/28 Group Control Number [M/NO 1/9]: 125 (Control number of the functional group being acknowledged)

AK2*850*9876'	<b>AK2 Transaction Set Response Header</b>
	AK201/143 Transaction Set Identifier Code [M/ID 3/3]: 850 (Transaction type being acknowledged)
	AK202/329 Transaction Set Control Number M/AN 4/9]: 9876 (control number of the transaction set being acknowledged)
AK3*PO1*10'	<b>AK3 Data Segment Note</b>
	AK301/721 Segment ID Code [M/ID 2/3]: PO1 (segment that contained fatal error)
	AK302/719 Segment Position in Transaction Set [M/N0 1/6]: 10 (tenth segment in the transaction set being acknowledged)
AK5*R*5'	<b>AK5 Transaction Set Response Trailer</b>
	AK501/717 Transaction Set Acknowledgment Code [M/ID 1/1]: R (Transaction set referenced in AK2 is rejected)
	AK502/718 Transaction Set Syntax Error Code [O/ID 1/3]: 5 (One or more segments in error)
AK9*P*5*5*4'	<b>AK9 Functional Group Response Trailer</b>
	AK901/715 Functional Group Acknowledge Code [M/ID 1/1]: P (The functional group is partially accepted)
	AK902/97 Number of Transaction Sets Included [M/N0 1/6]: 5 (from the GS01 of the functional group being acknowledged)
	AK903/123 Number of Received Transaction Sets [M/N0 1/6]: 5 (sets actually received)
	AK904/2 Number of Accepted Transaction Sets [M/N0 1/6]: 4 (sets accepted - implies 1 set rejected)
SE*7*12345'	<b>SE Transaction Set Trailer</b>
	SE01/96 Number of Included Segments [M/N0 1/10]: 7 (count of segments in this transaction set including ST and SE)
	SE02/329 Transaction Set Control Number [M/AN 4/9]: 12345

## 997 Example 4 – Functional Acknowledgment – Mixed Acceptance and Rejection of Sent Transaction Sets With Data Element Level Details

This is an example of a 997 (FA) to a PO functional group containing five transaction sets. Four of the five transaction sets were accepted and one was rejected. This 997 identifies the transaction set, the segment that contained the fatal error, and the missing data element.

### Example 4 Summary

ST*997*12345'	The transaction is a 997, with a transaction set control number of 12345.
AK1*PO*125'	A functional group of type 'PO' is being acknowledged; the control number of the group being acknowledged is 125.
AK2*850*9876'	Acknowledgment detail is included for an 850 with transaction set control number of 9876.
AK3*PO1*10'	The PO1 segment in the 850 (transaction set referenced in the AK2 segment) contains an error; it is the 10 <sup>th</sup> segment in that transaction set.
AK4*3*355*1'	The data element in the third position of the PO1 segment (referenced in the AK3 segment), which is data element number 355, is missing, and this data element is mandatory on the segment.
AK5*R*5'	The transaction is rejected because one or more segments is in error.
AK9*P*5*5*4'	The functional group was partially accepted (some but not all transaction sets accepted); 5 transaction sets were included in the functional group, 5 transactions sets were actually received, and 4 transaction sets were accepted (1 was rejected).
SE*8*12345'	There are 8 segments in this transaction set, and the transaction set control number is 12345.

### Example 4 Explanation

ST*997*12345'	<b>ST Transaction Set Header</b>
	ST01/143 Transaction Set Identifier Code [M/ID 3/3]: 997 (Functional Acknowledgment)
	ST02/329 Transaction Set Control Number [M/AN 4/9]: 12345
AK1*PO*125'	<b>AK1 Functional Group Response Header</b>
	AK101/479 Functional Identifier Code [M/ID 2/2]: PO (Functional Group type PO being acknowledged)
	AK102/28 Group Control Number [M/NO 1/9]: 125 (Control number of the functional group being acknowledged)

AK2*850*9876'	<b>AK2 Transaction Set Response Header</b>
	AK201/143 Transaction Set Identifier Code [M/ID 3/3]: 850 (Transaction type being acknowledged)
	AK202/329 Transaction Set Control Number M/AN 4/9]: 9876 (control number of the transaction set being acknowledged)
AK3*PO1*10'	<b>AK3 Data Segment Note</b>
	AK301/721 Segment ID Code [M/ID 2/3]: PO1 (segment that contained fatal error)
	AK302/719 Segment Position in Transaction Set [M/N0 1/6]: 10 (tenth segment in the transaction set being acknowledged)
AK4*3*355*1'	<b>AK4 Data Element Note</b>
	AK401/C030 Position in Segment [M] C03001/722 Element Position in Segment [M/N0 1/2]: 3 (data element is in third position of the segment referenced in AK3).
	AK402/725 Data Element Reference Number [O/N0 1/4]: 355 (data element number in X12 data element dictionary)
	AK403/723 Data Element Syntax Error Code [M/ID 1/3]: 1 (Mandatory data element missing)
AK5*R*5'	<b>AK5 Transaction Set Response Trailer</b>
	AK501/717 Transaction Set Acknowledgment Code [M/ID 1/1]: R (Transaction set referenced in AK2 is rejected)
	AK502/718 Transaction Set Syntax Error Code [O/ID 1/3]: 5 (One or more segments in error)
AK9*P*5*5*4'	<b>AK9 Functional Group Response Trailer</b>
	AK901/715 Functional Group Acknowledge Code [M/ID 1/1]: P (The functional group is partially accepted)
	AK902/97 Number of Transaction Sets Included [M/N0 1/6]: 5 (from the GS01 of the functional group being acknowledged)
	AK903/123 Number of Received Transaction Sets [M/N0 1/6]: 5 (sets actually received)
	AK904/2 Number of Accepted Transaction Sets [M/N0 1/6]: 4 (sets accepted - implies 1 set rejected)
SE*8*12345'	<b>SE Transaction Set Trailer</b>
	SE01/96 Number of Included Segments [M/N0 1/10]: 8 (count of segments in this transaction set including ST and SE)
	SE02/329 Transaction Set Control Number [M/AN 4/9]: 12345