



EDI ANSI X12 997

Version: V4010

Functional Acknowledgement

Author: One Network Integration
Last updated: Aug 2019

One Network Enterprises
4055 Valley View Lane
Dallas, TX 75244

Revision History

Revision	Date	Prepared By	Comments
1.0	8/13/2019	Integration Team	

Table of Contents

997 Functional Acknowledgement	4
EDI 997 Segments:	5
ISA Interchange Control Header	6
GS Functional Group Header	7
ST Transaction Set Header	8
AK1 Functional Group Response Header , Acknowledgment.....	8
AK2 Transaction Set Response Header	8
AK3 Data Segment Note	9
AK4 Data Element Node.....	10
AK5 Transaction Set Response Trailer	11
AK9 Functional Group Response Trailer	11
SE Transaction Set Trailer	12
GE Functional Group Trailer.....	12
IEA Interchange Control Trailer.....	12
Sample EDI 997	14

997 Functional Acknowledgement

Functional Group=FA

Purpose: This Draft Standard for Trial Use contains the format and establishes the data contents of the Functional Acknowledgement Transaction Set (997) for use within the context of an Electronic Data Interchange (EDI) environment. The transaction set serves as a response, or electronic receipt, between EDI transactions. After an 850 PO document has been sent to the trading partner, the EDI 997 will serve as an acceptance, acceptance with issues or rejection notification. This document gives transparency to the order fulfilment process, allowing buyers and vendors to address issues in a timely manner.

Usage Indicators:

Usage Indicators are applied at all levels of the guidelines and shown adjacent to data items such as segment groups, segments, composite data elements and simple data elements. They dictate the agreed usage of the data items or entities.

The Usage Indicators are:

Value	Description
M	Mandatory Indicates the item is mandatory in the UN/EDIFACT message.
X	Conditional The entity is used by agreement between trading partners
O	Optional Indicates that this item is at the need or discretion of both trading partners.
NA	Not Recommended (Advised) Indicates the item needn't be transmitted in this implementation.

Terminology:

Within this manual specific terminology will be used that you may not be familiar with. In order to give you some guidance, please find below the most important EDI terms and their according definitions.

Delimiters	Segment Terminator: ~ Each segment in this message is separated by a ~ character Element Separator: * sign indicates the start of a new element, either a simple or composite element Sub element separator: + character indicates the start of a sub-element of a composite element.
Segment	A segment is uniquely identified by a three character mnemonic tag, which is used as a reference to a common group of business information. For example, Invoice number, shipment identification number and SCAC code information, all this data is contained in Beginning segment B3.
Service Segment	A service segment is a segment that contains non-business related data. These segments usually include interchanges and messages, in the form of headers and trailers. For example ISA and GS are typical service segments.

Segment Group	A segment group is a collection of segments that are related within a message structure. A simple example would be a group for details of transport. This would typically include a segment for the reference (using N9).
Composite Element	A composite element is a lower level of detail to identify business data within segment. It is normally used when a data item requires addition information. Each composite element has a unique code identifying it. A composite element could be used, for example when a data item is in the form of a code and it requires a type qualifier and also organization responsible for its maintenance.
Data Element	A data element is the lowest level within the EDI structure for holding data. Each data element has a unique code identifying it. A data element can exist as a stand-alone element or as a sub-element within a composite element.

EDI 997 Segments:**Not Defined:**

<u>Pos</u>	<u>Id</u>	<u>Segment Name</u>	<u>Req</u>	<u>Max Use</u>	<u>Repeat</u>	<u>Usage</u>
	ISA	Interchange Control Header	M	1		Must use
0	GS	Functional Group Header	M	1		Must use

Heading:

<u>Pos</u>	<u>Id</u>	<u>Segment Name</u>	<u>Req</u>	<u>Max Use</u>	<u>Repeat</u>	<u>Usage</u>
010	ST	Transaction Set Header	M	1		Must Use
020	AK1	Functional Group Response Header , Acknowledgment	M	1		Must Use
030	AK2	Transaction Set Response Header	O	1		Used
040	AK3	Data Segment Note	O	1-99		Used
050	AK4	Data Element Node	O	1		Used
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		Must use

Not Defined:

<u>Pos</u>	<u>Id</u>	<u>Segment Name</u>	<u>Req</u>	<u>Max Use</u>	<u>Repeat</u>	<u>Usage</u>
	GE	Functional Group Trailer	M	1		Must use
	IEA	Interchange Control Trailer	M	1		Must use

ISA Interchange Control Header**Mandatory****Max: 1**

User Option (Usage): Must use

Purpose: To start and identify an interchange of zero or more functional groups and interchange-related control segments

Element Summary:

Ref	Element Description	Req	Type	Min/Max	Usage						
ISA05	Interchange ID Qualifier	M	ID	2/2	Must use						
	Description: Qualifier to designate the system/method of code structure used to designate the sender or receiver ID element being qualified All valid standard codes are used.										
ISA06	Interchange Sender ID	M	AN	15/15	Must use						
	Description: Identification code published by the sender for other parties to use as the receiver ID to route data to them; the sender always codes this value in the sender ID element										
ISA07	Interchange ID Qualifier	M	ID	2/2	Must use						
	Description: Qualifier to designate the system/method of code structure used to designate the sender or receiver ID element being qualified										
ISA08	Interchange Receiver ID	M	AN	15/15	Must use						
	Description: Identification code published by the receiver of the data; When sending, it is used by the sender as their sending ID, thus other parties sending to them will use this as a receiving ID to route data to them										
ISA14	Acknowledgment Requested	M	ID	1/1	Must use						
	Description: Code sent by the sender to request an interchange acknowledgment (TA1) All valid standard codes are used. <table><tr><td>Code</td><td>Name</td></tr><tr><td>0</td><td>No Acknowledgment Requested</td></tr><tr><td>1</td><td>Interchange Acknowledgment Requested</td></tr></table>					Code	Name	0	No Acknowledgment Requested	1	Interchange Acknowledgment Requested
Code	Name										
0	No Acknowledgment Requested										
1	Interchange Acknowledgment Requested										
ISA16	Component Element Separator	M		1/1	Optional						
	Description: Type is not applicable; the component element separator is a delimiter and not a data element; this field provides the delimiter used to separate component data elements within a composite data structure; this value must be different than the data element separator and the segment terminator										

GS Functional Group Header**Mandatory****Max: 1**

User Option (Usage): Must use

Purpose: To indicate the beginning of a functional group and to provide control information

Semantics:

1. GS04 is the group date.
2. GS05 is the group time.
3. The data interchange control number GS06 in this header must be identical to the same data element in the associated functional group trailer, GE02.

Comments: A functional group of related transaction sets, within the scope of X12 standards, consists of a collection of similar transaction sets enclosed by a functional group header and a functional group trailer.

Element Summary:

Ref	Element Description	Req	Type	Min/Max	Usage
GS01	Functional Identifier Code	M	ID	2/2	Must use
	Description: Code identifying a group of application related transaction sets				
	Code List Summary				
	Code	Name			
	FA	Functional Acknowledgement			
GS02	Application Sender's Code	M	AN	2/15	Must use
	Description: Code identifying party sending transmission; codes agreed to by trading partners				
GS03	Application Receiver's Code	M	AN	2/15	Must use
	Description: Code identifying party receiving transmission; codes agreed to by trading partners				
GS04	Date	M	DT	8/8	Must use
	Description: Date expressed as CCYYMMDD				
GS05	Time	M	TM	4/8	Must use
	Description: Time expressed in 24-hour clock time as follows: HHMM, or HHMMSS, or HHMMSSD, or HHMMSSDD, where H = hours (00-23), M = minutes (00-59), S = integer seconds (00-59) and DD = decimal seconds; decimal seconds are expressed as follows: D = tenths (0-9) and DD = hundredths (00-99)				
GS06	Group Control Number	M	NO	1/9	Must use
	Description: Assigned number originated and maintained by the sender				
GS07	Responsible Agency Code	M	ID	1/2	Must use
	Description: Code identifying the issuer of the standard; this code is used in conjunction with Data Element 480 All valid standard codes are used.				
GS08	Version / Release / Industry Identifier Code	M	AN	1/12	Must use

	Description: Code indicating the version, release, sub release, and industry identifier of the EDI standard being used, including the GS and GE segments; if code in DE455 in GS segment is X, then in DE 480 positions 1-3 are the version number; positions 4-6 are the release and sub release, level of the version; and positions 7-12 are the industry or trade association identifiers (optionally assigned by user); if code in DE455 in GS segment is T, then other formats are allowed	
	Code	Name
	004010	Draft Standards Approved for Publication by ASC X12 Procedures Review Board through October 1997

ST Transaction Set Header**Mandatory****Max: 1**

User Option (Usage): Must use

Purpose: To indicate the start of a transaction set and to assign a control number

Element Summary:

Ref	Element Description	Req	Type	Min/Max	Usage
ST01	Transaction Set Identifier Code	M	ID	3/3	Must use
	Description: Code uniquely identifying a Transaction Set				
	Code	Name			
	997	Functional Acknowledgement			
ST02	Transaction Set Control Number	M	AN	4/9	Must use
	Description: Identifying control number that must be unique within the transaction set functional group assigned by the originator for a transaction set				

AK1 Functional Group Response Header , Acknowledgment**Mandatory****Max: 1**

User Option (Usage): Must Use

Purpose: To transmit functional group level details maintained by sender

Element Summary:

Ref	Element Description	Req	Type	Min/Max	Usage
AK101	Functional Identifier Code	M	ID	2/2	Must use
	Description: Code defining transaction type for which ack is being sent. For e.g. PO/SH (purchase order/ shipment number)				
AK102	Group Control Number	M	N0	1/9	Must use
	Description: Assigned number originated and maintained by the sender				

AK2 Transaction Set Response Header**Optional****Max: 1**

User Option (Usage): Optional

Purpose: To transmit transaction set details for which the Acknowledgement is being sent

Element Summary:

Ref	Element Description	Req	Type	Min/Max	Usage
AK201	Transaction Set Identifier Code	M	ID	3/3	Must use
	Description: Transaction set identifier code (850, 856)				
AK202	Transaction Set Control Number	M	AN	4/9	Must use
	Description: Unique control number which is unique within the transaction set				

AK3 Data Segment Note

Optional

Max: 1

User Option (Usage): Optional

Purpose: To report errors in a data segment and identify the location of the data segment

Element Summary:

Ref	Element Description	Req	Type	Min/Max	Usage
AK301	Segment ID Code	M	ID	2/3	Must use
	Description: Code defining the segment ID of the data segment in error				
AK302	Segment Position in Transaction Set	M	N0	1/6	Must use
	Description: The numerical count position of this data segment from the start of the transaction set: the transaction set header is count position 1				
AK303	Loop Identifier Code	O	AN	1/6	Must use
	Description: The loop ID number given on the transaction set diagram is the value for this data element in segments LS				
AK304	Segment Syntax Error Code	O	ID	1/3	Must use
	Description: Code indicating error found based on the syntax editing of a segment				
	Code	Description			
	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			

AK4 Data Element Node**Optional****Max: 99**

User Option (Usage): Optional

Purpose: To report errors in a data element or composite data structure and identify the location of the data element

Element Summary:

Ref	Element Description	Req	Type	Min/Max	Usage																						
AK401	Position in Segment	M	NO	1/2	Must use																						
	Description: 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																										
C03001	Element Position in Segment	M	NO	1/2	Must use																						
	Description: 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	Component Data Element Position in Composite	M	NO	1/2	Must use																						
	Description: To identify the component data element position within the composite that is in																										
AK402	Data Element Reference Number	O	NO	1/4	Must use																						
	Description: Reference number used to locate the data element in the Data Element Dictionary																										
AK403	Data Element Syntax Error Code	M	ID	1/3	Must use																						
	Description: Code indicating the error found after syntax edits of a data element																										
	<table><tr><th>Code</th><th>Error</th></tr><tr><td>1</td><td>Mandatory data element missing</td></tr><tr><td>2</td><td>Conditional required data element missing.</td></tr><tr><td>3</td><td>Conditional required data element missing.</td></tr><tr><td>4</td><td>Data element too short.</td></tr><tr><td>5</td><td>Data element too long.</td></tr><tr><td>6</td><td>Invalid character in data element.</td></tr><tr><td>7</td><td>Invalid code value.</td></tr><tr><td>8</td><td>Invalid Date</td></tr><tr><td>9</td><td>Invalid Time</td></tr><tr><td>10</td><td>Exclusion Condition Violated</td></tr></table>	Code	Error	1	Mandatory data element missing	2	Conditional required data element missing.	3	Conditional required data element missing.	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				
Code	Error																										
1	Mandatory data element missing																										
2	Conditional required data element missing.																										
3	Conditional required data element missing.																										
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																										
AK404	Copy of Bad Data Element	O	AN	1/99	Must use																						
	Description: This is a copy of the data element in error																										

AK5 Transaction Set Response Trailer**Optional****Max: 1**

User Option (Usage): Optional

Purpose: To acknowledge acceptance or rejection and report errors in a transaction.

Element Summary:

Ref	Element Description	Req	Type	Min/Max	Usage
AK501	Transaction Set Acknowledge Code	M	ID	1	Must use
	Description: Code indicating accept or reject condition				
	Code	Description			
	A	Accepted			
	E	Accepted But Errors Were Noted			
	M	Rejected, Message Authentication Code (MAC) Failed			
	R	Rejected			
	W	Rejected, Assurance Failed Validity Tests			
	X	Rejected, Content After Decryption Could Not Be Analysed			
AK502-06	Transaction Set Syntax Error Code	O	ID	1/3	Must use
	Description: Code indicating error found based on the syntax editing of a transaction set				

AK9 Functional Group Response Trailer**Optional****Max: 1**

User Option (Usage): Optional

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

Element Summary:

Ref	Element Description	Req	Type	Min/Max	Usage
AK901	Functional Group Acknowledge Code	M	ID	1	Must use
	Description: Code indicating accept or reject condition				
	Code	Description			
	A	Accepted			
	E	Accepted But Errors Were Noted			
	M	Rejected, Message Authentication Code (MAC) Failed			
	P	Partially Accepted, At Least One Transaction Set Was Rejected			
	R	Rejected			
	W	Rejected, Assurance Failed Validity Tests			
	X	Rejected, Content After Decryption Could Not Be Analysed			
AK902	Number of Transaction Sets Included	M	NO	1/6	Must use
	Description: Total number of transaction sets included in the functional group or interchange (transmission) group terminated by the trailer containing this data element				
AK903	Number of Received Transaction Sets	M	NO	1/6	Must use
	Description: Number of Transaction Sets received				

AK904	Number of Accepted Transaction Sets	M	NO	1/6	Must use
	Description: Number of accepted Transaction Sets in a Functional Group				
AK905-09	Functional Group Syntax Error Code	O	ID	1/3	Must use
	Description: Code indicating error found based on the syntax editing of the functional group header and/or trailer (see pdf)				

SE Transaction Set Trailer**Mandatory****Max: 1**

User Option (Usage): Must Use

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)

Element Summary:

Ref	Element Description	Req	Type	Min/Max	Usage
SE01	Number of Included Segments	M	NO	1/10	Used
	Description: Count of segments included (does not include Header and Footer segments)				
SE02	Transaction Set Control Number	M	AN	4/9	Used
	Description: Identifying control number that must be unique within the transaction set functional group assigned by the originator for a transaction set. Same as Transaction Set Control Number as in ST segment				

GE Functional Group Trailer**Mandatory****Max: 1**

User Option (Usage): Must Use

Purpose: To indicate the end of a functional group and to provide control information

Element Summary:

Ref	Element Description	Req	Type	Min/Max	Usage
GE01	Number of Transaction Sets Included	M	NO	1/6	Must Use
	Description: Total number of transaction sets included in the functional group or interchange (transmission) group terminated by the trailer containing this data element				
GE02	Group Control Number	M	NO	1/9	Must Use
	Description: Assigned number originated and maintained by the sender. The data interchange control number GE02 in this trailer must be identical to the same data element in the associated functional group header, GS06.				

IEA Interchange Control Trailer**Mandatory****Max: 1**

User Option (Usage): Must Use

Purpose: To define the end of an interchange of zero or more functional groups and interchange-related control segments

Element Summary:

Ref	Element Description	Req	Type	Min/Max	Usage
IEA01	Number of Included Functional Groups	M	NO	1/5	Must Use
	Description: A count of the number of functional groups included in an interchange				
IEA02	Interchange Control Number	M	NO	1/9	Must Use
	Description: A control number assigned by the interchange sender				

Sample EDI 997

ISA*00* *00* *ZZ*HUB4 *ZZ*SUP6 *170804*1611*U*00401*000000617*0*T*~
GS*FA*HUB4*SUP6*20170804*1611*597*X*004010~
ST*997*10635~
AK1*SH*513~
AK2*856*001849727~
AK3* CLM*40*2300*8~
AK4*5*2*1332*7~
AK5*R*5~
AK9*R*1*0~
SE*6*10635~
GE*1*597~
IEA*1*000000617~