Customer EDI Guidelines

997 Functional Acknowledgment

Author: **CSC Consulting**

997 Functional Acknowledgment

Functional Group=FA

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.

Segments:

Pos	Id	Segment Name	Req	Max Use	Repeat	Notes	Usage
	ISA	Interchange Control Header	M	1			Used
	GS	Functional Group Header	M	1			Used

Heading:

Pos	Id	Segment Name	Req	Max Use	Repeat	Notes	Usage
010	ST	Transaction Set Header	M	1		N1/010	Must use
020	AK1	Functional Group Response Header	M	1		N1/020	Must use
LOOP ID - AK2					999999		
030	AK2	Transaction Set Response Header	O	1		N1/030	Used
LOOP ID - AK3					999999		
040	AK3	Data Segment Note	O	1			Used
050	AK4	Data Element Note	O	99			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

Segments:

Pos	Id	Segment Name	Req	Max Use	Repeat	Notes	Usage
	GE	Functional Group Trailer	M	1			Used
	IEA	Interchange Control Trailer	M	1			Used

Notes:

1/010   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.

1/020   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.

1/030   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.

ISA   Interchange Control Header

Pos:	**Max: 1**
- Mandatory	
Loop: N/A	**Elements: 16**

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

Element Summary:

Ref	Id	Element Name	Req	Type	Min/Max	Usage
ISA01	I01	**Authorization Information Qualifier** **Description:** Code to identify the type of information in the Authorization Information All valid standard codes are used.	M	ID	2/2	Must use
ISA02	I02	**Authorization Information** **Description:** Information used for additional identification or authorization of the interchange sender or the data in the interchange; the type of information is set by the Authorization Information Qualifier (I01)	M	AN	10/10	Must use
ISA03	I03	**Security Information Qualifier** **Description:** Code to identify the type of information in the Security Information All valid standard codes are used.	M	ID	2/2	Must use
ISA04	I04	**Security Information** **Description:** This is used for identifying the security information about the interchange sender or the data in the interchange; the type of information is set by the Security Information Qualifier (I03)	M	AN	10/10	Must use
ISA05	I05	**Interchange ID Qualifier** **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.	M	ID	2/2	Must use
ISA06	I06	**Interchange Sender ID** **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	M	AN	15/15	Must use
ISA07	I05	**Interchange ID Qualifier** **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.	M	ID	2/2	Must use
ISA08	I07	**Interchange Receiver ID** **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	M	AN	15/15	Must use
ISA09	I08	**Interchange Date** **Description:** Date of the interchange	M	DT	6/6	Must use
ISA10	I09	**Interchange Time** **Description:** Time of the interchange	M	TM	4/4	Must use
ISA11	I10	**Interchange Control Standards Identifier** **Description:** Code to identify the agency responsible for the control standard used by the message that is enclosed by the interchange header and trailer All valid standard codes are used.	M	ID	1/1	Must use
ISA12	I11	**Interchange Control Version Number**	M	ID	5/5	Must

Ref	Id	Element Name	Req	Type	Min/Max	Usage
		Description: This version number covers the interchange control segments				use
		All valid standard codes are used.				
ISA13	I12	**Interchange Control Number**	M	N0	9/9	**Must** use
		Description: A control number assigned by the interchange sender				
ISA14	I13	**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.				
ISA15	I14	**Usage Indicator**	M	ID	1/1	**Must** use
		Description: Code to indicate whether data enclosed by this interchange envelope is test, production or information				
		All valid standard codes are used.				
ISA16	I15	**Component Element Separator**	M		1/1	**Must** use
		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

Pos:	**Max: 1**
- Mandatory	
Loop: N/A	**Elements: 8**

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

Element Summary:

Ref	Id	Element Name	Req	Type	Min/Max	Usage
GS01	**479**	**Functional Identifier Code**	**M**	**ID**	**2/2**	**Must use**
		Description: Code identifying a group of application related transaction sets				
		All valid standard codes are used.				
GS02	**142**	**Application Sender's Code**	**M**	**AN**	**2/15**	**Must use**
		Description: Code identifying party sending transmission; codes agreed to by trading partners				
GS03	**124**	**Application Receiver's Code**	**M**	**AN**	**2/15**	**Must use**
		Description: Code identifying party receiving transmission. Codes agreed to by trading partners				
GS04	**373**	**Date**	**M**	**DT**	**8/8**	**Must use**
		Description: Date expressed as CCYYMMDD				
GS05	**337**	**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	**28**	**Group Control Number**	**M**	**N0**	**1/9**	**Must use**
		Description: Assigned number originated and maintained by the sender				
GS07	**455**	**Responsible Agency Code**	**M**	**ID**	**1/2**	**Must use**
		Description: Code used in conjunction with Data Element 480 to identify the issuer of the standard				
		All valid standard codes are used.				
GS08	**480**	**Version / Release / Industry Identifier Code**	**M**	**AN**	**1/12**	**Must use**
		Description: Code indicating the version, release, subrelease, 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 subrelease, 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				
		All valid standard codes are used.				

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:

1. 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.

ST   Transaction Set Header

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

Element Summary:

Ref	Id	Element Name	Req	Type	Min/Max	Usage
ST01	**143**	**Transaction Set Identifier Code**	**M**	**ID**	**3/3**	**Must use**

Description: Code uniquely identifying a Transaction Set

Code	Name
810	Invoice
830	Planning Schedule with Release Capability
850	Purchase Order
855	Purchase Order Acknowledgment
856	Ship Notice/Manifest

Ref	Id	Element Name	Req	Type	Min/Max	Usage
ST02	**329**	**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

Semantics:

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).

AK1   Functional Group Response Header

Pos: 020	Max: 1
Heading - Mandatory	
Loop: N/A	**Elements: 2**

To start acknowledgment of a functional group

Element Summary:

Ref	Id	Element Name	Req	Type	Min/Max	Usage
AK101	**479**	**Functional Identifier Code**	**M**	**ID**	**2/2**	**Must use**

Description: Code identifying a group of application related transaction sets

Code	Name
IN	Invoice Information (810,819)
PO	Purchase Order (850)
PR	Purchase Order Acknowledgement (855)
PS	Planning Schedule with Release Capability (830)
SH	Ship Notice/Manifest (856)

Ref	Id	Element Name	Req	Type	Min/Max	Usage
AK102	**28**	**Group Control Number**	**M**	**N0**	**1/9**	**Must use**

Description: Assigned number originated and maintained by the sender

Semantics:

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.

AK2   Transaction Set Response Header

Pos: 030   Max: 1
Heading - Optional
Loop: AK2   Elements: 2

To start acknowledgment of a single transaction set

Element Summary:

Ref	Id	Element Name	Req	Type	Min/Max	Usage
AK201	143	**Transaction Set Identifier Code**	M	ID	3/3	Must use

Description: Code uniquely identifying a Transaction Set

Code	Name
810	Invoice
830	Planning Schedule with Release Capability
850	Purchase Order
855	Purchase Order Acknowledgment
856	Ship Notice/Manifest

Ref	Id	Element Name	Req	Type	Min/Max	Usage
AK202	329	**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

Semantics:

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.

AK3   Data Segment Note

Pos: 040   Max: 1
Heading - Optional
Loop: AK3   Elements: 4

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

Element Summary:

Ref	Id	Element Name	Req	Type	Min/Max	Usage
AK301	721	**Segment ID Code**	M	ID	2/3	Must use
		Description: Code defining the segment ID of the data segment in error (See Appendix A - Number 77)				
AK302	719	**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	447	**Loop Identifier Code**	O	AN	1/6	Used
		Description: The loop ID number given on the transaction set diagram is the value for this data element in segments LS and LE				
AK304	720	**Segment Syntax Error Code**	O	ID	1/3	Used
		Description: Code indicating error found based on the syntax editing of a segment. All valid standard codes are used.				

AK4   Data Element Note

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

Element Summary:

Ref	Id	Element Name	Req	Type	Min/Max	Usage
AK401	**C030**	**Position in Segment**	**M**	**Comp**		**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				
	722	**Element Position in Segment**	**M**	**N0**	**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				
	1528	**Component Data Element Position in Composite**	**O**	**N0**	**1/2**	**Used**
		Description: To identify the component data element position within the composite that is in error				
AK402	**725**	**Data Element Reference Number**	**O**	**N0**	**1/4**	**Used**
		Description: Reference number used to locate the data element in the Data Element Dictionary				
AK403	**723**	**Data Element Syntax Error Code**	**M**	**ID**	**1/3**	**Must use**
		Description: Code indicating the error found after syntax edits of a data element All valid standard codes are used.				
AK404	**724**	**Copy of Bad Data Element**	**O**	**AN**	**1/99**	**Used**
		Description: This is a copy of the data element in error				

Semantics:

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

AK5   Transaction Set Response Trailer

Pos: 060	Max: 1
Heading - Mandatory	
Loop: AK2	Elements: 6

To acknowledge acceptance or rejection and report errors in a transaction set

Element Summary:

Ref	Id	Element Name	Req	Type	Min/Max	Usage
AK501	717	**Transaction Set Acknowledgment Code**	**M**	**ID**	**1/1**	**Must use**

Description: Code indicating accept or reject condition based on the syntax editing of the transaction set

Code	Name
A	Accepted
E	Accepted But Errors Were Noted
R	Rejected

Ref	Id	Element Name	Req	Type	Min/Max	Usage
AK502	718	**Transaction Set Syntax Error Code**	**O**	**ID**	**1/3**	**Used**

Description: Code indicating error found based on the syntax editing of a transaction set

All valid standard codes are used.

Ref	Id	Element Name	Req	Type	Min/Max	Usage
AK503	718	**Transaction Set Syntax Error Code**	**O**	**ID**	**1/3**	**Used**

Description: Code indicating error found based on the syntax editing of a transaction set

All valid standard codes are used.

Ref	Id	Element Name	Req	Type	Min/Max	Usage
AK504	718	**Transaction Set Syntax Error Code**	**O**	**ID**	**1/3**	**Used**

Description: Code indicating error found based on the syntax editing of a transaction set

All valid standard codes are used.

Ref	Id	Element Name	Req	Type	Min/Max	Usage
AK505	718	**Transaction Set Syntax Error Code**	**O**	**ID**	**1/3**	**Used**

Description: Code indicating error found based on the syntax editing of a transaction set

All valid standard codes are used.

Ref	Id	Element Name	Req	Type	Min/Max	Usage
AK506	718	**Transaction Set Syntax Error Code**	**O**	**ID**	**1/3**	**Used**

Description: Code indicating error found based on the syntax editing of a transaction set

All valid standard codes are used.

					Pos: 070 Max: 1

AK9 Functional Group Response Trailer

Pos: 070   Max: 1
Heading - Mandatory
Loop: N/A   Elements: 9

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	Id	Element Name	Req	Type	Min/Max	Usage
AK901	**715**	**Functional Group Acknowledge Code** **Description:** Code indicating accept or reject condition based on the syntax editing of the functional group	**M**	**ID**	**1/1**	**Must use**

Code	Name
A	Accepted
E	Accepted, But Errors Were Noted.
P	Partially Accepted, At Least One Transaction Set Was Rejected
R	Rejected

Ref	Id	Element Name	Req	Type	Min/Max	Usage
AK902	**97**	**Number of Transaction Sets Included** **Description:** 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** **Description:** Number of Transaction Sets received	**M**	**N0**	**1/6**	**Must use**
AK904	**2**	**Number of Accepted Transaction Sets** **Description:** Number of accepted Transaction Sets in a Functional Group	**M**	**N0**	**1/6**	**Must use**
AK905	**716**	**Functional Group Syntax Error Code** **Description:** Code indicating error found based on the syntax editing of the functional group header and/or trailer All valid standard codes are used.	**O**	**ID**	**1/3**	**Used**
AK906	**716**	**Functional Group Syntax Error Code** **Description:** Code indicating error found based on the syntax editing of the functional group header and/or trailer All valid standard codes are used.	**O**	**ID**	**1/3**	**Used**
AK907	**716**	**Functional Group Syntax Error Code** **Description:** Code indicating error found based on the syntax editing of the functional group header and/or trailer All valid standard codes are used.	**O**	**ID**	**1/3**	**Used**
AK908	**716**	**Functional Group Syntax Error Code** **Description:** Code indicating error found based on the syntax editing of the functional group header and/or trailer All valid standard codes are used.	**O**	**ID**	**1/3**	**Used**
AK909	**716**	**Functional Group Syntax Error Code** **Description:** Code indicating error found based on the syntax editing of the functional group header and/or trailer All valid standard codes are used.	**O**	**ID**	**1/3**	**Used**

Comments:

1. If AK901 contains the value "A" or "E", then the transmitted functional group is accepted.

SE   Transaction Set Trailer

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	Id	Element Name	Req	Type	Min/Max	Usage
SE01	96	**Number of Included Segments** **Description:** 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** **Description:** Identifying control number that must be unique within the transaction set functional group assigned by the originator for a transaction set	M	AN	4/9	Must use

Comments:

1. SE is the last segment of each transaction set.

GE   Functional Group Trailer

Pos:	Max: 1
- Mandatory	
Loop: N/A	Elements: 2

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

Element Summary:

Ref	Id	Element Name	Req	Type	Min/Max	Usage
GE01	97	**Number of Transaction Sets Included** **Description:** 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**
GE02	28	**Group Control Number** **Description:** Assigned number originated and maintained by the sender	M	N0	1/9	**Must use**

Semantics:

1. The data interchange control number GE02 in this trailer must be identical to the same data element in the associated functional group header, GS06.

Comments:

1. The use of identical data interchange control numbers in the associated functional group header and trailer is designed to maximize functional group integrity. The control number is the same as that used in the corresponding header.

IEA   Interchange Control Trailer

Pos:	Max: 1
- Mandatory	
Loop: N/A	Elements: 2

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

Element Summary:

Ref	Id	Element Name	Req	Type	Min/Max	Usage
IEA01	**I16**	**Number of Included Functional Groups** **Description:** A count of the number of functional groups included in an interchange	**M**	**N0**	**1/5**	**Must use**
IEA02	**I12**	**Interchange Control Number** **Description:** A control number assigned by the interchange sender	**M**	**N0**	**9/9**	**Must use**