



**To: Electronic Data Interchange (EDI) Partners:**

**Following are our Utility Industry Group compliant EDI 997 version 4010 guidelines for your use in implementing EDI. Page 16 contains a sample 997 for your reference.**

**Should you have questions regarding EDI, contact Sam White at (404) 506-2457 or Mike Holladay (404) 506-1464. We look forward to helping you improve your business and meeting your energy needs.**



**Southern Company**

**EDI  
Implementation Guideline**

**997  
Functional Acknowledgement**

**Version 004010**

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.

**Not Defined:**

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

**Heading:**

<u>Pos</u>	<u>Id</u>	<u>Segment Name</u>	<u>Req</u>	<u>Max Use</u>	<u>Repeat</u>	<u>Notes</u>
010	ST	Transaction Set Header	M	1		N1/010
020	AK1	Functional Group Response Header	M	1		N1/020
<b>LOOP ID - AK2</b>		-	-	-	<b>999999</b>	<b>N1/030L</b>
030	AK2	Transaction Set Response Header	O	1		N1/030
<b>LOOP ID - AK3</b>		-	-	-	<b>999999</b>	-
040	AK3	Data Segment Note	O	1		
050	AK4	Data Element Note	O	99		
060	AK5	Transaction Set Response Trailer	M	1		N1/060
070	AK9	Functional Group Response Trailer	M	1		N1/070
080	SE	Transaction Set Trailer	M	1		

**Not Defined:**

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

**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.
- 1/030L 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.
- 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.
- 1/060 Codes for elements AK503, AK504, AK505 and AK506 are the same as for AK502.
- 1/070 Codes for elements AK906, AK907, AK908 and AK909 are the same as for AK905.

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

### Element Summary:

<u>Ref</u>	<u>Id</u>	<u>Element Name</u>	<u>Req</u>	<u>Type</u>	<u>Min/Max</u>
ISA01	I01	<b>Authorization Information Qualifier</b>	M	ID	2/2
		<u>Code</u> <u>Name</u>			
		00            No Authorization Information Present (No Meaningful Information in I02)			
ISA02	I02	<b>Authorization Information</b>	M	AN	10/10
ISA03	I03	<b>Security Information Qualifier</b>	M	ID	2/2
		<u>Code</u> <u>Name</u>			
		00            No Security Information Present (No Meaningful Information in I04)			
ISA04	I04	<b>Security Information</b>	M	AN	10/10
ISA05	I05	<b>Interchange ID Qualifier</b>	M	ID	2/2
		<u>Code</u> <u>Name</u>			
		01            Duns (Dun & Bradstreet)			
		02            SCAC (Standard Carrier Alpha Code)			
		09            X.121 (CCITT)			
		12            Phone (Telephone Companies)			
		14            Duns Plus Suffix			
		16            Duns Number With 4-Character Suffix			
		17            American Bankers Association (ABA) Transit Routing Number (Including Check Digit, 9 Digit)			
		ZZ            Mutually Defined			
ISA06	I06	<b>Interchange Sender ID</b>	M	AN	15/15
ISA07	I05	<b>Interchange ID Qualifier</b>	M	ID	2/2
		<u>Code</u> <u>Name</u>			
		01            Duns (Dun & Bradstreet)			
		02            SCAC (Standard Carrier Alpha Code)			
		09            X.121 (CCITT)			
		12            Phone (Telephone Companies)			
		14            Duns Plus Suffix			
		16            Duns Number With 4-Character Suffix			
		17            American Bankers Association (ABA) Transit Routing Number (Including Check Digit, 9 Digit)			
		ZZ            Mutually Defined			
ISA08	I07	<b>Interchange Receiver ID</b>	M	AN	15/15
ISA09	I08	<b>Interchange Date</b>	M	DT	6/6
ISA10	I09	<b>Interchange Time</b>	M	TM	4/4
ISA11	I65	<b>Repetition Separator</b>	M		1/1
ISA12	I11	<b>Interchange Control Version Number</b>	M	ID	5/5
		<u>Code</u> <u>Name</u>			
		00401       Standards Approved for Publication by ASC X12 Procedures Review Board through October 1997			
ISA13	I12	<b>Interchange Control Number</b>	M	N0	9/9
ISA14	I13	<b>Acknowledgment Requested</b>	M	ID	1/1
		<u>Code</u> <u>Name</u>			
		0            No Interchange Acknowledgment Requested			
		1            Interchange Acknowledgment Requested (TA1)			
ISA15	I14	<b>Interchange Usage Indicator</b>	M	ID	1/1
		<u>Code</u> <u>Name</u>			
		P            Production Data			
		T            Test Data			
ISA16	I15	<b>Component Element Separator</b>	M		1/1

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

### Element Summary:

<u>Ref</u>	<u>Id</u>	<u>Element Name</u>	<u>Req</u>	<u>Type</u>	<u>Min/Max</u>
GS01	479	<b>Functional Identifier Code</b>	M	ID	2/2
		<u>Code</u> <u>Name</u>			
		FA                    Functional Acknowledgment (997)			
GS02	142	<b>Application Sender's Code</b>	M	AN	2/15
GS03	124	<b>Application Receiver's Code</b>	M	AN	2/15
GS04	373	<b>Date</b>	M	DT	8/8
GS05	337	<b>Time</b>	M	TM	4/8
GS06	28	<b>Group Control Number</b>	M	N0	1/9
GS07	455	<b>Responsible Agency Code</b>	M	ID	1/2
		<u>Code</u> <u>Name</u>			
		X                    Accredited Standards Committee X12			
GS08	480	<b>Version / Release / Industry Identifier Code</b>	M	AN	1/12
		<u>Code</u> <u>Name</u>			
		004010            Standards Approved for Publication by ASC X12 Procedures Review Board through October 1997			

### 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

Pos: 010	Max: 1
Heading - Mandatory	
Loop: N/A	Elements: 2

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

### Element Summary:

<u>Ref</u>	<u>Id</u>	<u>Element Name</u>	<u>Req</u>	<u>Type</u>	<u>Min/Max</u>
ST01	143	Transaction Set Identifier Code	M	ID	3/3
		<u>Code</u> <u>Name</u>			
		997                Functional Acknowledgment			
ST02	329	Transaction Set Control Number	M	AN	4/9

# 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:

<u>Ref</u>	<u>Id</u>	<u>Element Name</u>	<u>Req</u>	<u>Type</u>	<u>Min/Max</u>
AK101	479	<b>Functional Identifier Code</b> The Functional Identifier Code found in the GS segment (GS01) of the functional group being acknowledged	M	ID	2/2
AK102	28	<b>Group Control Number</b> The Group Control Number found in the GS segment (GS06) of the functional group being acknowledged	M	N0	1/9

# 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:

<u>Ref</u>	<u>Id</u>	<u>Element Name</u>	<u>Req</u>	<u>Type</u>	<u>Min/Max</u>
AK201	143	<b>Transaction Set Identifier Code</b> The Transaction Set Identifier Code found in the STsegment (ST01) of the transaction being acknowledged	M	ID	3/3
AK202	329	<b>Transaction Set Control Number</b> The Transaction Set Control Number found in the ST segment (ST02) of the transaction being acknowledged	M	AN	4/9



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

### Element Summary:

<u>Ref</u>	<u>Id</u>	<u>Element Name</u>	<u>Req</u>	<u>Type</u>	<u>Min/Max</u>
AK301	721	<b>Segment ID Code</b> Code defining the segment ID of the data segment in error	M	ID	2/3
AK302	719	<b>Segment Position in Transaction Set</b> The numerical count position of this data segment from the start of the transaction set: the transaction set header is count position 1	M	N0	1/6
AK303	447	<b>Loop Identifier Code</b> The loop ID number given on the transaction set diagram is the value for this data element in segments LS and LE	O	AN	1/6
AK304	720	<b>Segment Syntax Error Code</b>	O	ID	1/3
		<b><u>Code</u></b>			
		<b><u>Name</u></b>			
		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

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

### Element Summary:

<u>Ref</u>	<u>Id</u>	<u>Element Name</u>	<u>Req</u>	<u>Type</u>	<u>Min/Max</u>
AK401	C030	<b>Position in Segment</b>	M	Comp	
	722	<b>Element Position in Segment</b>	M	N0	1/2
	1528	<b>Component Data Element Position in Composite</b>	O	N0	1/2
AK402	725	<b>Data Element Reference Number</b>	O	N0	1/4
AK403	723	<b>Data Element Syntax Error Code</b>	M	ID	1/3
		<u>Code</u> <u>Name</u>			
		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			
AK404	724	<b>Copy of Bad Data Element</b>	O	AN	1/99

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

### Element Summary:

<u>Ref</u>	<u>Id</u>	<u>Element Name</u>	<u>Req</u>	<u>Type</u>	<u>Min/Max</u>
AK501	717	<b>Transaction Set Acknowledgment Code</b>	M	ID	1/1
		<u>Code</u> <u>Name</u>			
		A            Accepted			
		E            Accepted But Errors Were Noted			
		R            Rejected			
AK502	718	<b>Transaction Set Syntax Error Code</b>	O	ID	1/3
		<u>Code</u> <u>Name</u>			
		1            Transaction Set Not Supported			
		2            Transaction Set Trailer Missing			
		3            Transaction Set Control Number in Header and Trailer Do Not Match			
		4            Number of Included Segments Does Not Match Actual Count			
		5            One or More Segments in Error			
		6            Missing or Invalid Transaction Set Identifier			
		7            Missing or Invalid Transaction Set Control Number			
		23          Transaction Set Control Number Not Unique within the Functional Group			
AK503	718	<b>Transaction Set Syntax Error Code</b>	O	ID	1/3
AK504	718	<b>Transaction Set Syntax Error Code</b>	O	ID	1/3
AK505	718	<b>Transaction Set Syntax Error Code</b>	O	ID	1/3
AK506	718	<b>Transaction Set Syntax Error Code</b>	O	ID	1/3

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:

<u>Ref</u>	<u>Id</u>	<u>Element Name</u>	<u>Req</u>	<u>Type</u>	<u>Min/Max</u>
AK901	715	<b>Functional Group Acknowledge Code</b>	M	ID	1/1
		<u>Code</u> <u>Name</u>			
		A            Accepted			
		E            Accepted, But Errors Were Noted.			
		P            Partially Accepted, At Least One Transaction Set Was Rejected			
		R            Rejected			
AK902	97	<b>Number of Transaction Sets Included</b>	M	N0	1/6
AK903	123	<b>Number of Received Transaction Sets</b>	M	N0	1/6
AK904	2	<b>Number of Accepted Transaction Sets</b>	M	N0	1/6
AK905	716	<b>Functional Group Syntax Error Code</b>	O	ID	1/3
		<u>Code</u> <u>Name</u>			
		1            Functional Group Not Supported			
		2            Functional Group Version Not Supported			
		3            Functional Group Trailer Missing			
		4            Group Control Number in the Functional Group Header and Trailer Do Not Agree			
		5            Number of Included Transaction Sets Does Not Match Actual Count			
		6            Group Control Number Violates Syntax			
AK906	716	<b>Functional Group Syntax Error Code</b>	O	ID	1/3
AK907	716	<b>Functional Group Syntax Error Code</b>	O	ID	1/3
AK908	716	<b>Functional Group Syntax Error Code</b>	O	ID	1/3
AK909	716	<b>Functional Group Syntax Error Code</b>	O	ID	1/3

### Comments:

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

# SE

# Transaction Set Trailer

Pos: 080	Max: 1
Heading - Mandatory	
Loop: N/A	Elements: 2

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:

<u>Ref</u>	<u>Id</u>	<u>Element Name</u>	<u>Req</u>	<u>Type</u>	<u>Min/Max</u>
SE01	96	Number of Included Segments	M	N0	1/10
SE02	329	Transaction Set Control Number	M	AN	4/9

## Comments:

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

Pos:	Max: 1
Not Defined - Mandatory	
Loop: N/A	Elements: 2

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

### Element Summary:

<u>Ref</u>	<u>Id</u>	<u>Element Name</u>	<u>Req</u>	<u>Type</u>	<u>Min/Max</u>
GE01	97	Number of Transaction Sets Included	M	N0	1/6
GE02	28	Group Control Number	M	N0	1/9

### 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
Not Defined - 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:

<u>Ref</u>	<u>Id</u>	<u>Element Name</u>	<u>Req</u>	<u>Type</u>	<u>Min/Max</u>
IEA01	I16	Number of Included Functional Groups	M	N0	1/5
IEA02	I12	Interchange Control Number	M	N0	9/9

**SAMPLE 997 VERSION 4010 TRANSACTION**

ISA\*00\* \*00\* \*01\*xxxxxxxx \*01\*xxxxxxxx \*030814\*0046\*U\*00401\*000000557\*0\*P\*;-  
GS\*FA\*xxxxxxxx\*xxxxxxxx\*20030814\*0046\*557\*X\*004010~  
ST\*997\*0001~  
AK1\*IN\*241~  
AK2\*810\*0584~  
AK5\*A~  
AK9\*A\*1\*1\*1~  
SE\*6\*0001~  
GE\*1\*557~  
IEA\*1\*000000557~