# Texas Education Agency

## 997 (Functional Acknowledgment) Standard 3070

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## 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.

### 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 AKI is used to respond to the functional group header and to start the acknowledgment 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 acknowledgment 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.

### Introduction:

This section defines the format and content of ASC X12.20, Transaction Set 997 (Version 4, Release 1): Functional Acknowledgment – as adopted by the Rail Industry. The Functional Acknowledgment provides for notification by the ultimate receiver that the sender's transmission has been received and is syntactically correct or incorrect.

The Rail Industry requires acknowledgment of all transmissions initiated by a railroad and intends to acknowledge all that originate with the supplier. (The obvious exception is that Functional Acknowledgments are not acknowledged.)

The following explains the use of the various segments:

If all documents within the groups are accepted, only segments AK1 and AK9 are required (with AK901 = “A”);

If the group is rejected because of problems with the GS or GE information, only AK1 and AK9 are sent. In this case AK901 = “R”;

If the information in the GS segment is correct, but one or more documents are rejected, AK901 = “R” or “P”, and an occurrence of AK2/AK5 is sent for each document rejected.

The documentation thatfollows was developed to facilitate the interchange of Functional Acknowledgments at mutual benefit to the railroads and the suppliers. Each participant is strongly encouraged to bring to the attention of the Subcommmittee on Information Standards any areas in which further agreement among the railroads can reduce implementation or operating costs.

## Heading:

| Pos | ID | Segment Name | Req | Max Use | Repeat | Notes | Usage |
|---|---|---|---|---|---|---|---|
| **010** | **ST** | **Transaction Set Header** | **M** | **1** | | **N1/010** | |
| **020** | **AK1** | **Functional Group Response Header** | **M** | **1** | | **N1/020** | |
| **Loop ID – AK2** | | | | | **999999** | | |
| **030** | **AK2** | **Transaction Set Response Header** | **O** | **1** | | **N1/030** | |
| **Loop ID – AK3** | | | | | **999999** | | |
| **040** | **AK3** | **Data Segment Note** | **O** | **1** | | | |
| **050** | **AK4** | **Data Element Note** | **O** | **99** | | | |
| **060** | **AK5** | **Transaction Set Response Trailer** | **M** | **1** | | | |
| **070** | **AK9** | **Functional Group Response Trailer** | **M** | **1** | | | |
| **080** | **SE** | **Transaction Set Trailer** | **M** | **1** | | | |

| 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.

### 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).

**Element Summary:**

| Ref | Id | Element Name | Req | Type | Min/Max |
|---|---|---|---|---|---|
| **ST01** | **143** | **Transaction Set Identifier Code**<br>**Description**: Code uniquely identifying a Transaction Set<br>00 | M | ID | 3/3 |
| **ST02** | **329** | **Transaction Set Control Number**<br>**Description**: Identifying control number that must be unique within the transaction set functional group assigned by the originator for a transaction set<br>**Notes:** *Must be unique within the group.* | M | AN | 4/9 |

| AK1 | Functional Group Response Header | Pos: 020 Max: 1<br>Heading – Mandatory<br>Loop: N/A Elements: 2 |
|---|---|---|

To start acknowledgment of a functional group.

## 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.

### Element Summary:

| Ref | Id | Element Name | Req | Type | Min/Max |
|---|---|---|---|---|---|
| **AK101** | **479** | **Functional Identifier Code**<br>**Description:** Code identifying a group of application related transaction sets.<br>**Notes:** *Functional ID code as found in the GS segment of the transmission being acknowledged.*<br>**Code Name**<br>AG Application Advice (824)<br>IN Invoice Information (810, 819)<br>PO Purchase Order (850)<br>PR Purchase Order Acknowledgment (855)<br>RA Payment Order/Remittance Advice (820)<br>RC Receiving Advice/Acceptance Certificate (861)<br>RS Order Status Information (869, 870)<br>SC Price/Sales Catalog (832)<br>SH Ship Notice/Manifest (856) | M | ID | 2/2 |
| **AK102** | **28** | **Group Control Number**<br>**Description:** Assigned number originated and maintained by the sender.<br>**Notes:** *Data interchange control number as found in the GS segment of the transmission being acknowledged.* | M | N0 | 1/9 |

| AK2 | Transaction Set Response Header | Pos: 030 Max: 1<br>Heading – Optional<br>Loop: AK2 Elements: 2 |
|---|---|---|

To start acknowledgment of a single 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.

## Element Summary:

| Ref | Id | Element Name | Req | Type | Min/Max |
|---|---|---|---|---|---|
| **AK201** | **143** | **Transaction Set Identifier Code**<br>**Description:** Code uniquely identifying a Transaction Set. | M | ID | 3/3 |
| **AK202** | **329** | **Transaction Set Control Number**<br>**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 |

| AK3 | Data Segment Note | Pos: 040 Max: 1<br>Heading – Optional<br>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 |
|---|---|---|---|---|---|
| **AK301** | **721** | **Segment ID Code**<br>**Description**: Code defining the segment ID of the data segment in error (*See Appendix A – Number 77*)<br>**Notes**: *See Segment Directory.* | **M** | **ID** | **2/3** |
| **AK302** | **719** | **Segment Position in Transaction Set**<br>**Description**: 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** | **Loop Identifier Code**<br>**Description:** 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** | **Segment Syntax Error Code**<br>**Description**: Code indicating error found based on the syntax editing of a segment. | **O** | **ID** | **1/3** |

| AK4 | Data Element Note | Pos: 050 Max: 99<br>Heading – Optional<br>Loop: N/A Elements: 4 |
|---|---|---|

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

## Semantics:

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

### Element Summary:

| Ref | Id | Element Name | Req | Type | Min/Max |
|---|---|---|---|---|---|
| **AK401** | **C030** | **Position in Segment**<br>**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. | **M** | **Comp** | |
| | **722** | **Element Position in Segment**<br>**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. | **M** | **N0** | **1/2** |
| | **1528** | **Component Data Element Position in Composite**<br>**Description:** To identify the component data element position within the composite that is in error. | **0** | **N0** | **1/2** |
| **AK402** | **725** | **Data Element Reference Number**<br>**Description**: Reference number used to locate the data element in the Data Element Dictionary. | **O** | **N0** | **1/4** |
| **AK403** | **723** | **Data Element Syntax Error Code**<br>**Description**: Code indicating the error found after syntax edits of a data element. | **M** | **ID** | **1/3** |
| **AK404** | **724** | **Copy of Bad Data Element**<br>**Description**: This is a copy of the data element in error. | **O** | **AN** | **1/99** |

| AK5 | Transaction Set Response Trailer | Pos: 060 Max: 1<br>Heading – Mandatory<br>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 |
|---|---|---|---|---|---|

| | | | | | |
|---|---|---|---|---|---|
| **AK501** | **717** | **Transaction Set Acknowledgment Code**<br>**Description:** Code indicating accept or reject condition based on the syntax editing of the transaction set.<br>Code Name<br>A Accepted<br>E Accepted But Errors Were Noted<br>R Rejected | **M** | **ID** | **1/1** |
| **AK502** | **718** | **Transaction Set Syntax Error Code**<br>**Description**: Code indicating error found based on the syntax editing of a transaction set.<br>**Notes**: *This data element is repeated in positions AK503, AK504, AK505, and AK506.* | **O** | **ID** | **1/3** |
| **AK503** | **718** | **Transaction Set Syntax Error Code**<br>**Description**: Code indicating error found based on the syntax editing of a transaction set. | **O** | **ID** | **1/3** |
| **AK504** | **718** | **Transaction Set Syntax Error Code**<br>**Description**: Code indicating error found based on the syntax editing of a transaction set. | **O** | **ID** | **1/3** |
| **AK505** | **718** | **Transaction Set Syntax Error Code**<br>**Description**: Code indicating error found based on the syntax editing of a transaction set. | **O** | **ID** | **1/3** |
| **AK506** | **718** | **Transaction Set Syntax Error Code**<br>**Description**: Code indicating error found based on the syntax editing of a transaction set. | **O** | **ID** | **1/3** |

| | | |
|---|---|---|
| AK9 | Functional Group Response Trailer | Pos: 070 Max: 1<br>Heading – Mandatory<br>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.

## Comments:

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

   **Notes**: *See additional information in the introduction.*

### Element Summary:

| Ref | Id | Element Name | Req | Type | Min/Max |
|---|---|---|---|---|---|
| **AK901** | **715** | **Functional Group Acknowledge Code**<br>**Description:** Code indicating accept or reject condition based on the syntax editing of the functional group.<br>Code Name<br>A Accepted<br>E Accepted But Errors Were Noted | **M** | **ID** | **1/1** |

| | | | | | |
|---|---|---|---|---|---|
| | | P Partially Accepted, At Least One Transaction Set Was Rejected<br>R Rejected | | | |
| **AK902** | **97** | **Number of Transaction Sets Included**<br>**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** |
| **AK903** | **123** | **Number of Received Transaction Sets**<br>**Description**: Number of Transaction Sets received. | **M** | **N0** | **1/6** |
| **AK904** | **2** | **Number of Accepted Transaction Sets**<br>**Description**: Number of accepted Transaction Sets in a Functional Group. | **M** | **N0** | **1/6** |
| **AK905** | **716** | **Functional Group Syntax Error Code**<br>**Description**: Code indicating error found based on the syntax editing of the functional group header and/or trailer.<br>**Note**: *This data element is repeated in positions AK906, AK907, AK908, and AK909.* | **O** | **ID** | **1/3** |
| **AK906** | **716** | **Functional Group Syntax Error Code**<br>**Description**: Code indicating error found based on the syntax editing of the functional group header and/or trailer. | **O** | **ID** | **1/3** |
| **AK907** | **716** | **Functional Group Syntax Error Code**<br>**Description**: Code indicating error found based on the syntax editing of the functional group header and/or trailer. | **O** | **ID** | **1/3** |
| **AK908** | **716** | **Functional Group Syntax Error Code**<br>**Description**: Code indicating error found based on the syntax editing of the functional group header and/or trailer. | **O** | **ID** | **1/3** |
| **AK909** | **716** | **Functional Group Syntax Error Code**<br>**Description**: Code indicating error found based on the syntax editing of the functional group header and/or trailer. | **O** | **ID** | **1/3** |

| | | | |
|---|---|---|---|
| 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).

## Comments:

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

## Element Summary:

| Ref | Id | Element Name | Req | Type | Min/Max |
|---|---|---|---|---|---|
| **SE01** | **96** | **Number of Included Segments**<br>**Description:** Total number of segments included in a transaction set including ST and SE segments. | M | N0 | 1/10 |
| **SE02** | **329** | **Transaction Set Control Number**<br>**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 |