



Department
of
Defense

DoD
Transportation
Electronic Data
Interchange
(EDI) Convention

ASC X12 Transaction Set 824
Application Advice Invoice
Acknowledgment (004010)

INITIAL DRAFT

August 2003



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Section 1.0

INTRODUCTION

This implementation convention (IC) describes the standard or convention the Military Surface Deployment and Distribution Command (SDDC) and the Department of Defense (DoD) will use to process Application Advice transactions regarding transportation invoices.

For further information about the Defense Transportation community's Electronic Business (DTEB) program, contact the:

United States Transportation Command
TCJ4-LP
508 Scott Drive
Scott Air Force Base, IL 62225-7001

To obtain DoD conventions or ASC X12 guidance or to recommend DoD conventions or ASC X12 maintenance, contact the:

Defense Logistics Management Standards Office
Attn: DLMSO
8725 John J. Kingman Road
Ft. Belvoir VA 22060-6217

For the most recent publication, go to the World-Wide Web at <http://www.lmi.org/dtedi/>.

[Instructions: At the web location, select the IC Navigator Button. Choose the 'ICs Completed' menu and select the desired Implementation Convention document. That document is available in PDF format and may be downloaded or printed.]

Who Needs to Use This Document

Computer programmers use this document to identify the data requirements for populating an EDI transaction.

Why Use a Convention

A convention defines the rules for populating an EDI transaction. Following a convention ensures that trading partners will encounter fewer data quality problems during development and maintenance of EDI systems.

Contents

Additional sections are included in this document.

- Section 2.0, Control Segments, identifies the specific data requirements for formatting the EDI interchange control segments that envelop all EDI transactions.

- Section 3.0, Standard Implementation Convention, lists the layout of the target transaction set by segment and data element. Identified along side each transaction set data element is the Application Mapping Matrix index number from Section 4.0.
- Section 4.0, IC Element Matrix, identifies the application data elements trading partners need to exchange. This section can be used to map an existing application database into the transaction set.
- Other sections contain examples of hard copy documents, examples of EDI transaction sets, segment looping logic tables, and other items that serve as references for software developers.

Section 2.0

CONTROL SEGMENTS

Overview

This section describes the EDI control segments (interchange control and functional group segments). The control segment information was derived from the *ASC X12 Standards Draft Version 4 Release 1* (004010).

Purpose

This section identifies the specific data requirements for formatting the EDI control segments when transmitting and receiving EDI transactions. The format and data content of the control segments are usually managed by EDI translation software. The data requirements described herein should be used to set control segment formats when installing or initializing translation software for transmission and reception of EDI transactions.

Contents

Two items are included in this section.

- Interchange Control Segment Hierarchy, identifies the control segments in their order of occurrence in an EDI communications interchange.
- DoD Convention *ASC X12 Control Segments* follow this, which presents a detailed description of the DoD's data conventions for formatting EDI standard control segments. Each of the control segments is described by their discrete data elements.

Special Instructions

Any unique eight-bit (byte) character could serve as data element separator, segment terminator, or subelement separator, provided each character is disjoint from all data elements within an interchange and that these do not conflict with telecommunications protocols necessary to the transmission of the interchange. The following recommended values conform to information published in *Electronic Data Interchange, X12 Standards, Interchange Control Structures, Section 4.3 Delimiter Specifications*.

DATA ELEMENT SEPARATOR

While the data element separator is graphically displayed as an asterisk (*) or a tilde (~) in *ASC X12* documentation, it is the value employed in the fourth byte of an interchange envelope that actually assigns the separator that the translators will use throughout an interchange. Any unique eight-bit (byte) character could serve as data element separator, segment terminator, or subelement separator, provided each

character is disjoint from all data elements within an interchange and that these do not conflict with telecommunications protocols necessary to the transmission of the interchange.

ASC X12 recommends the ASCII character with hexadecimal value "1D" for use as the data element separator (gs). These values conform to information published in Electronic Data Interchange, X12 Standards, Interchange Control Structures, Section 4.3 Delimiter Specifications.

SEGMENT TERMINATOR

Likewise, the control envelope establishes the byte value used for segment termination within an interchange. ASC X12 documentation usually portrays this as a new line (n/l character, but the actual segment terminator for an interchange will be the byte value occurring immediately following the ISA16 segment.

ASC X12 recommends the ASCII character with hexadecimal value "1C" for use as the segment (fs) terminator.

SUBELEMENT SEPARATOR

The ISA segment provides a discrete element (ISA16) for defining the subelement separator within an interchange. Although designated as reserved for future expansion in Version 4, Release 1, a value in ISA16 is required.

ASC X12 recommends the ASCII character with hexadecimal value "1F" for use as the subelement separation (us) character.

GS01 CODE VALUE

Use code value AG – Application Advice (824) in the element GS01 of the control envelope for transmitting this transaction.

X12 PUBLICATION

See ASC X12 Electronic Data Interchange X12 Draft Version 4 Release 1 Standards, Document Number: ASC X12S/97-372, for complete 004010 version/release control segment specifications.

Section 3.0

STANDARD IMPLEMENTATION CONVENTION

This section presents the DoD's convention for interpreting Tailored Transportation Contract Traffic Transaction Services Tenders using the ASC X12.44 Transaction Set 824 Application Advice (Version 004010).

Symbols that appear in the Data Element Summary to the left of each segment reference designator (Ref. Des.) define implementation convention usage for the DoD. These designations may differ from X12 convention attributes appearing in the right-hand column of the Data Element Summary and should be interpreted as follows:

- [*blank*] - Segment or data element may be used optionally
- M - X12 standards designate mandatory use of segment or data element
- >> - Segment or data element is mandatory for DTEDI use
- X - Segment or data element is not used.

NOTE: Whenever a segment occurs more than once, DoD's actual usage requirement may differ among the instances of segment usage. In all cases, the Data Element Summary will indicate the highest order DoD requirement. In other words, if one or several particular instances for a segment are OPTIONAL but another is MANDATORY, the Data Element Summary will indicate a MANDATORY requirement. A review of the IC layout in Section 4.0 will distinguish among the multiple instances and clarify the usage requirement for each instance.

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824 Application Advice

Functional Group ID=**AG**

Introduction:

This Draft Standard for Trial Use contains the format and establishes the data contents of the Application Advice Transaction Set (824) for use within the context of an Electronic Data Interchange (EDI) environment. The transaction set can be used to provide the ability to report the results of an application system's data content edits of transaction sets. The results of editing transaction sets can be reported at the functional group and transaction set level, in either coded or free-form format. It is designed to accommodate the business need of reporting the acceptance, rejection or acceptance with change of any transaction set. The Application Advice should not be used in place of a transaction set designed as a specific response to another transaction set (e.g., purchase order acknowledgment sent in response to a purchase order).

Heading:

	<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>
M	010	ST	Transaction Set Header	M	1		
M	020	BGN	Beginning Segment	M	1		
LOOP ID - N1						>1	
Not Used	030	N1	Name	O	1		
Not Used	040	N2	Additional Name Information	O	2		
Not Used	050	N3	Address Information	O	2		
Not Used	060	N4	Geographic Location	O	1		
Not Used	070	REF	Reference Identification	O	12		
Not Used	080	PER	Administrative Communications Contact	O	3		

Detail:

	<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>
LOOP ID - OTI						>1	
M	010	OTI	Original Transaction Identification	M	1		n1
Not Used	020	REF	Reference Identification	O	12		n2
Not Used	030	DTM	Date/Time Reference	O	2		n3
Not Used	040	PER	Administrative Communications Contact	O	3		n4
Not Used	050	AMT	Monetary Amount	O	>1		n5
Not Used	060	QTY	Quantity	O	>1		n6
Not Used	065	NM1	Individual or Organizational Name	O	9		n7
LOOP ID - TED						>1	
Must Use	070	TED	Technical Error Description	O	1		
	080	NTE	Note/Special Instruction	O	100		
	082	RED	Related Data	O	100		n8
LOOP ID - LM						>1	

Not Used	085	LM	Code Source Information	O	1	n9
			LOOP ID - LQ	100		
Not Used	086	LQ	Industry Code	M	1	
Not Used	087	RED	Related Data	O	100	n10
M	090	SE	Transaction Set Trailer	M	1	

Transaction Set Notes

1. The OTI loop is intended to provide a unique identification of the transaction set that is the subject of this application acknowledgment.
2. The REF segment allows for the provision of secondary reference identification or numbers required to uniquely identify the original transaction set. The primary reference identification or number should be provided in elements OTI02-03.
3. The DTM segment allows for the provision of date, time, or date and time information required to uniquely identify the original transaction set.
4. The PER segment should be utilized if administrative communications contact information is important to the unique identification of the original transaction set.
5. The AMT segment should be utilized if monetary amount information is important to the unique identification of the original transaction set.
6. The QTY segment should be utilized if quantity information is important to the unique identification of the original transaction set.
7. The NM1 segment allows for the provision of entity identification information required to uniquely identify the original transaction set.
8. The RED segment may be used to provide data related to the error condition specified in the associated TED01 element.
9. The LM loop is used to identify industry-based or proprietary application error conditions.
10. The RED segment may be used to provide data related to the error condition specified in the associated LQ02 element.

Segment: **ST** Transaction Set Header

Position: 010

Loop:

Level: Heading

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:

Notes: [001] ST SEGMENT - Transaction Set Header

Data Element Summary

<u>Ref.</u>	<u>Data</u>	<u>Name</u>	<u>Attributes</u>
M	ST01 143	Transaction Set Identifier Code Code uniquely identifying a Transaction Set [002] Transaction Set Identifier Code 824 Application Advice [002] X12.44 Application Advice	M ID 3/3
M	ST02 329	Transaction Set Control Number Identifying control number that must be unique within the transaction set functional group assigned by the originator for a transaction set [003] Transaction Set Control Number Identifying control number that must be unique within the transaction set functional group assigned by the originator for a transaction set. The application and structure of the control number must be agreed upon between trading partners. (For example, some applications use all nine digits where the first five might indicate a group control number and the last four represent the sequence of the transaction set within the functional group. Also, the entire nine digit field may simply represent the sequence of the transaction set generated by a trading partner.)	M AN 4/9

Segment: **BGN** Beginning Segment

Position: 020

Loop:

Level: Heading

Usage: Mandatory

Max Use: 1

Purpose: To indicate the beginning of a transaction set

Syntax Notes: 1 If BGN05 is present, then BGN04 is required.

Semantic Notes: 1 BGN02 is the transaction set reference number.

2 BGN03 is the transaction set date.

3 BGN04 is the transaction set time.

4 BGN05 is the transaction set time qualifier.

5 BGN06 is the transaction set reference number of a previously sent transaction affected by the current transaction.

Comments:

Notes: [004] BGN SEGMENT - Transaction Set Purpose

Data Element Summary

	<u>Ref.</u>	<u>Data</u>	<u>Attributes</u>
	<u>Des.</u>	<u>Element</u> <u>Name</u>	
M	BGN01	353 Transaction Set Purpose Code	M ID 2/2
		Code identifying purpose of transaction set	
		[005] Transaction Set Purpose Code	
		Use code value '11' to indicate personal property.	
		01 Cancellation	
		[005] Constant	
		11 Response	
		[005] Response	
M	BGN02	127 Reference Identification	M AN 1/30
		Reference information as defined for a particular Transaction Set or as specified by the Reference Identification Qualifier	
		[006] TS 859 Response	
		Use the value '859 - PPSI' to indicate that this is a TS 824 in response to a TS 859. Use the Value '811 - PPSI' to indicate that this is a TS 824 in response to a TS 811.	
M	BGN03	373 Date	M DT 8/8
		Date expressed as CCYYMMDD	
		[007] Date of Transaction	
X	BGN04	337 Time	X TM 4/8
		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)	

X	BGN05	623	Time Code	O ID 2/2
			Code identifying the time. In accordance with International Standards Organization standard 8601, time can be specified by a + or - and an indication in hours in relation to Universal Time Coordinate (UTC) time; since + is a restricted character, + and - are substituted by P and M in the codes that follow	
			Refer to 004010 Data Element Dictionary for acceptable code values.	
X	BGN06	127	Reference Identification	O AN 1/30
			Reference information as defined for a particular Transaction Set or as specified by the Reference Identification Qualifier	
X	BGN07	640	Transaction Type Code	O ID 2/2
			Code specifying the type of transaction	
			Refer to 004010 Data Element Dictionary for acceptable code values.	
X	BGN08	306	Action Code	O ID 1/2
			Code indicating type of action	
			Refer to 004010 Data Element Dictionary for acceptable code values.	
X	BGN09	786	Security Level Code	O ID 2/2
			Code indicating the level of confidentiality assigned by the sender to the information following	
			Refer to 004010 Data Element Dictionary for acceptable code values.	

Segment: **OTI** Original Transaction Identification

Position: 010

Loop: OTI Mandatory

Level: Detail

Usage: Mandatory

Max Use: 1

Purpose: To identify the edited transaction set and the level at which the results of the edit are reported, and to indicate the accepted, rejected, or accepted-with-change edit result

Syntax Notes: 1 If OTI09 is present, then OTI08 is required.

Semantic Notes: 1 OTI03 is the primary reference identification or number used to uniquely identify the original transaction set.

2 OTI06 is the group date.

3 OTI07 is the group time.

4 If OTI11 is present, it will contain the version/release under which the original electronic transaction was translated by the receiver.

5 OTI12 is the purpose of the original transaction set, and is used to assist in its unique identification.

6 OTI13 is the type of the original transaction set, and is used to assist in its unique identification.

7 OTI14 is the application type of the original transaction set, and is used to assist in its unique identification.

8 OTI15 is the type of action indicated or requested by the original transaction set, and is used to assist in its unique identification.

9 OTI16 is the action requested by the original transaction set, and is used to assist in its unique identification.

10 OTI17 is the status reason of the original transaction set, and is used to assist in its unique identification.

Comments: 1 OTI02 contains the qualifier identifying the business transaction from the original business application, and OTI03 will contain the original business application identification.

2 If used, OTI04 through OTI08 will contain values from the original electronic functional group generated by the sender.

3 If used, OTI09 through OTI10 will contain values from the original electronic transaction set generated by the sender.

Notes: [008] OTI SEGMENT - Original Transaction Identification

Data Element Summary

<u>Ref.</u>	<u>Data</u>	<u>Element</u>	<u>Name</u>	<u>Attributes</u>
M		110	Application Acknowledgment Code	M ID 1/2
			Code indicating the application system edit results of the business data	
			[009] Application Acknowledgment Code	
		TE	Transaction Set Accept with Error	
			[009] Transaction Set Accept with Error	
		TR	Transaction Set Reject	
			[009] Transaction Set Reject	

M	OTI02	128	Reference Identification Qualifier	M ID 2/3
			Code qualifying the Reference Identification	
			[010] Carrier Identification Qualifier	
			Use code value '8M' to indicate - Input ISA Sender ID of the original sender.	
		8M	Originating Company Identifier	
			[010] Originating Company Identifier	
		CN	Carrier's Reference Number (PRO/Invoice)	
			[010] Carriers Reference Number (PRO/Invoice)	
M	OTI03	127	Reference Identification	M AN 1/30
			Reference information as defined for a particular Transaction Set or as specified by the Reference Identification Qualifier	
			[011] Carrier PRO Number Identification	
			The carrier reference number is generated by the carrier to uniquely identify an invoice.	
	OTI04	142	Application Sender's Code	O AN 2/15
			Code identifying party sending transmission; codes agreed to by trading partners	
			[012] Application Sender's Code	
	OTI05	124	Application Receiver's Code	O AN 2/15
			Code identifying party receiving transmission; codes agreed to by trading partners	
			[013] Application Receiver's Code	
	OTI06	373	Date	O DT 8/8
			Date expressed as CCYYMMDD	
			[014] Date	
	OTI07	337	Time	O TM 4/8
			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)	
			[015] Time	
	OTI08	28	Group Control Number	X N0 1/9
			Assigned number originated and maintained by the sender	
			[016] Group Control Number	
	OTI09	329	Transaction Set Control Number	O AN 4/9
			Identifying control number that must be unique within the transaction set functional group assigned by the originator for a transaction set	
			[017] Transaction Set Control Number	
X	OTI10	143	Transaction Set Identifier Code	O ID 3/3
			Code uniquely identifying a Transaction Set	
			Refer to 004010 Data Element Dictionary for acceptable code values.	

X	OTI11	480	Version / Release / Industry Identifier Code	O AN 1/12
			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 Refer to 004010 Data Element Dictionary for acceptable code values.	
X	OTI12	353	Transaction Set Purpose Code	O ID 2/2
			Code identifying purpose of transaction set Refer to 004010 Data Element Dictionary for acceptable code values.	
X	OTI13	640	Transaction Type Code	O ID 2/2
			Code specifying the type of transaction Refer to 004010 Data Element Dictionary for acceptable code values.	
X	OTI14	346	Application Type	O ID 2/2
			Code identifying an application Refer to 004010 Data Element Dictionary for acceptable code values.	
X	OTI15	306	Action Code	O ID 1/2
			Code indicating type of action Refer to 004010 Data Element Dictionary for acceptable code values.	
X	OTI16	305	Transaction Handling Code	O ID 1/2
			Code designating the action to be taken by all parties Refer to 004010 Data Element Dictionary for acceptable code values.	
X	OTI17	641	Status Reason Code	O ID 3/3
			Code indicating the status reason Refer to 004010 Data Element Dictionary for acceptable code values.	

Segment: **TED** Technical Error Description
Position: 070
Loop: TED Optional (Must Use)
Level: Detail
Usage: Optional (Must Use)
Max Use: 1
Purpose: To identify the error and, if feasible, the erroneous segment, or data element, or both
Syntax Notes:
Semantic Notes:
Comments: 1 If used, TED02 will contain a generic description of the data in error (e.g., part number, date, reference number, etc.).
Notes: [018] TED SEGMENT - Technical Error Description

Data Element Summary

Ref.	Data		
<u>Des.</u>	<u>Element</u>	<u>Name</u>	<u>Attributes</u>
M	TED01	647	Application Error Condition Code Code indicating application error condition [019] Application Error Condition Code Use code value 'ZZZ' to satisfy X12 syntax. ZZZ Mutually Defined [019] Mutually Defined M ID 1/3
	TED02	3	Free Form Message Free-form text [020] Error Message Prescribed description of acceptance or reasons for rejection. See Section 9.0, Table 1, for list of error messages. O AN 1/60
	TED03	721	Segment ID Code Code defining the segment ID of the data segment in error (See Appendix A - Number 77) [021] Segment ID Code O ID 2/3
	TED04	719	Segment Position in Transaction Set The numerical count position of this data segment from the start of the transaction set: the transaction set header is count position 1 [022] Segment Position in Transaction Set O N0 1/6
	TED05	722	Element Position in Segment 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 [023] Element Position in Segment O N0 1/2
	TED06	725	Data Element Reference Number Reference number used to locate the data element in the Data Element O N0 1/4

Dictionary

		[024] Data Element Reference Number	
TED07	724	Copy of Bad Data Element	O AN 1/99
		This is a copy of the data element in error	
		[025] Copy of Bad Data Element	
TED08	961	Data Element New Content	O AN 1/99
		New data which has replaced erroneous data	
		[026] Data Element New Content	

Segment: **NTE** Note/Special Instruction
Position: 080
Loop: TED Optional (Must Use)
Level: Detail
Usage: Optional
Max Use: 100
Purpose: To transmit information in a free-form format, if necessary, for comment or special instruction

Syntax Notes:
Semantic Notes:

Comments: 1 The NTE segment permits free-form information/data which, under ANSI X12 standard implementations, is not machine processable. The use of the NTE segment should therefore be avoided, if at all possible, in an automated environment.

Notes: [027] NTE SEGMENT - Note/Special Instruction

Data Element Summary

Ref.	Data	Name	Attributes
Des.	Element		
NTE01	363	Note Reference Code	O ID 3/3
		Code identifying the functional area or purpose for which the note applies	
		[028] Note Reference Code	
		APN Application Notes	
		[028] Application Notes	
		ERN Error Notes	
		[028] Error Notes	
		REC Recommendation	
		[028] Recommendation	
M	NTE02	352 Description	M AN 1/80
		A free-form description to clarify the related data elements and their content	
		[029] Description	
		Prescribed description of acceptance or reasons for rejection. See Section 9.0, Table 2, for list of error messages.	

Segment: **RED** Related Data
Position: 082
Loop: TED Optional (Must Use)
Level: Detail
Usage: Optional
Max Use: 100
Purpose: To provide business data related to an item within a transaction to which a business application editing process has been applied, and an error condition has resulted

Syntax Notes:

- 1 At least one of RED02 or RED06 is required.
- 2 Only one of RED02 or RED06 may be present.
- 3 If any of RED03 RED05 or RED06 is present, then all are required.
- 4 If RED04 is present, then RED03 is required.

Semantic Notes:

- 1 RED01 provides the related business data, whose nature is defined by the code in RED02 or RED06.
- 2 RED02 is an X12-defined code identifying the specific type of related data in RED01.
- 3 RED03 identifies the agency maintaining the code list identified in RED05.
- 4 RED04 provides further qualification of the agency identified in RED03.
- 5 RED05 identifies the code list containing the code indicated in RED06.
- 6 RED06 is an industry-defined code identifying the specific type of related data in RED01.

Comments:

- 1 As an example of the use of the RED01 element, an application edit is applied to the Unit Price element within an Invoice (810) transaction set. The result of that edit indicates an invalid unit price. One piece of related business data would be the associated Product or Service Identification (data element #234). In this example, RED01 would be used to convey the associated Product or Service Identification.

Notes: [030] RED SEGMENT - Related Data

Data Element Summary

Ref.	Data		
<u>Des.</u>	<u>Element</u>	<u>Name</u>	<u>Attributes</u>
M	RED01	352 Description	M AN 1/80
		A free-form description to clarify the related data elements and their content	
		[031] Description	
		Insert the value in the LX01 located in the TS 859.	
	RED02	1609 Related Data Identification Code	X ID 2/3
		Code identifying the nature of data related to an application edit error condition	
		[032] Related Data Identification Code	
		RP Reference Identification (Primary)	
		[032] Reference Identification (Primary)	
X	RED03	559 Agency Qualifier Code	X ID 2/2
		Code identifying the agency assigning the code values	

			Refer to 004010 Data Element Dictionary for acceptable code values.	
X	RED04	822	Source Subqualifier	O AN 1/15
			A reference that indicates the table or text maintained by the Source Qualifier	
X	RED05	1270	Code List Qualifier Code	X ID 1/3
			Code identifying a specific industry code list	
			Refer to 004010 Data Element Dictionary for acceptable code values.	
X	RED06	1271	Industry Code	X AN 1/30
			Code indicating a code from a specific industry code list	

Segment: **SE** Transaction Set Trailer
Position: 090
Loop:
Level: Detail
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.

Notes: [033] SE SEGMENT - Transaction Set Trailer

Data Element Summary

Ref.	Data		
<u>Des.</u>	<u>Element</u>	<u>Name</u>	<u>Attributes</u>
M	SE01	96	Number of Included Segments M N0 1/10 Total number of segments included in a transaction set including ST and SE segments [034] Number of Included Segments Total segments in this transaction set including the ST and SE segments.
M	SE02	329	Transaction Set Control Number M AN 4/9 Identifying control number that must be unique within the transaction set functional group assigned by the originator for a transaction set [035] Transaction Set Control Number This data element ends the transaction set and should match the number that appears in the ST02 that begins the transaction set.

Section 4.0

IC ELEMENT MATRIX

OVERVIEW

In order to implement an EDI transaction set, trading partners need to identify the application data elements they plan to exchange, identify where they plan to carry the data within the structure of the EDI transaction (a task commonly called mapping), identify any additional X12 data such as qualifier codes, and publish that information in an implementation convention (IC). This section contains an IC element matrix that lists that information.

PURPOSE

Using the IC element matrix will expedite mapping of an application database into a commercial EDI translation package. This IC element matrix applies to a specific application database, which is described in the Application Notes section below.

HOW TO READ THE IC ELEMENT MATRIX

To read the matrix, trading partners need to understand matrix record types, two categories of matrix information, the matrix layout, and the sort order of the matrix.

Record Types

The matrix contains two types of records: segment header records and element records.

- Segment header records begin the description of a segment. Each segment header record starts the description of a discrete occurrence of an X12 segment. The element records (see below) that follow a segment header record cannot be co-mingled with elements from other segments, including those segments with matching IDs.
- Element records identify an individual data element that occurs within a segment. Each element satisfies either an application requirement or X12 standard syntax. If one element in a segment is passed, all elements in the segment need to be passed in accordance with the IC requirement designator.

Two Categories of Record Information

The matrix contains two categories of information: IC application information and ASC X12 information.

- IC application information describes attributes outside the structure and syntax of the ASC X12 standard.
- ASC X12 information is attached to each IC element. That information is extracted directly from the X12 standard dictionary and enables programmers to map the IC element into the standards.

Matrix Layout

The IC element matrix lists information in sixteen columns.

- IC Index Number (Index) enables designers and programmers to quickly cite a record in the matrix.
- IC Data Group Number (DG) is a number assigned by the IC developers. That number identifies an IC element with a group of elements that form a database table within the application data model. In order to quickly reference a table, Defense transportation developers label database tables with a Data Group number. For example, a “Bill To Address” may belong to the “PURCHASE ORDER” parent table with GRP = 10. A “Stop-off Delivery Address” may belong to the “ITEM DELIVERY” child table with GRP = 60.
- IC Data Element Name (Data Name) is a label for each data element using terminology common to the business environment. The IC element matrix identifies an element as a “Route Order Number Qualifier.” This is more concise than using the generic X12 label of “Qualifier.” A segment header record identifies the segment ID in this field.
- IC Notes & Codes (DoD Information Notes and Codes) can contain application notes about various segment and element conditions or requirements. This column may also list both X12 standard codes and DoD unique codes. If the list is larger than 20 codes, it appears in the section that contains Code Lists.
- IC Attributes (Attributes). When part of a segment header record, this column indicates the usage of the segment. When part of an element record, this column indicates the usage of the element within the segment, if the segment is used. Attributes may differ from those in the ASC X12 standard. For example, if trading partners expect to exchange a purchase order number that has a specific length and structure, those attributes are described here. Attributes include requirement designator, data element type, minimum length and maximum length.
- X12 Transaction Set Table Number (Tabl).
- X12 Segment Position (Pos).
- X12 Requirement Designator (Req Des) . This column applies only to Segment Header type matrix records.
- X12 Maximum Usage (Max Use). This column applies only to Segment Header type matrix records.
- X12 Loop Repeat (Lp Rpt) indicates the number of times a loop may be used. This column applies only to Segment Header type matrix records.
- X12 Loop Level (Lp Lv). Loops may be nested within other loops. This column indicates the nesting level for each loop and applies only to Segment Header type matrix records.
- X12 Loop ID (Lp ID). This column applies only to Segment Header type matrix records.
- X12 Segment Reference Designator (Ref Des) . This column applies only to Element type matrix records.
- X12 Simple or Composite Data Element Number (DE#). This column applies only to Element type matrix records.

- X12 Simple Data Element Attributes (Attributes). Attributes listed include the data element requirement designator, data element type, minimum length and maximum length. This column applies only to Element type matrix records.
- X12 Composite Data Element Attributes ((Composite) Attributes) . Attributes listed include the simple data element number, requirement designator, data element type, minimum length and maximum length. This column applies only to Element type matrix records.

Sort Order of the Matrix

The matrix presents IC elements in an order that enables programmers to generate application-to-translator interface files (also known as user-defined files or UDFs) that are syntactically correct to ASC X12 standards. IC elements are grouped under segment header records. When exchanging an IC element, the programmer needs to generate the entire segment under which the element is listed. Likewise, when exchanging a segment, the programmer needs to generate the entire loop structure to which the segment belongs.

APPLICATION NOTES

The IC element matrix in this section maps data requirements for the Department of Defense program for invoice acknowledgment into the ASC X12 Transaction Set 824 Application Advice. DoD derived the IC elements from the following sources:

- Analysis of ASC X12 Transaction Set 824 Application Advice (Version 004010)
- Comments submitted by transportation activities involved in the DoD electronic data interchange effort.

DoD INFORMATION				X12 SEGMENT INFORMATION							X12 ELEMENT INFORMATION				
Index	DG	Data Name	Notes and Codes	DoD Recommended Attributes	Tabl	Pos	Req Des	Max Use	Lp Rpt	Lp Lv	Lp ID	Ref Des	DE #	(Simple) Attributes	(Composite) Attributes
1		ST SEGMENT - Transaction Set Header		M	1	10	M	1							
2		Transaction Set Identifier Code		M ID 3/3	1	10		1				ST01	143	M ID 3/3	
		824 - Application Advice													
3		Transaction Set Control Number		M AN 4/9	1	10		1				ST02	329	M AN 4/9	
		Identifying control number that must be unique within the transaction set functional group assigned by the originator for a transaction set. The application and structure of the control number must be agreed upon between trading partners. (For example, some applications use all nine digits where the first five might indicate a group control number and the last four represent the sequence of the transaction set within the functional group. Also, the entire nine digit field may simply represent the sequence of the transaction set generated by a trading partner.)													
4		BGN SEGMENT - Transaction Set Purpose		M	1	20	M	1							
5		Transaction Set Purpose Code		M ID 2/2	1	20		1				BGN01	353	M ID 2/2	
		Use code value '11' to indicate personal property. 11 - Response													
6		TS 859 Response		M AN 10/10	1	20		1				BGN02	127	M AN 1/30	
		Use the value '859 - PPSI' to indicate that this is a TS 824 in response to a TS 859. Use the Value '811 - PPSI' to indicate that this is a TS 824 in response to a TS 811.													
7		Date of Transaction		M DT 8/8	1	20		1				BGN03	373	M DT 8/8	
8		OTI SEGMENT - Original Transaction Identification		M	2	10	M	1	>1	1	OTI				
9		Application Acknowledgment Code		M ID 1/2	2	10		1	>1	1	OTI	OTI01	110	M ID 1/2	
		TE - Transaction Set Accept with Error TR - Transaction Set Reject													

DoD INFORMATION				X12 SEGMENT INFORMATION							X12 ELEMENT INFORMATION				
Index	DG	Data Name	Notes and Codes	DoD Recommended Attributes	Tabl	Pos	Req Des	Max Use	Lp Rpt	Lp Lv	Lp ID	Ref Des	DE #	(Simple) Attributes	(Composite) Attributes
10		Carrier Identification Qualifier		M ID 2/3	2	10		1	>1	1	OTI	OTI02	128	M ID 2/3	
			Use code value '8M' to indicate - Input ISA Sender ID of the original sender. 8M - Originating Company Identifier CN - Carriers Reference Number (PRO/Invoice)												
11		Carrier PRO Number Identification		M AN 1/30	2	10		1	>1	1	OTI	OTI03	127	M AN 1/30	
			The carrier reference number is generated by the carrier to uniquely identify an invoice.												
12		Application Sender's Code		C AN 2/15	2	10		1	>1	1	OTI	OTI04	142	O AN 2/15	
13		Application Receiver's Code		C AN 2/15	2	10		1	>1	1	OTI	OTI05	124	O AN 2/15	
14		Date		C DT 8/8	2	10		1	>1	1	OTI	OTI06	373	O DT 8/8	
15		Time		C TM 4/8	2	10		1	>1	1	OTI	OTI07	337	O TM 4/8	
16		Group Control Number		C NO 1/9	2	10		1	>1	1	OTI	OTI08	28	C NO 1/9	
17		Transaction Set Control Number		C AN 4/9	2	10		1	>1	1	OTI	OTI09	329	O AN 4/9	
18		TED SEGMENT - Technical Error Description		M	2	70	O	1	>1	2	TFD				
19		Application Error Condition Code		M ID 3/3	2	70		1	>1	2	TFD	TFD01	647	M ID 1/3	
			Use code value 'ZZZ' to satisfy X12 syntax. ZZZ - Mutually Defined												
20		Error Message		C AN 26/50	2	70		1	>1	2	TFD	TFD02	3	O AN 1/60	
			Prescribed description of acceptance or reasons for rejection. See Section 9.0, Table 1, for list of error messages.												

DoD INFORMATION				X12 SEGMENT INFORMATION								X12 ELEMENT INFORMATION			
Index	DG	Data Name	Notes and Codes	DoD Recommended Attributes	Tabl	Pos	Req Des	Max Use	Lp Rpt	Lp Lv	Lp ID	Ref Des	DE #	(Simple) Attributes	(Composite) Attributes
21		Segment ID Code		C ID 2/3	2	70		1	>1	2	TFD	TFD03	721	O ID 2/3	
22		Segment Position in Transaction Set		C NO 1/6	2	70		1	>1	2	TFD	TFD04	719	O NO 1/6	
23		Element Position in Segment		C NO 1/2	2	70		1	>1	2	TFD	TFD05	722	O NO 1/2	
24		Data Element Reference Number		C NO 1/4	2	70		1	>1	2	TFD	TFD06	725	O NO 1/4	
25		Copy of Bad Data Element		C AN 1/99	2	70		1	>1	2	TFD	TFD07	724	O AN 1/99	
26		Data Element New Content		C AN 1/99	2	70		1	>1	2	TFD	TFD08	961	O AN 1/99	
27		NTE SEGMENT - Note/Special Instruction		C	2	80	O	100	>1	2	TFD				
28		Note Reference Code		C ID 3/3	2	80		100	>1	2	TFD	NTF01	363	O ID 3/3	
		APN - Application Notes ERN - Error Notes REC - Recommendation													
29		Description		M AN 11/60	2	80		100	>1	2	TFD	NTF02	352	M AN 1/80	
		Prescribed description of acceptance or reasons for rejection. See Section 9.0, Table 2, for list of error messages.													
30		RED SEGMENT - Related Data		C	2	82	O	100	>1	2	TFD				
31		Description		M AN 1/80	2	82		100	>1	2	TFD	RFD01	352	M AN 1/80	
		Insert the value in the LX01 located in the TS 859.													
32		Related Data Identification Code		C ID 2/3	2	82		100	>1	2	TFD	RFD02	1609	C ID 2/3	
		RP - Reference Identification (Primary)													
33		SE SEGMENT - Transaction Set Trailer		M	2	90	M	1							

DoD INFORMATION				X12 SEGMENT INFORMATION							X12 ELEMENT INFORMATION						
Index	DG	Data Name	Notes and Codes	DoD Recommended Attributes		Tabl	Pos	Req Des	Max Use	Lp Rpt	Lp Lv	Lp ID	Ref Des	DE #	(Simple) Attributes	(Composite) Attributes	
34		Number of Included Segments		M	N0	1/10	2	90	1				SF01	96	M	N0	1/10
		Total segments in this transaction set including the ST and SE segments.															
35		Transaction Set Control Number		M	AN	4/9	2	90	1				SF02	329	M	AN	4/9
		This data element ends the transaction set and should match the number that appears in the ST02 that begins the transaction set.															

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Section 5.0

IC ELEMENTS IN EDI FORMAT

Contents

This section contains an example of the 824 transaction set as it is used for the Department of Defense (DoD) 859 Transaction Set Acknowledgment.

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Example 1

ST*824*0001
BGN*11*859-PPSI*20030723
OTI*TR*CN*DAY0000001*TESTCARRIER*MTMCCWA*20030723*001200*699049*0010
TED*ZZZ*ADR010 - invalid shipment id or GBL*B3*4*3*145*WP-478184
RED*2*RP
TED*ZZZ*ICF040 - invalid data format*N4*4*6*310
RED*3*RP
SE*6*0001
GE*1*189
IEA*1*000000189

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Section 9.0

ADDITIONAL INFORMATION FOR THE DEVELOPER

This section describes the data groups cited in the IC element matrix (Section 4.0) and lists the error messages and notes that may be reported in response to an 859 or 811 transaction.

PPSB EDI-824 - Technical Error Description (TED) Segment – (0003) Free Form Text Message Detail

Error Code Format

[Error Category][Error Sub-Category][Index Number]

Error Categories

- **IC** - implementation convention error
- **MD** - mutually defined error
- **AD** - application data integrity error

Error Sub-Categories

- **C** - cardinality error
- **F** - field integrity error
- **R** - referential integrity error
- **S** - segment relationship error
- **G** - generic error

Example: [IC][F][050] – (implementation convention, field integrity error)

Example: [MD][C][025] – (mutually defined, cardinality error)

Example: [AD][R][020] – (application data, referential integrity error, “invalid carrier SCAC”)

Table One

IMPLEMENTATION CONVENTION (IC) COMPLIANCE ERRORS

Code	(0003) Free Form Text (60 chars max)	<i>Explanation/Etc...</i>
ICF031	ICF031 - conditional field missing	condition details specified in sibling NTE segment
ICF035	ICF035 - invalid data type	expected data type specified in sibling NTE segment
ICF040	ICF040 - invalid data format	expected format in sibling NTE segment
ICR060	ICR060 - data element not found in code list	code list specified in 824 sibling 'NTE segment. Ex ['A', 'B', 'C']
ICG065	ICG065 - unexpected condition	details specified in sibling NTE segments

“MUTUALLY DEFINED” ERRORS

Note: these are errors not formally specified in the an IC but are informally acknowledged by the stakeholders and/or trading partners

MDF031	MDF031 - conditional field missing	condition details specified in sibling NTE segment
MDF040	MDF040 - invalid data format	expected format specified in sibling NTE segment
MDR060	MDR060 - data element not found in code list	code list specified in sibling 'NTE segment. Ex ['A', 'B', 'C']
MDG065	MDG065 - unexpected condition	details specified in sibling NTE segments

(Personal Property Shipping)

Application Data Integrity Errors

ADR010	ADR010 - invalid shipment id or GBL	
ADR015	ADR015 - invalid billing item code	
ADR020	ADR020 - invalid carrier SCAC	
ADR025	ADR025 - invalid GBLOCK	
ADR030	ADR030 - invalid GBL, SCAC, GBLOCK combination	
ADF035	ADF035 - duplicate invoice	??
ADR045	ADR045 - invalid postal code	
ADR050	ADR050 - invalid rate area	
ADF060	ADF060 - invalid data element	- details specified in sibling NTE segment(s)
ADG065	ADG065 - unexpected condition	- details specified in sibling NTE segment(s)

PPSB EDI-824 Note/Special Instruction (NTE) Segment – (352) Description

Table Two

<u>Code</u>	<u>(352) Description(80 chars max)</u>	<i>Explanation/Etc...</i>
FDT	FDT - field data type, '%s'	Expected data type
FDF	FDF - field data format, '%s'	Expected data format
FCN	FCN – field required when '%s' field is '%s'	
RCL	RCL - code list, [%s]	Code list referenced when error generated, truncated to 80 chars if necessary. Ex: "RCL - code list, ['A', 'B', 'C', 'D', '...']"