

Chapter

***Structural
Technology*****Control Specifications**

ANSI X12 has three levels of control characters that trading partners must be aware of when exchanging business documents using EDI. NAGASA has established the following specifications to be followed by all members when trading within the NAGASA community:

Version	-	3040	
Data Element Separator	-	Hexadecimal 2A	*
Sub Element Separator	-	Hexadecimal 3E	>
Segment Terminator	-	Hexadecimal 0A	LF

Interchange Structure

The ISA, IEA segment combination and the GS, GE segment combinations are required for all ANSI X12 EDI documents. These segments are defined below and must be wrapped around each EDI document being traded.

A diagram of an EDI document with the envelope wrapped around it is shown below:

Level 1	ISA - Interchange Control Header				
Level 2		GS-	Functional Group Header		
Level 3			ST	-	Transaction Set Header
Level 4				BEG	- Beginning Segment for Purchase Order
.				REF	- Reference Numbers
.				.	
.				.	
Level 4				CTT	- Transaction Totals
Level 3			SE	-	Transaction Set Trailer
Level 2		GE -		Functional Group Trailer	
Level 1	IEA - Interchange Control Trailer				

Example of the Interchange Control Structure Relationships for a Purchase Order - 850.

Segment:	ISA Interchange Control Header
Position:	005
Loop:	
Level:	Envelope
Usage:	Mandatory
Max Use:	1
Purpose:	To start and identify an interchange of zero or more functional groups and interchange-related control segments
Notes:	
Syntax Notes:	
Semantic Notes:	
Comments:	

Data Element Summary

<u>Ref.</u>	<u>Data</u>	<u>Name</u>	<u>Attributes</u>
<u>Des.</u>	<u>Element</u>		
ISA01	I01	Authorization Information Qualifier	M ID 2/2
		Code to identify the type of information in the Authorization Information.	
		00 No Authorization Information Present (No Meaningful Information in I02)	
ISA02	I02	Authorization Information	M AN 10/10
		Information used for additional identification or authorization of the sender or the data in the interchange. The type of information is set by the Authorization Information Qualifier.	
		<i>Spaces</i>	
ISA03	I03	Security Information Qualifier	M ID 2/2
		Code to identify the type of information in the Security Information.	
		00 No Security Information Present (No Meaningful Information in I04)	
ISA04	I04	Security Information	M AN 10/10
		This is used for identifying the security information about the sender or the data in the interchange. The type of information is set by the Security Information Qualifier.	
		<i>Spaces</i>	
ISA05	I05	Interchange ID Qualifier	M ID 2/2
		Qualifier to designate the system / method of code structure used to designate the sender or receiver ID element being qualified.	
		01 Duns (Dun & Bradstreet)	
ISA06	I06	Interchange Sender ID	M AN 15/15
		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	
		<i>DUNS #</i>	
ISA07	I05	Interchange ID Qualifier	M ID 2/2
		Qualifier to designate the system / method of code structure used to designate the sender or receiver ID element being qualified.	
		01 Duns (Dun & Bradstreet)	

ISA08	I07	Interchange Receiver ID 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. DUNS #	M	AN	15/15
ISA09	I08	Interchange Date Date of the interchange. <i>Current Date in 'YYMMDD' format.</i>	M	DT	6/6
ISA10	I09	Interchange Time Time of the interchange. <i>Current Time in 'HHMM' format, 24-hour, local</i>	M	TM	4/4
ISA11	I10	Interchange Control Standards Identifier Code to identify the agency responsible for the control standard used by the message that is enclosed by the interchange header and trailer. U U.S. EDI Community of ASC X12, TDCC, and UCS	M	ID	1/1
ISA12	I11	Interchange Control Version Number This version number covers the interchange control segments. 00300 Standard Issued as ANSI X12.5-1992	M	ID	5/5
ISA13	I12	Interchange Control Number This number uniquely identifies the interchange data to the sender. It is assigned by the sender. Together with the sender ID it uniquely identifies the interchange data to the receiver. It is suggested that the sender, receiver, and all third parties be able to maintain an audit trail of interchanges using this number. <i>Sequentially assigned, match to IEA02</i>	M	NO	9/9
ISA14	I13	Acknowledgment Requested Code sent by the sender to request an interchange acknowledgment (TA1) 0 No Acknowledgment Requested	M	ID	1/1
ISA15	I14	Test Indicator Code to indicate whether data enclosed by this interchange envelope is test or production. P Production Data T Test Data	M	ID	1/1
ISA16	I15	Subelement Separator This is a field reserved for future expansion in separating data element subgroups. (In the interest of a migration to international standards, this must be different from the data element separator). > <i>sign for sub element separator.</i>	M	AN	1/1

Segment:	GS	Functional Group Header
Position:	007	
Loop:		
Level:	Envelope	
Usage:	Mandatory	
Max Use:	1	
Purpose:	To indicate the beginning of a functional group and to provide control information	
Notes:		
Syntax Notes:		
Semantic Notes:	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.

Data Element Summary

<u>Ref.</u>	<u>Data</u>	<u>Name</u>	<u>Attributes</u>
<u>Des.</u>	<u>Element</u>		
GS01	479	Functional Identifier Code Code identifying a group of application related Transaction Sets. <i>CF, IN, PO, PR, PT, RA, SC, SH</i>	M ID 2/2
GS02	142	Application Sender's Code Code identifying party sending transmission. Codes agreed to by trading partners. <i>DUNS #</i>	M AN 2/15
GS03	124	Application Receiver's Code Code identifying party receiving transmission. Codes agreed to by trading partners. <i>DUNS #</i>	M AN 2/15
GS04	373	Date Date (YYMMDD).	M DT 6/6
GS05	337	Time Time expressed in 24-hour clock time as follows: HHMM.	M TM 4/8
GS06	28	Group Control Number Assigned number originated and maintained by the sender. <i>Sequentially assigned, match to GE02.</i>	M NO 1/9
GS07	455	Responsible Agency Code Code used in conjunction with Data Element 480 to identify the issuer of the standard. <i>X Accredited Standards Committee X12</i>	M ID 1/2
GS08	480	Version / Release / Industry Identifier Code 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	M AN 1/12

user). If code in DE455 in GS segment is T, then other formats are allowed.

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Segment:	GE	Functional Group Trailer
Position:	090	
Loop:		
Level:	Envelope	
Usage:	Mandatory	
Max Use:	1	
Purpose:	To indicate the end of a functional group and to provide control information	
Notes:		
Syntax Notes:		
Semantic Notes:	1	The data interchange control number GE02 in this trailer must be identical to the same data element in the associated Functional 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.

Data Element Summary

Ref.	Data	Name	Attributes
Des.	Element		
GE01	97	Number of Transaction Sets Included	M N0 1/6
		Total number of transaction sets included in the functional group or interchange (transmission) group terminated by the trailer containing this data element.	
GE02	28	Group Control Number	M N0 1/9
		Assigned number originated and maintained by the sender. <i>Matched from GS06.</i>	

Segment: **IEA** Interchange Control Trailer
Position: 100
Loop:
Level: Envelope
Usage: Mandatory
Max Use: 1
Purpose: To define the end of an interchange of zero or more functional groups and interchange-related control segments
Notes:
Syntax Notes:
Semantic Notes:
Comments:

Data Element Summary

<u>Ref.</u>	<u>Data</u>		
<u>Des.</u>	<u>Element</u>	<u>Name</u>	<u>Attributes</u>
IEA01	I16	Number of Included Functional Groups	M N0 1/5
		A count of the number of functional groups included in a transmission.	
IEA02	I12	Interchange Control Number	M N0 9/9
		This number uniquely identifies the interchange data to the sender. It is assigned by the sender. Together with the sender ID it uniquely identifies the interchange data to the receiver. It is suggested that the sender, receiver, and all third parties be able to maintain an audit trail of interchanges using this number.	
		<i>Matched from ISA13</i>	