

# **TUTORIAL – BEST PRACTICES (EDI Enveloping)**

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## **PURPOSE:**

The purpose of this document is to establish standards for communication enveloping and EDI Control Headers between TXU and Market Participants. TXU and Texas Set Work Groups have done an exceptional job with recommending communication transport mechanisms and developing specific EDI standards. This document defines in more detail the enveloping structure and what should be sent in the enveloping headers.

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## OVERVIEW:

### **I. Communication Enveloping** – (For details See Page 3, Section 3)

The typical FTP or GISB EDM File should follow these guidelines:

For One File: Use the 1 - 1 - 1 Concept

- One (1) or Many **ISA** Interchange Control Structure(s) per File
  - One (1) or Many (1) **GS** Functional Group Envelope per ISA.
    - One (1) or Many **ST – SE** Transaction Sets per GS.

In other words, for any given Trading Partner - multiple 814 types can be sent in one or many GS, one ISA, and one File.

### **II. ISA–IEA and GS–GE Control Segments** – (For Details See Page 4, Section 4)

The typical ISA-IEA and GS-GE control segments should follow these guidelines.

- ISA05 use qualifier: “01”=Duns or 16=DUNS+4 only
- ISA06 Interchange Sender ID: Use Sender’s DUNS Number. (See Note 1)
- ISA07 use qualifier: “01”=Duns or 16=DUNS+4 only
- ISA08 Interchange Receiver ID: Use Receiver DUNS Number. (See Note 1)
- ISA15 Test Indicator: Use T=Test Data (Pilot Test), P=Production Data
  
- GS02 Senders Code: Use Same DUNS Number as ISA06 (See Note 2)
- GS03 Receiver’s Code: Use Same DUNS Number as ISA08 (See Note 2)

#### **Notes:**

1. **ISA06 and ISA07:** *If a MP uses a third party EDI vendor, use the third party’s DUNS Number; otherwise use your companies DUNS Number. We recommend only use a 9 digit or 9 +4 digits, not an alphanumeric DUNS Number.*
  
2. **GS02 and GS03:** *One exception to ANSI-X12 rule. If a MP uses a third party EDI vendor, use the MP’s DUNS Number, not the third parties DUNS number in ISA06 / 08. The GS02 and GS03 will always be the MP’s DUNS number and should match the N104 segment in the ST-SE transaction set. We recommend only use a 9 digit or 9 +4 digits DUNS number, not an alphanumeric assigned number.*

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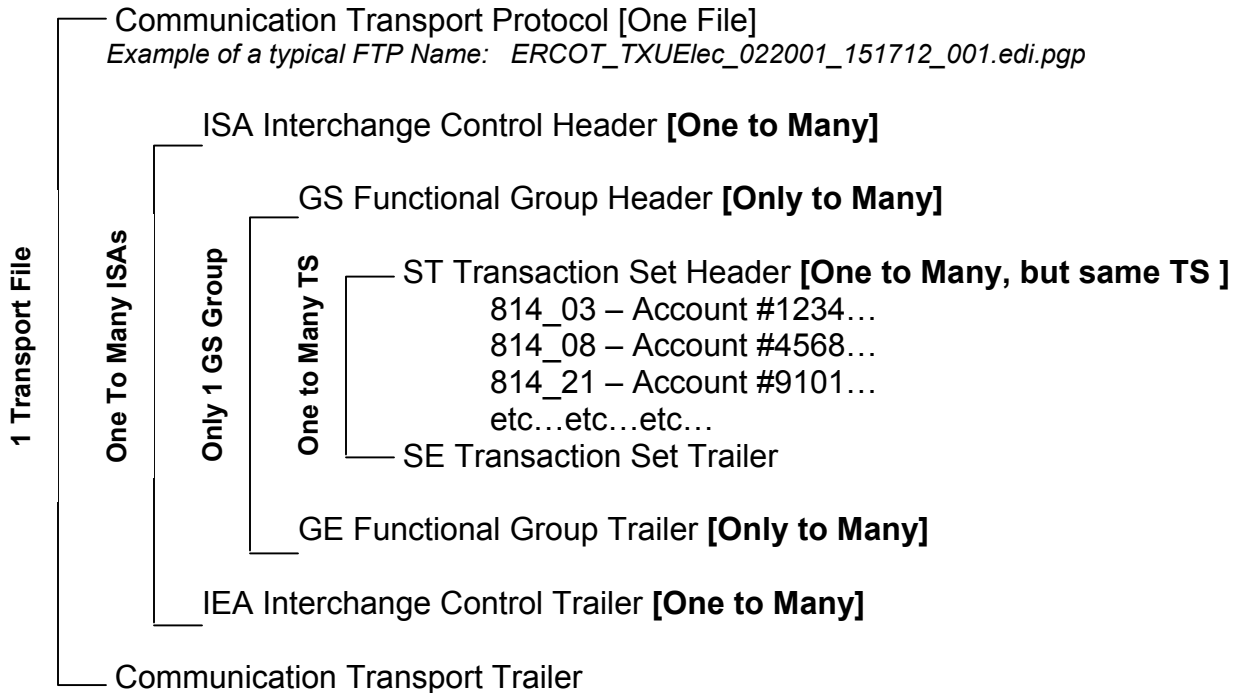
## III. COMMUNICATION ENVELOPE (FILE)

FTP OR GISB EDM:

Multiple Interchange Control Headers (ISA) can be sent or received by Trading Partners in one Communication Envelope (File). One or many Functional Group (GS) envelopes can be sent per ISA. Only one transaction set (i.e.814) will be sent in the GS envelope. Many types of ST-SE (i.e. 814\_01, 02, 03, 22), transaction sets can be sent in one GS envelope.

Example: TXU's Best Practice for File Transport or GISB EDM – Level of Envelopes

A typical EDI transmission file should follow the enveloping structure below:



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## ISA / GS SEGMENTS:

The purpose of the Interchange Control Structure is to define the control structures for the electronic interchange of one or more encoded transactions including the EDI encoded transactions of ASC- X12. This standard provides the interchange envelope of a header segment (ISA) and trailer segment (IEA) for the electronic interchange through a data transmission, and it provides a structure to acknowledge the receipt and processing of this envelope. These header and trailer segments envelope one or more functional groups, demarcated by the GS/GE envelope, and perform the following functions:

- Define the data element separators and data segment terminators
- Identify the sender and receiver
- Provide control information for the interchange, and
- Allow for authorization and security information.

The interchange header is transmitted first, followed by any optional interchange-related control segments, followed by the data in functional groups, with the interchange trailer following the data. The Interchange Control Header (ISA) sets the actual values of the data element separator and the segment terminator for this interchange. The character (usually an unprintable character) used to separate the data elements in the ISA segment is the character that will be used to separate the data elements in all segments, which follow the ISA segment until an occurrence of the IEA segment is encountered.

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**EXAMPLE: Typical ISA and GS Segments for Version 4010.**

ISA|00| |00| |01|987654321 |01|123456789 |010315|1511|U|00401|000000001|0|P|~^

GS|PT|987654321|123456789|20010315|155543|1|X|004010

ISA	Interchange Control Header			
Segment /Data Element	Description	Use	Recommended Code / Identifier	Explanation
ISA01	Authorization Information Qualifier	M	00	This is a code to identify the type of information in the Authorization Information. Use "00" No authorization information present
ISA02	Authorization Information	M		Not required in ERCOT transmissions. Fill with 10 blank characters.
ISA03	Security Information	M	00	Code to identify the type of information in the Security Information. Use "00" No security present.
ISA04	Security Information	M		This is used for identifying the security information about the sender or the data in the interchange. The Security Information Qualifier sets the type of information. Fill the field with 10 blank characters.
ISA05	Interchange ID Qualifier	M	01	Qualifier to designate the system/method of code structure used to designate the sender ID element being qualified in ISA06. Use "01"=DUNS, or else use 16=DUNS+4
ISA06	Interchange Sender ID	M	987654321	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

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				value in the sender ID element. Use Sender DUNS Number ex. 987654321
ISA07	Interchange ID Qualifier	M	<b>01</b>	Qualifier to designate the system/method of code structure used to designate the sender ID element being qualified in ISA08. Use "01"=DUNS, or else use 16=DUNS+4
ISA08	Interchange Receiver ID	M	<b>123456789</b>	Identification code published by the receiver of the data. This segment is used by the sender as their sender ID; thus other parties sending to them will use this as a receiving ID to route data to them. Use Receiver DUNS Number ex. 123456789
ISA09	Date	M	<b>010315</b>	Date of Interchange. Express in YYMMDD format.
ISA10	Time	M	<b>1511</b>	Time of Interchange. Express time in HHMM format.
ISA11	Interchange Control Standards Identifier	M	<b>U</b>	Code to identify the agency responsible for the control standard used by the message that is enclosed by the interchange header and trailer. The "U" code identifies the United States EDI Community of ASC X12
ISA12	Version Number	M	<b>004010</b>	This version number covers the interchange control segments.
ISA13	Interchange Control number	M	<b>00000001</b>	This number uniquely identifies the interchange data to the sender. The sender assigns the number. 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. Enter 9 numbers with no decimal point.
ISA14	Acknowledgment	M	<b>1</b>	Code sent by the sender to request an interchange acknowledgment. Codes used are <b>Code Description</b> 0 No Acknowledgment Requested - do not respond with TS997

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				1 Interchange Acknowledgment Requested - respond with TS997 as soon as the transaction is received
ISA15	Test Indicator	M	<b>P</b>	Code to indicate whether data enclosed by this interchange envelope is test or production. Codes used are  <b>Code Description</b>  T Test Data  P Production Data
ISA16	Component Element Separator	M	 ~	Indicate the value of the <b>Component Element Separator</b> .  Indicate the value of the <b>Element Separator</b> .  Note: Each Trading Partner will define the <b>Component Element Separator</b> and <b>Element Separator</b> in their Technical Worksheets.
	Enter ASCII Hexadecimal __ after ISA16.		^	This first occurrence of the <b>Segment Terminator</b> dictates the value the translation software will use throughout the interchange.  Example: Hexadecimal 5E “^”  Note: Each Trading Partner will define <b>Segment Terminator</b> in their Technical Worksheets.

<b>GS</b>	<b>Functional Group Header</b>			The Functional Group Header Segment is used to indicate the beginning of a functional group and to provide control information. For example multiple transaction sets (814,867,810) can be sent and separated by a GS – GE segments.
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GS01	Functional Identifier Code	M		This is a code identifying a group of application related transaction sets.
			<b>GE</b>	Use if an 814 transaction set.
			<b>PT</b>	Use if an 867 transaction set.
			<b>IN</b>	Use if an 810 transaction set.
			<b>RA</b>	Use if an 820 transaction set.
				Use if an 824 transaction set.
				Use if an 650 transaction set.
			<b>FA</b>	Use if an 997 transaction set.
GS02	Sender's Code	M	<b>DUNS</b>	Cite the sender's application identifier. DUNS or DUNS+4 is recommended. No leading or trailing blanks. Same DUNS number as ISA06. (2-15 characters)
GS03	Receiver's Code	M	<b>DUNS</b>	Cite the receiver's application identifier. DUNS or DUNS+4 is recommended. No leading or trailing blanks. Same DUNS number as ISA08. (2-15 characters)
GS04	Date	M	<b>20010315</b>	This is the date in the format CCYYMMDD.
GS05	Time	M	<b>155543</b>	This is the time expressed in 24-hour clock time (HHMMSSdd). Recommend only using the HHMM format.
GS06	Group Control Number	M	<b>1</b>	This is an assigned number originated and maintained by the sender.
GS07	Responsible Agency	M	<b>X</b>	This is a code used in conjunction with data element 480 to identify the issuer of the standard. We will use the code "X".
GS08	Version/Release	M	<b>004010</b>	IC version/release (i.e. enter 004010 for version 4010)