Reading EDI

Electronic Data Interchange (EDI) is an industry and government standard for the exchange of data. This standard enables the electronic transfer of all documents needed in a business transaction, such as purchase orders and invoices, between business entities participating in a trading partnership.

Each of these documents is comprised of data elements, segments and envelopes that are formatted according to the rules of the EDI standard.

Segments

Segments are the lines that make up a transaction. They are always preceded by a two or three letter code that identifies the line.

Example:

ST*850*3207

BEG*00*NE*02513760**20030506

DTM*106*20030511

DTM*063*20030511

N9*ZZ*0

MSG*FOR THIS WEEKS DELIVERY

N1*VN*TARANTULAS.COM*ZZ*04091

N3*P.O. BOX 384

N4*EDMONDS*WA*98020

N1*ST*PETCO - BEAVERTON*92*251

N3*4037 SW 117TH AVENUE, SUITE

N4*BEAVERTON*OR*97005

PO1**3000*EA*0.01**VN*110515*PD*CRICKET-LG LIVE*SK*110515***UP*555555110518

PO1**3000*EA*0.01**VN*110507*PD*CRICKET SM LIVE*SK*110507***UP*555555110501

CTT*000002**0000000.00*01

SE*16*3207

Elements

Elements are the pieces of data that make up the segments. They contain specific information or details about that segment. The elements are separated by '*' delimiters to distinguish where one element stops and another begins.

Example:

PO1*001*10*EA*4.39*LE*IN*637534079*UP*071815077693*VN*7769***IZ*P=200

PO1 is the segment for line item information in the Purchase Order. Each of the elements within it are separated by the "*" delimiter. PO101 (the first element in the PO1 segment) contains the value 001. The X12 standard and the implementation guide for this hub tell us that this piece of information represents the "Line Number." The PO102 contains the "Quantity Ordered" information and the PO103 contains the "UOM" for that item. Each element contains specific information for the item represented in this segment.

Loops

A loop is used when a segment is used multiple times within a transaction. It may contain additional segments that add more detailed information to the segment at the beginning of the loop.

Example:

PO1**3000*EA*0.01**VN*110515*PD*CRICKET-LG
LIVE*SK*110515***UP*555555110518

PO1**3000*EA*0.01**VN*110507*PD*CRICKET SM
LIVE*SK*110507***UP*555555110501

The PO1 segment contains item information in the Purchase Order. Each item on the order contains a PO1 segment of its own.

Qualifiers

A qualifier is a piece of information that identifies the segment or element that immediately follows it in the transmission.

An *element* qualifier identifies the data in the element that follows.

Example:

PO1**3000*EA*0.01**VN*110515*PD*CRICKET-LG
LIVE*SK*110515***UP*555555110518

The PO107 is a qualifier that contains a value of VN. It tells the recipient of the transmission that the value in the PO108 is the vendor's "Item Number." The PO109 contains a PD qualifier, which indicates that the PO110 contains the "Product Description."

A *segment* qualifier is a piece of information that describes all of the data within a segment or loop.

Example:

N1*ST*PETCO - BEAVERTON*92*251

N3*4037 SW 117TH AVENUE, SUITE

N4*BEAVERTON*OR*97005

The N1 loop contains address information. The N101 serves as a segment qualifier for this loop because it tells the receiver what kind of address information is contained within it. In this example, the segment qualifier of ST informs the receiver that the information in this N1 loop represents the Ship To: Address.

Envelope

The envelope consists of a series of segments that are "wrapped" around the transactions. The beginning of the envelope contains the ISA (Interchange Control Header) and GS segments. Their presence identifies the beginning of an EDI transmission. The GE and IEA segments indicate the end of the envelope.

Several transactions and transaction types may be contained within an envelope that contains key information about the transmissions inside. Such information includes Sender and Receiver Qualifiers and IDs, control numbers, and a test or production indicator. The EDI envelope is similar to addressing a letter. The EDI transmission also needs to be sent in an envelope, so the intended recipient receives it.

ISA Example:

```
ISA*00*      *00*      *12*6194537845     *ZZ*04091062802     *030506*1630*U*00401*000000197*0*P*>~
     01   02    03  04    05       06          07        08          09      10  11   12     13        14 15 16
```

ISA01 Security & authorization fields - normally contains 00

ISA02: Security & authorization fields must contain 10 spaces or 10 zeros

ISA03: Security & authorization fields - normally contains 00

ISA04: Security & authorization fields must contain 10 spaces or 10 zeros

ISA05: Sender's Qualifier

ISA06: Sender's EDI ID - must be space padded to equal 15 characters

ISA07: Receiver's Qualifier

ISA08: Receiver's EDI ID - must be space padded to equal 15 characters

ISA09: Interchange Date – six-digit date

ISA10: Interchange Time – military time

ISA11: Standards Identifier which normally contains U

ISA12: X12 Version Number – minus the sub-release

ISA13: Interchange Control Number – unique number to this batch

ISA14: Acknowledgment Requested Indicator. 0=none; 1=Acknowledgement Requested

ISA15: Test or Production Indicator. T=Test; P=Production

ISA16: Sub-element Delimiter

At the end of the raw data (the examples here have been parsed by delimiters, so they are more easily read), the ISA segment shows the delimiters for the transaction in the order of element, sub-element, and segment. These are the delimiters that the EDI viewer uses to parse the data so that each segment is represented on a line of its own.

GS *Example***:**

```
GS*PO*6194537845*04091062802*20030506*1630*197*X*004010
```

GS01: Transaction Identification Code

GS02: Sender's EDI ID

GS03: Receiver's EDI ID

GS04: Group Date

GS05: Group Time

GS06: Group Control Number

GS07: Standards Code which is usually X

GS08: Versions Code

Trailer *Example*:

```
SE*16*3207
GE*1*197
IEA*1*000000197
```

SE01: Number of Included Segments

SE02: Transaction Set Control Number

GE01: Number of Transaction Sets Included

GE02: Group Control Number

IEA01: Number of Included Functional Groups

IEA02: Interchange Control Number