SUPPRESSION OF LEADING AND TRAILING ZEROES IN TYPE R DECIMAL NUMBER

REQUEST

In your Email correspondence you referenced version 003060 and version 004010 of the X12 Standards, and specifically field "03" of the "SER' segment. You also referenced text from the "TMA guide to Account Analysis", which is not an X12 Standard.

You provide examples of values that might appear in an element of type 'real', and make the observation that with some unnamed vendor package, using the Version 004 Release 010 Standards, "when we pass a zero value, it passes a null, problem." Using the same vendor package with the Version 003 Release 060 Standards, you imply that "when we pass a zero, it passes a zero."

Your specific request for interpretation is: "I need to know how DISA interprets 'suppress leading (and) trailing zeros'."

The X12C Subcommittee has submitted both a formal interpretation, and a further discussion in response to your request for interpretation. This formal X12 interpretation has been developed and approved in compliance with the Operating Procedures of the X12 Committee.

The documents relevant to this interpretation are:

X12.6 Application Control Structures	Version 003 Release 060
X12.6 Application Control Structures	Version 004 Release 010
X12.3 Data Element Dictionary	Version 003 Release 060
X12.3 Data Element Dictionary	Version 004 Release 010

INTERPRETATION

This interpretation applies to all releases of Version 3 of the X12.6 Standard, and applies to all releases of Version 4 of the X12.6 through release 040. It is expected that future versions and releases of the X12.6 Standard will not result in a change of interpretation in regard to this matter.

Further, the behavior of any application is beyond the scope of the standard. This interpretation only deals with the contents of a data stream that is compliant with the X12 standards.

The X12.6 Standard provides specific syntactic constraints on values of type 'Decimal Number', or type 'R'. Among these are rules for suppression of leading and trailing zeroes:

> 3.5.1.2 Decimal Number
> …"Leading zeros should be suppressed unless necessary to satisfy a minimum length requirement. Trailing zeros following the decimal point should be suppressed unless necessary to indicate precision."…

The x12.6 Standard makes a clear distinction between the absence of data and the presence of data in an instance of an element within a transaction:

> 3.7.3 Absence of Data
> "Absence of data is represented by the value <empty>. Any value other than <empty> is an indication that data are present."…

Segment 'SER' field '03' (or SER03) references Data Element 782 Monetary Amount, which is of Type 'R' and has minimum length '1' and maximum length '15'. A syntax note constraint on segment 'SER' states that at least one of SER03 and SER04 is required.

Your request for interpretation indicates that you have data, specifically a value of zero, that you wish to transmit in the SER03 element. Therefore, according to the cited sections of the standard, since you have data present a single zero in the data stream would be compliant. Both the minimum length restriction and the fact that you have a data value of zero prohibit suppressing the element to become a zero length empty element. On the other hand, suppressing all zeroes in this element would indicate that you have no data to transmit in SER03, and that therefore in order to satisfy the relational condition you would have data to transmit in SER04 (which could also be a zero).

A contrary interpretation would hold that it is valid to totally suppress the zero from the data stream. This would have the extreme effect of declaring noncompliant any element that contains only a zero. Clearly, this would not support business cases where a zero has semantic value, such as indicating that a container should be held at temperature of zero degrees.

In summary, our interpretation is that a zero in the SER03 element is compliant with the standards.