

mpXML
Variable Measure Data Synchronization
Pilot Results

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Overview

In March and April of 2006 several members of mpXML participated in a data synchronization pilot for variable measure meat and poultry items. The purpose of the pilot was to test the adequacy of existing GDSN data standards for synchronizing variable-measure products, to allow mpXML to identify gaps in the standards and issues which preclude synchronization, and to test the mpXML Implementation Guidelines for meat and poultry trade items. The pilot was completed in late April.

The purpose of this document is to provide an overview of the parameters of the pilot, discuss the results of the pilots, including preparations by the participants and challenges which were overcome, and to coalesce this experience into recommendations that can aid subsequent data synchronization implementation efforts for variable measure products.

Participants

RETAILER	PRODUCER
Wegman's	Tyson
Safeway	Perdue
SuperValu	
Albertson's	

Products Transmitted

All of the products piloted were chicken products, and all were established products in retailer systems (i.e., already being purchased by the retailers). Although there was some variance from retailer to retailer, in general, all retailers tested two variable weight products that each had a CASE and EACH level, and one product that had only a CASE level. Some retailers also tested fixed weight poultry products.

General Steps Before Piloting

As noted, the goal was to test products that were already in the retailer's systems. The first step was for the retailer and producer to agree on the products for which Catalogue Item Notification messages were to be sent. Once the products were agreed upon, the retailer and producer agreed on a general timeframe for sending, and who would be notified on the retailer side once the message had been sent. Notification allowed the retailers to check their work queues to see what happened to the messages once received – Were they automatically rejected? Was the synch successfully completed?

Challenges Impacting Pilot

A number of factors impacted the start of the pilot. A number of retailers had previously received CASE-level data for variable measure products. However, because there were typically no GTINs assigned at the EACH level for these products, the UPC field was populated with an incorrect UPC – either a truncation of the CASE GTIN or a completely fictional number. This caused some retailers to assume that some variable weight products were fixed weight products. On the producer side, some products for the case-level GTIN started with a leading 9 (used to denote variable measure), but were actually fixed measure. Thus the retailers and producers had to spend time correctly identifying fixed weight and variable weight products.

Once the products were agreed upon, the primary challenges were in matching the data synch messages to the items already in the retailer's systems. The matching criteria used for fixed weight products, often UPC, Pack, and Size, did not work for the variable measure products, which typically used a UPC A Type 2 label containing a commodity code and price instead of a true GTIN. Also, the retailers were not accustomed to using the variable measure attribute flag to drive processing logic in their systems for data synchronization, so they had no way of flagging variable measure products for a different synch process or work flow. Retailers also did not capture the GTIN at the EACH level, which as noted, is not the same number as that on a UPC Type 2 barcode.

Outcome of the Pilot

Generally, all of the retailers were able to match the product data received to products in their systems. One retailer was able to accomplish this synch seamlessly(machine to machine). Most retailers had to use manual processes to identify the appropriate matches within their systems. The retailers that had to use manual processes were able to identify coding changes to their systems which would create separate work flows for variable measure products and also create separate matching criteria for variable measure products.

Lessons Learned

One of mpXML's goals in doing the pilot was to identify practical steps and best practices that could be utilized by retailers and producers that seek to routinely synchronize variable measure products. Following is a summary of mpXML's recommendations:

- Retailers should capture the “isTradeItemVariableMeasure” attribute;
- Retailers should capture the GTIN at the EACH level;
- Retailers should identify any differences in the way they handle fixed weight and variable weight products, including differences in the data is populated across the product hierarchy;
- Retailers should be conscious of whether they import hierarchy data “top down” or “bottom up”;
- Retailers should work with producers to identify matching criteria which work with the different product scenarios;
- Retailers should evaluate whether or not they should establish a separate work flow for variable measure products; and
- If producers are using dimensional data in their systems, producers should populate the Height, Width and Depth attributes with the correct information. For variable eaches, the average dimensions should be used. If retailers are not using dimensional data in their systems, producers can consider populating the Height, Width and Depth attributes with “1” (1, 1, 1) as a short term solution.

Detailed Recommendations

Make Sure You Capture Variable Measure Flag. The data synch model utilizes an attribute specifically designed to note that a product is variable measure – the Boolean “isTradeItemVariableMeasure” attribute. Because most retailers started with fixed weight items only, many do not currently capture this attribute, and thus do not have the key to distinguishing variable measure products from those that are fixed weight. Capturing the variable measure flag facilitates establishing unique match criteria or work flow for variable measure products.

Recommendation: Retailers should capture the “isTradeItemVariableMeasure” attribute

Consider Storing the GTIN at the EACH Level. For fixed weight products, the GTIN is almost always the code that is embedded in the barcode. Thus if a retailer captures the UPC code, it is effectively also capturing the GTIN. Variable measure products at the EACH level use the UPC A Type 2 barcode, which contains a commodity code and the price instead of the GTIN. For this reason, retailers may want to consider capturing the actual GTIN at the EACH level, as a means of facilitating data synchronization.

Recommendation: Retailers should consider capturing the GTIN at the EACH level

Identify Product Scenarios and Hierarchy Levels. Generally, a retailer will have up to three different product scenarios for variable measure products: case-ready, bulk, and deli. Data synch for case ready products will likely include two hierarchy levels: CASE and EACH. Bulk, for instance, a case of chicken breasts in bags that will be packaged by the retailer, could have one or two hierarchy levels, CASE, or both CASE and EACH. Similarly Deli, could also have one or both hierarchy levels.

Recommendation: Retailers should identify the product scenarios and hierarchy levels for each scenario

Be Conscious of How Data Synch is Imported and Stored. The data synch message is transmitted from the top down, higher hierarchy levels first, and then lower hierarchy levels (for example, CASE, then EACH). Some retailers import and process data from the top down, (CASE, then EACH), but some retailers import and process from the bottom up (EACH, then CASE). Furthermore, some retailers store EACH level data but no CASE data, and some store CASE level data but no EACH data. How a retailer imports and stores data can have an impact on synching variable measure products.

Recommendation: Retailers should be conscious of whether they import data “top down” or “bottom up”, and the hierarchy level for which they store the data

Identify Matching Rules for Different Scenarios. For fixed weight products, retailers typically use a range of attribute matching criteria to match the data synch message to products in their databases. For instance, a retailer may look for a match of the UPC code, pack, and size or net content (which for variable weight products is the average net weight). These matching criteria are less likely to work reliably with variable measure products. For instance, at the EACH level there will not be a standard UPC code, because the product will be bar-coded with a UPC A Type 2 label that includes a commodity code and the price. Retailers and their suppliers need to think through the attributes that are captured for the different product scenarios, and identify appropriate matching criteria for each. Using the same attributes as are used for fixed weight products is likely to cause rejections even when a match does exist.

Recommendation: Retailers should work with producers to identify matching criteria which work with the different product scenarios

Evaluate Establishing a Separate Work Flow for Variable Measure Products. It may be necessary to establish a separate work flow for synching variable measure products, to insure synch messages are not incorrectly rejected.

Recommendation: Retailers should evaluate whether or not they should establish a separate work flow for vm products.

Use of Dimensions at the EACH Level. Height, Width and Depth are mandatory attributes in the data synch message. A long-term goal of data synch is to transmit the dimensional information at the EACH level to allow the synch data to be used for planograms and shelf space management. However currently the General Specifications for data synch does not specify this use, and the standards for measuring products continued to be clarified for odd or irregularly shaped products. Further, many producers do not store dimensional information in their systems, and many retailers are not currently using the dimensional information. Because the attributes are mandatory, they must be included in the message. mpXML's recommendation is to transmit the correct data if available and used by the retailer. However, if the information is not being used by the retailer, mpXML recommends populating attributes with the digit "1" as a short term solution.

Recommendation: If retailers are using dimensional data in their systems, producers should populate the Height, Width and Depth attributes with the correct information. If retailers are not using dimensional data in their systems, the Height, Width and Depth attributes can each be populated with the digit "1".

Miscellaneous Issues

Effective Dates. Though not specific to variable measure products, the pilot did focus attention on the issue of the use of availability dates such as the startAvailabilityDateTime attribute. Retailers noted that often different hierarchy levels for the same product have different start availability dates, and further retailers have not yet configured their systems to capture and use these dates. Retailers noted that if there is a true future effective date for an item message, producers need to transmit this date outside of the data synch process. Retailers and producers agreed on the need to continue to define the use of effective dates within the data synch process.

Data Storage. Most retailers are not using all of the information included in a data synch message. However several retailers do store the whole message, even with unused data. This allows them to pull additional data from the message at a later date if they have implemented systems changes that require the additional data.

Change Messages. Retailers noted that managing Change Messages was more complicated than receiving the initial data synch message. For this reason, it is recommended that producers send as much correct information as possible in the original message, even if that data is not going to be immediately used by the retailers.

Next Steps

Originally, mpXML's pilot scope was to work in two directions: (1) for retailer/producer pairs to synchronize on 5-6 items that were fixed and variable weight, (2) expand the number of attributes sent beyond just the mandatory attributes to include attributes recommended in the mpXML Implementation Guide; and (3) extend the participation in the pilot to additional retailers and producers to grow adoption.

However the pilot has shown that retailers and producers may have work to do internally to allow a true machine to machine synchronization. Retailers need to modify their current data capture processes to insure they are capturing the variable measure flag, and also may need to change the matching criteria used for variable measure products. Producers may also need system and process changes to allow them to capture all of the information needed and requested for data synch with their customers.

Further, mpXML identified that although the core information is being sent in the publication today, not all retailers are using the information being sent. Expanding the message at this time with additional optional attributes would only provide more information that would not be used any time soon. For these reasons, mpXML recommends delaying any effort to expand the number of attributes being sent, until producers and retailers are further along in their systems evolutions and adoption of data synchronization. We do, however, believe that the optional attributes identified in the updated mpXML Implementation Guide should be considered as data synchronization projects are being implemented.