

History

Industry background

mpXML was founded in 2001 in response to rapidly evolving data standardization efforts. mpXML's members recognized both the potential of a seamless electronic supply chain, and the challenges faced in achieving that goal. In 2001, there were numerous standards development efforts underway, some of which promised to replace existing business systems and processes, and many of which were working on overlapping or parallel standards efforts. Most of these efforts were driven by the "center of the store" and did not necessarily address the unique business requirements of the meat and poultry supply chain, with its perishable, often variable weight products. mpXML's members recognized that leveraging the potential of electronic data would be much harder if multiple approaches were pursued and that the industry would be better served by a consolidation of efforts. Further, mpXML's members also recognized that an overall upgrade of systems, while attractive from the standpoint of a data purist, would be significantly less attractive from a cost standpoint.

Who was mpXML?

Meat and Poultry XML (mpXML) was a non-profit business to business data standards organization pioneering the development and use of the standards that support electronic commerce among all segments of the meat and poultry industry. The organization was comprised of representatives from all sectors of the meat and poultry supply chain. Membership in mpXML was open to all meat and poultry industry suppliers, distributors, grocery retailers, food service operators, government agencies, and incorporated industry associations that wish to participate in and support the development of the mpXML standards. Governance was provided by an unpaid Board of Directors with elected officers.

mpXML achieved its mission by developing and promoting the use of open standards for exchanging business information among all segments and entities in the meat and poultry supply chain. mpXML worked to adapt and implement existing logistics standards from GS1[®] and EDI messages from X12 that are used globally throughout the meat and poultry industry.

mpXML members:

Agentrics	GXS	Smithfield Foods, Inc.
Agribuys	iTradeNetwork	SuperValu
Albertsons	Mettler-Toledo	Tyson Foods, Inc.
Cargill Meat Solutions	Pardalis	U.S. Department of Agriculture
CSB System International	Perdue Farms, Inc.	Walmart
Daymon Worldwide	Prime Pro Data	Wegmans
Farmland Foods, Inc.	Safeway	
GS1 US / 1SYNC	Sealed Air Corporation	

mpXML Goals:

- Ensure the unique needs of the meat and poultry supply chain were addressed in the standards processes
- Protect against standards efforts targeted at the center of the store that would be onerous for the meat and poultry supply chain
- Push to coalesce different parallel standards efforts to into a single approach
- Push to extend usage of existing systems and infrastructures

Since its formation, mpXML has worked to further these goals and principles. Generally, mpXML's efforts have coalesced into four areas of activity: data synchronization, EDI messaging, product classification, and product traceability.

Activities:

Data Synchronization

Achieving data synchronization was the initial focus of mpXML. Since 2001, mpXML worked for a number of changes in GS1 Standards to address the needs of the meat and poultry supply chain. An Implementation Guideline for data synchronization was developed by the group to facilitate adoption in the meat and poultry industry. Addressing the full range of meat and poultry trade items, including fixed weight and variable weight (i.e. catch-weight or tray-pack) products, the guide provides recommendations for the party and item GS1 attributes that should be used for meat and poultry. Further, it recommends best practices for these standards to synchronize meat and poultry product information between suppliers, retailers, distributors, and wholesalers. The guide is platform-neutral and can be used with or without third party service providers.

With the continued refinement of the GS1 Standards, by 2006 mpXML's members recognized that data synchronization for variable-measure products was now practical. In the first quarter of 2006, mpXML's members successfully completed a Data Synchronization Pilot of variable-measure meat and poultry items using the Global Data Synchronization Network™ (GDSN®). Retailers were able to successfully receive Catalogue Item Notification (CIN) Messages from the manufacturers for variable-measure meat and poultry products for both the Item and Case level. Developing a viable solution to synchronize variable-measure products is a significant step toward extending data synchronization to all meat and poultry products carried by the supplier, retailer, distributor, and wholesaler.

The work done by mpXML in data synchronization aids other perishables and provides a base for them to build upon to further their own synchronization efforts.

The GDSN developed sector-specific data sync guidance for use in the GDSN. A basic guide has already been published, as have several of the industry sectors. mpXML participated in the Fresh Foods portion of the GDSN Implementation Guide project which produced its Implementation Guide in 2008. The Global Data Synchronization Network (GDSN) has become a critical tool for suppliers, retailers and service providers. mpXML worked to foster adoption of the standards in the perishable protein supply chain.

DATA SYNCHRONIZATION DOCUMENTS

[mpXML Data Sync Implementation Guide v4](#), Published June 2011 Revised June 2014

[GDSN Trade Item Attributes v4](#), Published June 2011 Revised June 2014

EDI Implementation

Most manufacturers, distributors, and retailers in the meat and poultry industry deal electronically with other companies in the supply chain. Those electronic transactions are done directly (company to company), via EDI over a VAN or the Internet, or through one or more of several exchanges (Transora, Amphire, iTN, EFS, UCCNet, etc.) The proliferation of disparate one-to-one data relationships has a number of financial and operational impacts on all supply chain participants. It is likely that each of the communication methods employed in these scenarios is different. For example, if a retailer is dealing with five different suppliers utilizing five different methods (EDI, direct to partner, exchange, etc.) it is likely that the programming/interfaces required for each method is different, the data elements are slightly different, etc. Maintaining and managing disparate data formats slows down the flow of data between partners, increases IT costs, necessitates a full synchronization process every time a new supply chain partner is added and complicates the process of capturing equivalent data from the different formats.

Moving to a standards-based approach yields significant direct advantages for the meat and poultry industry:

- Having to maintain only one data profile lowers IT costs.
- Adding new supply chain partners that also use the standard is significantly easier and less expensive.
- Information can be transmitted throughout the supply chain much more quickly.
- Orders can be received into stores and DCs more quickly and accurately.
- Potentially, producers will be able to assemble pallets for each specific store, lowering cross-handling time and cost and lessening the opportunities for temperature variances and spoilage.
- Getting product into the stores and displays more quickly with less temperature variance will allow longer effective shelf life and lower shrink.
- Better data capture will facilitate the kind of category management now utilized in the center of the store.

Electronic Data Interchange (EDI) is a well-established standard that enables machine to machine communication between trading partners. EDI has been widely used in the grocery supply chain, but the meat and poultry supply chain has historically limited the use of EDI to purchase orders and invoicing. Data transmission have continued to evolve in response to both government regulatory requirements and more sophisticated business practices. The meat and poultry supply chain is making greater use of the different order to cash messages, including the Advance Ship Notice, and is beginning to recognize EDI as a critical communications platform that can be leveraged for our benefit.

mpXML began their first EDI Guidance project in 2006. The initial document reviewed was the EDI 856 Advance Ship Notice (ASN). mpXML proceeded to create guidance documents for all aspects of EDI Implementation in the meat and poultry industry. Guides can be downloaded below for Purchase Order, Purchase Order Acknowledgment, Purchase Order Change, and Invoice. mpXML evaluates both VICS and UCS versions.

In March of 2010, mpXML published the 856 Ship Notice/Manifest with batch level reporting for trade items in support of product traceability. To access the following guidelines, [click here](#):

[810 Invoice Guidelines: EDI_810MP UCS v5050](#)

[820 PO Remittance Advice: EDI_820MP UCS v5050](#)

[850 Purchase Order Guidelines: EDI_850MP UCS v5050](#)

[855 PO Acknowledgment Guidelines: EDI_855MP UCS v5050](#)

[856 Ship Notice/Manifest Guidelines: EDI_856MP UCS v5050](#)

[875 Grocery Products Purchase Order Guidelines: EDI_875MP UCS v5050](#)

[880 Grocery Products Invoice Guidelines: EDI_880MP UCS v5050](#)

Product Classification

Effective product classification is a key enabler of efficient electronic commerce. Although Global Trade Item Numbers® (GTINs®) uniquely identify a product in the supply chain, product classification is what gives that product global context and meaning. The two international systems most commonly used to classify products and services in supply chains are the GS1 Global Product Classification (GPC) and the United Nations Standard Product and Services Code (UNSPSC).

Industry interest in data synchronization through the Global Data Synchronization Network (GDSN) has created an effective platform for leveraging product classification in the meat and poultry supply chain. The GPC code is a mandatory attribute when publishing products in a GDSN-compliant data pool. Product classification is used as a tool for sourcing new products, performing spend analysis, creating a global category management reference tool, and facilitating product admission at international borders.

When mpXML first examined the GPC and UNSPSC code sets, they found very limited functionality for distinguishing key differences among meat and poultry products. Over the course of several face-to-face meetings and regular teleconference sessions, mpXML's members identified the product classification attributes that are most critical to the meat and poultry supply chain, and formalized those into change requests for UNSPSC and GS1. Both change requests were accepted, and the UNSPSC meat and poultry classification codes were updated in March 2007 and the GS1 Global Product Codes were updated in November 2008. These expanded code sets have allowed the meat and poultry industry to be the first fresh foods sector to leverage product classification for subscribing to new product information in GDSN-compliant data pools, granular product sourcing, and expedited product admission pilots at international borders. The Global Product Classification (GPC) can be accessed by clicking on the following link:

<http://www.gs1.org/gsmc/kc/gpc>

Product Traceability

mpXML developed a Meat and Poultry Traceability Implementation Guide as a consistent approach to traceability across all fresh food supply chains in June 2010. This guide was produced for US suppliers, wholesalers, and retailers, and provides minimum standards and best practices for managing product traceability at the shipment, pallet, case, and consumer level.

Representatives from all major meat and poultry supplier trade associations and GS1 US participated in the development of the guide to capture a broad set of industry expertise. Contributors were: the American Meat Institute, Butterball, LLC, Costco Wholesale Corporation, Farmland Foods, GS1 US, iTradeNetwork, Inc., Meat Solutions LLC, mpXML, USDA, National Turkey Federation, Perdue Farms, Safeway, Inc., Smithfield Foods, Supervalu, Inc., Topco Associates LLC, Tyson Foods, UFPC, Walmart, and Wegmans Foods Markets.

Traceability Documents

1) Meat and Poultry Traceability Guide for North America

mpXML worked with GS1 US, GS1 Canada, and GS1 Mexico to revise the current mpXML Traceability for Meat and Poultry - US Implementation Guideline to accommodate all North American countries - US, Canada and Mexico. The primary objectives of this workgroup were to:

- Review, revise and reissue the existing mpXML Traceability Guideline, dated June 2010, in a more global context. Factors relevant to product traceability include product identification, product labeling, use of barcodes, human readable information, data capture as a function of product movement or transformation, electronic commerce, and recordkeeping requirements.
- Identify content to be revised or developed to handle Canada and Mexico traceability requirements, including local regulations and trade practices.
- Establish minimum requirements and best practices to share information between trading partners.
- Identify Critical Tracking Event data elements across the supply chain that are used to support product traceability.
- Enable the document content to continue to be expanded to handle additional countries, and possibly eventually accommodate global meat and poultry traceability as a compendium of documents encompassing individual country-specific requirements. As such, it is expected that global agreement would only be needed on the core global section which would focus on common processes and data.

[Traceability for Meat and Poultry U.S. Implementation Guide](#), Published June 2010, Revised June 2014

2) mpXML Model for Critical Tracking Event Traceability

FDA-commissioned reports have recently recognized the potential of a Critical Tracking Event (CTE) approach to managing traceability of food products across the supply chain. mpXML considered what the adoption of CTEs might look like across the meat and poultry supply chain from the perspective of suppliers, distributors, foodservice operators, and retail grocers, to contribute to future conversations about enhancing supply chain traceability. [A Model for the Adoption of Critical Tracking Events in the Meat and Poultry Supply Chain](#), Published June 2013 Revised June 2014

Other Activities:

GS1 Standards

The use of standards for the benefit of the meat and poultry industry was a key factor in the founding of mpXML. While there were varied constituencies within mpXML (suppliers, retailers, distributors, etc.), there was a common need that each of the parties be able to effectively and accurately communicate with each other pertaining to a number of product-related business processes, including product identification, order, delivery, invoice, payment, inventory and sales activity.

To that end, mpXML endorsed the use of GS1 Standards, which are used globally. GS1 has developed standards for:

- Product Identification
- Trade Party Identification
- Barcodes for consumer trade items, non-consumer trade items, logistic units
- Electronic Commerce - X12 EDI and GS1 XML
- RFID - Electronic Product Code (EPC®)
- Data Synchronization
- Product Classification
- Product Traceability

Visit the [GS1 US meat and poultry website](#) for additional information on GS1 Standards.

Barcoding

The meat and poultry industry supports the use of electronic scanning of bar codes. Scanning enables efficient shipping, receiving, and selling processes, but more importantly, lays the foundation for food traceability processes. Because the meat and poultry industry has both fixed weight and variable measure products, the industry supports the use of two bar code symbologies at the case level. In addition, the meat and poultry industry supports additional bar code types at the consumer item level. The case level bar codes used in the meat and poultry industry include the ITF-14 (Interleaved Two of Five) for fixed weight cases and the GS1-128 bar code for variable measure products. The ITF-14 enables the capture of the product GTIN (Global Trade Item Number) while the GS1-128 enables manufacturers to include additional information about the product such as case weight and batch/lot information.

At the consumer item level, fixed weight products utilize the UPC-A bar code symbology. This bar code format is also used for non-perishable type products and only supports encoding of the product GTIN. For perishable, commodity, and case-ready meat and poultry consumer items, most states regulate the inclusion of package weight, price per pound, and extended pricing on the label. These requirements cannot be met by the UPC-A bar code symbology and consequently are administered through the use of a UPC Number System 2 bar code format. As this symbology does not support the use of a GTIN, a retailer-assigned product identification value is provided to the manufacturer to be printed on the package.

mpXML work group members participated and contributed to the development of a new bar code symbology through the GS1 GSMP (Global Standards Management Process) in an effort to enhance the electronic scan on the consumer item level because of the limitations of the UPC Number System 2 bar code. As a result, the GS1 DataBar[®] was developed and a Sunrise date of January 1, 2010 was agreed upon. The GS1 DataBar symbology was the first new bar code format developed since the 1970s for the food industry. It enables suppliers to encode the product GTIN and additional product information such as weight, price, batch/lot number and dates into the bar code. mpXML participants continued to work through the GSMP process to develop implementation guidelines and recommended standards guidance for these additional attributes for the meat and poultry industry.

mpXML supported the use of bar code symbology as a recommended practice to enable product traceability processes. While the capture of human readable information does support product traceability, the electronic scanning of product information provides a more accurate, timely, and efficient business process. Thus, mpXML continued to support and provide guidance to members of the meat and poultry supply chain to facilitate adoption of the use of bar code scanning.

More information about GS1's development of barcodes can be found on [GS1's website](#).

Country of Origin Labeling

The Country of Origin Labeling (COOL) Final Rule was published by USDA on January 12, 2009, as a marketing initiative to provide consumers with accurate information on the source of certain foods, referred to in the Act as "covered commodities." For the meat and poultry supply chain, COOL regulations require the following:

- Retailers must notify their customers of the country(ies) of origin for covered commodities, which are the muscle cuts of beef, veal, lamb, pork, goat, chicken, as well as ground beef, ground lamb, ground pork, ground goat, and ground chicken.
- Retailers must maintain, for a period of one year from the date of sale, records and other documentary evidence provided by the supplier to establish a product's country(ies) of origin.
- Suppliers must maintain records to establish and identify the immediate previous source (if applicable) and immediate subsequent recipient of a covered commodity and records to substantiate origin claims for a period of 1 year from the date of the transaction.

In addition, USDA Food Safety Inspection Service (FSIS) regulations published August 2008 require that a country of origin statement, if present on the label of a covered commodity product that is to be sold by a retailer, must comply with COOL regulations.

mpXML prepared a guidance document for the meat and poultry supply chain to coordinate compliance with the USDA Country of Origin Labeling (COOL) program. This guide summarizes the

best-practice actions that suppliers, retailers, wholesalers, distributors, and foodservice operators should take regarding labeling and record-keeping for products that are defined as covered commodities. It also provides a standard process for incorporating COOL information into EDI messages.

[GS1 US X12 EDI implementation Guidance for USDA Country of Origin Labeling \(COOL\) Requirements](#),
Published June 2010 Revised June 2014

Transition:

The Meat and Poultry B2B Data Standards Organization (mpXML) Board of Directors announced that the organization has successfully accomplished its mission of creating a solid business-to-business e-commerce foundation for the meat and poultry supply chain. As a result, the Board unanimously voted on November 7, 2013, to transition all activities and relevant oversight to GS1 US.

The information contained above was transcribed from the mpXML website for historical reference prior to the de-activation of the site. All documents have been moved to the GS1 US website and branded as a GS1 US document.