

BWH News Letter

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Why Data Synchronization Can Never Work

Suppliers have been trying to satisfy retailers' demands that they support Data Synchronization for years. Retailers have been pursuing Data Synchronization as a means for improving the accuracy of their data bases and the order recommendations, shelf allocation planograms, and PO's that are generated from them. Both parties have been disappointed.

On the surface, Data Synchronization seems like a simple concept that should be easily achieved. Suppliers must be able to accurately report the measurements, packaging hierarchy and (eventually) costs charged for their products. Retailers must be able to use this information in their internal applications to produce accurate PO's, match invoices, and manage replenishment and merchandising applications.

Why do I say this can never work? It really goes to very core of the GTIN (UPC) and how it is used (or abused). The UPC was originally designed as an index for the Point Of Sale systems. Initially, manufacturers did not even print barcodes on their products. Stores used hand guns that produced labels with "locally assigned codes" which were stuck onto item packages. This was very similar to many of today's RFID "slap and ship" implementations except that today the supplier, instead of the retailer, is applying the RFID tags.

The UPC as a price index made sense, and its single purpose (to retrieve the selling price) made its meaning unambiguous. But even this simple purpose was marked with some controversy as retailers who hadn't yet implemented scanning systems promoted their ability to charge the consumer the "right retail". Because they were still price marking each unit, these retailers could have multiple retails on various units. They did not have to switch to the new retail for all units when a cost changed. Using the UPC as a price index meant that all units of an item changed price based on an effective date. What cost had been paid for a particular unit was immaterial.

But the uses for the UPC eventually expanded far beyond a price index. The next logical thing was to use it for ordering. This made sense for many items, but when a common business practice known as "downsizing" came into vogue, ordering became problematic.

Downsizing refers to the manufacturing practice of adjusting the net contents of a container to maintain the same cost. As ingredient prices change, the manufacturer will adjust the formula or the contents as they try to avoid increasing the cost to consumers. Each change in formula may require a new UPC because the net price per unit of measure is different, even though the cost of the logistics unit is not changed (the pound can of coffee now only weighs 13 ounces). So although the "item" is the same (a can of coffee), the UPC is constantly changing.

The same issues affecting ordering can impact retailer applications such as replenishment and planograms. Although the net contents have changed, the new UPC is considered the same as the old one for replenishment and shelf allocation.

When using the UPC or GTIN for invoice matching you encounter the same timing issues that impact its use for retail price. Since a cost change does not change the GTIN, something else must be used to signal when new costs go into effect. They are usually implemented based on ship, delivery, or order dates. But the invoice matching issues get even more complicated than retails because suppliers have implemented "menu pricing" into their PO or invoice costs. Federal trade rules, and the Robinson Patman Act in particular, require suppliers to offer the same deals to all purchasers in a market area. The exception to the rule is when particular trade practices can be shown to reduce the supplier's costs. Thus if a retailer can pay electronically or always order in full pallets, they can be offered a discount on their PO costs. This leads to a complicated list of conditional PO discounts often based on retailer performance criteria that must be evaluated in order to determine final cost. Most retailer internal applications cannot accept these complicated structures and then apply them to

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particular purchases (say a full truck order vs an LTL). The weakness in the back office applications means that even if the supplier could provide the correct data in a Data Synchronization message it would not reach the business transactions that are created from the retailer's internal applications.

Supermarkets are a particularly difficult environment in which to implement Data Synchronization. This is because many of the retail items they sell are not received in the store as logistics units. Meat, Deli, Bakery, Prepared Foods, and other sections of the supermarket receive primal cuts, bulk containers, ingredients, and partially prepared products that are transformed into retail units by a production process in the store. Data Synchronization can coordinate the measurements of the logistics units but cannot identify the retail units that might be produced in the store.

When the physical characteristics of an item change and a new UPC gets issued, that new version will have to flow through the supplier's and retailer's distribution networks. This means there will be "two answers" for some period of time regarding the physical characteristics of the generic item that the multiple UPC's support.

As long as various users of the GTIN and UPC design applications that take only a parochial view of these identifiers, Data Synchronization will not work. Instead, back office applications must be designed with the various uses of the GTIN and UPC in mind so that different nuances can be implemented within different organizations. Instead of starting out with the UPC and GTIN, the retailer has to begin by identifying the entities that are important to their business and then map the UPC or GTIN to the entities. (See another BWH Consulting Newsletter on "How to Implement Data Synchronization")