

INFORMATION PAPER

SUBJECT: Sunrise 2005 and Global Trade Identification Number

PURPOSE:

The purpose of this information paper is to provide clarification on the two industry initiatives “2005 Sunrise” and “Global Trade Identification Number (GTIN) Compliance.” It is important to note that 2005 Sunrise and the industry GTIN compliance initiative are two different initiatives. Both initiatives involve “GTIN,” an umbrella term used to describe a new way to identify trade items. The GTIN is a 14-digit number that uniquely identifies every item. The rules for assigning GTIN’s ensure that every variation of an item (product or service) is allocated a single reference number that is globally unique. A single unit, a sleeve of those units, a case of those sleeves and a pallet of those cases will each have a unique identifier or GTIN. A GTIN has a 14-digit data structure though its data carrier (bar code) may contain only 12-digits (the UPC), 13-digits (EAN-13) or 8-digits (EAN-8).

BACKGROUND:

The 2005 Sunrise initiative requires that effective January 1, 2005:

- Point-of-Sale (POS) systems owned by North American retailers are capable of scanning and processing EAN-8, EAN-13 and UPC 12 symbologies. This primarily requires checking symbology settings as all laser scanners decode EAN bar codes as part of their factory default symbology settings.
- All retail systems accommodate variable length company prefixes.
- Companies accept and send 14-digit GTIN’s via electronic commerce.

The GTIN-compliance initiative requires that:

- A company is 2005 Sunrise compliant (see above).
- Host database and associated systems and applications process, store and communicate with trading partners using all forms of GTIN.

The comments below explain why some industry members are pursuing GTIN and provide insights on GTIN approaches that may be used by some manufacturers:

- Projections are that the number of products identified with EAN-8 and EAN-13 symbologies will increase quickly after January 2005 because UCC Company Prefixes, or conventional UPC 12-digit prefixes, will no longer be issued to new companies outside the U.S. and Canada.
- Some U.S. and Canadian companies will be assigned UCC Company prefixes with lead digits of 10, 11, 12 or 13. As a result, these companies must create EAN-13 symbols rather than conventional UPC symbols. However, North American companies with variable length manufacturer’s ID’s can still print UPC codes.

- UCC company prefixes are no longer issued as just 6-digit numbers; they now vary between 6 and 10 digits in length. Additionally, the company prefixes encoded in EAN-13 and EAN-8 symbols will also vary in length.
- The UCC has opened new UCC company prefixes with lead digits of 1, 8 and 9 for assignment to new companies. Internal systems that use these lead numbers could find they clash with valid UPC's assigned by other companies unless their systems are changed.
- Many manufacturers will not change item level packaging (e.g., unit UPC barcode will not change) as was first thought. However, many manufacturers will begin transmitting existing UPC data in a 14-digit GTIN format through EDI.
- Many of the major manufacturers will utilize both GTIN and UPC in their transactions in order to support GTIN compliant and non-GTIN compliant partners.
- Some of DeCA's business partners will not be GTIN compliant.

DISCUSSION:

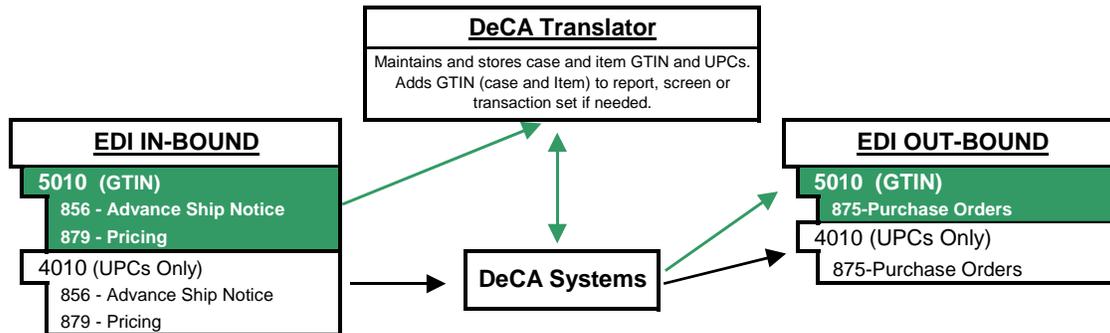
DeCA's approach to Sunrise 2005 has three areas of focus:

- Providing the ability to send and receive GTIN and related information through electronic commerce (EDI).
- Ensuring that most DeCA applications will be able to read and translate 14-digit case GTIN's to allow adjustment of inventories and ordering and receiving goods into commissaries.
- Translating 14-digit GTIN's correctly for POS as more variable length company prefixes are assigned.

No effort is required to support scanning since the current POS system currently scans items with EAN-8, EAN-13 and UPC-12 symbologies.

Internally, DeCA's EDI and Electronic Data Warehouse (EDW) applications will be able to accept, process and store 14-digit item and case identifiers in addition to the 12 and 13-digit item and case identifiers handled today. DIBS, CAO, PkMS, POS and SOS will not be storing 14-digit item identifiers. Instead, a GTIN translator is being developed as the middleware that will translate and pass data necessary to conduct business between applications (see the illustration below).

High Level View of the DeCA Translator



DeCA has developed the following business rules for passing data via a 12-digit UPC to DIBS, CAO, PkMS and POS as derived from the 14-digit GTIN used by our business partners:

- Item-Level GTIN
 - Item translation will occur only if the GTIN Translator validates a record matching a unique GTIN to a DIBS UCC-12 value (item UPC).
 - EAN-8 – An EAN-8 is expanded to a UCC-12 format when the item is added to DIBS. UCC-12 rules then apply.
 - UCC-12 – Translation to a UCC-12 occurs if 14-digit (GTIN) data received matches data stored on a translation table record. PkMS processing remains unchanged. DIBS and CAO translation is strictly a lookup function.
 - EAN-13 – The translator will strip the leading 0 and the last digit, which is the check digit, before passing the data to DIBS, CAO and PkMS. See item level UCC-12 comment.
 - The COPPS/POS data interface will not change. Item UPC/EAN will be limited to 13 digits.
- Sleeve-Level GTIN
 - Sleeve GTIN's will not be used. The one exception is when the manufacturer identifies the “sleeve” as the case.
- Case-Level GTIN
 - Item translation will occur only if the GTIN Translator validates a record matching a unique GTIN to a DIBS UCC-12 value (case UPC).
 - Translation to a UCC-12 (case UPC) occurs if 14-digit (GTIN) data received matches data stored on a translation table record.
 - When building a default Case Level GTIN from an Item Level GTIN to update the translator, DIBS logic of stripping the last digit (check

- digit) and zero filling in front of the first digit will be used. Line Item Managers must then validate that the Case GTIN is correct.
- UCC-12 Case Bar Code - The translator will validate and pass the data to DIBS and PkMS.
 - GTIN Case Bar Code - The translator validates the GTIN before passing the UCC-12 data to DIBS, CAO, COPPS and PkMS.
- Pallet/Shipper-Level GTIN
 - Pallet/Shipper GTIN's will not be used until DeCA's GTIN-compliant Enterprise Business System is deployed. Until then, the current practice of building unique case UPC's based upon a joint decision with the supplier will be continued.
 - Electronic Data Interchange (EDI)
 - EDI Standard 5010:
 - ◆ DeCA will have the capability to transmit orders (875 Transaction Set), receive receipts (856 Transaction Set), and receive price updates (879 Transaction Set) containing both GTIN and UCC-12 (UPC) information. If industry has provided only GTIN's for new items, DeCA and the manufacturer must jointly develop a UPC that can be used by DeCA legacy systems.
 - EDI Standard 4010:
 - ◆ Industry trading partners using this standard can only send and receive UPCs for purchase requests (875 transaction set), advance ship notices (856 transaction set), and pricing (879 transaction set).
 - ◆ DeCA will support version 4010 for 1-year starting January 1, 2005.
 - Coupons
 - This system is basically GTIN-compliant although there will not be any immediate usage since the new coupon format will not be available for at least 2 to 3 years. The current proposal for coupons includes use of RSS (Reduced Space Symbology Code).
 - Direct Store Delivery Products:
 - Suppliers providing products via Direct Store Delivery will be able to utilize the following when making a DSD-type delivery:
 - ◆ Item UPC
 - ◆ Item GTIN
 - Suppliers providing products via Direct Store Delivery-Single will be able to utilize the following when making a DSD-S type delivery:

- ◆ Item UPC or Item GTIN
- ◆ Case UPC or Case GTIN

Note: The attached spreadsheet provides actual examples of GTIN/UPC storage in the GTIN Translation table and application data tables and how GTIN/UPC data will be sent and received by DeCA system applications.

RECOMMENDATION: None, for information only.

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GTIN Translator Table					
Database	Item Type	Item GTIN	Case GTIN	Item UPC	Case UPC
GTIN Translator	UCC-12	00073651214010	10073651214010	073651214010	007365121401
	EAN13	00721624003108	01072162400315	721624003100	072162400310
	EAN8 (0373400)	00037000003400	00003700073049	037000003400	003700073049

An item will reside in the translator ONLY if a valid GTIN has been supplied by the manufacturer. EAN8 is converted upon entry to a UCC-12 format, which is used for all subsequent processing.

External Input/Output Files					
Interface From/To	Item Type	Item GTIN	Case GTIN	Item UPC	Case UPC
COPPS	UCC-12	00007365121401		007365121401	
(DIBS)	EAN13	00072162400310		072162400310	
DIBS	UCC-12	00073651214010	10073651214010	073651214010	007365121401
(AAFES)	EAN13	00721624003108	01072162400315	721624003100	072162400310
DIBS	UCC-12	00073651214010	10073651214010	073651214010	007365121401
(ALA)	EAN13	00721624003108	01072162400315	721624003100	072162400310
DIBS	UCC-12	00073651214010	10073651214010	073651214010	007365121401
(COPPS-AAFES)	EAN13	00721624003108	01072162400315	721624003100	072162400310

ftp'd to two printers (ip addresses)

DIBS	UCC-12	00073651214010		073651214010	
(COPPS-NEXMART)	EAN13	00721624003108		721624003100	

Sent via email to designated addressees

DIBS	UCC-12	00007365121401		007365121401	
(COPPS-POS)	EAN13	00072162400310		072162400310	

If embedded item identifier for Unit UPC and GTIN are not equal, two records will be sent.

DIBS	UCC-12		10073651214010		007365121401
(EDI-812, 867, 875)	EAN13		01072162400315		072162400310

Some transactions will only contain GTIN information if flag indicating only GTIN should be sent is 'Y'. Either GTIN and UPC (5010), GTIN (5010) or UPC (4010) information will be sent based on what is received.

DIBS	UCC-12	00073651214010	10073651214010	073651214010	007365121401
(EDI-824)	EAN13	00721624003108	01072162400315	721624003100	072162400310

DIBS	UCC-12	00073651214010	10073651214010	007365121401	007365121401
(EDW)	EAN13	00721624003108	01072162400315	072162400310	072162400310

DIBS	UCC-12	00073651214010	10073651214010	073651214010	007365121401
(Family Coupons)	EAN13	00721624003108	01072162400315	721624003100	072162400310

DIBS will send both GTIN and UPC to Coupon Clearing House unless the UPC is bogus. Coupon Clearing House will return either UPC or GTIN but not both.

DIBS	UCC-12				007365121401
(PkMS)	EAN13				072162400310

DIBS	UCC-12	00073651214010	10073651214010	073651214010	007365121401
(SOS)	EAN13	00721624003108	01072162400315	721624003100	072162400310

Daily DIBS snapshot of ENTGTINUPC translator table

EDI	UCC-12		10073651214010		007365121401
(DIBS-856)	EAN13		01072162400315		072162400310

Either GTIN and UPC (5010), GTIN (5010) or UPC (4010) information will be sent based on what is received.

EDI	UCC-12	00073651214010	10073651214010	073651214010	007365121401
(DIBS-879)	EAN13	00721624003108	01072162400315	721624003100	072162400310

Either GTIN and UPC (5010), GTIN (5010) or UPC (4010) information will be sent based on what is received.

EDW	UCC-12			073651214010	
(AAFES)	EAN13			721624003100	

EDW	UCC-12	00073651214010	10073651214010	073651214010	007365121401
(ALA)	EAN13	00721624003108	01072162400315	721624003100	072162400310

SOS	UCC-12			007365121401	
(CAO)	EAN13			072162400310	