GS1 Global Trade Item Numbers and the 2005 Sunrise Date

InsightU Class #A206

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BACKGROUND

Problem Summary

• USA/Canada had Prefix ‘0’ with 5 digit company code
• Other large countries were assigned a 2 digit Prefix for country (i.e. UK = 50) with 4 digit company code.
• Smaller Countries were assigned a 3 digit Prefix for country (i.e. South Africa = 600) w/ 4 digit company code.
• Going Forward, there were NOT enough numbers left to assign to new companies and new products - especially for emerging markets such as China and India.
Product Identification: GTIN’s are Here!

Solution Summary

• Fixed formatting was eliminated
• Data content size was expanded to 14 digit
• Large ranges of new numbers are now available for global trade item, global location, etc. usage.

UCC (USA) and EAN (Europe) become GS1

• Standards Groups were combined in 2005
• GTIN terminology was introduced
Global Trade Item Number

- Globally unique 14 digit number to identify Trade Items (product or service)
- EAN/UCC-14, EAN/UCC-13, UCC-12, and EAN/UCC-8 are data structures within GTIN
GTIN Reminder #1

• The GTIN Family of Data Structures:
  ▪ UCC-12 (encoded in a U.P.C. symbol)
  ▪ EAN/UCC-13 (encoded in an EAN symbol)
  ▪ EAN/UCC-14 (encoded in GS1-128 or ITF Symbols)
  ▪ EAN/UCC-8 (encoded in an EAN symbol)

Important Note: **NOTHING** has really changed. GTIN is a term only! The U.P.C. will not go away.
Important Reminder

- Data Structure is different than a symbol
U.P.C. = Data Structure + Symbology

Symbology

Data Structure (GTIN as UCC-12)
GTIN Reminder #2

• Most scanners in use today will scan both EAN symbols and U.P.C. symbols just fine.

• It’s the ability to store the number in your system applications that needs to be addressed.
Why 14 digits and not 13?

- Updating your systems and related applications to 14-digits will allow you to accept the complete family of GS1 data carriers.
- This includes all levels of packaging.
- Also includes emerging technology such as RSS (Reduced Space Symbology – now called DataBar) that will bring 14-digit scanning capability to small items.
<table>
<thead>
<tr>
<th>Symbol</th>
<th>GTIN Structure</th>
<th>Number Example</th>
<th>Database Storage</th>
</tr>
</thead>
<tbody>
<tr>
<td>UCC-12 (UPC-A)</td>
<td>614141005277</td>
<td></td>
<td>00614141005277</td>
</tr>
<tr>
<td>EAN/UCC-13 (EAN)</td>
<td>3439494949392</td>
<td></td>
<td>03439494949392</td>
</tr>
</tbody>
</table>
# Data Structure/Data Storage Examples

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<tr>
<td></td>
<td><strong>EAN/UCC-14</strong></td>
<td><strong>10614141000415</strong></td>
<td><strong>10614141000415</strong></td>
</tr>
<tr>
<td></td>
<td><strong>EAN/UCC-8</strong></td>
<td><strong>20123451</strong></td>
<td><strong>00000020123451</strong></td>
</tr>
</tbody>
</table>
What’s behind Sunrise 2005? (Current Situation at that time)

- Retail products outside of the USA and Canada are identified with EAN-13 data carriers and EAN/UCC-13 data structures.
- To sell in USA and Canada, some manufacturers must re-label products with a U.P.C. data carrier and UCC-12 data structure.
Where Are We Now?
(Current Problem back in 2005)

- Currently, some North American companies can’t store more than 12-digits in their system applications.
- These companies are asking suppliers to mark their products with different types of data structures which creates additional expense and time to market issues.
Who does Sunrise 2005 impact?

- Those who assign product identification numbers
  - Primarily Manufacturers
- Those who turn numbers into Bar Codes
  - Packagers, Printers, Graphic Designers
- Those who use it in applications - Retailers, Distributors, any “receivers” of trade items (this may include manufacturers / suppliers)
System Impacts
Internal/External Considerations

Examples of industries and companies that have been or will be affected by 14-digits:

- Retailers
- Manufacturers
- Distributors/Wholesalers
- Raw Material Suppliers
- Scanner/POS Equipment Providers
- Bar Code Printer/ Film Master Provider
- Packaging Designer
- Management/Accounting Co.
- Transportation Providers
- Software Providers
- System Integrators
- Coupon Clearing Houses
- Market Research Firms
- Trade Exchanges
- Inventory Services
Impact on Receivers of Trade Items

• In addition to items marked with the U.P.C., expect to see items marked with EAN-13s & EAN-8s. Be able to scan them!

• Going forward, expect to see 14-digit numbers that are used to identify all levels of packaging as well as emerging technologies such as RSS (Reduced Space Symbology) – Data Bar

• These numbers may have company prefixes that are longer in length.
Impact on Suppliers

- If currently marking items using the U.P.C.……no need to change.
- Consider, however, trade items that you buy from others will be subject to longer numbers.
- If you are a multi-national company, you may already be using longer company prefixes assigned by one or more GS1 Member Organization
Data Storage & Applications
Requirements

• Your systems and applications need to expand to accommodate all 14-digits.
• Data structures that require less than 14-digits should be right justified and left zero filled.
• When communicating GTINs electronically, the full 14-digit structure should be transmitted and stored right justified and left zero filled.

* Confirm with your trading partners!
RELATED ISSUES
Changes to GS1 Company Prefixes

- New GS1 Prefixes 1, 8 and 9 are here.
- This was needed to accommodate adequate number supply for the future.
- GS1 Company Prefixes are being issued as both 6 and 8 digits long depending on the number of items to be identified.
Important Reminders
GS1 Prefixes 1, 8 & 9

• Remove system edits and blocks against lead digits 1, 8 and 9.

• Any internal systems (i.e. customer loyalty programs) that use these lead digits should be discontinued.

• Failure to do so will compromise legitimate numbers and may cause time to market delays.

Special note to retailers:
UCC Prefix 8 is here now.
Conservancy and Stewardship

- The concept of differing length GS1 Company Prefixes is a reflection of the GS1’s dedication to conserve assignable GS1 Company Prefixes.

- Good stewardship of the numbering system will ensure the continuing availability of Global Trade Item, Logistics, Location, Asset and Service Relation Numbers.
Why Assign 8-digits?

- 6-digit structure allows for the numbering of 100,000 trade items.
- 8-digit structure allows for the numbering of 1000 trade items.
- Many new members will never need the numbering capacity of 100,000 trade items.
- GS1 Company Prefix capacity is now used more efficiently.
What Does NOT Change?

- GS1 Prefixes 0, 2, 3, 4, 5, 6, 7 are not impacted. Status Quo.
- No impact to current members who already have and use their GS1 Company Prefix.
- The numbers and symbols created using a currently assigned GS1 Company Prefix will continue to be globally unique.
Data Structures - UCC-12 (U.P.C.)

- 12 Total Digits
  - 6 - Company Prefix Assigned by the UCC
  - 5 - Item Reference (Item Number)
  - 1 - Check digit

- or
  - 8 - Assigned by the UCC
  - 3 - Item Reference
  - 1 - Check digit

Began in March 2000
Two Approaches

- 8 00000 nnnnn c -to- 809999 nnnnn c
  (Will allow the GS1 to assign 10,000 6-digit Company Prefixes using GS1 Prefix 8+0)

- 8 1000000 nnn c -to- 81999999 nnn c
  (Will allow the GS1 to assign one million 8-digit GS1 Company Prefixes using GS1 Prefix 8+1)
Rules and Transitions

- Prefixes 8 + 0 and 8 + 2 are used for 6-digit Company Prefixes
- Prefixes 8 + 1 and 8 + 3 are used for 8-digit Company Prefixes
- 8 + 4 is for 7-digit Company Prefixes
- 8 + 5 is for 9-digit Company Prefixes
- 8 + 6 is for 10-digit Company Prefixes
- Others, including “1 + n” and “9 + n” will be defined as usage dictates.
Example of UPC-A and GS1-128 Symbols using a 6-digit GS1 Company Prefix

- Product Identification

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Example of UPC-A and GS1-128 Symbols using an 8-digit GS1 Company Prefix

- **Product Identification**

Note: For 8-digit GS1 Company Prefixes the length of the GS1 Company Prefix is longer (eight-digits) and the Item Reference is shorter (3-digits). Members with eight-digit GS1 Company Prefixes can assign 1,000 unique Item References.
NEXT STEPS

Assuming Your Company Has NOT Already Adopted These Changes
Important Reminders & Cautions

• Don’t delay ….. Begin to plan for system changes now!
• Use a checklist to assist with your planning and conversion efforts. (available in 2005 Sunrise brochure)
• Before transmitting GTINs, it is recommended that you notify your trading partner to verify their ability to accept and store a 14-digit GTIN.
Additional GS1 Resources

• GS1 Web Site ..... www.gs1us.org
• GS1 Customer Service Call Center 609-620-0200
• Future GS1 Conferences/Events
  ▪ U Connect 2010 – June 7- 10, 2010 in San Antonio, Texas
The Floor Belongs to You

Questions ...
Thank You! Any Questions?

Check out these online resources by visiting www.InsightU.org