Produce Traceability Initiative
Milestone 2: Assigning GTINs to Cases

Q: **What is a GTIN?**

A: Although a Global Trade Item Number (or GTIN) can be used at both the item and case level, *for the context of this document* it is a 14-digit number based upon GS1 standard protocols that is used *to identify a case of product*.

Q: **What are the components that make up a GTIN?**

A: The 14-digit GTIN has four major components:

- Indicator: This is also known as the Packaging Indicator and is found in position 1 in the diagram as shown below. The indicator is used to identify different pack configurations of the same product. For example, a single apple has an indicator of 0 and a case of apples may have an indicator of 1. Additional indicators (2 through 8) could be used for tray packs, bags, etc.
- The next 12 digits is a combination of your GS1 Company Prefix and your Case Reference #. Note that the GS1 Company Prefix is the same as your UPC Company Prefix, but it's preceded by a '0'.
    - GS1 Company Prefix: See Milestone #1.The length of the Company Prefix could vary from 6-9 digits long. Remember, the GS1 Company Prefix is equal to your UPC Company Prefix, but it's preceded by a '0'.
    - Reference #: the number assigned by the owner of the Company Prefix that identifies the *case* being numbered. This number can be whatever the owner of the Company Prefix wishes it to be, as long as this reference number is unique within their own operation. The length of this item reference number will vary depending on the size of your Company Prefix (see Milestone #1 on determining the length of your number).
- Check Digit: A check digit is used for error detection, and consists of a single digit that is computed from all the other digits in the barcode based on a specific mathematical algorithm. Please refer to the GS1 Check Digit Calculator at http://barcodes.gs1us.org/dnn_bcec/Solutions/CheckDigitCalculator/tabid/85/Default.aspx.

GTIN Diagram for Case Coding of Produce

Position 1: Indicator (permitted to use digits 1 through 8 to denote pack configuration)

Positions 2-13: combination of GS1 Company Prefix (0 + UPC Company Prefix) which is assigned by GS1 and Reference # (which is assigned by the Company Prefix owner)

Position 14: Check Digit, assigned by algorithm

Global Trade Item Number (GTIN) Format													
Indicator Digit	------------------------------- GS1 Company Prefix and Item Reference ---------------------------------- ----												Check Digit
N1	N2	N3	N4	N5	N6	N7	N8	N9	N10	N11	N12	N13	N14

Q: **Who needs to assign GTINs to case configurations?**
A:

- Growers who wish to maintain their own brand. Their GTIN will be shown on the case of produce. If that particular case is not repacked or reconfigured, it will maintain that GTIN throughout the entire supply chain.
- Packers that change the composition of the original case of product and re-brand it. Note that the packer will be responsible for tracking the GTIN and Lot # of each original input (e.g., case/product) and linking it to the newly-created GTIN and Lot/Batch #.
- Shippers maintaining their own brand must give the GTIN number to their growers if their growers are packing the product for them.
- Buyers requiring private labeled product. The private label owners need to give the packer the appropriate GTIN. The Lot/Batch # will be created by the packer.

IMPORTANT NOTE: If a reconfigured case (e.g. repackaged, reformulated, mixed, etc.) is being shipped directly to an individual store or individual restaurant, it does NOT need to have a new GTIN assigned to the case. As you will note in Milestone #6, the individual store or individual restaurant is excluded from scanning inbound cases, and therefore the GTIN is not needed on these reconfigured cases. This does NOT exclude the repacker in this scenario from creating a Lot or Batch # and tracking the original inputs from each source product.

Q: **When does my company have to assign GTINs to our case configurations?**
A: Those companies that need to assign GTINs to their case configurations should do so by the 1st quarter of 2009 to meet the deadline for this milestone.

Q: **How do I assign GTINs to my case configurations?**
A: See the PTI's GTIN Case Code Assignment Strategy for advice. This strategy is a guide that, if followed, will provide relative simplicity of and consistency among the many GTINs the produce supply chain will have to manage.

Q: **Can I use GS1 US' "Data Driver" to create my case level GTINs?**
A: You can if you are a "Partners Connection" member of GS1 US. However, PLEASE BE CAREFUL as the Data Driver assumes that you have less than 8 packaging configurations for a single item.

Q: **How do I calculate the Check Digit?**

A: Log onto www.gs1us.org and type "Check Digit" into their Web site's search engine. It will take you to a Check Digit Calculator that will allow you to enter the first13 digits into the GTIN-14 field, then you click Calculate and it will give you your check digit for that number. If you have more than just a few numbers, scroll down underneath the Check Digit Calculator and it will show you the calculation used for each Check Digit so that you can automate the calculation of this Check Digit.

NOTE: As the calculation of the Check Digit is different for different GS1 number formats, be careful as to which calculation you choose both for the manual Check Digit Calculator and also the formula below the calculator. If you need to calculate the check digit for the GTIN, use the GTIN-14 portion of the calculator and corresponding formula below the calculator.