Business Message Standard (BMS)
Align Variable Measure Trade Item

BMS Release: 2.1, BRG Name: GDSN

Issue: 2, Date: 20-Nov-2006, Approved

Document Summary

Document Item	Current Value
Document Title	Business Message Standard (BMS)
BMS Name	Align Variable Measure Trade Item
BMS Release	2.1
BRG Name	GDSN
Current Document Issue	2
Date Last Modified	20-Nov-2006
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BMS Template Version	1.2

Change Request Reference

Date of CR Submission to GSMP:	CR Submitter(s):	Refer to Change Request (CR) Number(s):
	Brendon Beumer, Oliver Mouton, Bruce Hawkins	CR 05-00082

Business Requirements Document (BRAD) Reference

BRAD Title:	BRD Date:	BRAD Version
BRAD GDSN Fresh Foods	17-Nov-2005	0.0.4

Document Change History

Date of Change	Version	Changed By	Reason for Change	Summary of Change	Model Build #
15.09.2005	1.0.1	Cameron Green Eric Kauz	Initial Draft		
18.09.2005	1.0.2	Eric Kauz	Initial Draft	Included example	
	1.0.3	Eric Kauz	Comment Review Period	Renamed document to BMS Align_Fresh_Foods_Item. Re-wrote Performance goals and use case description to better reflect the stated purpose of the BMS. Added definition of Variable Measure Bar Code Master. Changed business rule 2 to use May instead of Must. Eliminated erroneous reference to Item Authorisation.	

Date of Change	Version	Changed By	Reason for Change	Summary of Change	Model Build #
08/11/2006	1.0.4	Eric Kauz	Comment Review Period	Updated document title and content to reflect applicability to all retail consumer variable measure trade items.	
08/24/2007	2	Cameron Green	Errata change (see CR 07-270)	Add prefix 02 to be consistent with the General Specifications Sections 1.4.2 under "Preconditions" and "Related Rules"	

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1. Business Solution

1.1. Business Domain View

1.1.1. Problem Statement / Business Need

A variable measure trade item is defined in the GS1 General Specification as trade item that has at least one characteristic that varies whilst other characteristics of the trade item remain the same. The variable characteristic may be weight, dimension, number of items contained, or volume information. Some examples of these types of trade items are meat, poultry, fish, produce, wire, rope, carpet, fabric, snack foods and candy sold in bulk.

Today the consumer level variable measure trade items cannot be synchronised in the Global Data Synchronization Network (GDSN) because the retail consumer trade item is not identified with Global Trade Item Numbers (GTINs). The business opportunity and need is simple: create a data synchronization solution that is common to all suppliers and retailers in order to drive a critical mass of implementation and create efficiency for variable measure trade items.

With this standard any Consumer Products Goods company that deals in variable measure trade items is able to participate in the Global Data Synchronisation Network.

1.1.2. Objective

Today at retail Point-of-Sale, retail consumer variable measure trade items are processed using some combination of weight or measure, pricing or unit of measure, commodity code, and in some cases vendor or retailer identification. The rules for this identification process vary by country or even by store location and cannot provide a globally unique, unambiguous identification for GDSN.

This Change Request intends to:

- Initiate GTIN usage for retail consumer variable measure trade items for the GDSN application

- Design a standard approach to loading and cross-referencing "master data" (e.g., commodity code) contained in the bar code on the trade item or its packaging. This solution will also work for consumer level variable measure trade items that use a product look-up (PLU) code.

1.1.3. Audience

The audience includes producers, growers, farmers, retailers, shippers, distributors, and manufacturers that trade variable measure trade items.

1.1.4. Artefacts

Not Applicable

1.1.5. References

Reference Name	Description
{Ref1} BRAD GDSN Fresh Foods Version 0.0.4	Requirements documentation for synchronising fresh food Items.

1.1.6. Acknowledgements

1.1.6.1. BRG Members

Function	Name	Company / Organisation
BRG Member	Bruce Hawkins	Wal-Mart
BRG Member	Marcel Yska	Royal Ahold

1.1.6.2. ITRG Members

Function	Name	Company / Organisation
ITRG Chair		
ITRG Member		

1.1.6.3. Task/Project Group Participants (*where applicable*)

Function	First Name	Last Name	Company / Organisation
Participant	Blake	Ashby	mpXML
Participant	Drew	Bell	mpXML
Participant	Brendon	Beumer	Ahold
Participant	Karen	Boillot	Pork Board
Participant	Sue	Brozas	UCCnet
Participant	Alicia	Calhoun	PMA
Participant	Carol	Christison	IDDBA
Participant	Kathy	Collier	SOBEYS
Participant	Harry	Geelen	The Greenery
Participant	Ichihara	Hideki	GS1- Japan
Participant	Gary	Knox	Wal-Mart
Participant	Wesley	MacKenzie	Daymon
Participant	Teri	Miller	Food Lion
Participant	Richard	Mosley	C H Robinson
Participant	Sarina	Pielaat	GS1 - Netherlands
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Function	First Name	Last Name	Company / Organisation
Participant	David	Silva	Ballantine Produce
Participant	Steve	Springer	Publix
Participant	Denise	Townsend	Albertsons
Participant	Lela	Tripp	Tyson Foods
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Participant	Donna	Yeksigian	Transora

1.1.6.4. Design Team Members

Function	Name	Organisation
Modeller	Eric Kauz	GS1
XML Technical Designer	N/A	
EANCOM Technical Designer		
Peer Reviewer	Cameron Green	GS1

1.2. Business Context

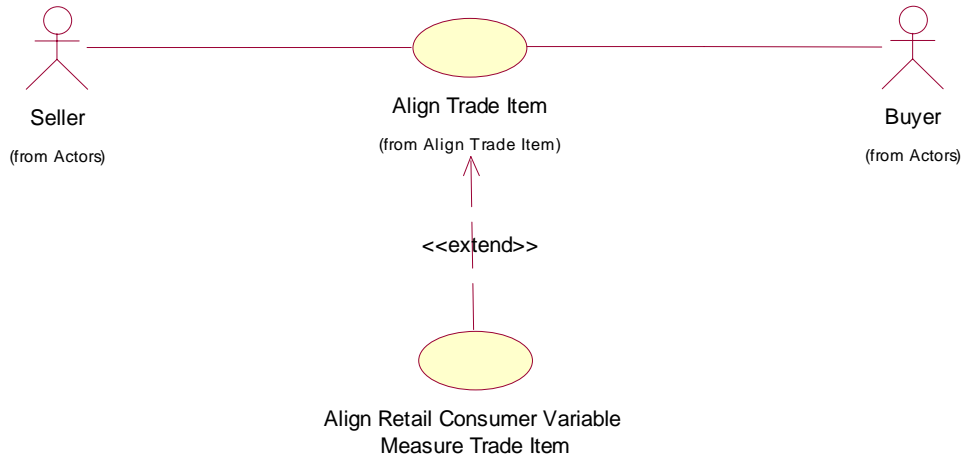| Context Category	Value(s)
Industry	All
Geopolitical	All
Product	All
Process	Align_Variable Measure Items
System Capabilities	EAN.UCC
Official Constraints	None

1.3. Additional Technical Requirements Analysis

1.3.1. Technical Requirements (optional)

Not Applicable

1.4. Business Transaction View:

1.4.1. Business Transaction Use Case Diagram:

Seller
(from Actors)

Align Trade Item
(from Align Trade Item)

Buyer
(from Actors)

<<extend>>

Align Retail Consumer Variable
Measure Trade Item

1.4.2. Use Case Description

Use Case ID	UC-1
Use Case Name	Align Retail Consumer Variable Measure Trade Item
Use Case Description	The alignment of a retail consumer variable measure trade items in the GDSN using a standardised method for suppliers and retailers in any industry to use existing bar code or PLU and item file information. This use case supports the following scenarios: ■ The distributor of a product is sending a retail consumer variable measure trade item (Each) within a fixed measure case to a retailer. ■ The distributor of a product is sending a retail consumer variable measure trade item (Each) within a variable measure case to a retailer. Note 1: This use case is an extension of the Align Item Use Case.
Actors (Goal)	Buyer Seller Supplier Data Pool (SDP) Retailer Data Pool (RDP) Global Registry (GR)
Performance Goals	To align a retail consumer variable measure trade item in the Global Data Synchronisation Network.
Preconditions	■ Trade Item must have a unique GTIN ■ Trade Item must indicate whether the Variable Measure Bar Code Master Data or PLU is provided. The Variable Measure Bar Code Master Data is defined as the EAN/UCC or UCC Prefix, commodity code, and check digit in a variable measure bar code that begins with EAN.UCC Prefixes 02, 20-29 or UCC Prefix 2 used on retail consumer trade items.

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Post conditions	The end-state of the Data Sync Trade Item business process occurs when the par-ties have achieved Party and Item data alignment.
Scenario	See Use Case For Align Trade Item
Alternative Scenario	
Related Requirements	See related data requirements in associated BRAD

Related Rules		
	1.	All variable measure trade items must use the GTIN, as it is mandatory in the GDSN application.
	2	The Variable Measure Bar Code Master Data or PLU may be provided and is conditional upon retailer request of variable measure suppliers if a bar code or PLU is present.
	3.	The attributes length, width, and depth in the Trade Item are average values if "isTradeItemAVariableUnit" has a value of true,
	4.	If attribute isTradeItemAConsumerUnit = True, and
		if a trading partners requests the non-GTIN based bar code identification "master data", then
		use the 'AdditionalTradeItemIdentification' Code List Value INDUSTRY_ASSIGNED
		and populate the additionalTradeItemIdentification attribute with a 13-digit numeric value as follows:
		If UCC-12, then Fill Position One in the 13-digit field with the Digits 0
		1. Fill Position Two in the 13-digit field with the UCC Prefix 2
		2. Fill positions for Commodity Codes (PLU) if Target Market Member Organization (MO) specifies.
		Example: if commodity code begins in Position Seven of the UCC-12 number, place it in Position Eight of the 13-digit field because the UCC-12 number is filled beginning in Position Two not One
		3. Fill all other positions in the 13-digit field except Position Thirteen with zeros.
		4. After zero-filling, calculate Check Digit and place it in Position Thirteen.
		If EAN/UCC-13, then…
		1. Fill Positions One and Two in the 13-digit field with the EAN/UCC Prefix digits 02, 20, 21, 22, 23, 24, 25, 26, 27, 28, or 29 as specified by the GS1 Member Organization (MO).
		2. In certain target markets, the EAN/UCC Prefix may be three or even four digits in length. In this scenario, fill Positions Three & even Four in the 13-digit field with the EAN/UCC Prefix digits as specified by the MO
		3. Fill positions for Commodity Codes (PLU) if Target Market Member Organization (MO) specifies.
		4. Fill all other positions in the 13-digit field except Position Thirteen with zeros.
		5. After zero-filling, calculate Check Digit and place in Position Thirteen.
	5	Most variable measure trade items will not have a bar code on the package that is equal to the GTIN used to register the item in the GDSN. In this case, the attribute "isBarCodeDerivable" should have a value of "false".
	6.	Consumer unit indicator must be populated with a true if sold at Point of Sale.
	7.	Trade item can have an indicator of the country where the variable measure, retail consumer level trade item is sold.
	8.	The attribute grossWeight can use average values if "isTradeItemAVariableUnit" has a value of true,

1.4.3. Business Transaction Activity Diagram

Not applicable.

1.5. Information Model (including GDD Report)

1.5.1. Data Description:

1.5.2. GDD Report :

Not Applicable: Uses Trade Item Models and extensions.

1.5.3. Class Diagrams

Not Applicable: Uses Trade Item Models and extensions.

1.5.4. Code Lists

Not Applicable

1.6. Business Document Example

Attribute	Value
GTIN	01234567890128
Target Market	528
Additional Trade Item Identification Value	2303894000001
Additional Trade Item Identification Type	INDUSTRY_ASSIGNED
Is Trade Item A Consumer Unit	True
Is Trade Item A Variable Unit	True
Is Bar Code Derivable	False (= False because the GTIN cannot be derived from the data structure on the trade item)
Gross Weight (=average gross weight because isTradeItemAVariableUnit=true)	450 GR

1.7. Implementation Considerations

1.7.1. Use of Trade Item Attributes

The following attributes in GDSN are leveraged for the retail consumer variable measure trade item solution within GDSN.

Number	Business Requirement	Solution
01	An indicator whether or not the bar code on the physical trade item package is equal to the GTIN used to register the trade item in GDSN. This field is optional.	Use the Bar Code Candidate Attribute Extension to send: *IsBarCodeDerivable* Definition: A boolean field determining that the data structure on the trade item can be derived from the GTIN.
02	An indicator if a trade item, registered in GDSN, is sold at the retail consumer unit level (e.g., sold at retail POS). This field is mandatory.	Use isTradeItemAConsumerUnit in Trade Item Message.
03	An indication of the country where the variable measure, retail consumer level trade item is sold. This field is mandatory.	Use targetMarketCountryCode for registered items (already in core Trade Item). Definition of targetMarketCountryCode : The country level or higher geographical definition in which the Information Provider will make the GTIN available to buyers. This does not in any way govern where the buyer may re-sell the GTIN to consumers. This code can be repeated as many times as needed. This code is represented by the 2-character ISO 3166-1 code. It is a mandatory attribute. Additionally, Target Market Subdivision Code indicates country subdivision where the trade item is intended to be sold. This code is represented by the 3-character ISO 3166-2 code.

1.8. Testing

1.8.1. Pass / Fail Criteria

Not Applicable

1.8.2. Sample Data

1.9. Appendices

1.10. Summary of Changes

Change	BMS Version	Associated CR Number
Initial creation		

2. Technical Solution Design

- Not required

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