Business Message Standard (BMS) Configure to Order

BMS Release: 2.4.0, BRG Name: eCom BRG

Issue 0.1.4, 25-Sep-2007

Document Summary

Document Item	Current Value
Document Title	Business Message Standard (BMS)
BMS Name	Configure to Order
BMS Release	2.4.0
BRG Name	eCom BRG
Document Number	Issue 0.1.4
Date Last Modified	25-Sep-2007
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Owner	eCom BRG
BMS Template Version	1.8

Change Request Reference

Date of CR Submission to GSMP:	CR Submitter(s):	Refer to Change Request (CR) Number(s):
20070713	John RYU, GS1 Global Office	07-000285
20070321	Stef SPAAN, GS1 Netherlands	07-000098
20070312	Stef SPAAN, GS1 Netherlands	07-000077
20020821	Furnish Net	02-000179

Business Requirements Document (BRAD) Reference

BRAD Title:	BRAD Date:	BRAD Version
BRD Configure to Order	20031101	0.1.5
BMS Common Library	200707	2.4
BRAD For Multi Shipment Order Receipt Response and Excise Tax Free	20070606	0.0.4

Document Change History

Date of Change	Version	Changed By	Reason for Change	Summary of Change	Model Build #
20050315	0.0.1	Maria Victoria CARO	Creation of the document	Migration of the BRD Configure to Order approved by Order BRG and ITRG for publication December 2004.	

Date of Change	Version	Changed By	Reason for Change	Summary of Change	Model Build #
20050407	0.0.2	John RYU	Updated BSD for harmonization	- Pasted Related Requirements Section - Pasted GDD Platform - Harmonized Class Diagram - Updated Business Document section 1.6 to reflect the enforcement of GTIN and removal of the alternate trade item identification as part of Version 2.0.1 release	Model P4CL: 6352 BSD P4CL: 6364
20070710	0.1.0	John RYU	Upgrade for BMS Version 2.4 Release Submitted for Peer Review	Note in Summary of Changes	Model P4CL: 9617 BSD P4CL: 9618
20070718	0.1.1	John RYU	eCom BRG Motioned for TSD Development	Noted in Summary of Changes	BSD P4CL: 9666
20070824	0.1.2	John RYU	Included in TSD Packet Review	Public Review	BSD P4CL: 9802
20070911	0.1.3	John RYU	Based on Public Review Resolution Initiate eBallot Period	Noted in Summary of Changes	BSD P4CL: 9933
20070925	0.1.4	John RYU	eCom BRG eBallot Approved	Updated BMS to Approved	BSD P4CL: 9998

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1. Business Domain View

1.1. Problem Statement / Business Need

There is a need to build the business requirements to provide support for configurable items on a purchase order. A configurable item is one that starts with a single structure, but to which a large variety of options may be added in a variety of combinations. A unique product identification code is assigned to the main structure of a configurable item, but due to the variety of combinations of options, it is NOT practical to assign unique product identification to each completed configured item.

The current GS1 XML Standards documents don't permit:

- Ordering a base item with a customer specific combination of options

This scenario applies to many manufacturers and retailers. For manufacturers and retailers who specialize in upholstered furniture, it can apply to the vast majority of their business. For these companies, any model that does not support configured product is not an accurate business model, and any implementation from a model that does not support configured product is not usable. As such, the business benefits of this request are the ability to do business at all.

1.2. Objective

To supply the detail design of the (specific) business transaction needed to meet the requirements of the referenced BRAD(s).

The objective is to upgrade the GS1 Order Message standard, according to the requirements of the referenced change request.

- 07-000285
- 07-000098
- 07-000077
- 02-000179

1.3. Audience

The audience for this document is the global business community and the senders/receivers of purchase orders, changes to purchase orders, and responses.

1.4. References

Reference Name	Description
BRD Configure to Order	BRD Version 0.1.5
BMS Common Library	BMS Release 2.4.0
Business Requirements Analysis Document (BRAD) For Multi Shipment Order Receipt Response and Excise Tax Free	BRAD Version 0.0.4

1.5. Acknowledgements

The following is a list of individuals (and their companies) who participated in the creation, review and approval of this BMS.

1.5.1. BRG Work Group

Function	Name	Company / organisation
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1.5.2. Design Team Members

Function	Name	Organisation
Modeler	John RYU	GS1 Global Office
XML Technical Designer	Dipan ANARKAT	GS1 Global Office
EANCOM Technical Designer	Not Applicable	
Peer Reviewer	Giovanni BIFFI	GS1 Global Office

2. Business Context

Context Category	Value(s)
Industry	Furniture
Geopolitical	Global
Product	Configurable Item
Process	Order
System Capabilities	GS1 System
Official Constraints	None

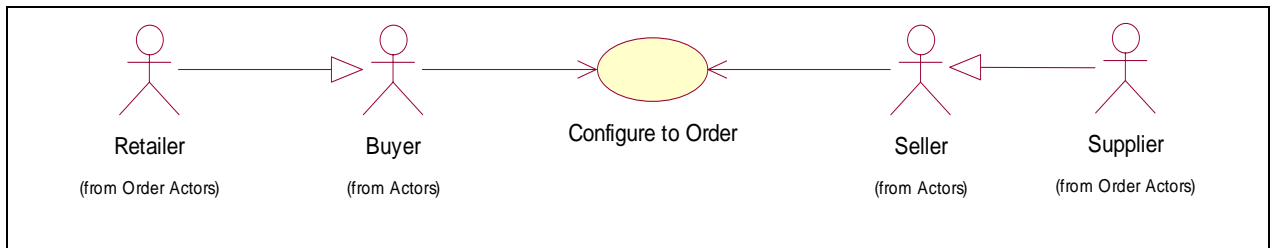# 3. Additional Technical Requirements Analysis

Not Applicable

3.1. Technical Requirements (optional)

Number	Statement	Rationale	
	Not Applicable		

4. Business Transaction View

4.1. Business Transaction Use Case Diagram

4.2. Use Case Description

Use Case ID	UC -1
Use Case Name	Ordering of Configurable Items specifying ship to location
Use Case Description	This Use Case provides the ability for a buyer can create one order for one or more configurable items. One order can contain order lines for configurable items as well as order lines for stock items.
Actors (Goal)	Buyer, Seller, Consumer
Performance Goals	Not Applicable
Preconditions	▪ The Buyer and Seller have aligned Party and Item information, with the exception of the values of the consumer's options for the configurable item. ▪ During data alignment, the retailer has received from the manufacturer item definition information that defines exactly which options are available on each configurable item, and which values may be used in each of those options. ▪ The Buyer and Seller agree that each can produce and process an order with configurable items. ▪ The Buyer and Seller agree on whether an Order Response message is required, as an option based on the pre-determined trading partner agreements.
Post conditions	The Seller has received the Configure to Order sent by the Buyer

Scenario	**Begins when**... An end-consumer walks into a retail store and buys a configurable item (e.g. sofa).

Continues with...

Step #	Actor	Activity Step
1	Consumer/Retailer	In the process of ordering, makes many decisions about the finished piece, choosing from a wide variety options (e.g. fabric). The options that can be selected are all totally defined with the publication of the item identification, as offered by the manufacturer.
2	Consumer/Retailer	Sends the order to the manufacturer with instructions on which base item to start with (e.g. frame), which options to include, and with which values each option should be constructed. The resulting piece may literally be a "one-of-a-kind" piece, depending on what options the customer chooses.
3		

Ends when… the Seller receives the Configure to Order for processing

Alternative Scenario	**Step #**	**Actor**	**Activity Step**
	1	Not Applicable	
	2		
	3		

Related Requirements	1. Not Applicable
Related Rules	1. Not Applicable

4.3.   Business Transaction Activity Diagram(s)

Not Applicable

4.4.   Business Transaction Sequence Diagram(s) (optional)

Not Applicable

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5. Information Model (Including GDD Report)

5.1. GDD Report

5.1.1. GDD Report ConfigureToOrder

Class (ABIE)	Attribute (BBIE)	Association (ASBIE)	Secondary Class	Definition	Multiplicity	Data Type	Related Requirements
ConfigureToOption				Specify the identification for each of the options of the configurable item; its value; quantity and price.			BRD Title: Configure to Order BRD Version 0.1.5
	optionValue			The value that the buyer has chosen for the Configure To Option.	1..1	String {1..70}	BRD Title: Configure to Order BRD Version 0.1.5
	requestedOptionQuantity			the number of units that the buyer has ordered of the Configure To Option	1..1	Quantity	BRD Title: Configure to Order BRD Version 0.1.5
		optionUnitPrice	MultiAmount	The unit price associated with the configure to option.	0..1		BRD Title: Configure to Order BRD Version 0.1.5
			SubConfigureToOption	A sub-option associated with a configure to option.	0..*		BRD Title: Configure to Order BRD Version 0.1.5
		optionTradeItemIdentification	TradeItemIdentification	The trade item associated with this configure to option.	1..1		BRD Title: Configure to Order BRD Version 0.1.5

Class (ABIE)	Attribute (BBIE)	Association (ASBIE)	Secondary Class	Definition	Multiplicity	Data Type	Related Requirements
ConfigureToOrder				The Configure to Order provides the ability for a buyer to order configurable items; that starts with a base item; but to which a large variety of options may be added in a variety of combinations.			BRD Title: Configure to Order BRD Version 0.1.5
			ConfigureToOrderLineItem	This information on ConfigureToOrderLineItem for ConfigureToOrder.	1..*		BRD Title: Configure to Order BRD Version 0.1.5
			Document	This information on Document for ConfigureToOrder.	1..1		BRD Title: Configure to Order BRD Version 0.1.5
		orderIdentification	EntityIdentification	Provides the unique identification for the configure to order.	1..1		BRD Title: Configure to Order BRD Version 0.1.5
			OrderHeaderIndicator	Provides the order header indicator information.	1..1		[BRAD For Multi Shipment Order Receipt Response and Excise Tax Free] {BR1,2}
			OrderLogisticalInformation	This information on OrderLogisticalInformation for ConfigureToOrder.	1..1		BRD Title: Configure to Order BRD Version 0.1.5
			OrderPartyInformation	Party Information associated with this Configure to Order.	1..1		BRD Title: Configure to Order BRD Version 0.1.5
ConfigureToOrderLineItem				Specify the information related to each line item; and each Configure to Order will contain one or more line items.			BRD Title: Configure to Order BRD Version 0.1.5

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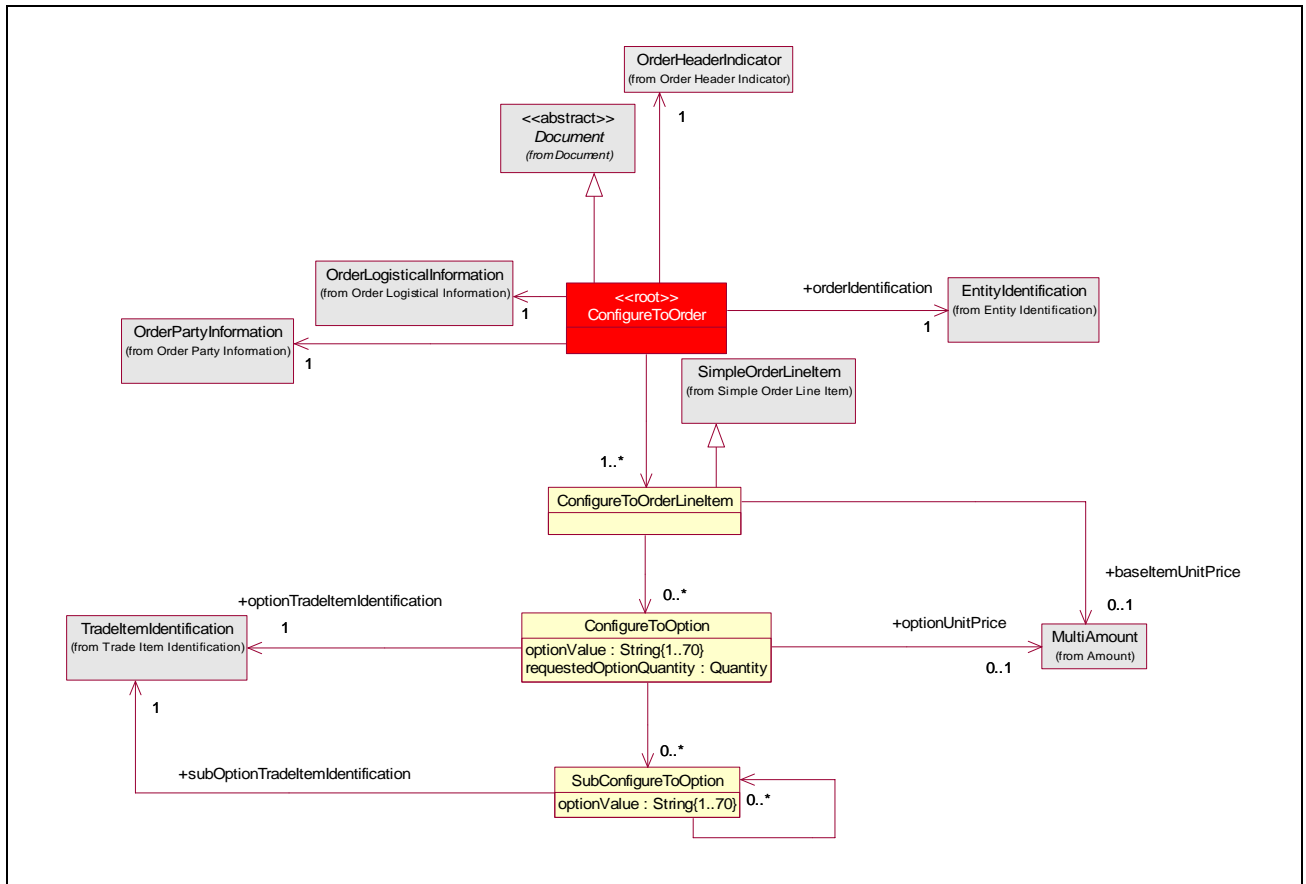| Class (ABIE)	Attribute (BBIE)	Association (ASBIE)	Secondary Class	Definition	Multiplicity	Data Type	Related Requirements
			ConfigureToOption	A configure to option associated with a configure to order.	0..*		BRD Title: Configure to Order BRD Version 0.1.5
		baseItemUnitPrice	MultiAmount	Provides the base item unit price.	0..1		BRD Title: Configure to Order BRD Version 0.1.5
			SimpleOrderLineItem	Provides the order line item details.	1..1		BRD Title: Configure to Order BRD Version 0.1.5
SubConfigureToOption				Specify the identification for each of the sub options of the option of the configurable item and its value.			BRD Title: Configure to Order BRD Version 0.1.5
	optionValue			The value that the buyer has chosen for the Configure To Option.	1..1	String {1..70}	BRD Title: Configure to Order BRD Version 0.1.5
			SubConfigureToOption	A purchase order subline associated with a purchase order subline.	0..*		BRD Title: Configure to Order BRD Version 0.1.5
		subOptionTradeItemIdentification	TradeItemIdentification	Provides the item identification for the SubOption Trade Item.	1..1		BRD Title: Configure to Order BRD Version 0.1.5

5.1.2. GDD Order Header Indicator

New Entry added into Common Library for BMS Release 2.4

Class (ABIE)	Attribute (BBIE)	Association (ASBIE)	Secondary Class	Definition	Multiplicity	Data Type Components	Related Requirements
OrderHeaderIndicator				Contains the order header indicator information.			[BRAD For Multi Shipment Order Receipt Response and Excise Tax Free V 0.0.4] {BR 1 BR 2}

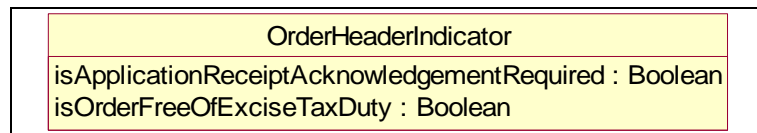| Class (ABIE)	Attribute (BBIE)	Association (ASBIE)	Secondary Class	Definition	Multiplicity	Data Type Components	Related Requirements
	isApplicationReceiptAcknowledgementRequired			A buyer's requirement to receive an order receipt acknowledgement from the seller's application system to ensure the seller received the order message.	1..1	Boolean	[BRAD For Multi Shipment Order Receipt Response and Excise Tax Free V 0.0.4] {BR 1 BR 2}
	isOrderFreeOfExciseTaxDuty			An excise tax is a tax applied to the consumption of a particular type of good, such as alcohol or tobacco. Excise taxes apply at the same rates to domestic or imported goods. They must not be confused with customs duties which apply to imports only.	1..1	Boolean	[BRAD For Multi Shipment Order Receipt Response and Excise Tax Free V 0.0.4] {BR 1 BR 2}

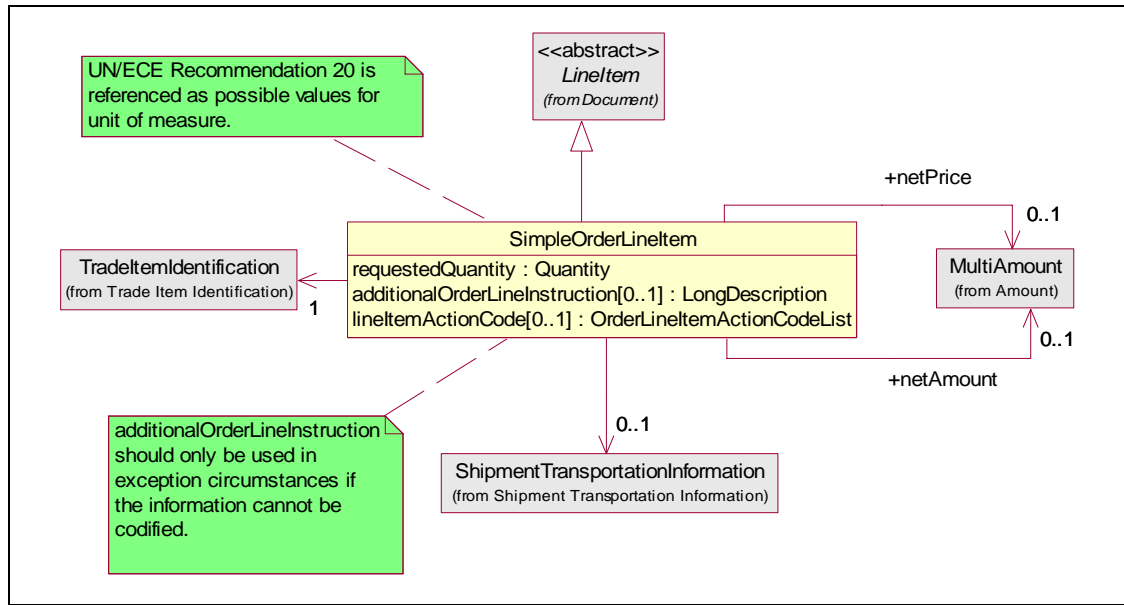*All contents copyright © GS1 2007*

5.2. Class Diagrams

5.2.1. Configure to Order

5.2.2. Order Header Indicator

For reference purpose only and included in the Common Library BMS Release 2.4

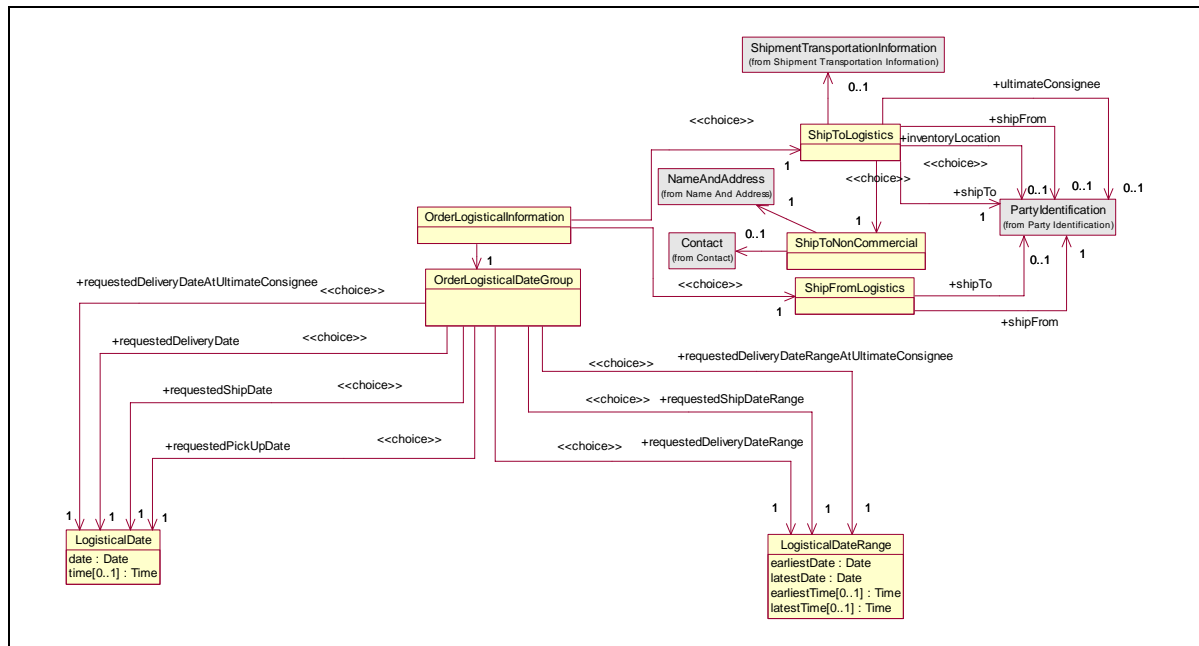| OrderHeaderIndicator |
|---|
| isApplicationReceiptAcknowledgementRequired : Boolean
isOrderFreeOfExciseTaxDuty : Boolean |

5.2.3. Simple Order Line Item

For reference purpose as Simple Order Line Item was modified in the Common Library BMS Release 2.3

5.2.4. Order Logistical Information

For reference purpose as Simple Order Line Item was modified in the Common Library BMS Release 2.3

5.3. Code Lists

Not Applicable

Code List Name	Code List Description

6. Business Document Example

EXAMPLE 1 ORDER LINE - FURNITURE LINE ITEM

Configure To Order

Order Identification: CTO4454

Document

Document Status: ORIGINAL

Creation Date Time: 2007-07-04 11:00

Order Header Indicator

Is Application Receipt Acknowledgement Required: FALSE

Is Order Free of Excise Tax Duty: FALSE

BASE ITEM

Line Number: 1

(Base)Trade Item Identification (GTIN): 00052800483200 (Sofa)

(Base) Trade Item Identification: 11-212 (Sofa)

Additional Trade Item Identification List: BUYER_ASSIGNED

Quantity: 1

Net Price (Total Unit Price): 1000 USD

Base Unit Price: 500 USD

ITEM CONFIGURATION SECTION

Option Trade Item Identification (GTIN): 00614141006601(Primary Fabric)

Option Trade Item Identification: 50579L44 (Primary Fabric)

Additional Trade Item Identification List: SELLER_ASSIGNED

Quantity: 1

Option Unit Price: 250 USD

Option Value: 456abc (identify specific fabric as Velvet)

Option Trade Item Identification (GTIN): 00614141005501 (Secondary Fabric)

Option Trade Item Identification: 20295L12 (Secondary Fabric)

Additional Trade Item Identification List: SELLER_ASSIGNED

Quantity: 1

Option Unit Price: 250 USD

Option Value: 09884 (identify specific fabric)

Sub Option Trade Item Identification (GTIN): 00614141004401 (Placement)

Sub Option Trade Item Identification: 9987V45 (Placement)

Additional Trade Item Identification List: SELLER_ASSIGNED

Option Value: 98098 (Seat Cushion)

Sub Option Trade Item Identification (GTIN): 00614141003301 (Orientation) Sub Option Trade Item Identification: 54309854 (Orientation)

Additional Trade Item Identification List: SELLER_ASSIGNED

Option Value: Railroad

Sub Option Trade Item Identification (GTIN): 00614141002201 Customer Owned Material)

Sub Option Trade Item Identification: 809854 (Customer Owned Material)

Additional Trade Item Identification List: SELLER_ASSIGNED

Option Value: True

Sub Option Trade Item Identification (GTIN): 00614141001101 (Excess Material instruction)

Sub Option Trade Item Identification: 85245 (Excess Material instruction)

Alternative Trade Item Identification List: SELLER_ASSIGNED

Option Value: Return to Customer

EXAMPLE 2 ORDER LINE – AUTOMOBILE LINE ITEM

Configure To Order

Order Identification: CTO4444

Document

Document Status: ORIGINAL

Creation Date Time: 2007-07-04 11:00

Order Header Indicator

Is Application Receipt Acknowledgement Required: FALSE

Is Order Free of Excise Tax Duty: FALSE

BASE ITEM

Line Number: 1

(Base) Item Identification: 8436518390545

Quantity: 1

Net Price (Total Unit Price): 25.000

Base Unit Price: 20.000

ITEM CONFIGURATION SECTION

Option Trade Item Identification (GTIN): 00514141006601(Primary Seat Cover)

Option Trade Item Identification: 88098L (Primary Seat Cover)

Additional Trade Item Identification List: SELLER_ASSIGNED

Quantity: 1

Option Unit Price: 2.000 EUR

Option Value: 786876 (Leather)

Sub Option Trade Item Identification (GTIN): 00333141006601 (Protection)

Sub Option Trade Item Identification: 9098905 (Protection)

Additional Trade Item Identification List: SELLER_ASSIGNED

Option Value: True

Option Trade Item Identification (GTIN): 00333333006601 Exterior Color)

Option Trade Item Identification: 20295L12 (Exterior Color)

Additional Trade Item Identification List: SELLER_ASSIGNED

Quantity: 1

Option Unit Price: 3.000 EUR

Option Value: 8797 (White)

Sub Option Trade Item Identification (GTIN): 00848141006601 (Finish)

Sub Option Trade Item Identification: 8436518393802 (Finish)

Option Value: Perlized

7. Implementation Considerations

Not Applicable

8. Testing

Not Applicable

8.1. Pass / Fail Criteria

No.	Test Criteria	Related Requirement	Design Element	Pass Criteria	Fail Criteria
1	Not Applicable				

8.2. Test Data

Attribute	Value
Reference Section 6	

9. Appendices

Not Applicable

10. Summary of Changes

Change	BSD Version	Associated CR Number
Upgraded BMS Document to BMS Template Version 1.8 and upgraded for BMS Release 2.4.0 Class Diagram ■ Added mandatory (1..1) association from ConfigureToOrder to OrderHeaderIndicator ■ Reference SimpleOrderLineItem which was enhanced for BMS Release 2.3.0 ■ Referenced OrderLogisticalInformation which was enhanced for BMS Release 2.3.0 Changed Data Types Class ConfigureToOption ■ From: optionValue:String ■ TO : optionValue:String{1..70} ■ From: requestedOptionQuantity:Float ■ TO : requestedOptionQuantity:Quantity Class SubConfigureToOption ■ From: optionValue:String ■ TO : optionValue:String{1..70} Sample Data ■ Updated with new class diagram additions.	Version 0.1.0	CR 07-000285 CR 07-000077 CR 07-000098
Peer Review incorporated 9638 eCom BRG motioned for TSD Development	Version 0.1.1	
For Public Review	Version 0.1.2	Not Applicable
Based on Public Review Updated sample data to be consistent with Boolean indicator. Order Header Indicator Is Application Receipt Acknowledgement Required: FALSE Is Order Free of Excise Tax Duty: FALSE	Version 0.1.3	Not Applicable
eCom BRG eBallot Approved 20070925 BMS Updated to approved	Version 0.1.4	Not Applicable