

# **Business Message Standard (BMS)**

**for**

## **Purchase Conditions**

**BRG: Plan  
IRT: Upstream Standards**

**BMS Release: 2.1.1**

**Document Version: 0.1.3**

**Date: 06.02.2006**



### Change Request Reference

Refer to Change Request (CR) Number(s):	CR05-000118
CR Submitter(s):	Regenald Kramer
Date of CR Submission to GSMP:	05.11.2004

### Business Requirements Document (BRAD) Reference

BRAD Title:	BRAD Upstream Standards – Purchase Conditions
BRAD Date:	31.05.2005
BRAD Version:	0.0.3

### Document Summary

Document Title:	Purchase Conditions
Owner:	BRG: Plan IRT: Upstream Standards
Status:	(check one box) <input type="checkbox"/> DRAFT <input checked="" type="checkbox"/> Approved
BMS Template Version:	1.2
Targeted BMS Publication Version	2.1.1

## Document Change History

Date of Change	Version	Changed By	Reason for Change	Summary of Change	Model Build #
24.06.2005	0.0.1	CJ	Initial Draft		
11.07.2005	0.0.2	CJ	BRG / IRT comments	Changes to class diagram and GDD section. Changes to use case description.	
18.07.2005	0.0.3	CJ	Peer review comments	Several minor changes.	P4CL 7152
29.08.2005	0.1.0	CJ	Motion to progress	Changes to use case diagram, class diagram, GDD report, business example.	P4CL 7367
13.10.2005	0.1.1	CJ	Build master comments	Renamed some classes to use term PurchaseConditions consistently.	P4CL 7571
06.02.2006	0.1.2	Coen Janssen	Bugfix on BMS version 2.1	See paragraph 1.10 for detailed changes. Updated sections 1.5 and 1.6 accordingly.	P4CL 8918
25.04.2007	0.1.3	Giovanni Biffi	Editorial Changes	Minor Editorial Changes to the Document	N/A

# Business Message Standard

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### **1 Business Solution**

#### **1.1 Business Domain View**

##### **1.1.1 Problem Statement / Business Need**

Purchase Conditions express the official commitment between buyer and seller that certain quantities are to be delivered over a given period and at the stated price. In doing so it sets the contractual conditions for the ordering and delivering of the goods and so details specific terms and conditions that apply for a given period.

The Purchase Conditions does not intend to contain the totality of the contractual information, but to provide the relevant data in order to be able to align key conditions in an automated way.

The Purchase Conditions message supports multiple scenarios:

- Fixed quantity and fixed period
- Fixed quantity and variable period
- Variable quantity and fixed period

##### **1.1.2 Objective**

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

##### **1.1.3 Audience**

- Manufacturers
- Suppliers

## Business Solution Design

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### 1.1.4 Artefacts

None

### 1.1.5 References

	Reference Name	Description
[Ref1]	BMS Common Library 0.2.6	The documented design of components that are reused in multiple messages.
[Ref2]	BRAD Upstream Standards – Purchase Conditions 0.0.3	

### 1.1.6 Acknowledgements

#### 1.1.6.1 IRT Members

Function	Name	Company / organisation
IRT Chair	Fred Kempkes	Unilever
IRT Participant	Arthur Doldersum	SCA
IRT Participant	Bala Vishwanath	Connect Global One AG
IRT Participant	Georges Socquet	Givaudan
IRT Participant	James Kimber	General Mills, Inc.
IRT Participant	Jan Peter Klijn	Royal Sens
IRT Participant	Kevin Zeng	Procter & Gamble
IRT Participant	Kristen Halwachs	UCCnet
IRT Participant	Nicola Comiotto, Menno Smit	Nestlé
IRT Participant	Paul Moodey	Johnson & Johnson
IRT Participant	Pawel Solowinski	Kappa Packaging
IRT Participant	Peter Broend, Johannes Lundgren	Novozymes
IRT Participant	Roland Dachs, Olivier Grienenberger, Don Reed	Crown Cork
IRT Participant	Stephen Bell	CPG Market
IRT Participant	Thierry Baillif, Gabriel Galeazzi	Firmenich
IRT Participant	Wouter Crul	Nspyre
IRT Participant	Yasushi Kiyama	Ajinomoto Co.

#### 1.1.6.2 BRG Members

Function	Name	Company / organisation
BRG Manager	Tom Heist	GS1 Head Office
BRG Chair	Fred Kempkes	Unilever Bestfoods Europe
BRG Member	Mutsuo Fukada	The Distribution Code Centre - DCC
BRG Member	Roman Strand	Centrale Fur Coorganisation - CCG
BRG Member	Ricardo Toshio Yugue	EAN Brazil
BRG Member	David Ferrell	Wal-Mart Stores
BRG Member	Victoria M. Kendzierski	Thomson
BRG Member	Murray Pratt	Kraft Foods
BRG Member	Larry Roth	Kimberly-Clark
BRG Member	Robert Rzepka	Worldwide Retail Exchange
BRG Member	Thomas Stenftenagel	Procter & Gamble



### 1.1.6.3 ITRG Members

Function	Name	Company / organisation
ITRG Member	Stef Spaan	GS1 Netherlands

### 1.1.6.4 Design Team Members

Function	Name	Organisation
Modeller	Coen Janssen	GS1 Netherlands
XML Technical Designer	Dipan Anarkat	GS1
EANCOM Technical Designer	Marco Schuyt	GS1 Netherlands
Peer Reviewer	Eric Kauz	GS1

# Business Solution Design

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## 1.2 Business Context

Context Category	Value(s)
Industry	All
Geopolitical	Global
Product	All
Process	Plan
Official Constraints	None
Roles	Buyer, Seller
System Capabilities	EANCOM, XML

## 1.3 Additional Technical Requirements Analysis

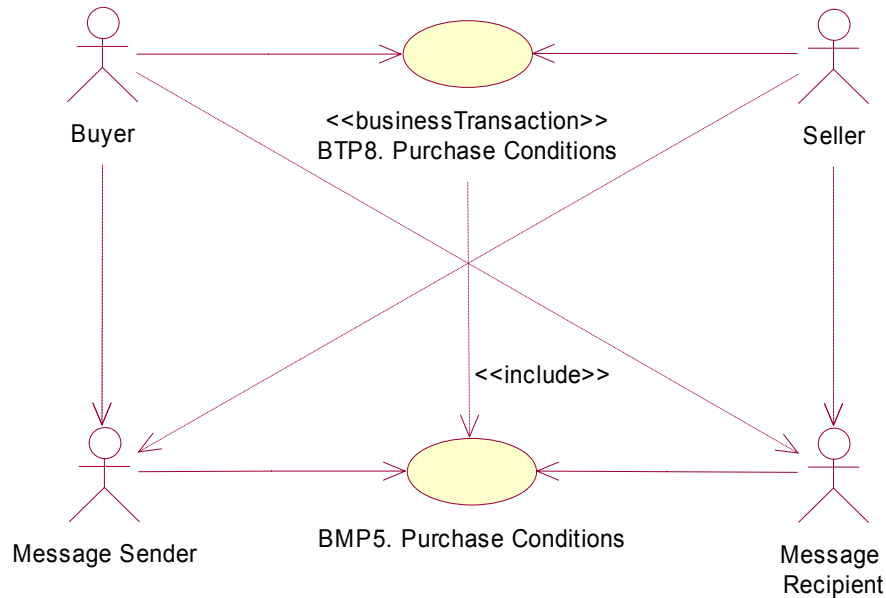
### 1.3.1 Technical Requirements (optional)

Number	Statement	Rationale
1.		

## 1.4 Business Transaction View

### 1.4.1 Business Transaction PURCHASE CONDITIONS

### 1.4.2 Business Transaction Use Case Diagram



**Figure 1 – Use Case Diagram: Business Transaction**

### 1.4.3 Use Case Description

<b>Use Case ID</b>	BTP8
<b>Use Case Name</b>	Purchase Conditions
<b>Use Case Description</b>	The Purchase Conditions sets the contractual conditions for the ordering and delivering of the goods and so details specific terms and conditions that apply for a given period. While both parties need to agree on Purchase Conditions data, it is understood that only one party, i.e. the buyer or seller, will send the Purchase Conditions message and that the information flow will be in one direction only in order to ensure alignment.
<b>Actors (Goal)</b>	Buyer: to align Purchase Conditions with the seller. Seller: to align Purchase Conditions with the buyer..
<b>Performance Goals</b>	
<b>Preconditions</b>	Integration agreement is in place Item data are aligned
<b>Post conditions</b>	Purchase conditions are communicated
<b>Scenario</b>	<b>Begins when:</b>

## Business Solution Design

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	The buyer generates the purchase conditions message		
	<b>Continues with:</b>		
	<b>Step #</b>	<b>Actor</b>	<b>Activity Step</b>
	1.	Buyer	Sends Purchase Conditions message to the Seller.
	2.	Seller	Receives Purchase Conditions Message
	<b>Ends when:</b> the seller has received the purchase conditions message		
<b>Alternative Scenario</b>	<b>Step #</b>	<b>Actor</b>	<b>Activity Step</b>
	1.	Seller	Sends Purchase Conditions message to the Buyer.
	2.	Buyer	Receives Purchase Conditions Message
<b>Business Transaction Rules</b>	1.		
	2.		

### 1.4.4 Business Transaction Activity Diagram(s)

None

### 1.4.5 Business Transaction Sequence Diagram(s) (optional)

None

## Business Solution Design

### 1.5 Information Model (including GDD Report)

#### 1.5.1 Data Description

Class (ABIE)	Attribute (BBIE)	Association (ASBIE)	Secondary Class	Related Requirement
PurchaseConditions				
	purchaseConditionsCurrency			New requirement
		<<generalization>>	Document	[ref2] {7.1.1-2, 3}
		accountingCurrencyInformation	CurrencyExchangeRateInformation	New requirement added on request of Upstream IRT
		purchaseConditionsIdentification	EntityIdentification	[ref2] {7.1.1-1}
		buyer	PartyIdentification	[ref2] {7.1.1-4}
		seller	PartyIdentification	[ref2] {7.1.1-5}
		payee	PartyIdentification	New requirement added on request of Upstream IRT
		payer	PartyIdentification	New requirement added on request of Upstream IRT
		remitTo	PartyIdentification	New requirement added on request of Upstream IRT
		taxRepresentative	PartyIdentification	[ref2] {7.1.1-8}
			PurchaseConditionsLocationInformation	
PurchaseConditionsLocationInformation				
		shipTo	PartyIdentification	[ref2] {7.1.1-6}
		shipFrom	PartyIdentification	[ref2] {7.1.1-7}
			PurchaseConditionsLineItem	
PurchaseConditionsLineItem				
		<<generalization>>	LineItem	[ref2] {7.1.1-9} ! mandatory
	discrepancyTolerance			[ref2] {7.1.1-29}
	effectiveEndDateTime			[ref2] {7.1.1-13}
	effectiveStartDateTime			[ref2] {7.1.1-12}
	maximumQuantity			[ref2] {7.1.1-16}
	minimumQuantity			[ref2] {7.1.1-15}

## Business Solution Design

Class (ABIE)	Attribute (BBIE)	Association (ASBIE)	Secondary Class	Related Requirement
	packagingType			[ref2] {7.1.1-17}
	quantity			[ref2] {7.1.1-14}
			TradeItemIdentification	[ref2] {7.1.1-10, 11}
		materialSpecification	Reference	[ref2] {7.1.1-26}
			AllowanceCharge	[ref2] {7.1.1-21, 22}
			TradeItemTaxInformation	[ref2] {7.1.1-23, 24, 25}
			PurchaseConditionsPriceInformation	
			PurchaseConditionsCommitmentPeriod	
PurchaseConditionsPriceInformation				
	itemPriceExclusiveAllowancesCharges			[ref2] {7.1.1-18, 19}
	itemPriceBaseQuantity			New requirement added on request of Upstream IRT.
			QuantityRange	[ref2] {7.1.1-20}
PurchaseConditionsCommitmentPeriod				[ref2] {7.1.1-27, 28}
	commitmentPeriodDuration			
	commitmentType			
	timeBucketSize			

## Business Solution Design

### 1.5.2 GDD Report

Class (ABIE)	Attribute (BBIE)	Association (ASBIE)	Secondary Class	Official Dictionary Entry Name	Definition	Multiplicity
PurchaseConditions				Purchase Conditions. Details	The Purchase Conditions document provides the ability to specify commercial conditions that will apply to trade items/services shipped to and from multiple locations using one business message	
	purchaseConditionsCurrency			Purchase Conditions. Purchase Conditions Currency. ISO4217_Code	The currency in which all amounts in the document are stated.	1..1
		<<generalization>>	Document	Purchase Conditions. Generalization. Document	No definition required.	
		accountingCurrencyInformation	CurrencyExchangeRateInformation	Purchase Conditions. Accounting Currency Information. Currency Exchange Rate Information	Contains information about the currency and exchange rate that need to be applied during the invoicing process, such as the calculation of taxes.	0..1
		purchaseConditionsIdentification	EntityIdentification	Purchase Conditions. Purchase Conditions Identification. Entity Identification	The unique identification of the Purchase Conditions document.	1..1
		buyer	PartyIdentification	Purchase Conditions. Buyer. Party Identification	Identifies the party to which the products or services are sold.	1..1
		seller	PartyIdentification	Purchase Conditions. Seller. Party Identification	Identifies the party which sells products or services to a buyer.	1..1
		payee	PartyIdentification	Purchase Conditions. Payer. Party Identification	Identifies the credit party when other than the beneficiary.	0..1
		payer	PartyIdentification	Purchase Conditions. Payer. Party Identification	Identifies the party which initiating payment.	0..1
		remitTo	PartyIdentification	Purchase Conditions. Remit To. Party Identification	The party (account owner) that receives a payment when such party is not the same as the seller.	0..1
		taxRepresentative	PartyIdentification	Purchase Conditions. Tax Representative. Party Identification	The party who is responsible for declaring the Value Added Tax (VAT) on the sale of goods or services.	0..1
			PurchaseConditionsLocationInformation	Purchase Conditions. Association. Purchase Conditions Location Information	No definition required.	1..*
PurchaseConditionsLocationIn-				Purchase Conditions Location Information. Details	Specifies a combination of one ship from and one ship to location to which the	

## Business Solution Design

Class (ABIE)	Attribute (BBIE)	Association (ASBIE)	Secondary Class	Official Dictionary Entry Name	Definition	Multiplicity
formation					underlying purchase conditions apply.	
		shipTo	PartyIdentification	Purchase Conditions Location Information. Ship To. Party Identification	The Ship To location to which the purchase conditions apply.	1..1
		shipFrom	PartyIdentification	Purchase Conditions Location Information. Ship From. Party Identification	The Ship From location to which the purchase conditions apply.	1..1
			PurchaseConditionsLineItem	Purchase Conditions Location Information. Association. Purchase Conditions Line Item	No definition required.	1..*
PurchaseConditionsLineItem				Purchase Conditions Line Item. Details	Specifies the commercial conditions for a specific trade item.	
		<<generalization>>	LineItem	Purchase Conditions Line Item. Generalization. Line Item	No definition required.	
	discrepancy-Tolerance			Purchase Conditions Line Item. Discrepancy Tolerance. Percentage_ Numeric	Percentage that specifies the allowed margin (positive or negative, relative to the specified purchase quantity) for which the purchase conditions will still apply.	0..1
	effectiveEnd-DateTime			Purchase Conditions Line Item. Effective End Date Time. Date Time	The date and time until which the purchase conditions will apply.	0..1
	effectiveStartDate Time			Purchase Conditions Line Item. Effective Start Date Time. Date Time	The date and time as of which purchase conditions will apply.	1..1
	maximum-Quantity			Purchase Conditions Line Item. Maximum Quantity. Quantity	The maximum purchase quantity (cumulative) that has been agreed upon.	0..1
	minimum-Quantity			Purchase Conditions Line Item. Minimum Quantity. Quantity	The minimum purchase quantity (cumulative) that has been agreed upon.	0..1
	packaging-Type			Purchase Conditions Line Item. Packaging Type. Package Type Description_ Code	Specifies the type of package in which the purchase goods are to be delivered.	0..1
	quantity			Purchase Conditions Line Item. Quantity. Quantity	The purchase quantity (cumulative) that has been agreed upon.	0..1
			TradeItemIdentification	Purchase Conditions Line Item. Association. Trade Item Identification	Identifies the trade item to which the purchase conditions apply.	1..1
		materialSpecification	Reference	Purchase Conditions Line Item. Material Specification. Reference	References any additional product specifications to be included in the purchase conditions.	0..1
			AllowanceCharge	Purchase Conditions Line Item. Association. Allowance Charge	Identifies any allowances and or charges to be included in the purchase conditions.	0..*



## Business Solution Design

Class (ABIE)	Attribute (BBIE)	Association (ASBIE)	Secondary Class	Official Dictionary Entry Name	Definition	Multiplicity
			TradeItemTaxInformation	Purchase Conditions Line Item. Association. Trade Item Tax Information	Specifies the taxes that will apply to the goods to be purchased.	0..1
			PurchaseConditionsPriceInformation	Purchase Conditions Line Item. Association. Purchase Conditions Price Information	Specifies the agreed price(s) that will apply to the trade item to be purchased.	1..*
			PurchaseConditionsCommitmentPeriod	Purchase Conditions Line Item. Association. Purchase Conditions Commitment	The hard production or delivery commitment that have been agreed by both parties for the trade item to be purchased.	0..1
PurchaseConditionsPriceInformation				Purchase Conditions Price Information. Details	Specifies the agreed price of a trade item and optionally the quantity range for which the price is valid.	
	itemPriceExclusiveAllowancesCharges			Purchase Conditions Price Information. Item Price Exclusive Allowances Charges. Amount	Specifies the agreed price.	1..1
	itemPriceBaseQuantity			Purchase Conditions Price Information. Item Price Base Quantity. Quantity	Specifies the quantity in which the price is expressed. For example: item price = \$10 per 1000 units.	0..1
			QuantityRange	Purchase Conditions Price Information. Association. Quantity Range	Defines the upper and lower purchase quantity between which the specified price is valid.	0..1
PurchaseConditionsCommitmentPeriod				Purchase Conditions Commitment Period. Details	Specifies the length and type of the commitment that will apply when communicating about goods requirements for the specified trade item. Example: For trade item A the first 5 days of the goods requirements planning are always a hard commitment.	
	commitmentPeriodDuration			Purchase Conditions Commitment Period. Commitment Period Duration. Integer_ Numeric	Duration of the period in which the goods are committed to be produced or delivered, expressed in the number of time buckets. For example: 20 days.	1..1
	commitmentType			Purchase Conditions Commitment Period. Commitment Type. Purchase Conditions Commitment Type List_ Code	Indicates whether the commitment refers to goods to be produced or goods to be delivered.	1..1
	timeBucketSize			Purchase Conditions Commitment Period. Time Bucket Size. Bucket Size Type Code List_ Code	Specifies the duration of a time bucket. Examples: WEEK, DAY.	1..1

## Business Solution Design

### 1.5.3 Class Diagrams

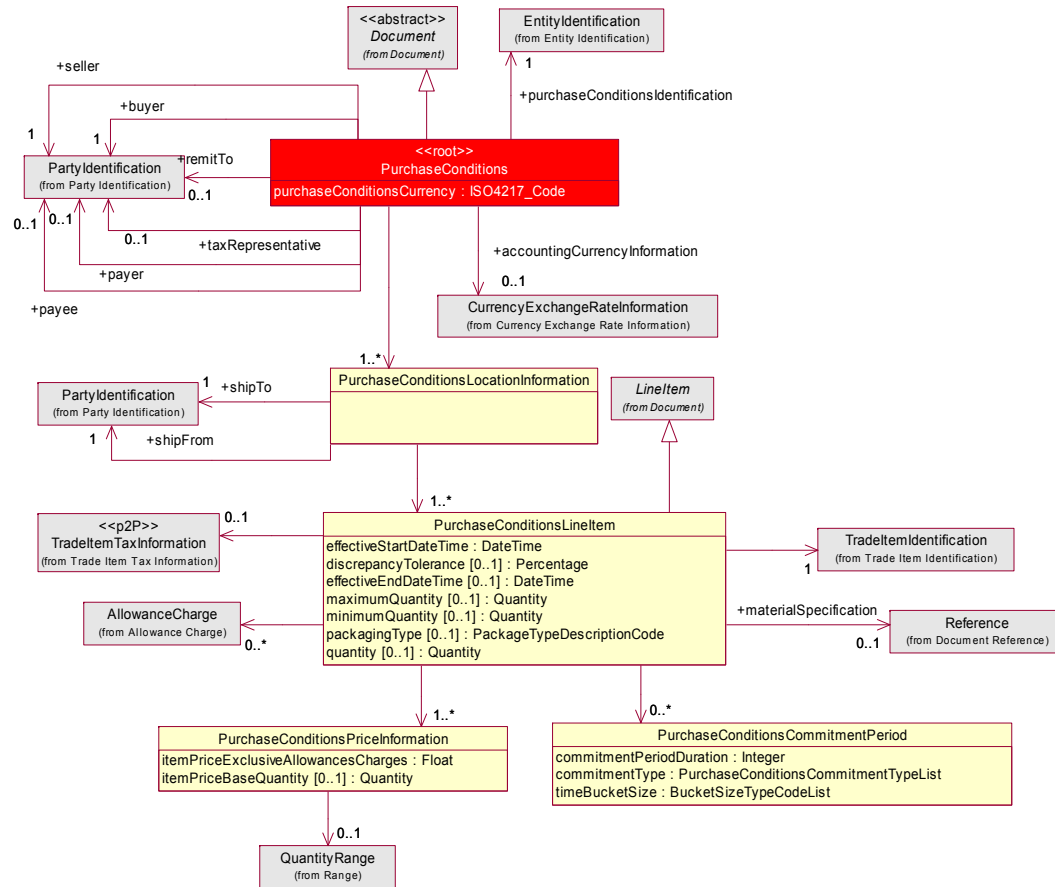


Figure 2 – Class Diagram: Business Document

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### 1.5.4 Code Lists

Code List Name	Code List Description
PurchaseConditionsCommitment-TypeList	
Code Name	Code Description
PRODUCTION	Committed to be produced.
DELIVERY	Committed to be delivered.

## Business Solution Design

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### 1.6 Business Document Example

The following is an example of a purchase conditions message. The message is sent out on February 9<sup>th</sup> at 11 AM. The message is identified with the unique identifier 2005001. The content owner is the sending party, in this case the manufacturer (Buyer 8712345678913).

The gross requirements are sent by the manufacturer (Buyer 8712345678913) to the material supplier (Seller 8812345678903).

The purchase conditions are for two delivery sites, X (Ship To 8712345670009) and Y (Ship To 8712345678951). There is only one shipping site, Z (Ship From 8812345678950).

For locations X and Z the following conditions have been agreed upon:

Trade Item A (GTIN 08712345678906):

- agreement applies to 100.000 units
- start date of agreement is February 18<sup>th</sup> 2005
- discrepancy margin is 5%
- committed period of delivery: a period of 5 days.
- Price is € 12,-

For locations Y and Z the following conditions have been agreed upon:

Trade Item A (GTIN 08712345678906):

- agreement applies to 25.000 to 100.000 units
- start date of agreement is February 18<sup>th</sup> 2005
- Price is € 0,135 for 0 to 50.000 units, € 0,125 for 50.000 units or more. The price will be expressed per 100 units.

PurchaseConditions	
- creationDateTime	2005-02-09T11:00:00
- documentStatus	ORIGINAL
- purchaseConditionsCurrency	EUR
EntityIdentification (+PurchaseConditionsIdentification)	
- uniqueCreatorIdentification	2005001
PartyIdentification (+contentOwner)	
- gLN	8712345678913
PartyIdentification (+seller)	
- gLN	8812345678903
PartyIdentification (+buyer)	
- gLN	8712345678913
PurchaseConditionsLocationInformation *1	
PartyIdentification (+shipTo)	
- gLN	8712345670009
PartyIdentification (+shipFrom)	
- gLN	8812345678950

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<b>PurchaseConditionsLineItem *1.1</b>	
- lineItemNumber	1
- discrepancyTolerance	5
- effectiveStartDateTime	2005-02-18T00:00:00:000
- quantity (value, unitOfMeasure)	100000
<b>TradeItemIdentification</b>	
- gTIN	08712345678906
<b>PurchaseConditionsPriceInformation</b>	
- Item Price Exclusive Allowances Charges	12
<b>PurchaseConditionsCommitmentPeriod</b>	
- commitmentPeriodDuration	5
- commitmentType	DELIVERY
- timeBucketSize	DAY
<b>PurchaseConditionsLocationInformation *2</b>	
<b>PartyIdentification (+shipTo)</b>	
- gLN	8712345678951
<b>PartyIdentification (+shipFrom)</b>	
- gLN	8812345678950
<b>PurchaseConditionsLineItem *2.1</b>	
- lineItemNumber	2
- effectiveStartDateTime	2005-02-18T00:00:00:000
- minimumQuantity (value, unitOfMeasure)	25000
- maximumQuantity (value, unitOfMeasure)	100000
<b>TradeItemIdentification</b>	
- gTIN	08712345678906
<b>PurchaseConditionsPriceInformation</b>	
- itemPriceExclusiveAllowancesCharges	13,50
- itemPriceBaseQuantity	100
<b>QuantityRange</b>	
- minimum	0
- maximum	50000
<b>PurchaseConditionsPriceInformation</b>	
- Item Price Exclusive Allowances Charges	12,50
- Item Price Base Quantity	100
<b>QuantityRange</b>	
- minimum	50000
- maximum	100000

## Business Solution Design

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### 1.7 Implementation Considerations

None

### 1.8 Testing

#### 1.8.1 Pass / Fail Criteria

None

#### 1.8.2 Test Data

See paragraph 1.6 Example

### 1.9 Appendices

None

### 1.10 Summary of Changes

*(Details changes to BMS for each version by BMS Section)*

Change	BMS Ver- sion	Associated CR Number
<p><b>PurchaseConditions (root class)</b></p> <ul style="list-style-type: none"><li>Added new mandatory attribute purchaseConditionsCurrency.</li></ul> <p><b>PurchaseConditionsLineItem</b></p> <ul style="list-style-type: none"><li>Changed cardinality of association to PurchaseConditionsCommitmentPeriod from 0..1 into 0..*.</li></ul> <p><b>PurchaseConditionsPriceInformation</b></p> <ul style="list-style-type: none"><li>Changed data type of attribute itemPriceExclusiveAllowancesCharges from Amount into Float.</li></ul>	0.1.2	

## Technical Solution Design

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### 2 Technical Solution Design

This section provides the specifications for the standards content ITRG approves. It is called the Technical Solution Design (TSD).

The Technical Solution Design contains:

- TSD Zip file Table of Contents
- Business Message Standard Section Technical Level GDD Report
- XSD (XML Schema Documents)
- XML Instance File and HTML Form View (XML and HTML files containing sample data specified in Section 1.6)

In the process of approving the Technical Solution Design, the ITRG will be provided the following artefacts:

- Any relevant Business Requirements Analysis Document (BRAD)
- Any relevant Business Requirements Document (BRD)
- Section 1 of Business Message Standard (Business Solution Design)
- Comment Resolution Template from Technical Public Review
- XML Test Report
- Change Request
- Other informative or reference documents