

# **Business Message Standard (BMS)**

**for**

## **Inventory Activity or Inventory Status**

### **BRG: Deliver & Plan**

### **BMS Release: 2.0.2**

### **Document Version: 0.1.1**

**Date:**            **31/03/2005**  
*(dd/mm/ccyy)*



### Change Request Reference

<b>Refer to Change Request (CR) Number(s):</b>	CR: 04-21 (01-80, 02-135)
<b>CR Submitter(s):</b>	Bruno Julien (Jim Rodriguez, Fred Kempkes)
<b>Date of CR Submission to GSMP:</b>	20040120 (20011015, 20020702)

### Business Requirements Document (BRAD) Reference

<b>BRAD Title:</b> Inventory Activity or Inventory Status – Business Requirement Document
<b>BRAD Date:</b> 19/11/2004
<b>BRAD Version:</b> 10.6.2

<b>BRAD Title:</b>
<b>BRAD Date:</b>
<b>BRAD Version:</b>

### Document Summary

<b>Document Title:</b>	BMS Inventory Activity or Inventory Status
<b>Document Version</b>	0.1.1
<b>Owner:</b>	Deliver & Plan BRG
<b>Status:</b>	( <i>Check one box</i> ) <input type="checkbox"/> DRAFT <input checked="" type="checkbox"/> Approved
<b>BMS Template Version:</b>	1.0
<b>Targeted BMS Publication Version</b>	2.0.2

### Document Change History

Date of Change	Version	Changed By	Reason for Change	Summary of Change	Model Build #
31/03/2005	0.1.0	John Ryu	Initial Version in BMS/BSD template	Migration of BRD to standard BMS/BSD format	5401
19.04.2007	0.1.1	Giovanni Biffi	Editorial Changes	Minor editorial changes	

# Business Message Standard

---

## Table of contents

---

Chapter	Page
<b>1 Business Solution Design .....</b>	<b>5</b>
1.1 Business Domain View.....	5
1.1.1 Problem Statement / Business Need.....	5
1.1.2 Objective.....	5
1.1.3 Audience.....	5
1.1.4 Artefacts .....	5
1.1.5 References .....	6
1.1.6 Acknowledgements .....	7
1.1.6.1 BRG Members .....	7
1.1.6.2 ITRG Members .....	7
1.1.6.3 Task/Project Group Participants ( <i>where applicable</i> ) .....	7
1.1.6.4 Design Team Members .....	7
1.2 Business Context .....	8
1.3 Additional Technical Requirements Analysis .....	8
1.3.1 Technical Requirements (optional).....	8
1.4 Business Transaction View .....	9
1.4.1 Business Transaction Use Case Diagram.....	9
1.4.1.1 Use Case Description Status of inventory .....	9
1.4.1.2 Use Case Description Activity of inventory .....	10
1.4.2 Business Transaction Activity Diagram(s).....	12
1.4.2.1 Business Transaction Activity Diagram : Status of Inventory .....	12
1.4.2.3 Business Transaction Activity Diagram : Activity of Inventory .....	13
1.4.3 Business Transaction Sequence Diagram(s) (optional) .....	13
1.4.3.1 Business Transaction Sequence Diagram : Status of Inventory...	13
1.4.3.2 Business Transaction Sequence Diagram : Activity of Inventory .	13
1.5 Information Model (including GDD Report) .....	14
1.5.1 Data Description: .....	14
1.5.2 GDD Report : .....	21
1.5.3 Class Diagrams .....	29
1.5.4 Code Lists.....	30

**Business Message Standard**

---

---

Table of contents

---

- 1.6 Business Document Example..... 34
- 1.7 Location by Item Structure with Inventory Status Information Example ..... 34
- 1.8 Item by Location Structure with Inventory Activity Information Example ..... 36
- 1.9 Implementation Considerations ..... 37
- 1.10 Testing ..... 37
  - 1.10.1 Pass / Fail Criteria ..... 37
  - 1.10.2 Test Data ..... 37
- 1.11 Appendices..... 38
- 1.12 Summary of Changes..... 38
- 1.13 Relationship with the EAN.UCC General Business Model (GBM) ..... 38
- 2. XML Technical Solution ITRG Packet ..... 39**

# Business Solution Design

---

---

## 1 Business Solution Design

The purpose of the Business Solution Design (BSD) is to document a process-to-data approach using the Unified Modelling Language (UML) notation. Processes and their business requirements are clearly understood because of the use of formal modelling with the UML models. Agreed to models permit the application of the data elements to support the processes. The biggest benefit of this process-to-data approach is the alignment of the model to fit the business need.

### 1.1 Business Domain View

#### 1.1.1 Problem Statement / Business Need

The BRD is co-developed with members of Deliver BRG and Plan BRG. The intent is to consolidate an established Inventory Status Advice Standard (Released July 2003) and Inventory Adjustment (In Development) into one process termed Inventory Activity or Inventory Status Process.

The current inventory status advice standards allow for communication from the place where items is stored to the owner of Items. There is a need for the messages to be exchanged between both parties, and to add additional trading partners involved in maintaining inventory levels such as the distributor, manufacturer, material supplier, retailer, warehouse, and wholesaler.

There is a need for additional functionality for the item, and additional values need to be incorporated into code lists. The Inventory Activity or Inventory Status includes all the activities and techniques of maintaining the stocks of items.

#### 1.1.2 Objective

The objective of this document is to consolidate the inventory status advice and inventory adjustment standard into one process termed as Inventory Activity or Inventory Status.

#### 1.1.3 Audience

The audience for this document is the global business community being any business that stores or owns goods at one or more points in the supply chain.

#### 1.1.4 Artefacts

Artefact name	State	Artefact / State description
Inventory Status Advice BRD Version 2.4 20030630		ITRG Approved BRD included in the Inventory Status Advice BMS Version 1.3.1 November 2003.
Inventory Adjustment BRD Version 1.1 20031117		Deliver BRG approved version 1.0 on 20021031, and version 1.1 is the harmonized version yet to be approved by ITRG.
Inventory Management BRW Version 0.3 20031212		BRW created by Fred Kempkes to consolidate the business processes of inventory status advice and inventory adjustment.

# Business Solution Design

---

---

## 1.1.5 References

Reference Name	Description
EANCOM INVRPT	
Unified Modelling Language	

### 1.1.6 Acknowledgements

#### 1.1.6.1 BRG Members

Function	Name	Company
Deliver BRG Co-Chair	Donarski, Sue	Schneider Logistics
Deliver BRG Member	Noyes, Debra	Johnsonville Sausage
Deliver BRG Member	Martin, Paul	Generals Mills
Deliver BRG Member	Osiecki, Mike	Best Buy
Deliver BRG Member	Xiradakis, Apo	Unilever
Deliver BRG Manager	Julien, Bruno	EAN France
Plan BRG Manager	Kempkes, Fred	Unilever
Plan BRG Manager	Heist, Tom	Uniform Code Council

#### 1.1.6.2 ITRG Members

Function	Name	Company / organisation
ITRG Chair	None	
ITRG Member	None	
ITRG Member	None	
ITRG Member	None	
...		

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

Function	Name	Company / organisation
Participant	None	
Participant	None	
Participant	None	
...		

#### 1.1.6.4 Design Team Members

Function	Name	Organisation
Modeller	Ryu, John	EAN.UCC
XML Technical Designer		
EANCOM Technical Designer		
Peer Reviewer	Bob Celeste	EAN.UCC

# Business Solution Design

---

---

## 1.2 Business Context

Context Category	Value(s)
Industry	All
Geopolitical	All
Product	All
Process	All
System Capabilities	All
Official Constraints	None

## 1.3 Additional Technical Requirements Analysis

### 1.3.1 Technical Requirements (optional)

*(User Interface, Security, Performance, Quality, etc.)*

Number	Statement	Rationale



# Business Solution Design

---

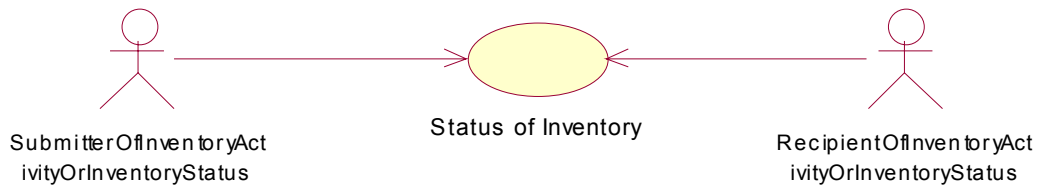
## 1.4 Business Transaction View

There are two use cases involved in this Inventory Activity or Inventory Status process.

- Status of Inventory
- Activity of Inventory

### 1.4.1 Business Transaction Use Case Diagram

#### 1.4.1.1 Use Case Description Status of inventory

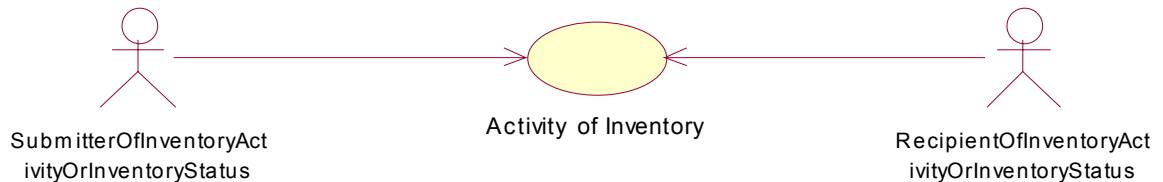


<b>Use Case ID</b>	UC-1
<b>Use Case Name</b>	Request Status of Inventory
<b>Use Case Description</b>	This use case describes the exchange of the Inventory Activity or Inventory Status. The Inventory Activity or Inventory Status can be either an Inventory Activity or Inventory Status. The inventory status provides the inventory levels of an item where items are stored. The inventory activity provides the activity of an item.
<b>Actors (Goal)</b>	Reference actor matrix section 2.2 <ul style="list-style-type: none"> <li>• All actors can be a submitter and or recipient of the status of inventory.</li> </ul>
<b>Performance Goals</b>	<i>Goals related to technical requirements</i> <b>None</b>
<b>Preconditions</b>	Both trading partners have agreed upon the reporting dates and times.
<b>Post conditions</b>	Success: The Inventory Activity or Inventory Status Recipient receives the Inventory Status message. Failure: The Inventory Activity or Inventory Status Recipient does not receive the Inventory Status message.
<b>Scenario</b>	<b>Begins when</b> The submitter of the inventory status prepares the inventory status message on the agreed upon date and time.  <b>Continues with...</b>  <b>Step #</b> <b>Actor</b>

# Business Solution Design

	<p style="text-align: center;"><b>Activity Step</b></p> <p>1</p> <p>Submitter of Inventory Activity or Inventory Status Sends the inventory status</p> <p>2</p> <p><b>Ends when...</b> The recipient of the inventory status receives the inventory status message.</p>
<b>Alternative Scenario</b>	<p>There are no alternative scenarios.</p> <p><b>None</b></p> <p style="text-align: center;"><b>Step #</b> <b>Actor</b> <b>Activity Step</b></p>
<b>Related Requirements</b>	<b>None</b>
<b>Related Rules</b>	<p><i>Business rules associated with use case.</i></p> <p><b>None</b></p>

## 1.4.1.2 Use Case Description Activity of inventory



<b>Use Case ID</b>	UC-1
<b>Use Case Name</b>	Request Activity of Inventory
<b>Use Case Description</b>	This use case describes the exchange of the Inventory Activity or Inventory Status. The Inventory Activity or Inventory Status can be either an Inventory Activity or Inventory Status. The inventory status provides the inventory levels of an item where items are stored. The inventory activity provides the activity of an item.
<b>Actors (Goal)</b>	Reference actor matrix section 2.2 All actors can be a submitter and or recipient of the status of inventory.

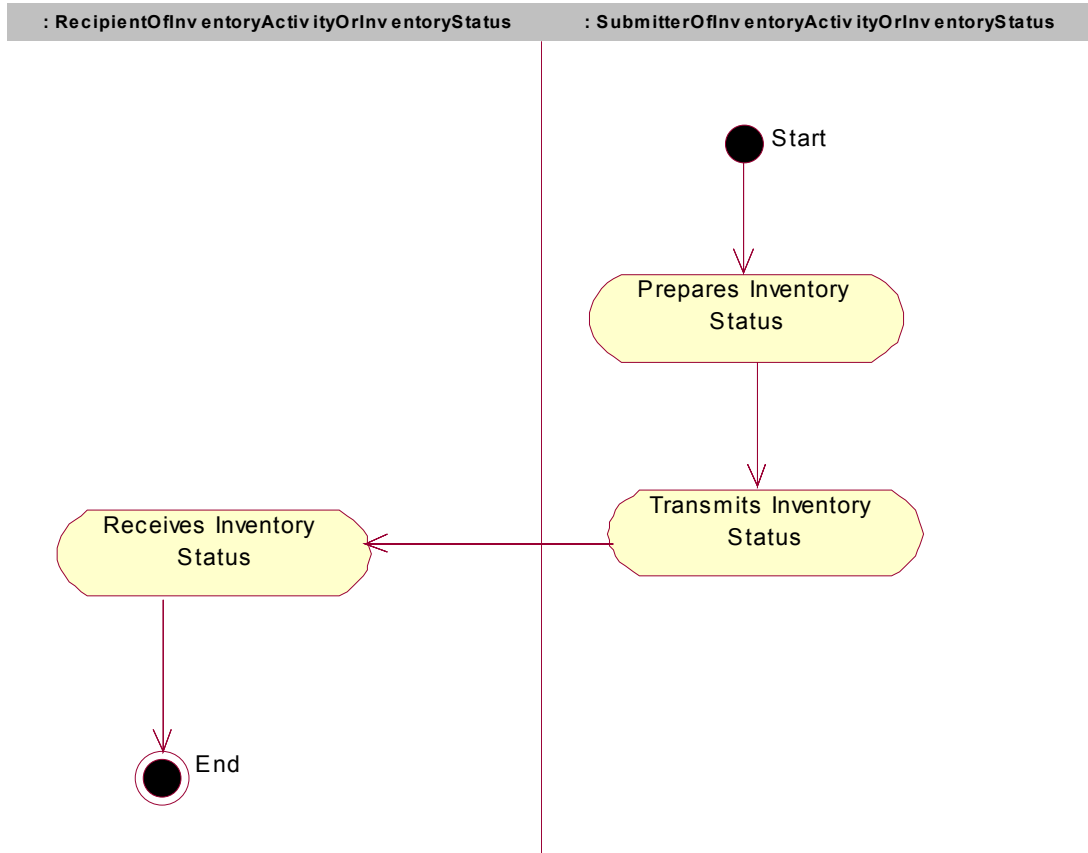
## Business Solution Design

---

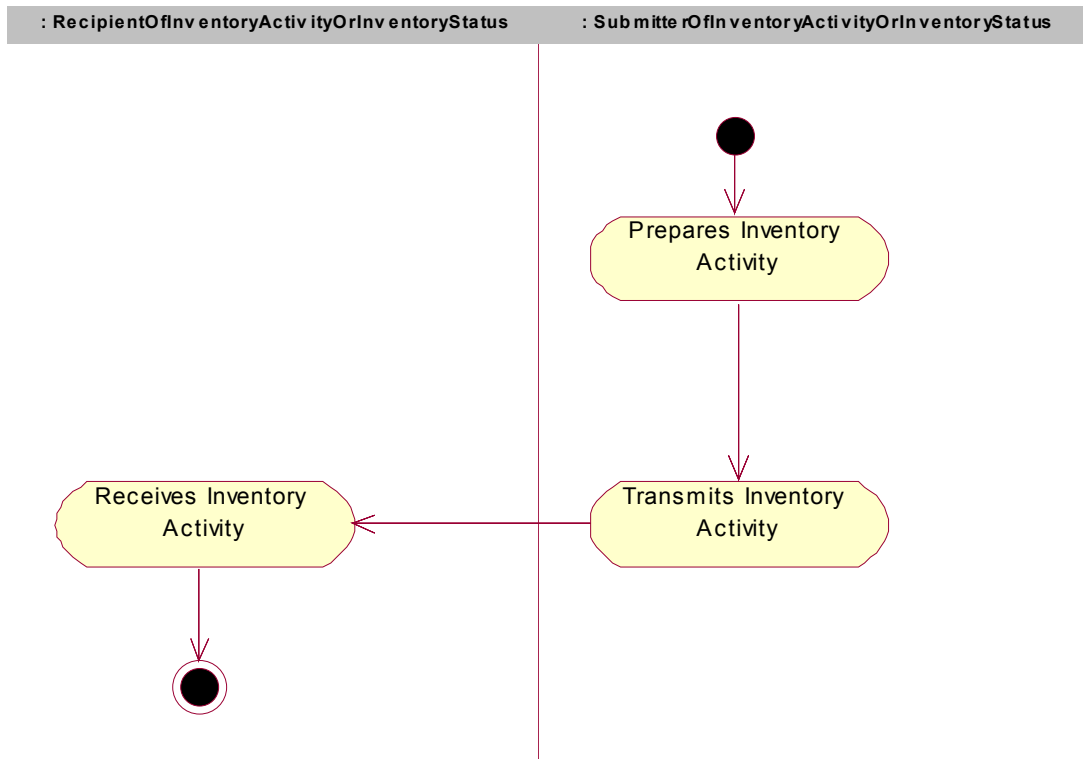
<b>Performance Goals</b>	<p><i>Goals related to technical requirements</i></p> <p><b>None</b></p>			
<b>Preconditions</b>	Both trading partners have agreed upon the reporting dates and times.			
<b>Post conditions</b>	<p>Success: The Inventory Activity or Inventory Status Recipient receives the Inventory Activity message.</p> <p>Failure: The Inventory Activity or Inventory Status Recipient does not receive the Inventory Activity message.</p>			
<b>Scenario</b>	<p><b>Begins when</b> The submitter of the inventory activity prepares the inventory activity message on the agreed upon date and time.</p> <p><b>Continues with...</b></p> <table border="0" style="margin-left: auto; margin-right: auto;"> <tr> <td style="text-align: center;"><b>Step #</b></td> </tr> <tr> <td style="text-align: center;"><b>Actor</b></td> </tr> <tr> <td style="text-align: center;"><b>Activity Step</b></td> </tr> </table> <p>1</p> <p>Submitter of Inventory Activity or Inventory Status Sends the inventory activity.</p> <p>2</p> <p><b>Ends when...</b> The recipient of the inventory activity receives the inventory activity message.</p>	<b>Step #</b>	<b>Actor</b>	<b>Activity Step</b>
<b>Step #</b>				
<b>Actor</b>				
<b>Activity Step</b>				
<b>Alternative Scenario</b>	<p>There are no alternative scenarios.</p> <p><b>None</b></p> <table border="0" style="margin-left: auto; margin-right: auto;"> <tr> <td style="text-align: center;"><b>Step #</b></td> </tr> <tr> <td style="text-align: center;"><b>Actor</b></td> </tr> <tr> <td style="text-align: center;"><b>Activity Step</b></td> </tr> </table>	<b>Step #</b>	<b>Actor</b>	<b>Activity Step</b>
<b>Step #</b>				
<b>Actor</b>				
<b>Activity Step</b>				
<b>Related Requirements</b>	<b>None</b>			
<b>Related Rules</b>	<p><i>Business rules associated with use case.</i></p> <p><b>None</b></p>			

## 1.4.2 Business Transaction Activity Diagram(s)

### 1.4.2.1 Business Transaction Activity Diagram : Status of Inventory



## 1.4.2.3 Business Transaction Activity Diagram : Activity of Inventory



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

### 1.4.3.1 Business Transaction Sequence Diagram : Status of Inventory

### 1.4.3.2 Business Transaction Sequence Diagram : Activity of Inventory

## Business Solution Design

### 1.5 Information Model (including GDD Report)

#### 1.5.1 Data Description:

Class (ABIE)	Attribute (BBIE)	Association (ASBIE)	Secondary Class	Related Requirements
Document				BRD for Inventory Activity or Inventory Status Version 0.6.2, 19.11.2004
	contentVersion			BRD for Inventory Activity or Inventory Status Version 0.6.2, 19.11.2004
	creationDateTime			BRD for Inventory Activity or Inventory Status Version 0.6.2, 19.11.2004
	documentStatus			BRD for Inventory Activity or Inventory Status Version 0.6.2, 19.11.2004
	documentStructureVersion			BRD for Inventory Activity or Inventory Status Version 0.6.2, 19.11.2004
	lastUpdateDate			BRD for Inventory Activity or Inventory Status Version 0.6.2, 19.11.2004
EntityIdentification				BRD for Inventory Activity or Inventory Status Version 0.6.2, 19.11.2004
	uniqueCreatorIdentification			BRD for Inventory Activity or Inventory Status Version 0.6.2, 19.11.2004

## Business Solution Design

		contentOwner	PartyIdentification	BRD for Inventory Activity or Inventory Status Version 0.6.2, 19.11.2004
InventoryActivityItem				BRD for Inventory Activity or Inventory Status Version 0.6.2, 19.11.2004
	inventory Activity Type			BRD for Inventory Activity or Inventory Status Version 0.6.2, 19.11.2004
	inventoryMovementIndicator			BRD for Inventory Activity or Inventory Status Version 0.6.2, 19.11.2004
	quantityOfUnits			BRD for Inventory Activity or Inventory Status Version 0.6.2, 19.11.2004
	referenceNumber			BRD for Inventory Activity or Inventory Status Version 0.6.2, 19.11.2004
			TradeItemIdentification	BRD for Inventory Activity or Inventory Status Version 0.6.2, 19.11.2004
			TransactionalItemData	BRD for Inventory Activity or Inventory Status Version 0.6.2, 19.11.2004
InventoryActivityOrInventoryStatus				BRD for Inventory Activity or Inventory Status Version 0.6.2, 19.11.2004

## Business Solution Design

	beginDateTime			BRD for Inventory Activity or Inventory Status Version 0.6.2, 19.11.2004
	endDateTime			BRD for Inventory Activity or Inventory Status Version 0.6.2, 19.11.2004
	inventoryDocumentType			BRD for Inventory Activity or Inventory Status Version 0.6.2, 19.11.2004
	structureType			BRD for Inventory Activity or Inventory Status Version 0.6.2, 19.11.2004
			Document	BRD for Inventory Activity or Inventory Status Version 0.6.2, 19.11.2004
		inventoryActivityOrInventoryStatusIdentification	EntityIdentification	BRD for Inventory Activity or Inventory Status Version 0.6.2, 19.11.2004
			InventoryItem	BRD for Inventory Activity or Inventory Status Version 0.6.2, 19.11.2004
		ownerOfItem	PartyIdentification	BRD for Inventory Activity or Inventory Status Version 0.6.2, 19.11.2004
			PlaceWhereItemIsStored	BRD for Inventory Activity or Inventory Status Version 0.6.2, 19.11.2004



## Business Solution Design

InventoryItem				BRD for Inventory Activity or Inventory Status Version 0.6.2, 19.11.2004
			LocationInventoryActivity	BRD for Inventory Activity or Inventory Status Version 0.6.2, 19.11.2004
			LocationInventoryStatusInformation	BRD for Inventory Activity or Inventory Status Version 0.6.2, 19.11.2004
			TradeItemIdentification	BRD for Inventory Activity or Inventory Status Version 0.6.2, 19.11.2004
			TransactionalItemData	BRD for Inventory Activity or Inventory Status Version 0.6.2, 19.11.2004
InventoryStatusInformation				BRD for Inventory Activity or Inventory Status Version 0.6.2, 19.11.2004
	inventoryStatusType			BRD for Inventory Activity or Inventory Status Version 0.6.2, 19.11.2004
	quantityOfUnits			BRD for Inventory Activity or Inventory Status Version 0.6.2, 19.11.2004
			TradeItemIdentification	BRD for Inventory Activity or Inventory Status Version 0.6.2, 19.11.2004
			TransactionalItemData	BRD for Inventory Activity or Inventory Status Version 0.6.2, 19.11.2004

## Business Solution Design

LocationInventoryActiv- ity				BRD for Inventory Activity or Inventory Status Version 0.6.2, 19.11.2004
	inventoryActivityType			BRD for Inventory Activity or Inventory Status Version 0.6.2, 19.11.2004
	inventoryMovementIndicator			BRD for Inventory Activity or Inventory Status Version 0.6.2, 19.11.2004
	quantityOfUnits			BRD for Inventory Activity or Inventory Status Version 0.6.2, 19.11.2004
	referenceNumber			BRD for Inventory Activity or Inventory Status Version 0.6.2, 19.11.2004
		placeWhereItemIsStoredIdentification	PartyIdentification	BRD for Inventory Activity or Inventory Status Version 0.6.2, 19.11.2004
LocationInventoryS- tatusInformation				BRD for Inventory Activity or Inventory Status Version 0.6.2, 19.11.2004
	inventoryStatusType			BRD for Inventory Activity or Inventory Status Version 0.6.2, 19.11.2004
	quantityOfUnits			BRD for Inventory Activity or Inventory Status Version 0.6.2, 19.11.2004

## Business Solution Design

		placeWhereItemIsStoredIdentification	PartyIdentification	BRD for Inventory Activity or Inventory Status Version 0.6.2, 19.11.2004
PartyIdentification				BRD for Inventory Activity or Inventory Status Version 0.6.2, 19.11.2004
	globalLocationNumber			BRD for Inventory Activity or Inventory Status Version 0.6.2, 19.11.2004
			AdditionalPartyIdentification	BRD for Inventory Activity or Inventory Status Version 0.6.2, 19.11.2004
PlaceWhere-ItemIsStored				BRD for Inventory Activity or Inventory Status Version 0.6.2, 19.11.2004
			InventoryActivityItem	BRD for Inventory Activity or Inventory Status Version 0.6.2, 19.11.2004
			InventoryStatusInformation	BRD for Inventory Activity or Inventory Status Version 0.6.2, 19.11.2004
		placeWhereItemIsStoredIdentification	PartyIdentification	BRD for Inventory Activity or Inventory Status Version 0.6.2, 19.11.2004
TradeItemIdentification				BRD for Inventory Activity or Inventory Status Version 0.6.2, 19.11.2004
	globalTradeItemNumber			BRD for Inventory Activity or Inventory Status Version 0.6.2, 19.11.2004

## Business Solution Design

			AdditionalTradeItemIdentification	BRD for Inventory Activity or Inventory Status Version 0.6.2, 19.11.2004
TransactionalItemData				BRD for Inventory Activity or Inventory Status Version 0.6.2, 19.11.2004
	availableForSaleDate			BRD for Inventory Activity or Inventory Status Version 0.6.2, 19.11.2004
	itemExpirationDate			BRD for Inventory Activity or Inventory Status Version 0.6.2, 19.11.2004
	lotNumber			BRD for Inventory Activity or Inventory Status Version 0.6.2, 19.11.2004
	productionDate			BRD for Inventory Activity or Inventory Status Version 0.6.2, 19.11.2004
	sellByDate			BRD for Inventory Activity or Inventory Status Version 0.6.2, 19.11.2004
		quantityContained	MultiMeasurementValue	BRD for Inventory Activity or Inventory Status Version 0.6.2, 19.11.2004

## Business Solution Design

---

### 1.5.2 GDD Report :

(Output from GDD should be pasted in this section.)

Class (ABIE)	Attribute (BBIE)	Association (ASBIE)	Secondary Class	Official Dictionary Entry Name	Definition	Multiplicity
Document				Electronic_ Document. Details	Used to specify basic information about the content of the message including version number	
	contentVersion			Electronic_ Document. Content_ Version. Identifier	Not Available	0..1
	creationDateTime			Electronic_ Document. Creation_ Date. Date Time	Not Available	1..1
	documentStatus			Electronic_ Document. Status. Identifier	Indicates if the document is a copy or an original.	1..1
	documentStructureVersion			Electronic_ Document. Document Structure_ Version. Identifier	Not Available	0..1
	lastUpdateDate			Electronic_ Document. Last Update_ Date. Date Time	Not Available	0..1
EntityIdentification				Entity Identification. Details	The unique identification of a document.	
	uniqueCreatorIdentification			Entity Identification. Identification. Identifier	Not Available	1..1

## Business Solution Design

		contentOwner	PartyIdentification	Entity Identification. Content Owner. Party Identification	Not Available	1..1
InventoryActivity-Item				Trade Item_ Inventory Activity Line. Details	Supplies the inventory activity item information with the quantity of units	
	inventory Activity Type			Trade Item_ Inventory Activity Line. Activity_ Type. Code	The inventory activity type for the Inventory Activity Item from the Inventory Activity List.	1..1
	inventoryMovementIndicator			Trade Item_ Inventory Activity Line. Movement Indicator. Indicator	This indicator will identify to increase or decrease the quantity in their systems.	0..1
	quantityOfUnits			Trade Item_ Inventory Activity Line. Quantity. Quantity	The number of units and the unit of measure associated to the Inventory Activity Item.	1..1
	referenceNumber			Trade Item_ Inventory Activity Line. Reference. Text	The reference number of activity associated to the inventory item.	0..1
			TradeItemIdentification	Trade Item_ Inventory Activity Line. Association. Trade Item Identification	Not Available	1..1
			TransactionalItem-Data	Trade Item_ Inventory Activity Line. Association. Transactional_ Trade Item Containment Line	Not Available	0..*

## Business Solution Design

InventoryActivity-OrInventoryStatus				Inventory Activity Or Inventory Status. Details	Provides the Inventory Activity or Inventory Status information.	
	beginDateTime			Inventory Activity Or Inventory Status. Begin Date Time_ Date Time. Date Time	Represents the begin date time of the inventory activity or inventory status.	1..1
	endDateTime			Inventory Activity Or Inventory Status. End Date Time_ Date Time. Date Time	Represents the end date time of the inventory activity or inventory status.	0..1
	inventoryDocument-Type			Inventory Activity Or Inventory Status. Inventory Document Type_ Type. Code	Inventory Document type identifies the process as an inventory status or an inventory activity.	1..1
	structureType			Inventory Activity Or Inventory Status. Structure Type_ Type. Code	The structure format of the inventory activity or Inventory Status message.	1..1
			Document	Inventory Activity Or Inventory Status. Inheritance_ Association. Electronic_ Document	Not Available	1..1
		inventoryActivityOrInventoryStatusIdentification	EntityIdentification	Inventory Activity Or Inventory Status. Association. Entity Identification	Not Available	1..1
			InventoryItem	Inventory Activity Or Inventory Status. Choice_ Association. Trade Item_ Inventory Activity Or Inventory Status	Not Available	1..*

## Business Solution Design

		ownerOfItem	PartyIdentification	Inventory Activity Or Inventory Status. Association. Party Identification	The party identification for the owner of the item.	1..1
			PlaceWhere-ItemIsStored	Inventory Activity Or Inventory Status. Choice_ Association. Location_ Inventory Activity Or Inventory Status	Not Available	1..*
InventoryItem				Trade Item_ Inventory Activity Or Inventory Status. Details	Not Available	
			LocationInventoryActivity	Trade Item_ Inventory Activity Or Inventory Status. Choice_ Association. Location_ Inventory Activity Line	Not Available	1..*
			LocationInventoryStatusInformation	Trade Item_ Inventory Activity Or Inventory Status. Choice_ Association. Location_ Inventory Status Line	Not Available	1..*
			TradeItemIdentification	Trade Item_ Inventory Activity Or Inventory Status. Association. Trade Item Identification	Not Available	1..1
			TransactionalItem-Data	Trade Item_ Inventory Activity Or Inventory Status. Association. Transactional_ Trade Item Containment Line	Not Available	0..*
InventoryStatus-Information				Trade Item_ Inventory Status Line. Details	Supplies the inventory status information with the quantity and the inventory status type.	



## Business Solution Design

	inventoryStatusType			Trade Item_ Inventory Status Line. Type. Code	Identifies the inventory status type associated to the inventory status information	1..1
	quantityOfUnits			Trade Item_ Inventory Status Line. Quantity. Quantity	The number of units and the unit of measure associated to the Inventory Item.	1..1
			TradeItemIdentification	Trade Item_ Inventory Status Line. Association. Trade Item Identification	Not Available	1..1
			TransactionalItemData	Trade Item_ Inventory Status Line. Association. Transactional_ Trade Item Containment Line	Not Available	0..*
LocationInventoryActivity				Location_ Inventory Activity Line. Details	Not Available	
	inventoryActivityType			Location_ Inventory Activity Line. Type. Inventory Activity_ Code	Not Available	1..1
	inventoryMovementIndicator			Location_ Inventory Activity Line. Movement Indicator. Indicator	Not Available	0..1
	quantityOfUnits			Location_ Inventory Activity Line. Quantity. Quantity	Not Available	1..1

## Business Solution Design

	referenceNumber			Location_ Inventory Activity Line. Reference. Text	Not Available	0..1
		placeWhere-ItemIsStoredIdentification	PartyIdentification	Location_ Inventory Activity Line. Association. Party Identification	Not Available	1..1
LocationInventoryStatusInformation				Location_ Inventory Status Line. Details	Not Available	
	inventoryStatusType			Location_ Inventory Status Line. Type. Inventory Status_ Code	Not Available	1..1
	quantityOfUnits			Location_ Inventory Status Line. Quantity. Quantity	Not Available	1..1
		placeWhere-ItemIsStoredIdentification	PartyIdentification	Location_ Inventory Status Line. Association. Party Identification	Not Available	1..1
PartyIdentification				Party Identification. Details	Unique location number identifying the Party for which the rest of the message defines.	
	globalLocationNumber			Party Identification. Primary_ Identification. GLN_ Identifier	The Global Location Number (GLN) is a structured Identification of a physical location	
			AdditionalPartyIdentification	Party Identification. Additional. Non GLN_ Party Identification	Not Available	0..*
PlaceWhere-ItemIsStored				Location_ Inventory Activity Or Inventory Status. Details	The party identification for the place where items are stored.	

## Business Solution Design

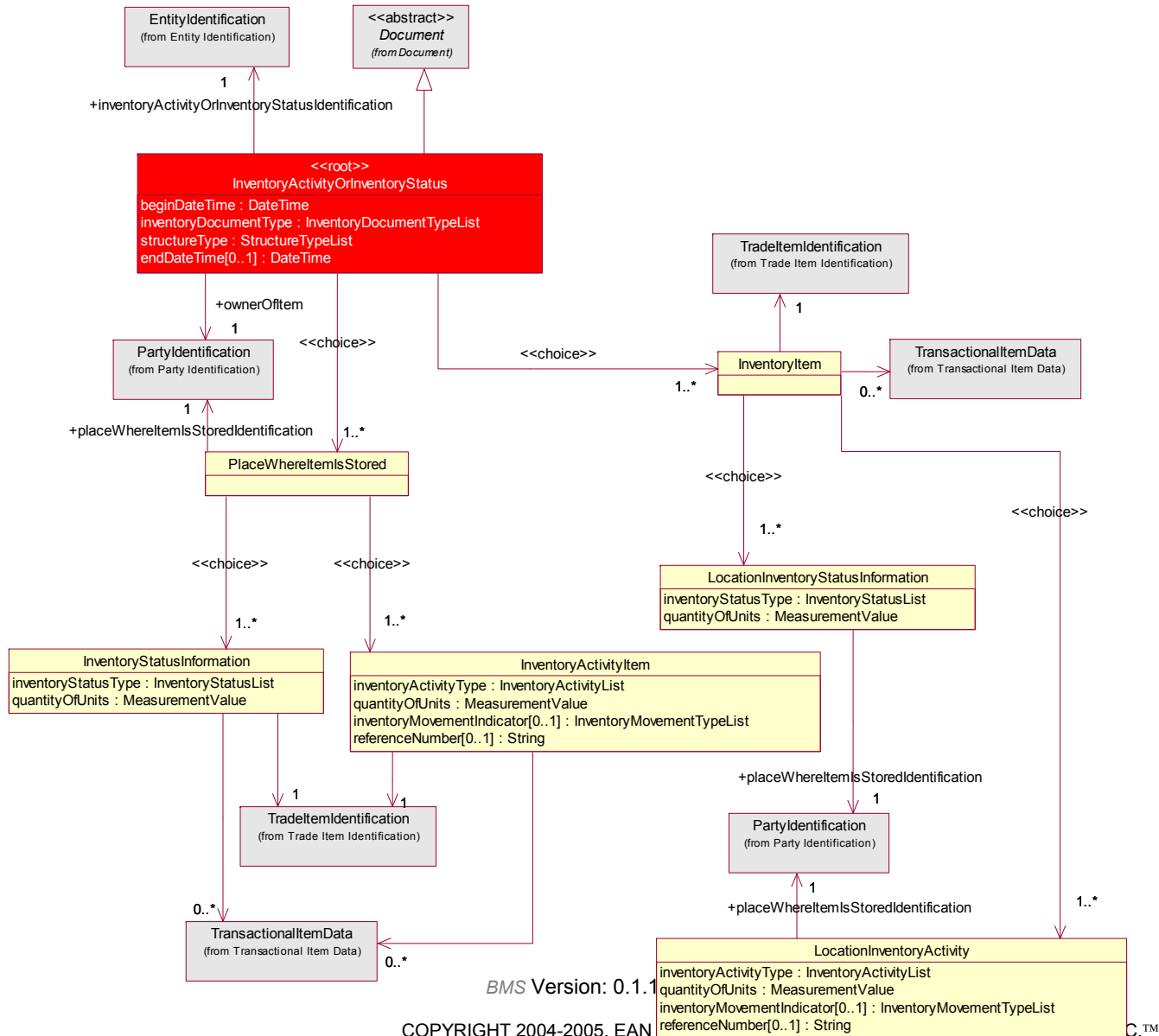
			InventoryActivity-Item	Location_ Inventory Activity Or Inventory Status. Choice_ Association. Trade Item_ Inventory Activity Line	Not Available	1..*
			InventoryStatusInformation	Location_ Inventory Activity Or Inventory Status. Choice_ Association. Trade Item_ Inventory Status Line	Not Available	1..*
		placeWhere-ItemIsStoredIdentification	PartyIdentification	Location_ Inventory Activity Or Inventory Status. Association. Party Identification	Not Available	1..1
TradeItemIdentification				Trade Item Identification. Details	Not Available	
	globalTradeItemNumber			Trade Item Identification. Primary_ Identification. GTIN_ Identifier	A particular Global trade item Number	
			AdditionalTrade-ItemIdentification	Trade Item Identification. Additional. Non GTIN_ Trade Item Identification	Not Available	0..*
TransactionalItemData				Transactional_ Trade Item Containment Line. Details	ItemContainment has TransactionalItemData. TransactionalItemData allows for specific item data as indicated by its attributes itemExpirationDate	

## Business Solution Design

	availableForSaleDate			Transactional_ Trade Item Containment Line. Available For Sale Date. Date Time	Date - The date the item is available for sale represented in CCYY-MM-DD.	0..1
	itemExpirationDate			Transactional_ Trade Item Containment Line. Item Expiration_ Date. Date Time	Date - The maximum durability of an item CCYY-MM-DD. The format is ISO 8601 CCYY-MM-DD for all data types.	0..1
	lotNumber			Transactional_ Trade Item Containment Line. Lot Number. Text	String - The batch or lot number of a trade item.	0..1
	productionDate			Transactional_ Trade Item Containment Line. Production Date. Date Time	Date - The date that the product was produced.	0..1
	sellByDate			Transactional_ Trade Item Containment Line. Sell By Date. Date Time	Date - Maximum durability date of an item CCYY-MM-DD.	0..1
		quantityContained	MultiMeasurement-Value	Transactional_ Trade Item Containment Line. Association. Multi-unit Measure	Measurement - The number of units shipped of the order unit or associated item. The unit of measure for the quantity is assumed to be the same as for the associated item. Thus the quantity must be specified in the same unit of measure as the item	

# Business Solution Design

## 1.5.3 Class Diagrams



BMS Version: 0.1.1

COPYRIGHT 2004-2005, EAN

C.™

## Business Solution Design

---

### 1.5.4 Code Lists

(Note: Code Lists are taken from the GDD though a GDD report.

Code List Name	Code List Description
InventoryDocumentTypeList	Identifies the document type for the Inventory Activity or Inventory Status message.
Code Name	Code Description
INVENTORY_ACTIVITY	Inventory Activity is used to report on all the changes on the inventory level per item.
INVENTORY_STATUS	Inventory Status is used to report on the actual inventory per item.

Code List Name	Code List Description
InventoryMovementTypeList	A list that identifies the inventory movement for the Inventory Activity Item.
Code Name	Code Description
MOVING_PRODUCT_INTO_INVENTORY	An inventory or product movement into the place where item is stored.
MOVING_PRODUCT_OUT_OF_INVENTORY	An inventory or product movement out of the place where item is stored.

Code List Name	Code List Description
InventoryStatusList	A list that identifies the inventory status type for the Inventory Status Information.
Code Name	Code Description
ALLOCATED_FOR_ORDER	Inventory designated to fulfil a shipment request.
AVAILABLE_FOR_SALE	Inventory designated to fulfil future shipment requests.
DAMAGED	Inventory that has been identified and categorized as damaged.
EXPIRED	Inventory that has been identified as exceeding the maximum durability date of an item.
IN_TRANSIT	Inventory being transferred or transported either in-bound or out-bound to the warehouse or warehouse location.
MAXIMUM_STOCK	Maximum stock target quantity in storage location in order to trigger action if this is exceeded.
MINIMUM_STOCK	Minimum stock target quantity in storage location in order to trigger actions if this is exceeded.
ON_HAND	The total quantity of all inventory for a warehouse or warehouse location.
QUARANTINED	The total quantity of non-shippable or non-saleable inventory in a warehouse or warehouse location.
RECALLED	Status of product that has been produced, but has not yet cleared quality /performance testing and is therefore not available for transport or sale.

## Business Solution Design

RETURNED	Product in inventory that has been withdrawn from circulation.
----------	--

Code List Name	Code List Description
InventoryActivityList	A list that identifies the inventory activity type for the Inventory Activity Item.
Code Name	Code Description
DAMAGED_IN_FACILITY	A decrease or increase due to product being damaged in the warehouse or warehouse location.
DAMAGED_IN_TRANSIT	A decrease or increase due to product being damaged during transfer or transportation in-bound or out-bound to a warehouse or warehouse location.
DESPATCH_DISCREPANCY	A decrease or increase due to product being dumped or destroyed and physically no longer exists.
DESPATCHES	A decrease or increase of inventory because of shipment of goods to another location.
DESTROYED	A decrease or increase in inventory as a result of shipping product to or from the warehouse or warehouse location.
DESTROYED	A decrease or increase for product in inventory that is about to expire.
DISTRESSED	A decrease or increase for product in inventory that has expired.
EXPIRATION	A decrease or increase due to product being place on hold.
ON_HOLD	A decrease or increase due to the result of a physical count of inventory.
PHYSICAL_COUNT	A decrease or increase in a status of product that has been produced, but has not yet cleared quality /performance testing and is therefore not available for transport or sale
QUARANTINE	A decrease or increase for inventory received back to the warehouse or warehouse location.
RECALL	A decrease or increase in inventory because of shipment of goods from another location.
RECEIPT_DISCREPANCY	A decrease or increase in inventory as a result of discrepancies made at receipt of product at the warehouse or warehouse location.
RECOUP_REWORK_OF_DAMAGED_PRODUCT	A decrease or increase in inventory as a result of restoring damaged product.
REIDENTIFICATION	A decrease or increase in inventory as a result of changing the identification of a product; e.g. regarding, stock number change, material identification change.
TRANSFER	A decrease or increase in inventory as a result of moving inventory between warehouses, warehouse locations, or cost centres.

## Business Solution Design

---

---

<b>Code List Name</b>	<b>Code List Description</b>
StructureTypeList	A list that identifies the document structure type of the inventory activity or the Inventory Status.
<b>Code Name</b>	<b>Code Description</b>
ITEM_BY_LOCATION	The Item will be the header information followed with the applicable location(s) information.
LOCATION_BY_ITEM	The location will be the header information followed with the applicable item(s) information.





### 1.6 Business Document Example

Factitious sample data should be used as an aid to visualize and reach agreement on the message. **Blue Bold** font represents the sample data. The two examples highlight the two choices in the message. The first choice is between inventory activity and inventory status, and the second choice is either an item by location or location by item structure.

### 1.7 Location by Item Structure with Inventory Status Information Example

Given:

Locations (GLN):	Items (GTIN):
0999999999991	011111111111111
0999999999992	022222222222222
0999999999993	033333333333333
	044444444444444

Inventory Activity or Inventory Status

Begin Date Time: **'2004-01-01T02:00:00'**

Inventory Document Type: **'INVENTORY\_STATUS'**

Structure Type: **'LOCATION\_BY\_ITEM'**

Owner of Item (GLN): **'0999999999991'**

Entity Identification:

Unique Creator Identification: **'FK-000001'**

Document Content Owner (GLN): **'0999999999991'**

Submitter of Document (GLN): **'0999999999991'**

Recipient of Document (GLN): **'0999999999993'**

Document:

Creation Date Time: **'2004-05-07T10:43:00'**

Document Status: **'ORIGINAL'**

Place where item is stored

Place where item is stored identification (GLN): **'0999999999991'**

Item (GTIN): **'011111111111111'**

Inventory Status Type: **'AVAILABLE\_FOR\_SALE'**, Qty of Units: **'15'** UoM **'CASE'**

Inventory Status Type: **'EXPIRED'** Qty of Units: **'10'** UoM **'CASE'**

Item (GTIN): **'022222222222222'**

Inventory Status Type: **'ON\_HAND'**, Qty of Units: **'20'** UoM **'CASE'**

Transactional Item Data:

Production Date: **'20030101'** Quantity Contained: **'15'** UoM **'CASE'**

Production Date: **'20030601'** Quantity Contained: **'5'** UoM **'CASE'**

Item (GTIN): **'033333333333333'**

Inventory Status Type: **'ON\_HOLD'**, Qty of Units: **'300'** UoM **'PIECE'**

Inventory Status Type: **'DAMAGED'**, Qty of Units: **'25'** UoM **'PIECE'**

Place where item is stored

Place where item is stored identification (GLN) **'0999999999992'**

Item (GTIN): **'011111111111111'**

Inventory Status Type: **'AVAILABLE\_FOR\_SALE'**, Qty of Units: **'25'** UoM **'CASE'**

Item (GTIN): **'033333333333333'**

Inventory Status Type: **'EXPIRED'**, Qty of Units: **'55'** UoM **'PIECE'**

## Business Solution Design

---

---

Place where item is stored

Place where item is stored identification (GLN): '09999999999993'

Item (GTIN): '044444444444444'

Inventory Status Type: 'ON\_HAND', Qty of Units: '250' UoM 'CASE'

Transactional Item Data:

Lot Number: '123456789' Quantity Contained: '200' UoM 'CASE'

Lot Number: '123456790' Quantity Contained: '50' UoM 'CASE'

### 1.8 Item by Location Structure with Inventory Activity Information Example

Given:

Locations (GLN):	Items (GTIN):
0999999999991	011111111111111
0999999999992	022222222222222
0999999999993	033333333333333
	044444444444444

Inventory Activity or Inventory Status  
Begin Date Time: '2004-01-01T02:00:00'  
Inventory document type: 'INVENTORY\_ACTIVITY'  
Structure type: 'ITEM\_BY\_LOCATION'  
Owner of Item (GLN): '0999999999991'  
Entity Identification:  
Unique Creator Identification: 'FK-000002'  
Document Content Owner (GLN): '0999999999991'  
Submitter of Document (GLN): '0999999999991'  
Recipient of Document (GLN): '0999999999993'  
Document:  
Creation Date Time: '2004-05-07T11:33:00'  
Document Status: 'ORIGINAL'

Inventory Item (GTIN): '011111111111111'  
Place where item is stored identification (GLN): '0999999999991'  
Location Inventory Activity: 'QUARANTINE', Qty of Units: '15' UoM 'CASE'  
Location Inventory Activity: 'RECALL', Qty of Units: '10' UoM 'CASE'  
Place where item is stored identification (GLN): '0999999999992'  
Location Inventory Activity: 'DESTROYED', Qty of Units: '10' UoM 'CASE',  
Inventory Movement Indicator: 'MOVING\_PRODUCT\_OUT\_OF\_INVENTORY', Reference  
'444'

Inventory Item (GTIN): '022222222222222'  
Transactional Item Data:  
Lot Number: '123456789' Quantity Contained: '20' UoM 'KG'  
Place where item is stored identification (GLN): '0999999999991'  
Location Inventory Activity: 'DISTRESSED', Qty of Units: '20' UoM 'KG'

Inventory Item (GTIN): '033333333333333'  
Place where item is stored identification (GLN): '0999999999991'  
Location Inventory Activity: 'DESPATCH\_DISCREPANCY', Qty of Units: '300' UoM  
'PIECE', Reference: '3391'  
Location Inventory Activity: 'RECEIPTS', Qty of Units: '25' UoM 'PIECE',  
Inventory Movement Indicator: 'MOVING\_PRODUCT\_INTO\_INVENTORY', Reference:  
'HIGH TICKET ITEM 4433'  
Place where item is stored identification (GLN): '0999999999992'  
Location Inventory Activity: 'PHYSICAL\_COUNT', Qty of Units: '250' UoM  
'CASE'

## Business Solution Design

---

---

Inventory Item (GTIN): '0444444444444444'

Place where item is stored identification (GLN): '0999999999993'

Location Inventory Activity: 'DAMAGED\_IN\_FACILITY', Qty of Units: '250' UoM  
'CASE', Inventory Movement Indicator: 'MOVING\_PRODUCT\_OUT\_OF\_INVENTORY'

### 1.9 Implementation Considerations

Not filled in the previous BRD

---

### 1.10 Testing

#### 1.10.1 Pass / Fail Criteria

*Unit testing criteria for business solution.*

Number	Test Criteria	Related Requirement	Design Element	Pass Criteria	Fail Criteria
1					
2					
3					

#### 1.10.2 Test Data

Test data is detailed in section 1.7.

# Business Solution Design

---

---

## 1.11 Appendices

## 1.12 Summary of Changes

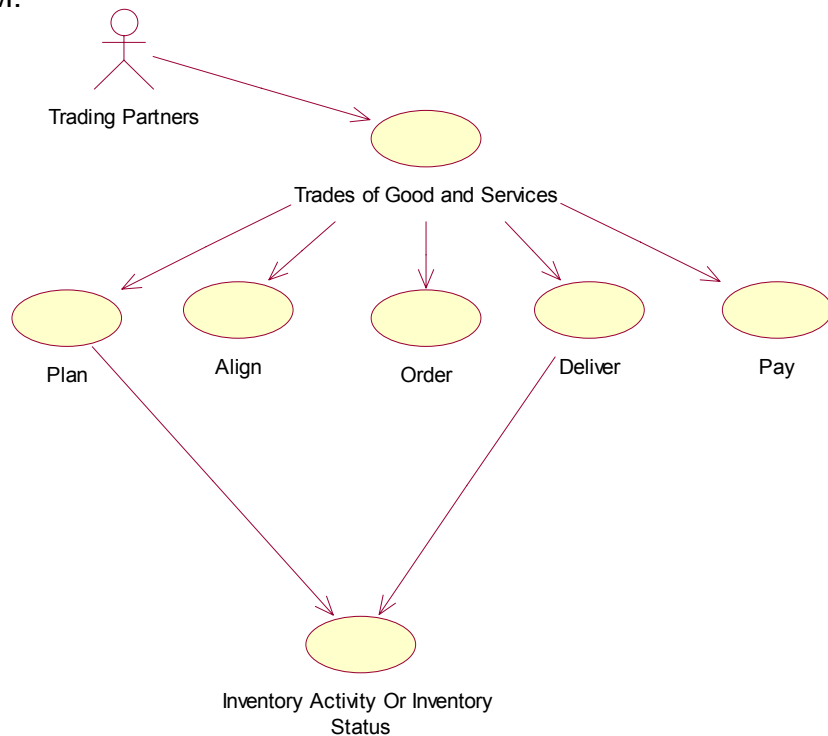
*(Details changes to BMS for each version by BMS Section)*

Change	BMS Version	Associated CR Number

## 1.13 Relationship with the EAN.UCC General Business Model (GBM)

*(This sub section shall include a standard introductory sentence and the use case diagram showing the position of the BRD use case(s) in relationship to the GBM)*

The following diagram illustrates the position of the BRD Inventory Activity or Inventory Status within the GBM:



### 2. XML Technical Solution ITRG Packet

The Technical Representation of the Business process is documented in a Technical Solution ITRG Packet containing all supplemental XML artefacts and is used by the Information Requirements Group (ITRG) to evaluate the solution. Upon approval from the Information Technical Requirements Group (ITRG), the Technical Solution ITRG Packet is updated to the Technical Solution Implementers Packet and published with the Business

Message Standard at:

[http://www.ean-ucc.org/global\\_smp/ean.ucc\\_standards.htm](http://www.ean-ucc.org/global_smp/ean.ucc_standards.htm).

Technical Solution ITRG Packet Content:

- Business Message Standard (BMS)
- ITRG Review Packet
  - Style Sheet: This HTML has been created using a Style Sheet that is a visual representation of the data. It is not an actual Style Sheet, but an example of what a Style Sheet may look like.
  - Instance File: The Instance File is an example of what the schema may look like when it includes live data. This can be used as comparison to a completed schema and can serve as a point of reference for development.
  - Technical Level GDD Report

Technical Solution Implementers Packet Content:

Contains all the message specific.XSD files required to implement

Example:

- AS2Envelope
- Command.xsd
- DocumentCommand.xsd
- Proxy.xsd
- ComponentLibrary.xsd

Both the Business Message Standard and the Implementers Packet are available during the ITRG Review Period in the working documents section of the ITRG eRoom:

[http://eroom.uncouncil.org/eRoom/facility/InformationTechnicalAssessmentGroupITAG/0\\_14f7](http://eroom.uncouncil.org/eRoom/facility/InformationTechnicalAssessmentGroupITAG/0_14f7)

All documents for review will be in this folder listed by name of the Change Request and Change Request Number. The Business Message Standard is not open for review, but offered as the basis for determining the suitability of the technical solutions.

This eRoom may be accessed by using the following User Name and Password:

User Name: guest

Password: guest