

Business Message Standard (BMS)

for

Deliver Extension

**Exchange Traceability and Processing History Data
of Beef Products (Slaughter to Retail)**

**BRG: Deliver
Project Team: eBmeat 2**

BMS Release: 2.1.1

Document Version: 1.0.7

Date: 07.03.2007



Change Request Reference

Refer to Change Request (CR) Number(s):	CR04-177 (CR 02-000195)
CR Submitter(s):	Bruno Julien [GENCOD EAN France] (Frank Kuhlmann [GS1 Germany])
Date of CR Submission to GSMP:	10.09.2004 (4.11.2002)

Business Requirements Document (BRAD) Reference

BRAD Title:	BRD Exchange Traceability and Processing History Data of Beef Products (Slaughter to Retail)
BRAD Date:	14.03.2005
BRAD Version:	2.5.1.

Document Summary

Document Title:	Deliver Extension (Exchange Traceability and Processing History Data of Beef Products(Slaughter to Retail))
Owner:	BRG: Deliver Project Team: eBmeat 2
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

Note: During development include revisions in history. Upon Approval, eliminate revisions and include only delta from previous version.

Date of Change	Version	Changed By	Reason for Change	Summary of Change	Model Build #
26.04.2005	1.0.0	Frank Kuhlmann	Migration	Migration of BRD to standard BMS/BSD format	6058 //depot/EAN.UCC/BS Ds/deliver/ BMS_Deliver_Extensi on_eBmeat .doc
26.06.2005	1.0.1	Eric Kauz	Best Practices	<ul style="list-style-type: none"> • updated names of code lists • created common class of Steplden-tification 	

				<ul style="list-style-type: none"> changed name of extension class. changed context classification. 	
12.07.2005	1.0.2	Eric Kauz	Best Practices	<ul style="list-style-type: none"> Added Test Class into BSD. 	
25.07.2005	1.0.3	Eric Kauz	Errata	<ul style="list-style-type: none"> Updated GDD report for Optimum Maturation 	
30.08.2005	1.0.4	Eric Kauz	ITRG Review	<ul style="list-style-type: none"> Made relationship from MeatHistory-Information to MeatActivity-History Mandatory Removed qualitySystem from the Slaughtering Class as there was no requirement for this attribute. Removed ActivityStep from GDD Report. Updated Technical Information in Section 2 to reflect latest template. Changed implementation of slaughterNumber in WorkItemIdentification. 	
13.10.2005	1.0.5	John Ryu	Build Master QA	Change depicted in section 1.10	BSD P4CL: 7576 MDL P4CL: 7570
07.03.2007	1.0.6	Andrew Hearn	Errata	Update BMS Version Number	
25.04.2007	1.0.7	Giovanni Biffi	Editorial Changes	Minor Editorial Changes to the Document	N/A

Business Message Standard

Table of contents

Chapter	Page
1 Business Solution	1
1.1 Business Domain View.....	1
1.1.1 Problem Statement / Business Need.....	1
1.1.2 Objective.....	1
1.1.3 Audience.....	1
1.1.4 Artefacts	1
1.1.5 References	1
1.1.6 Acknowledgements	3
1.1.6.1 BRG Members.....	3
1.1.6.2 ITRG Members	3
1.1.6.3 Task/Project Group Participants.....	3
1.1.6.4 Design Team Members	4
1.2 Business Context	6
1.3 Additional Technical Requirements Analysis	6
1.3.1 Technical Requirements (optional).....	6
1.4 Business Transaction View	6
1.4.1 Business Transaction Use Case Diagram.....	6
1.4.2 Use Case Description.....	7
1.4.3 Business Transaction Activity Diagram(s).....	8
1.4.4 Business Transaction Sequence Diagram(s) (optional)	8
1.5 Information Model.....	9
1.5.1 Data Description	9
1.5.2 GDD Report.....	13
1.5.3 Class Diagrams	18
1.5.4 Code Lists.....	23
1.6 Business Document Example	25
1.6.1 Example (Origin and production history)	25
1.6.2 Scenario 1: Aggregated detailed origin and production history	25
1.6.3 Scenario 2: Restricted origin and production history	40
1.7 Implementation Considerations.....	51
1.8 Testing.....	51
1.8.1 Pass / Fail Criteria	51

Business Message Standard

Table of contents

1.8.2	Test Data	51
1.9	Appendices.....	52
1.10	Summary of Changes.....	52
2	Technical Solution Design	53

1 Business Solution

1.1 Business Domain View

1.1.1 Problem Statement / Business Need

- No global recommendation for the traceability of unprepared beef by using AIDC and EDI in an efficient and effective way; how to link the physical and information flow in the beef supply chain (slaughter to retail).
- No general understanding of beef-specific terms and requirements for unprepared beef; where these exist, they are national and ill-suited to international trade/e-commerce.

1.1.2 Objective

The objectives of this extension are:

- Describe the exchange of production history data of unprepared beef in order to support traceability and quality management.
- Creation of UML-based business models for the global beef supply chain (slaughter to retail) using Rational Rose as a modelling tool, and involving beef trading partners and users, to better enable *tracking & tracing* (henceforth referred to in this context as “traceability”) of beef products.
- Definition of beef-specific terms for the EAN.UCC Global Data Dictionary.

1.1.3 Audience

- Slaughterhouse
- Post-Slaughter Processor
- Wholesaler
- Retailer
- Service Provider [Carrier/Logistic Service Provider] (to be expanded on in a future project)

1.1.4 Artefacts

Artefact name	State	Artefact / State description
BRD Exchange Traceability and Processing History Data of Beef Products (Slaughter to Retail)		

1.1.5 References

Business Solution Design

	Reference Name	Description
[Ref1]	BRD Exchange Traceability and Processing History Data of Beef Products (Slaughter to Retail)	
[Ref2]	BRAD Upstream Standards – Despatch, Receipt & Consumption 0.1.1	
[Ref3]	BRD Despatch Advice 1.0.9.3	
[Ref4]	EANCOM®-1997 (UN/EDIFACT D.96A)	
[Ref5]	EANCOM®-2002 (UN/EDIFACT D.01B)	
[Ref6]	Simpl-eb Principles EAN.UCC Business Message Standards July 2001 (Simpl-eb and FMCG extension)	
[Ref7]	EbXML Core Components technical specification Version 1.8	
[Ref8]	EbXML Core Component Catalogue Feb 2002	
[Ref9]	UMM R8D and UMM N90 R10 (UN/CEFACT)	
[Ref10]	EAN.UCC Modelling Methodology (Draft)	
[Ref11]	EAN.UCC Core Components (Draft)	
[Ref12]	EAN.UCC General Specifications	
[Ref13]	EAN•UCC Traceability Implementation (“TRACE-I”)	
[Ref14]	GCI-Glossary	
[Ref15]	Project proposal eBmeat	
[Ref16]	Traceability of beef (EAN International)	
[Ref17]	Stage3OnFarmProject (Australia)	
[Ref18]	EANEDI Model 5A (Australia)	
[Ref19]	EMEG-EDI Data Dictionary	
[Ref20]	UN/ECE standard for bovine carcass and cuts	
[Ref21]	UMM R8D and UMM N90 R10 (UN/CEFACT)	
[Ref22]	PRODAT / Übermittlung von Stammdaten/Qualitätsdaten zur Rindfleischherkunft mit EANCOM® (Germany)	
[Ref23]	DESADV Profil Boucherie (France)	

Business Solution Design

1.1.6 Acknowledgements

1.1.6.1 BRG Members

function	Name	Company / organisation
BRG Co-chair	Debra Noyes	Johnsonville Sausage
BRG Co-chair	Sue Donarski	Schneider Logistics
BRG Member	Regina De Baker	Watkins
BRG Member	Shanda Marvin	Procter & Gamble
BRG Member	Mike Osiecki	Best Buy Company
BRG Member	Roman Gural	UPS
BRG Member	Wayne Gingerich	Werner Enterprises
BRG Member	Paul Martin	General Mills
BRG Member	Kari Melhus	Target Corporation
BRG Member	Jeff Miller	Kraft Foods, Inc.
BRG Member	Bob Robertson	Manhattan Associates
BRG Member	David Burns	INTTRA
BRG Member	Marco Van Der Lee	GS1 Netherlands
BRG Member	Apostolos Xiradakis	Unilever
BRG Member	Thorsten Kirschner	GS1 Germany
BRG Member	Jean François Fusco	Geodis Solution
BRG Member	Aart Koning	Albert Heijn
BRG Member	José Jean-Paul Tavares	GS1 Brazil
BRG Member	Jeoffrey Cubillos	IBC Solutions
BRG Member	Tamari Tashiro	GS1 Japan
BRG Member	Tan Jin Soon	GS1 Singapore
BRG Manager	Bruno Julien	GS1France

1.1.6.2 ITRG Members

Function	Name	Company / organisation
ITRG Chair		
ITRG Member		

1.1.6.3 Task/Project Group Participants

Project Team Members

Function	Name	Company / organisation
Project Sponsor	Mitic, Miodrag	GS1
Project Manager / EANCOM / EDIFIX	Kuhlmann, Frank	GS1 Germany

Business Solution Design

Knowledge Carrier	Bergamin, Stefano	INDICOD
Knowledge Carrier	Gaspa, Roger	GS1 Spain
Modeler	Aguemon, Alice	GS1 France
Knowledge Carrier	Houlette, Cédric	GS1 France
Modeler	Yavo, Noel	GS1
Knowledge Carrier	Lindberg, Anders	ScandTrace Sweden
Knowledge Carrier / former EMEG member (European Meat Expert Group) / AIDC expert	Mouthaan, Dorien	GS1 Nederland
EANCOM / Knowledge Carrier	Pereira, Steven	GS1 Australia
XML (Member of XML Team)	Przybilla, Christian	GS1 Germany
Modeler / adjunct project leader	Repec, Craig Alan	GS1 Germany
EANCOM (Member of the EANCOM Team)	DeZutter, Dany	GS1

Distribution Task Group Members

Function	Name	Company / organisation
DTG Co-Chair	Debra Noyes	Johnsonville Sausage
DTG Co-Chair	Mike Osiecki	Best Buy Company
Participant	Regina De Baker	Watkins
Participant	Dean Yuhas	Millard Refrigeration
Participant	Sue Donarski	Schneider Logistics
Participant	Paul Martin	General Mills
Participant	Kari Melhus	Target Corporation
Participant	Jeff Miller	Kraft Foods, Inc.
Participant	Franck Napoli	LMI
Participant	David Burns	INTTRA
Participant	Marco Van Der Lee	GS1Netherlands
Participant	Apostolos Xiradakis	Unilever
Participant	Fred Kempkes	Unilever
Participant	Thorsten Kirschner	GS1 Germany
Participant	Jean François Fusco	Geodis Solution
Participant	Aart Koning	Albert Heijn
Participant	Tan Jin Soon	GS1 Singapore)
Participant	Bruno Julien	GS1 France

1.1.6.4 Design Team Members

Function	Name	Organisation
Modeler	Yavo, Noel	GS1
Modeler	Repec, Craig Alan	GS1 Germany

Business Solution Design

XML Technical Designer		
EANCOM Technical Designer		
Peer Reviewer	Janssen, Coen (BRD) Kauz, Eric	GS1 Netherlands GS1

Business Solution Design

1.2 Business Context

(Note: The context of the business)

Context Category	Value(s)
Industry	All
Geopolitical	All
Product	Unprepared Meat
Process	Deliver
Official Constraints	None
Roles	Shipper, Ship From, Receiver, Ship To
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

The extension for the “**Exchange Traceability and Processing History Data of Beef Products (Slaughter to Retail)**” details the data needed to be used in conjunction with the Despatch Advice message.

The team was chartered to define the business requirements and this has been achieved by providing data definitions and UML-model for the exchange of traceability and processing history data of unprepared beef products (slaughter to retail).

Note that this model can be used as a basis for other tasks regarding traceability and/or processing history of products.

1.4.1 Business Transaction Use Case Diagram

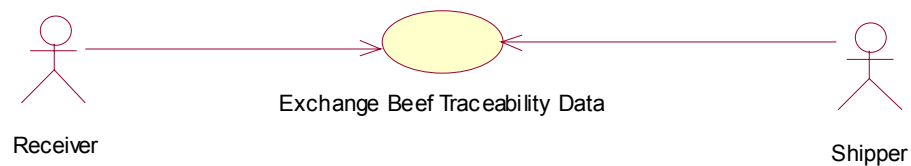


Figure 1 – Use Case Diagram: Business Transaction

Business Solution Design

1.4.2 Use Case Description

Use Case ID																
Use Case Name	Exchange Beef Traceability Data															
Use Case Description	Exchange beef history data and beef product despatch information in order to support traceability and quality management.															
Actors (Goal)	<ul style="list-style-type: none"> Shipper (Slaughterhouse; Post-Slaughter Processor, Wholesaler) Receiver (Post-Slaughter Processor, Wholesaler, Retailer) 															
Performance Goals	None															
Preconditions	<ul style="list-style-type: none"> A trading agreement (including alignment of master data, payment and delivery terms) has been established between Seller and Buyer. A valid order from the Buyer has been received and accepted. Traceability data for product(s) ordered have been compiled and prepared for exchange by the Shipper. The beef products are uniquely identified. 															
Post conditions	<ul style="list-style-type: none"> Receiver has been supplied with traceability data for beef product(s) which he is to receive. Place, time and conditions for delivery have been communicated. 															
Scenario	<p>Begins when the Shipper secures in his local storage medium the traceability data of beef product(s).</p> <p>Continues with:</p> <table border="1"> <thead> <tr> <th>Step #</th> <th>Actor</th> <th>Activity Step</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td>Shipper</td> <td>Shipper sends the Receiver traceability data of beef products to be delivered.</td> </tr> <tr> <td>2.</td> <td>Receiver</td> <td>Receiver receives this traceability data.</td> </tr> <tr> <td>3.</td> <td>Receiver</td> <td>Receiver cross-checks traceability data with physical delivery.</td> </tr> <tr> <td>4.</td> <td>Receiver</td> <td>Receiver adds internal information to traceability data, where applicable.</td> </tr> </tbody> </table> <p>Ends when the Receiver secures the traceability data in his local storage medium.</p>	Step #	Actor	Activity Step	1.	Shipper	Shipper sends the Receiver traceability data of beef products to be delivered.	2.	Receiver	Receiver receives this traceability data.	3.	Receiver	Receiver cross-checks traceability data with physical delivery.	4.	Receiver	Receiver adds internal information to traceability data, where applicable.
Step #	Actor	Activity Step														
1.	Shipper	Shipper sends the Receiver traceability data of beef products to be delivered.														
2.	Receiver	Receiver receives this traceability data.														
3.	Receiver	Receiver cross-checks traceability data with physical delivery.														
4.	Receiver	Receiver adds internal information to traceability data, where applicable.														
Alternative Scenario	A discrepancy exists between traceability data and the physical delivery. <i>(Must be addressed in a separate project.)</i>															
Business Transaction Rules	None															

1.4.3 Business Transaction Activity Diagram(s)

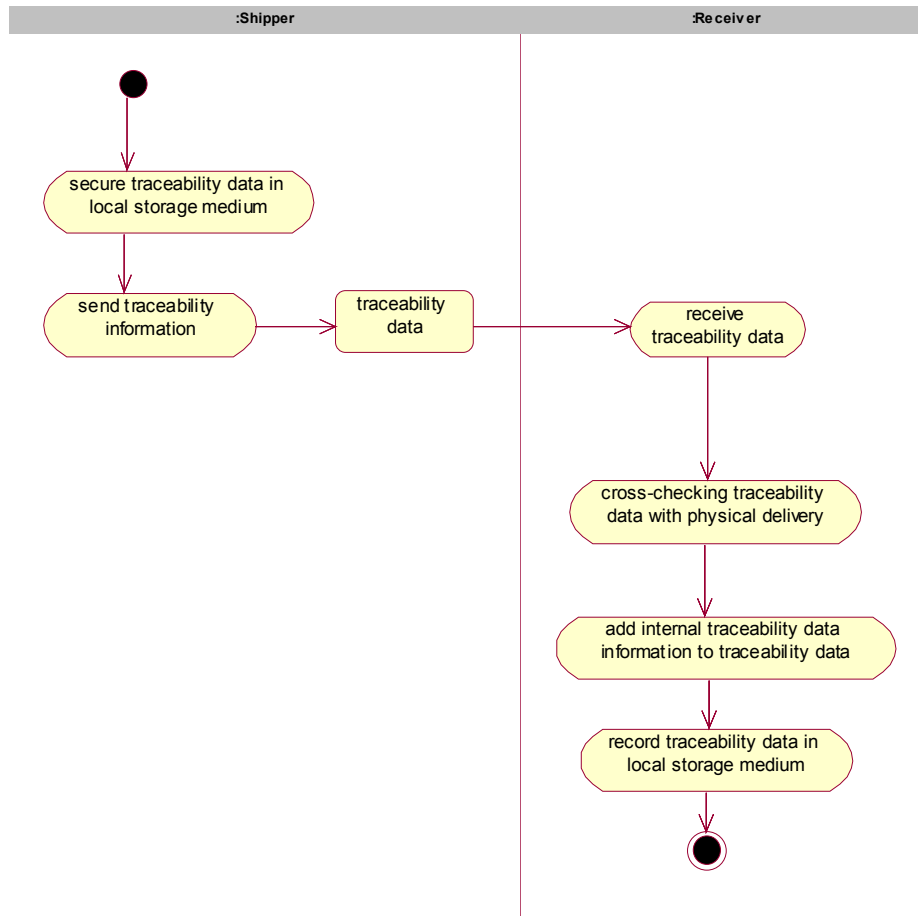


Figure 2 – Use Case Diagram: Business Transaction

1.4.4 Business Transaction Sequence Diagram(s) (optional)

Business Solution Design

1.5 Information Model

1.5.1 Data Description

Class (ABIE)	Attribute (BBIE)	Association (ASBIE)	Secondary Class	Related Requirement
MeatHistoryInformation			MeatActivityHistory	
MeatItemContainmentExtension		<extends>	ItemContainment	
		slaughterNumber	AnimalIdentification	{ref1}
		animalIdentification	AnimalIdentification	{ref1}
			MeatHistoryInformation	
ProcessingActivity				
	ProcessingActivityType			{ref1}
	countryOfActivity			{ref1}
		Processingactivitystep	StepIdentification	{ref1}
ProcessingActivityStep				
	StepNumber			{ref1}
AnimalIdentification				
	identificationNumber			{ref1}
	identificationType			{ref1}
MeatActivityHistory				
		<choice>	WorkItemIdentification	
			ProcessingActivity	
			Movement	
		currentStepIdentification	StepIdentification	{ref1}
		nextStepIdentification	StepIdentification	{ref1}

Business Solution Design

		performer	PerformerInformation	{ref1}
		<choice>	MeatDespatchInformation	
StepIdentification				
	stepNumber			{ref1}
Slaughtering				
	ageOfAnimal			{ref1}
	categoryOfMeat			{ref1}
	dateOfSlaughtering			{ref1}
	fatContent			{ref1}
	slaughteringSystem			{ref1}
	fatCover			{ref1}
	conformation			{ref1}
	colourOfMeat			{ref1}
	slaughteringWeight			{ref1}
	optimumMaturation-Date			{ref1}
	profileOfMeat			{ref1}
		meatAcidity		{ref1}
		slaughteringDNATest	Test	{ref1}
		bseTest	Test	{ref1}
Mincing				
	fatPercentOfMinced-Meat			{ref1}
	typeOfMincing			{ref1}
MeatDespatchInformation				
			Breeding	
			Fattening	
			Mincing	
			Cutting	

Business Solution Design

			Slaughtering	
Fattening				
	housingSystem			{ref1}
	feedingSystem			{ref1}
Cutting				
	profileOfMeat			{ref1}
Breeding				
	breed			{ref1}
	breedOfMother			{ref1}
	breedOfFather			{ref1}
	crossBreed			{ref1}
	dateOfBirth			{ref1}
	gender			{ref1}
	typeOfAnimal			{ref1}
	housingSystem			{ref1}
	feedingSystem			{ref1}
		paternalIdentification	AnimalIdentification	{ref1}
		maternalIdentification	AnimalIdentification	{ref1}
		breedingDNATest	Test	{ref1}
MeatAcidity				
	acidityOfMeat			{ref1}
	acidityMeasurement-Time			{ref1}
Movement				
	dateOfArrival			{ref1}
	dateOfDeparture			{ref1}
	movementReason			{ref1}
PerformerInformation				
	performerType			{ref1}

Business Solution Design

	approvalNumber			{ref1}
	performerIdentification- Type			
		performerIdentification	PartyIdentification	{ref1}
		performerAddress	NameAndAddress	{ref1}
Test				
	testResult			{ref1}
	testMethod			{ref1}
WorkItemIdentifi- cation				
	workItemType		WorkItemTypeInfoList	{ref1}
			MeatDespatchInformation	{ref1}
			OtherIdentification	{ref1}
			AnimalIdentification	{ref1}
		slaughterNumber	AnimalIdentification	{ref1}
			MeatDespatchInformation	{ref1}
		productIdentification	TradeItemIdentification	{ref1}
OtherIdentification				
	livestockMob			{ref1}
	batchNumber			{ref1}

Business Solution Design

1.5.2 GDD Report

Class (ABIE)	Attribute (BBIE)	Association (ASBIE)	Secondary Class	Official Dictionary Entry Name	Definition	Multiplicity
MeatHistoryInformation						
			MeatActivityHistory			1..*
MeatItemContainmentExtension		<extends>	ItemContainment			
		slaughterNumber	AnimalIdentification		Unique number given by a slaughterhouse to an animal.	0..1
		animalIdentification	AnimalIdentification		Unique number given by a competent national authority to identify an animal individually.	0..1
			MeatHistoryInformation			0..1
ProcessingActivity						
	processingActivityType				Processing undertaken at a given point.	1..1
	countryOfActivity				Country where processing takes place.	0..1
		ProcessingActivityStep	StepIdentification			0..*
AnimalIdentification						
	identificationNumber				ID number for a given animal.	1..1
	identificationType				Nature of the ID number.	0..1
MeatActivityHistory						
		<choice>	WorkItemIdentification			1..*
			ProcessingActivity			1..*
			Movement			0..1
		currentStepIdentification	StepIdentification		Cardinal sequence of the current processing activity, in relation to the processing history.	0..1
		nextStepIdentification	StepIdentification		Cardinal sequence of the sub-	0..1

Business Solution Design

					sequent processing activity, in relation to the processing history.	
		performer	PerformerInformation		Identity of stakeholder undertaking a given process.	1..1
		<choice>	MeatDespatchInformation			1..*
StepIdentification						
	stepNumber				Cardinal sequence of the current processing step, in relation to the processing history.	1..1
Slaughtering						
	ageOfAnimal				Age of the animal, in months, on the day of its slaughter.	0..1
	categoryOfMeat				Classification of meat in terms of gender and or age of the animal from which it is derived.	0..1
	dateOfSlaughtering				Date of slaughtering	0..1
	fatContent				An indication of the fat content of a product	0..1
	slaughteringSystem				Tools methods and practices used for the slaughter.	0..1
	fatCover				External fat thickness/level.	0..1
	conformation				The quality of the meat at the carcass.(related to meat quality)	0..1
	colourOfMeat				Colour of meat	0..1
	slaughteringWeight				Warm weight after slaughter.	0..1
	optimumMaturation-Date				Date at which optimal maturity occurs.	0..1
	profileOfMeat				Specific and official quality system.	0..*
		meatAcidity			The meat's acid quality or condition, expressed as a pH value.	0..*

Business Solution Design

		slaughteringDNATest	Test		n/a	0..1
		bseTest	Test		BSE test is used to determine whether the animal has been tested or not	0..1
Mincing						
	fatPercentOfMinced-Meat				Fat content of minced meat	0..1
	typeOfMincing				Type of mincing of the meat	0..1
MeatDespatchInformation						
			Breeding			0..1
			Fattening			0..*
			Mincing			0..*
			Cutting			0..*
			Slaughtering			0..1
Fattening						
	housingSystem				Type of housing/holding of the animal	0..1
	feedingSystem				Specifies the method of the feeding/fattening.	0..1
Cutting						
	profileOfMeat				Specific and official quality system.	0..*
Breeding						
	breed				A particular type of animal that has been developed by people in a controlled way.	0..1
	breedOfMother				See Breed.	0..1
	breedOfFather				See Breed.	0..1
	crossBreed				Indicates an animal stemming from parents of different breeds, where the breed of only one parent is known.	0..1

Business Solution Design

	dateOfBirth				Birth date/time of the animal.	0..1
	gender				Gender, the state of being either male or female	0..1
	typeOfAnimal				Official term which specifies milk or meat.	0..1
	housingSystem				Type of housing/holding of the animal	0..1
	feedingSystem				Specifies the method of the feeding/fattening.	0..1
		paternalIdentification	AnimalIdentification		See Animal identification.	0..1
		maternalIdentification	AnimalIdentification		See Animal identification.	0..1
		breedingDNATest	Test		n/a	0..1
MeatAcidity						
	acidityOfMeat				The meat's acid quality or condition, expressed as a pH value.	0..1
	acidityMeasurement-Time				Point in time when the pH-value is measured.	0..1
Movement						
	dateOfArrival				Date when the animal arrives at a new location.	0..1
	dateOfDeparture				Date when the animal is departing to another location.	0..1
	movementReason				Explanation for animal's transfer to another location	0..1
PerformerInformation						
	performerType				Nature of stakeholder.	1..1
	approvalNumber				Veterinary licence number allocated by a national authority	0..1
	performerIdentification-Type				Nature of stakeholder ID.	0..1
		performerIdentification	PartyIdentification		Stakeholder ID, in the form of a mandatory GLN.	0..1

Business Solution Design

		performerAddress	NameAndAddress		Stakeholder name and address.	0..1
Test						
	testResult				Result of test.	1..1
	testMethod				Nature of test.	0..1
WorkItemIdentification						
	workItemType		WorkItemTypeList		Nature of article being processed.	0..1
			MeatDespatchInformation			1..1
			OtherIdentification			0..1
			AnimalIdentification			0..1
		slaughterNumber	AnimalIdentification		Unique number given by a slaughterhouse to an animal.	0..1
		productIdentification	TradeItemIdentification		ID of product, in the form of a mandatory GTIN.	0..1
OtherIdentification						
	livestockMob				A collection of like breeds of livestock animals. Usually the livestock is moveable as a group.	0..1
	batchNumber				A number that identifies a quantity of a product produced under similar conditions i.e. at one location, at one time and according to specific business rules.	0..1

1.5.3 Class Diagrams

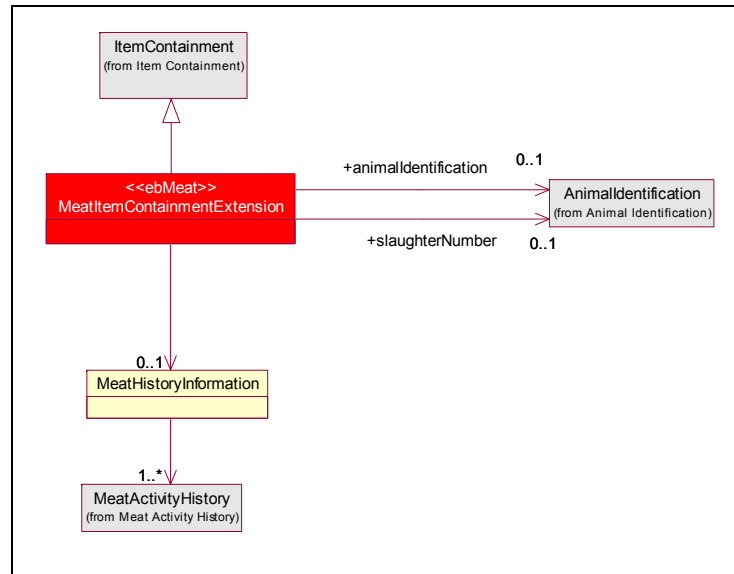


Figure 3 – Class Diagram: Dispatch Advice: Meat Traceability Extension

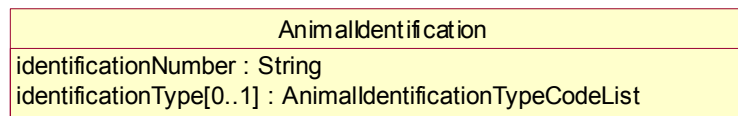


Figure 4 – Class Diagram: Animal Identification

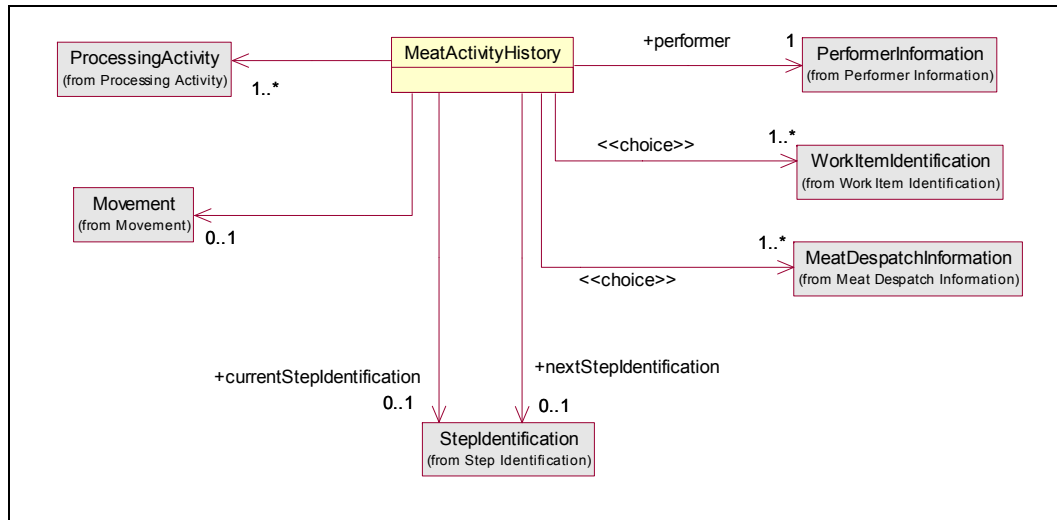


Figure 5 – Class Diagram: Meat Activity History Information

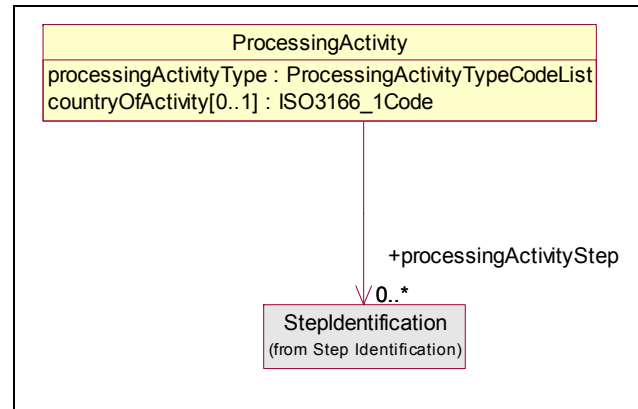


Figure 6 – Class Diagram: Processing Activity

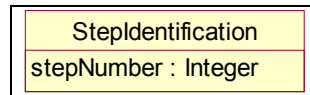


Figure 7 – Class Diagram: Step Identification

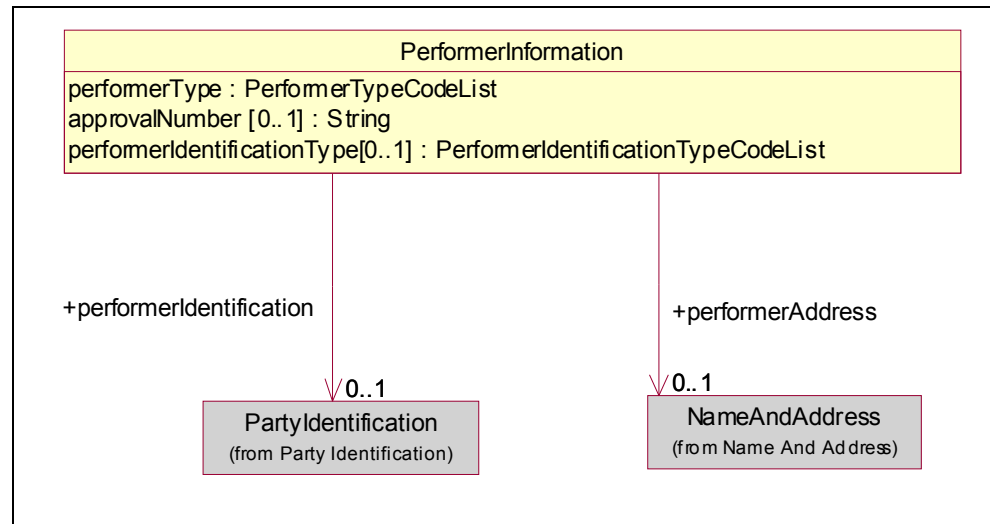


Figure 8 – Class Diagram: Performer Information

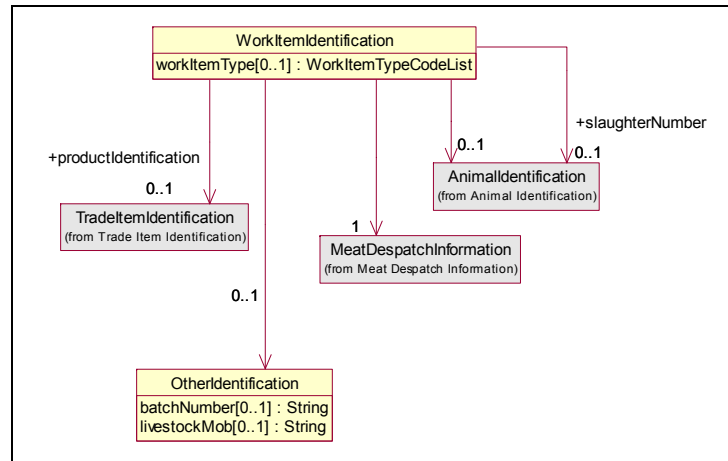


Figure 9 – Class Diagram: Work Item Identification

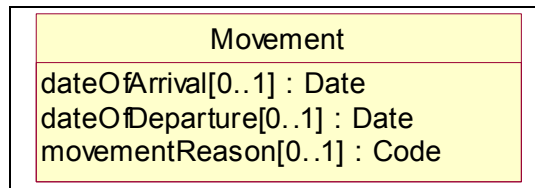


Figure 10 – Class Diagram: Movement

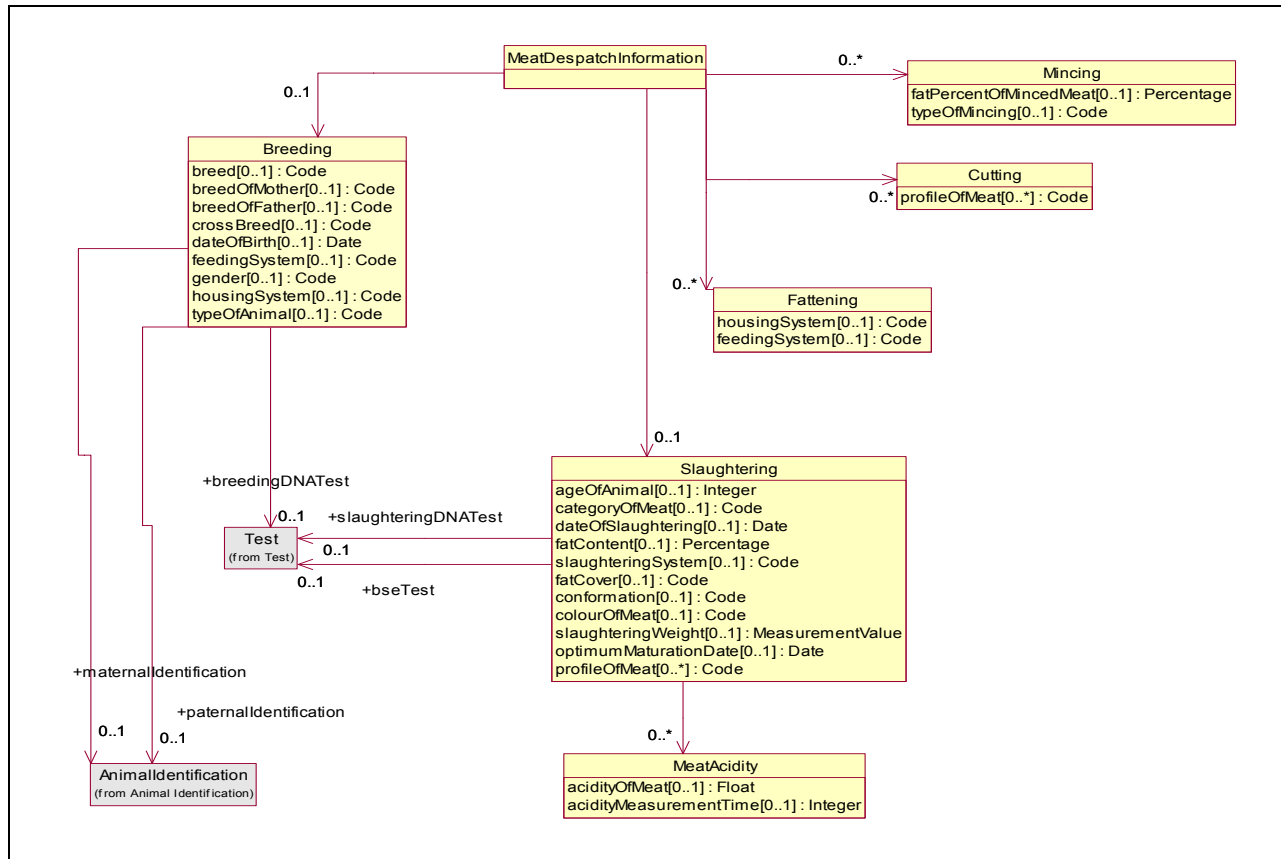


Figure 11 – Class Diagram: Meat Despatch Information

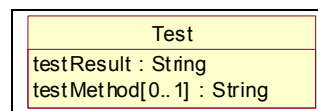


Figure 12 – Class Diagram: Test

Business Solution Design

1.5.4 Code Lists

Code List Name	Code List Description
ProcessingActivityTypeCodeList	
Code Name	Code Description
BREEDING	
CUTTING	
FATTENING	
MINCING	
SLAUGHTERING	

Code List Name	Code List Description
AnimalIdentificationTypeCodeList	
Code Name	Code Description
EARTAG_NUMBER	
ALTERNATE_IDENTIFIER	

Business Solution Design

Code List Name	Code List Description
PerformerIdentificationTypeCodeList	
Code Name	Code Description
GLN	
ADDRESS	
APPROVAL_NUMBER	

Code List Name	Code List Description
PerformerTypeCodeList	
Code Name	Code Description
BREEDER	
SLAUGHTERER	
FATTENER	
CUTTER	
MINCER	

Code List Name	Code List Description
WorkItemTypeCodeList	
Code Name	Code Description
TRADE_ITEM	
ANIMAL	
CARCASS	
MEAT	

1.6 Business Document Example

The examples describe show the information flow within the beef supply chain from the slaughterhouse to the retailer. The **example** is related to the origin and processing history of the product(s).

1.6.1 Example (Origin and production history)

Examples A describes two different scenarios. Both scenarios are covered by this extension. The usage is strongly dependent on the specific business context. The business partners involved have to agree on one of the following scenarios.

In scenario 1 the business partner receives aggregated detailed information of the origin and processing history of each animal which is used for the meat product, e.g. animal ID of mother and father of each animal.

In scenario 2 the partner receives a limited set of information of the origin and processing history, e.g. country of birth for all the animals which are used for the respective meat product.

1.6.2 Scenario 1: Aggregated detailed origin and production history

Process step 1: Producer

Address of the producer:
Name: Producer company
Street: Backstreet 133
City: Brussels
Postal code: 12345
Country: Belgium

The following animals are born on the farm of the producer:

Animal ID	AU71244008	AU71244009	AU71244010
Date of birth	01.01.2004	02.01.2004	01.01.2004
Gender	male	male	male
Breed	Jersey	Jersey	Jersey
Country of birth	Belgium	Belgium	Belgium
Feeding system	organic	intensive organic	Intensiveorganic
Holding system	predominantly barn	predominantly barn	predominantly barn
Paternal Identification	AU71244111	AU71244112	AU71244113
Breed of father	Jersey	Jersey	Jersey
Maternal Identification	AU71244222	AU71244223	AU71244224
Breed of mother	Jersey	Jersey	Jersey
Reason for movement	sale for fattening	sale for fattening	sale for fattening
Date of departure	01.03.2004	01.03.2004	01.03.2004

Business Solution Design

Process step 2: Fattening farm 1

Address of the fattening farm 1:

Name: Fattening company

Street: Bigstreet 5

City: Amsterdam

Postal code: 34567

Country: Netherlands

Animal ID	AU71244008	AU71244009	AU71244010
Date of arrival	02.03.2004	02.03.2004	02.03.2004
Country of fattening	Netherlands	Netherlands	Netherlands
Feeding system	Not specified	Organic	Not specified
Holding system	predominantly pasture	predominantly pasture	predominantly pasture
Reason for movement	sale for fattening	sale for fattening	sale for fattening
Date of departure	01.06.2004	01.06.2004	01.06.2004

Process step 3: Fattening farm 2

Address of the fattening farm 2:

Name: Fettmann KG

Street: Kanalstraße 33

City: Köln

Postal code: 50825

Country: Germany

Animal ID	AU71244008	AU71244009	AU71244010
Date of arrival	02.06.2004	02.06.2004	02.06.2004
Country of fattening	Germany	Germany	Germany
Feeding system	Intensive	Intensive	Intensive
Holding system	predominantly pasture	predominantly pasture	predominantly pasture
Reason for movement	sale for slaughteringslaughtering	sale for slaughteringsale for slaughterering	sale for slaughteringsale for slaughterering
Date of departure	02.09.2004	02.09.2004	02.09.2004

Process step 4: slaughterhouse

A shipment of cows from the "Fattermanettmann company" is received September 93th, 2004. The slaughterhouse records the information regarding the rearing of each cattle or the data are stored in a central data base for the supply chain. The cows are slaughtered and each carcass is identified with the GTIN and ear-tag number of the cow it is derived from.

GLN of the slaughterhouse: 4012345000009

Slaughterhouse approval number: BE234

Business Solution Design

GTIN	4012345000016	4012345000016	4012345000016
Animal ID	AU71244008	AU71244009	AU71244010
Date of arrival	03.09.2004	03.09.2004	03.09.2004
Country of Slaughtering	Belgium	Belgium	Belgium
Date of slaughter	04.09.2004	04.09.2004	05.09.2004
Slaughtering weight	280,3 kg	285,7 kg	290,6 kg
Slaughter system	halal	kosher	Halal
Category (UN/ECE)	young intact male	heifer	Young intact male
Conformation (SEUROP)	SE	S	E
Fat cover (UN/ECE)	Not specified	Peeled Denuded	Not specified
Reason for movement	Sale for cutting	Sale for cutting	Sale for cutting
Date of departure	05.09.2004	05.09.2004	05.09.2004

The slaughterhouse prepares a shipment identified with number “BE59-351-6098” on September 5th, under trading partner agreement “BE59.BEF2-CT-2”, to the cutting plant with the GLN 4000005000070; the shipment consists of the carcasses of the received and slaughtered cows.

The message sent from the slaughterhouse to the cutting hall 1 contains the following information (related to the product respectively GTIN):

Trade Item Identification	Animal Identification	
GTIN	Animal ID	
4012345000016	AU71244008	Meat history information (origin and processing history)
	Activity History	
	Current step identification	1
	Next step identification	2
	Activity Type:	Breeding
	Activity Step	
	Country of activity	Belgium
	Performer Type	Breeder
	Performer Identification:	Name: Producer company Street: Backstreet 133 City: Brussels Postal code: 12345 Country: Belgium
	Date of departure	01.03.2004
	Reason for movement	sale for fattening
	Work Item Identification	
	Animal Id	AU71244008
	Work Item Type	Animal
	Meat Despatch Information	
	Breeding Details	
	Date of birth	01.01.2004
	Gender	male
	Breed	Jersey
	Feeding system	organic
	Holding system	predominantly barn
	Paternal Identification	AU71244111
	Breed of father	Jersey

Business Solution Design

		Maternal Identification	AU71244222
		Breed of mother	Jersey
Activity History			
	Current step identification	2	
	Next step identification	3	
	Activity Type:	Fattening	
	Activity Step	1	
	Country of activity	Netherlands	
	Performer Type	Fattener	
	Performer Identification:	Name: Fattening company Street: Bigstreet 5 City: Amsterdam Postal code: 34567 Country: Netherlands	
	Date of arrival	02.03.2004	
	Date of departure	01.06.2004	
	Reason for movement	sale for fattening	
Work Item Identification			
	AnimalID	AU71244008	
	Work Item Type	Animal	
Meat Despatch Information			
Fattening			
	Feeding system	Not specified	
	Holding system	predominantly pasture	
Activity History			
	Current step identification	3	
	Next step identification	4	
	Activity Type:	Fattening	
	Activity Step	2	
	Country of activity	Germany	
	Performer Type	Fattener	
	Performer Identification:	Name: Fettmann KG Street: Kanalstraße 33 City: Köln Postal code: 50825 Country: Germany	
	Date of arrival	02.06.2004	
	Date of departure	02.09.2004	
	Reason for movement	sale for slaughtering	
Work Item Identification			
	Animal ID	AU71244008	
	Work Item Type	Animal	
Meat Despatch Information			
Fattening			
	Feeding system	Intensive	
	Holding system	predominantly pasture	
Activity History			
	Current step identification	4	
	Next Stage Id		
	Activity Type:	Slaughtering	
	Activity Step		
	Country of activity	Belgium	
	Performer Type	Slaughterer	
	Performer Identification:	GLN: 4012345000009 ApprovalNumber:BE234	
	Date of arrival	03.09.2004	
	Date of departure	05.09.2004	
	Reason for movement	sale for cutting	
Work Item Identification			
	GTIN	4012345000016	
	Animal ID	AU71244008	
	Work Item Type	Carcass	
	4012345000016	AU71244008	
Meat Despatch Information			
slaughteringDetailsSlaughtering			

Business Solution Design

Date of slaughter	04.09.2004
Slaughtering weight	280,3 kg
Slaughter system	halal
Category (UN/ECE)	young intact male
Conformation (SEUROP)	SE
Fat cover (UN/ECE)	Not specified

Trade Item Identification	Item Sub Identification
GTIN	Animal ID

4012345000016 AU71244009

Meat history information (origin and processing history)

.....

Process step 5: Cutting plant 1

A shipment of carcasses from slaughterhouse with the GLN 4012345000009 is received by the cutting plant 1 identified with GLN 4000005000070 (cutting plant approval number: FR2345) on September 5th, 2004. Two of the carcasses are converted into a batch of primal cuts (product A). Product A is identified with GTIN 4000005009998 and batch number FR2-NB-1523 and consists of the carcasses with the ID's:

- GTIN 4012345000016 / Animal ID AU71244008
- GTIN 4012345000016 / Animal ID AU71244010.

The third carcass is converted into a different product (product B). Product B is identified with GTIN 4000005001114 and batch number FR2-ZZ-9999 and consists of the carcass with the ID:

- GTIN 4012345000016 / Animal ID AU71244009

Product	A	B
GTIN	4000005009998	4000005001114
Batch number	FR2-NB-1523	FR2-ZZ-9999
Date of arrival	05.09.2004	05.09.2004
Country of cutting	France	France
UN/ECE classification	1164353010400015000	
Date of departure	07.09.2004	07.09.2004

A shipment to cutting hall 2 is prepared on September 7th, 2004 and consists of the products derived from the received carcasses.

The message sent from cutting plant 1 to cutting plant 2 contains the following information (related to the product respectively GTIN):

Trade Item Identification	Item Sub Identification
GTIN	Additional ID

4000005009998 FR2-NB-1523

Meat history information (origin and processing history)

Activity History

Current step identification 1

Business Solution Design

Next step identification 2
 Activity Type: Breeding
 Activity Step
 Country of activity Belgium
 Performer Type Breeder
 Performer Identification: Name: Producer company
 Street: Backstreet 133
 City: Brussels
 Postal code: 12345
 Country: Belgium
 Date of departure 01.03.2004
 Reason for movement sale for fattening

Work Item Identification	
Animal ID	AU71244008
Work Item Type	Animal

Meat Despatch Information	
Breeding	
Date of birth	01.01.2004
Gender	male
Breed	Jersey
Feeding system	organic
Holding system	predominantly barn
Paternal Identification	AU71244111
Breed of father	Jersey
Maternal Identification	AU71244222
Breed of mother	Jersey

Work Item Identification	
Animal ID	AU71244010
Work Item Type	Animal

Meat Despatch Information	
Breeding	
Date of birth	01.01.2004
Gender	male
Breed	Jersey
Feeding system	organic
Holding system	predominantly barn
Paternal Identification	AU71244113
Breed of father	Jersey
Maternal Identification	AU71244224
Breed of mother	Jersey

Activity History

Current step identification 2
 Next step identification 3
 Activity Type: Fattening
 Activity Step 1
 Country of activity Netherlands
 Performer Type Fattener
 Performer Identification: Name: Fattening company
 Street: Bigstreet 5
 City: Amsterdam
 Postal code: 34567
 Country: Netherlands
 Date of arrival 02.03.2004
 Date of departure 01.06.2004
 Reason for movement sale for fattening

Work Item Identification	
Animal ID	AU71244008
Work Item Type	Animal

Meat Despatch Information	
Fattening Details	
Feeding system	Not specified
Holding system	predominantly pasture

Work Item Identification	
Animal ID	AU71244010

Business Solution Design

	Work Item Type	Animal	Meat Despatch Information	
			Fattening Details	
			Feeding system	Not specified
			Holding system	predominantly pasture
Activity History				
	Current step identification	3		
	Next step identification	4		
	Activity Type:	Fattening		
	Activity Step	2		
	Country of activity	Germany		
	Performer Type	Fattener		
	Performer Identification:	Name: Fettmann KG		
		Street: Kanalstraße 33		
		City: Köln		
		Postal code: 50825		
		Country: Germany		
	Date of arrival	02.06.2004		
	Date of departure	02.09.2004		
	Reason for movement	sale for slaughtering		
	Work Item Identification		Meat Despatch Information	
	Animal ID	AU71244008	Fattening Details	
	Work tem Type	Animal	Feeding system	Intensive
			Holding system	predominantly pasture
	Work Item Identification		Meat Despatch Information	
	Animal ID	AU71244010	Fattening Details	
	Work tem Type	Animal	Feeding system	Intensive
			Holding system	predominantly pasture
Activity History				
	Current step identification	4		
	Next step identification	5		
	Activity Type:	Slaughtering		
	Activity Step			
	Country of activity	Belgium		
	Performer Type	Slaughterer		
	Performer Identification:	GLN: 4012345000009		
		ApprovalNumber:BE234		
	Date of arrival	03.09.2004		
	Date of departure	05.09.2004		
	Reason for movement	sale for cutting		
	Work Item Identification		Meat Despatch Information	
	GTIN	4012345000016	Slaughtering Details	
	Animal ID	AU71244008	Date of slaughter	04.09.2004
	Work Item Type	Carcass	Slaughtering weight	280,3 kg
			Slaughter system	halal
			Category (UN/ECE)	young intact male
			Conformation (SEUROP)	E
			Fat cover (UN/ECE)	Not specified
	Work Item Identification		Meat Despatch Information	
	GTIN	4012345000016	Slaughtering Details	
	Animal ID	AU71244010		
	Work Item Type	Carcass		

Business Solution Design

Date of slaughter	04.09.2004
Slaughtering weight	290,6 kg
Slaughter system	halal
Category (UN/ECE)	Young intact male
Conformation (SEUROP)	E
Fat cover (UN/ECE)	Not specified

Activity History

Current step identification	5
Next step identification	
Activity Type:	Cutting
Activity Step	1
Country of activity	France
Performer Type	Cutter
Performer Identification:	GLN: 4000005000070
	Approval Number: FR2345
Date of arrival	05.09.2004
Date of departure	07.09.2004

Work Item Identification

GTIN	4000005009998
Batch Number	FR2-NB-1523
Work Item Type	Meat

Meat Despatch Information

Cutting Details	
UN/ECE classification	1164353010400015000

GTIN	Additional ID	
4000005001114	FR2-ZZ-9999	Meat history information (origin and processing history)

.....

Process step 6: Cutting plant 2

A shipment of 2 products of primal cuts from cutting plant 1 is received by the cutting hall 2 identified with GLN 4400999000016 (approval number of cutting hall DK98767) on September 8th, 2004.

Each batch is processed separately and converted into a single batch of secondary cuts.

Product A (GTIN 4000005009998 / batch number FR2-NB-1523) is converted in product C identified with GTIN 4400999000993 and batch number DK3296.

Product B (GTIN 4000005001114 / batch number FR2-ZZ-9999) is converted in product D GTIN 4400999000443 and batch number "DK9999".

Product	C	D
GTIN	4400999000993	4400999000443
Batch number	DK3296	DK9999
Date of arrival	08.09.2004	08.09.2004
Country of cutting	Denmark	Denmark
UN/ECE classification	1164353010400017999	
Date of departure	10.09.2004	10.09.2004

A shipment to the mincer consisting of the two products is prepared on September 10th, 2004.

Business Solution Design

The message sent from cutting plant 2 to the mincer contains the following information (related to the product respectively GTIN):

Trade Item Identification	Item Sub Identification	Meat history information (origin and processing history)	
GTIN	Additional ID	Activity History	
4400999000993	DK3296	Current step identification	1
		Next step identification	2
		Activity Type:	Breeding
		Activity Step	
		Country of activity	Belgium
		Performer Type	Breeder
		Performer Identification:	Name: Producer company Street: Backstreet 133 City: Brussels Postal code: 12345 Country: Belgium
		Date of departure	01.03.2004
		Reason for movement	sale for fattening
		Work Item Identification	
		Animal ID	AU71244008
		Work Item Type	Animal
		Meat Despatch Information	
		Breeding Details	
		Date of birth	01.01.2004
		Gender	male
		Breed	Jersey
		Feeding system	organic
		Holding system	predominantly barn
		Paternal Identification	AU71244111
		Breed of father	Jersey
		Maternal Identification	AU71244222
		Breed of mother	Jersey
		Work Item Identification	
		Animal ID	AU71244010
		Work Item Type	Animal
		Meat Despatch Information	
		Breeding Details	
		Date of birth	01.01.2004
		Gender	male
		Breed	Jersey
		Feeding system	organic
		Holding system	predominantly barn
		Paternal Identification	AU71244113
		Breed of father	Jersey
		Maternal Identification	AU71244224
		Breed of mother	Jersey
		Activity History	
		Current step identification	2
		Next step identification	3
		Activity Type:	Fattening
		Activity Step	1
		Country of activity	Netherlands
		Performer Type	Fattener
		Performer Identification:	Name: Fattening company Street: Bigstreet 5 City: Amsterdam Postal code: 34567 Country: Netherlands
		Date of arrival	02.03.2004

Business Solution Design

Date of departure 01.06.2004

Reason for movement sale for fattening

Work Item Identification	
Animal ID	AU71244008
Work Item Type	Animal

Meat Despatch Information fatteningDetails	
Feeding system	Not specified
Holding system	predominantly pasture

Work Item Identification	
Animal ID	AU71244010
Work Item Type	Animal

Meat Despatch Information Fattening Details	
Feeding system	Not specified
Holding system	predominantly pasture

Activity History

Current step identification 3

Next step identification 4

Activity Type: Fattening

Activity Step 2

Country of activity Germany

Performer Type Fattener

Performer Identification: Name: Fettmann KG
Street: Kanalstraße 33
City: Köln
Postal code: 50825
Country: Germany

Date of arrival 02.06.2004

Date of departure 02.09.2004

Reason for movement sale for slaughtering

WorkItemIdentification	
Animal ID	AU71244008
Work Item Type	Animal

Meat Despatch Information Fattening Details	
Feeding system	Intensive
Holding system	predominantly pasture

Work Item Identification	
Animal ID	AU71244010
Work tem Type	Animal

Meat Despatch Information Fattening Details	
Feeding system	Intensive
Holding system	predominantly pasture

Activity History

Current step identification 4

Next step identification 5

Activity Type: Slaughtering

Activity Step

Country of activity Belgium

Performer Type Slaughterer

Performer Identification: GLN: 4012345000009
ApprovalNumber:BE234

Date of arrival 03.09.2004

Date of departure 05.09.2004

Reason for movement sale for cutting

Work Item Identification	
GTIN	4012345000016
Animal ID	AU71244008
Work Item Type	Carcass

Meat Despatch Information Slaughtering Details	
Date of slaughter	04.09.2004
Slaughtering weight	280,3 kg

Business Solution Design

Slaughter system	halal
Category (UN/ECE)	young intact male
Conformation (SEUROP)	E
Fat cover (UN/ECE)	Not specified

Work Item Identification	
GTIN	4012345000016
Animal ID	AU71244010
Work tem Type	Carcass

Meat Despatch Information Slaughtering Details

Country of Slaughtering	Belgium
Date of slaughter	04.09.2004
Slaughtering weight	290,6 kg
Slaughter system	halal
Category (UN/ECE)	Young intact male
Conformation (SEUROP)	E
Fat cover (UN/ECE)	Not specified

Activity History

Current step identification 5
 Next step identification 6
 Activity Type: Cutting
 Activity Step 1
 Country of activity Belgium
 Performer Type Cutter
 Performer Identification: GLN: 400005000070
 Approval Number: FR2345
 Date of arrival 05.09.2004
 Date of departure 07.09.2004

Work Item Identification	
GTIN	400005009998
Batch Number	FR2-NB-1523
Work tem Type	Meat

Meat Despatch Information Cutting Details

UN/ECE classification	1164353010400015000
-----------------------	---------------------

Activity History

Current step identification 6
 Next step identification
 Activity Type: Cutting
 Activity Step 2
 Performer Type Cutter
 Performer Identification: GLN: 4400999000016
 Approval Number: DK98767
 Date of arrival 08.09.2004
 Date of departure 10.09.2004

Work Item Identification	
GTIN	4400999000993
Batch Number	DK3296
Work tem Type	Meat

Meat Despatch Information Cutting Details

UN/ECE classification	1164353010400017999
-----------------------	---------------------

GTIN	Additional ID
------	---------------

4400999000443	DK9999
---------------	--------

Meat history information (origin and processing history)

.....

Process step 6: Mincer

A shipment of 2 products of secondary cuts from cutting plant 2 is received by the mincer identified with GLN 4055555999992 on September 12th, 2004.

Business Solution Design

Product C identified with GTIN 4400999000993 and batch number DK3296 is converted into minced beef identified with GTIN 4055555000568 and batch number NL1232.

GTIN	4055555000568
Batch number	NL1232
Date of arrival	12.09.2004
Fat content	40 %
Country of cutting	Netherlands
Date of departure	13.09.2004

The message sent from the mincer to the retailer contains the following information (related to the product respectively GTIN):

Trade Item Identification	Item Sub Identification	
GTIN	Additional ID	
4055555000568	NL1232	Meat history information (origin and processing history)
Activity History		
	Current step identification	1
	Next step identification	2
	Activity Type:	Breeding
	Activity Step	
	Country of activity	Belgium
	Performer Type	Breeder
	Performer Identification:	Name: Producer company Street: Backstreet 133 City: Brussels Postal code: 12345 Country: Belgium
	Date of departure	01.03.2004
	Reason for movement	sale for fattening
Work Item Identification		
	Animal ID	AU71244008
	Work Item Type	Animal
Meat Despatch Information		
Breeding Details		
	Date of birth	01.01.2004
	Gender	male
	Breed	Jersey
	Feeding system	organic
	Holding system	predominantly barn
	Paternal Identification	AU71244111
	Breed of father	Jersey
	Maternal Identification	AU71244222
	Breed of mother	Jersey
Work Item Identification		
	Animal ID	AU71244010
	Work Item Type	Animal
Meat Despatch Information		
breedingDetails		
	Date of birth	01.01.2004
	Gender	male
	Breed	Jersey
	Feeding system	organic
	Holding system	predominantly barn
	Paternal Identification	AU71244113
	Breed of father	Jersey
	Maternal Identification	AU71244224
	Breed of mother	Jersey
Activity History		

Business Solution Design

Current step identification 2
 Next step identification 3
 Activity Type: Fattening
 Activity Step 1
 Country of activity Netherlands
 Performer Type Fattener
 Performer Identification: Name: Fattening company
 Street: Bigstreet 5
 City: Amsterdam
 Postal code: 34567
 Country: Netherlands
 Date of arrival 02.03.2004
 Date of departure 01.06.2004
 Reason for movement sale for fattening

Work Item Identification
 Animal ID AU71244008
 Work Item Type Animal

Meat Despatch Information Fattening Details

Feeding system Not specified
 Holding system predominantly pasture

Work Item Identification
 Animal ID AU71244010
 Work tem Type Animal

Meat Despatch Information Fattening Details

Feeding system Not specified
 Holding system predominantly pasture

Activity History

Current step identification 3
 Next step identification 4
 Activity Type: Fattening
 Activity Step 2
 Country of activity Germany
 Performer Type Fattener
 Performer Identification: Name: Fettmann KG
 Street: Kanalstraße 33
 City: Köln
 Postal code: 50825
 Country: Germany
 Date of arrival 02.06.2004
 Date of departure 02.09.2004
 Reason for movement sale for slaughtering

Work Item Identification
 Animal ID AU71244008
 Work tem Type Animal

Meat Despatch Information Fattening Details

Country of fattening Germany
 Feeding system Intensive
 Holding system predominantly pasture

Work Item Identification
 Animal ID AU71244010
 Work tem Type Animal

Meat Despatch Information Fattening Details

Country of fattening Germany
 Feeding system Intensive
 Holding system predominantly pasture

Activity History

Current step identification 4
 Next step identification 5
 Activity Type: Slaughtering
 Activity Step
 Country of activity Belgium

Business Solution Design

Performer Type Slaughterer
 Performer Identification: GLN: 4012345000009
 ApprovalNumber:BE234
 Date of arrival 03.09.2004
 Date of departure 05.09.2004
 Reason for movement sale for cutting

Work Item Identification
 GTIN 4012345000016
 Animal ID AU71244008
 Work tem Type Carcass

Meat Despatch Information	
Slaughtering Details	
Date of slaughter	04.09.2004
Slaughtering weight	280,3 kg
Slaughter system	halal
Category (UN/ECE)	young intact male
Conformation (SEUROP)	E
Fat cover (UN/ECE)	Not specified

Work Item Identification
 GTIN 4012345000016
 Animal ID AU71244010
 Work tem Type Carcass

Meat Despatch Information	
Slaughtering Details	
Country of Slaughtering	Belgium
Date of slaughter	04.09.2004
Slaughtering weight	290,6 kg
Slaughter system	halal
Category (UN/ECE)	Young intact male
Conformation (SEUROP)	E
Fat cover (UN/ECE)	Not specified

ActivityHistory

Current step identification 5
 Next step identification 6
 Activity Type: Cutting
 Activity Step 1
 Country of activity Belgium
 Performer Type Cutter
 Performer Identification: GLN: 400005000070
 Approval Number: FR2345
 Date of arrival 05.09.2004
 Date of departure 07.09.2004

Work Item Identification
 GTIN 4000050009998
 Batch Number FR2-NB-1523
 Work tem Type Meat

Meat Despatch Information	
Cutting Details	
UN/ECE classification	1164353010400015000

Activity History

Current step identification 6
 Next step identification 7
 Activity Type: Cutting
 Activity Step 2
 Country of activity Denmark
 Performer Type Cutter
 Performer Identification: GLN: 4400999000016
 Approval Number: DK98767
 Date of arrival 08.09.2004
 Date of departure 10.09.2004

Work Item Identification

Business Solution Design

GTIN	4400999000993	
Batch Number	DK3296	
Work tem Type	Meat	
		Meat Despatch Information
		Cutting Details
		UN/ECE classification 1164353010400017999
Activity History		
	Current step identification	7
	Next step identification	
	Activity Type:	Mincing
	Activity Step	1
	Country of activity	Netherlands
	Performer Type	Mincer
	Performer Identification:	GLN: 4055555999992
	Date of arrival	12.09.2004
	Date of departure	13.09.2004
	Work Item Identification	
GTIN	4055555000568	
Batch Number	NL1232	
Work tem Type	Trade Item	
		Meat Despatch Information
		Mincing Details
	Fat content	40 %

Process step 7: Retailer

A shipment of one batch of consumer units from the mincer is received September 30th, 2004.

The batch is made available for sale at a retail outlet October 1st, 2004.

Business Solution Design

1.6.3 Scenario 2: Restricted origin and production history

Process step 1: Producer

Address of the producer:
Name: Producer company
Street: Backstreet 133
City: Brussels
Postal code: 12345
Country: Belgium

The following animals are born on the farm of the producer:

Animal ID	AU71244008	AU71244009	AU71244010
Date of birth	01.01.2004	02.01.2004	01.01.2004
Gender	male	male	male
Breed	Jersey	Jersey	Jersey
Country of birth	Belgium	Belgium	Belgium
Feeding system	organic	intensive	organic
Holding system	predominantly barn	predominantly barn	predominantly barn
Paternal Identification	AU71244111	AU71244112	AU71244113
Breed of father	Jersey	Jersey	Jersey
Maternal Identification	AU71244222	AU71244223	AU71244224
Breed of mother	Jersey	Jersey	Jersey
Reason for movement	sale for fattening	sale for fattening	sale for fattening
Date of departure	01.03.2004	01.03.2004	01.03.2004

Process step 2: Fattening farm 1

Address of the fattening farm 1:
Name: Fattening company
Street: Bigstreet 5
City: Amsterdam
Postal code: 34567
Country: Netherlands

Animal ID	AU71244008	AU71244009	AU71244010
Date of arrival	02.03.2004	02.03.2004	02.03.2004
Country of fattening	Netherlands	Netherlands	Netherlands
Feeding system	Not specified	Organic	Not specified
Holding system	predominantly pasture	predominantly pasture	predominantly pasture
Reason for movement	sale for fattening	sale for fattening	sale for fattening

Business Solution Design

Date of departure	01.06.2004	01.06.2004	01.06.2004
-------------------	------------	------------	------------

Process step 3: Fattening farm 2

Address of the fattening farm 2:

Name: Fettmann KG

Street: Kanalstraße 33

City: Köln

Postal code: 50825

Country: Germany

Animal ID	AU71244008	AU71244009	AU71244010
Date of arrival	02.06.2004	02.06.2004	02.06.2004
Country of fattening	Germany	Germany	Germany
Feeding system	Intensive	Intensive	Intensive
Holding system	predominantly pasture	predominantly pasture	predominantly pasture
Reason for movement	sale for slaughtering	sale for slaughtering	sale for slaughtering
Date of departure	02.09.2004	02.09.2004	02.09.2004

Process step 4: slaughterhouse

A shipment of cows from the "Fettmann company" is received September 3th, 2004. The information regarding the rearing of each cattle are stored in a data base. The cows are slaughtered and each carcass is identified with the GTIN and ear-tag number of the cow it is derived from.

GLN of the slaughterhouse: 4012345000009

Slaughterhouse approval number: BE234

GTIN	4012345000016	4012345000016	4012345000016
Animal ID	AU71244008	AU71244009	AU71244010
Date of arrival	03.09.2004	03.09.2004	03.09.2004
Country of Slaughtering	Belgium	Belgium	Belgium
Date of slaughter	04.09.2004	04.09.2004	05.09.2004
Slaughtering weight	280,3 kg	285,7 kg	290,6 kg
Slaughter system	halal	kosher	Halal
Category (UN/ECE)	young intact male	heifer	Young intact male
Conformation (SEUROP)	E	S	E
Fat cover (UN/ECE)	Not specified	Peeled Denuded	Not specified
Reason for movement	Sale for cutting	Sale for cutting	Sale for cutting
Date of departure	05.09.2004	05.09.2004	05.09.2004

Business Solution Design

The slaughterhouse prepares a shipment identified with number "BE59-351-6098" on September 5th, under trading partner agreement "BEF2-CT-2", to the cutting plant with the GLN 4000005000070; the shipment consists of the carcasses of the received and slaughtered cows.

The message sent from the slaughterhouse to cutting plant 1 contains the following information (related to the product respectively GTIN):

Trade Item Identification	Animal Identification	
GTIN	AnimalID	
4012345000016	AU71244008	Meat history information (origin and processing history)
		Activity History
		Current step identification 1
		Next step identification 2
		Activity Type: Breeding
		Activity Step
		Country of activity Belgium
		Performer Type Breeder
		Performer Identification: Name: Producer company
		Street: Backstreet 133
		City: Brussels
		Postal code: 12345
		Country: Belgium
		Date of departure 01.03.2004
		Reason for movement sale for fattening
		Meat Despatch Information
		Breeding Details
		Date of birth 01.01.2004
		Gender male
		Breed Jersey
		Feeding system organic
		Holding system predominantly barn
		Paternal Identification AU71244111
		Breed of father Jersey
		Maternal Identification AU71244222
		Breed of mother Jersey
		Activity History
		Current step identification 2
		Next Stage Id 3
		Activity Type: Fattening
		Activity Step 1
		Country of activity Netherlands
		Performer Type Fattener
		Performer Identification: Name: Fattening company
		Street: Bigstreet 5
		City: Amsterdam
		Postal code: 34567
		Country: Netherlands
		Date of arrival 02.03.2004
		Date of departure 01.06.2004
		Reason for movement sale for fattening
		Meat Despatch Information
		fattening Details
		Feeding system Not specified
		Holding system predominantly pasture
		Activity History
		Current step identification 3
		Next step identification 4
		Activity Type: Fattening

Business Solution Design

Activity Step 2
 Country of activity Germany
 Performer Type Fattener
 Performer Identification: Name: Fettmann KG
 Street: Kanalstraße 33
 City: Köln
 Postal code: 50825
 Country: Germany
 Date of arrival 02.06.2004
 Date of departure 02.09.2004
 Reason for movement sale for slaughtering

Meat Despatch Information fattening Details	
Feeding system	Intensive
Holding system	predominantly pasture

ActivityHistory

Current step identification 4
 Next Stages Id
 Activity Type: Slaughtering
 Activity Step
 Country of activity Belgium
 Performer Type Slaughterer
 Performer Identification: GLN: 4012345000009
 ApprovalNumber:BE234
 Date of arrival 03.09.2004
 Date of departure 05.09.2004
 Reason for movement sale for cutting

Meat Despatch Information Slaughtering Details	
Date of slaughter	04.09.2004
Slaughtering weight	280,3 kg
Slaughter system	halal
Category (UN/ECE)	young intact male
Conformation (SEUROP)	E
Fat cover (UN/ECE)	Not specified

Trade Item Identification	Item Sub Identification
GTIN	Animal ID

4012345000016 AU71244009 Meat history information (origin and processing history)

.....

Process step 5: Cutting plant 1

A shipment of carcasses from slaughterhouse with the GLN 4012345000009 is received by the cutting plant 1 identified with GLN 4000005000070 (cutting plant approval number: FR2345) on September 5th, 2004. Two of the carcasses are converted into a batch of primal cuts (product A). Product A is identified with GTIN 4000005009998 and batch number FR2-NB-1523 and consists of the carcasses with the ID's:

- GTIN 4012345000016 / Animal ID AU71244008
- GTIN 4012345000016 / Animal ID AU71244010.

The third carcass is converted into a different product (product B). Product B is identified with GTIN 4000005001114 and batch number FR2-ZZ-9999 and consists of the carcass with the ID:

- GTIN 4012345000016 / Animal ID AU71244009

Business Solution Design

Product	A	B
GTIN	4000005009998	4000005001114
Batch number	FR2-NB-1523	FR2-ZZ-9999
Date of arrival	05.09.2004	05.09.2004
Country of cutting	France	France
UN/ECE classification	1164353010400015000	
Date of departure	07.09.2004	07.09.2004

A shipment to cutting hall 2 is prepared on September 7th, 2004 and consists the products derived from the received carcasses.

The message sent from cutting plant 1 to cutting plant 2 contains the following information (related to the product respectively GTIN):

TradeItem Identification	ItemSub Identification	
4000005009998	FR2-NB-1523	Meat history information (origin and processing history)
		Activity History
		Current step identification 1
		Next step identification 2
		Activity Type: Breeding
		Activity Step
		Country of activity Belgium
		Performer Type Breeder
		Performer Identification: Name: Producer company
		Street: Backstreet 133
		City: Brussels
		Postal code: 12345
		Country: Belgium
		Date of arrival
		Date of departure 01.03.2004
		Reason for movement sale for fattening
		Meat Despatch Information
		Breeding Details
		Gender male
		Breed Jersey
		Feeding system organic
		Holding system predominantly barn
		Breed of father Jersey
		Breed of mother Jersey
		Activity History
		Current step identification 2
		Next step identification 3
		Activity Type: Fattening
		Activity Step 1
		Country of activity Netherlands
		Performer Type Fattener
		Performer Identification: Name: Fattening company
		Street: Bigstreet 5
		City: Amsterdam
		Postal code: 34567
		Country: Netherlands
		Date of arrival 02.03.2004
		Date of departure 01.06.2004
		Reason for movement sale for fattening
		Meat Despatch Information

Business Solution Design

		Fattening Details	
		Feeding system	Not specified
		Holding system	predominantly pasture
	Activity History		
	Current step identification	3	
	Next step identification	4	
	Activity Type:	Fattening	
	Activity Step	2	
	Country of activity	Germany	
	Performer Type	Fattener	
	Performer Identification:	Name: Fettmann KG Street: Kanalstraße 33 City: Köln Postal code: 50825 Country: Germany	
	Date of arrival	02.06.2004	
	Date of departure	02.09.2004	
	Reason for movement	sale for slaughtering	
		Meat Despatch Information	
		Fattening Details	
		Feeding system	Intensive
		Holding system	predominantly pasture
	Activity History		
	Current step identification	4	
	Next step identification	5	
	Activity Type:	Slaughtering	
	Activity Step		
	Country of activity	Belgium	
	Performer Type	Slaughterer	
	Performer Identification:	GLN: 4012345000009 ApprovalNumber:BE234	
	Date of arrival	03.09.2004	
	Date of departure	05.09.2004	
	Reason for movement	sale for cutting	
		Meat Despatch Information	
		Slaughtering Details	
		Date of slaughter	04.09.2004
		Slaughter system	halal
		Category (UN/ECE)	young intact male
		Conformation (SEUROP)	E
		Fat cover (UN/ECE)	Not specified
	Activity History		
	Current step identification	5	
	Next step identification		
	Activity Type:	Cutting	
	Activity Step	1	
	Country of activity	France	
	Performer Type	Cutter	
	Performer Identification:	GLN: 4000005000070 Approval Number: FR2345	
	Date of arrival	05.09.2004	
	Date of departure	07.09.2004	
	Work tem Type	Meat	
		Meat Despatch Information	
		Cutting Details	
		UN/ECE classification	1164353010400015000

GTIN	Additional ID
4000005001114	FR2-ZZ-9999

Meat history information (origin and processing history)

.....

Business Solution Design

Process step 6: Cutting plant 2

A shipment of 2 products of primal cuts from cutting plant 1 is received by the cutting hall 2 identified with GLN 4400999000016 (approval number of cutting hall DK98767) on September 8th, 2004.

Each batch is processed separately and converted into a single batch of secondary cuts.

Product A (GTIN 400005009998 / batch number FR2-NB-1523) is converted in product C identified with GTIN 4400999000993 and batch number DK3296.

Product B (GTIN 400005001114 / batch number FR2-ZZ-9999) is converted in product D identified with GTIN 4400999000443 and batch number "DK9999".

Product	C	D
GTIN	4400999000993	4400999000443
Batch number	DK3296	DK9999
Date of arrival	08.09.2004	08.09.2004
Country of cutting	Denmark	Denmark
Date of departure	10.09.2004	10.09.2004

A shipment to the mincer consisting of the two products is prepared on September 10th, 2004.

The message sent from cutting plant 2 to the mincer contains the following information (related to the product respectively GTIN):

TradeItem Identification	ItemSub Identification	
4400999000993	DK3296	Meat history information (origin and processing history)
		Activity History
		Current step identification 1
		Next step identification 2
		Activity Type: Breeding
		Activity Step
		Country of activity Belgium
		Performer Type Breeder
		Performer Identification: Name: Producer company
		Street: Backstreet 133
		City: Brussels
		Postal code: 12345
		Country: Belgium
		Date of departure 01.03.2004
		Reason for movement sale for fattening
		Meat Despatch Information
		breedingDetails
		Date of birth 01.01.2004
		Gender male
		Breed Jersey
		Feeding system organic
		Holding system predominantly barn
		Breed of father Jersey
		Breed of mother Jersey
		Activity History

Business Solution Design

Current step identification 2
 Next step identification 3
 Activity Type: Fattening
 Activity Step 1
 Country of activity Netherlands
 Performer Type Fattener
 Performer Identification: Name: Fattening company
 Street: Bigstreet 5
 City: Amsterdam
 Postal code: 34567
 Country: Netherlands
 Date of arrival 02.03.2004
 Date of departure 01.06.2004
 Reason for movement sale for fattening

Meat Despatch Information

Fattening Details

Feeding system	Not specified
Holding system	predominantly pasture

Activity History

Current step identification 3
 Next step identification 4
 Activity Type: Fattening
 Activity Step 2
 Country of activity Germany
 Performer Type Fattener
 Performer Identification: Name: Fettmann KG
 Street: Kanalstraße 33
 City: Köln
 Postal code: 50825
 Country: Germany
 Date of arrival 02.06.2004
 Date of departure 02.09.2004
 Reason for movement sale for slaughtering

Meat Despatch Information

Fattening Details

Country of fattening	Germany
Feeding system	Intensive
Holding system	predominantly pasture

Activity History

Current step identification 4
 Next step identification 5
 Activity Type: Slaughtering
 Activity Step
 Country of activity Belgium
 Performer Type Slaughterer
 Performer Identification: GLN: 4012345000009
 ApprovalNumber:BE234
 Date of arrival 03.09.2004
 Date of departure 05.09.2004
 Reason for movement sale for cutting

Meat Despatch Information

Slaughtering Details

Date of slaughter	04.09.2004
Slaughter system	halal
Category (UN/ECE)	young intact male
Conformation (SEUROP)	E
Fat cover (UN/ECE)	Not specified

Activity History

Current step identification 5
 Next step identification 6

Business Solution Design

Activity Type: Cutting
 Activity Step 1
 Country of activity France
 Performer Type Cutter
 Performer Identification: GLN: 400005000070
 Approval Number: FR2345
 Date of arrival 05.09.2004
 Date of departure 07.09.2004

Meat Despatch Information
 Cutting Details
 UN/ECE classification 1164353010400015000

ActivityHistory

Current step identification 6
 Next step identification
 Activity Type: Cutting
 Activity Step 2
 Performer Type Cutter
 Performer Identification: GLN: 4400999000016
 Approval Number: DK98767
 Date of arrival 08.09.2004
 Date of departure 10.09.2004

Meat Despatch Information
 Cutting Details
 UN/ECE classification 1164353010400017999

GTIN Additional ID
 4400999000443 DK9999

Meat history information (origin and processing history)

.....

Process step 6: Mincer

A shipment of 2 products of secondary cuts from cutting plant 2 is received by the mincer identified with GLN 405555999992 on September 12th, 2004.

Product C identified with GTIN 4400999000993 and batch number DK3296 is converted into minced beef identified with GTIN 405555000568 and batch number NL1232.

GTIN	405555000568
Batch number	NL1232
Date of arrival	12.09.2004
Fat content	40 %
Country of cutting	Netherlands
Date of departure	13.09.2004

The message sent from the mincer to the retailer contains the following information (related to the product respectively GTIN):

TradeItem Identification
 ItemSub Identification
 GTIN Additional ID
 405555000568 NL1232

Meat history information (origin and processing history)

Activity History

Current step identification 1
 Next step identification 2
 Activity Type: Breeding

Business Solution Design

Activity Step
 Country of activity Belgium
 Performer Type Breeder
 Performer Identification: Name: Producer company
 Street: Backstreet 133
 City: Brussels
 Postal code: 12345
 Country: Belgium
 Date of arrival
 Date of departure 01.03.2004
 Reason for movement sale for fattening

Meat Despatch Information breedingDetails	
Date of birth	01.01.2004
Gender	male
Breed	Jersey
Feeding system	organic
Holding system	predominantly barn
Breed of father	Jersey
Breed of mother	Jersey

Activity History

Current step identification 2
 Next step identification 3
 Activity Type: Fattening
 Activity Step 1
 Country of activity Netherlands
 Performer Type Fattener
 Performer Identification: Name: Fattening company
 Street: Bigstreet 5
 City: Amsterdam
 Postal code: 34567
 Country: Netherlands
 Date of arrival 02.03.2004
 Date of departure 01.06.2004
 Reason for movement sale for fattening

Meat Despatch Information Fattening Details	
Feeding system	Not specified
Holding system	predominantly pasture

Activity History

Current step identification 3
 Next step identification 4
 Activity Type: Fattening
 Activity Step 2
 Country of activity Germany
 Performer Type Fattener
 Performer Identification: Name: Fettmann KG
 Street: Kanalstraße 33
 City: Köln
 Postal code: 50825
 Country: Germany
 Date of arrival 02.06.2004
 Date of departure 02.09.2004
 Reason for movement sale for slaughtering

Meat Despatch Information Fattening Details	
Country of fattening	Germany
Feeding system	Intensive
Holding system	predominantly pasture

Activity History

Current step identification 4

Business Solution Design

Next step identification 5
 Activity Type: Slaughtering
 Activity Step
 Country of activity Belgium
 Performer Type Slaughterer
 Performer Identification: GLN: 4012345000009
 ApprovalNumber:BE234
 Date of arrival 03.09.2004
 Date of departure 05.09.2004
 Reason for movement sale for cutting

Meat Despatch Information Slaughtering Details	
Date of slaughter	04.09.2004
Slaughter system	halal
Category (UN/ECE)	young intact male
Conformation (SEUROP)	E
Fat cover (UN/ECE)	Not specified

Activity History

Current step identification 5
 Next step identification 6
 Activity Type: Cutting
 Activity Step 1
 Country of activity France
 Performer Type Cutter
 Performer Identification: GLN: 4000005000070
 Approval Number: FR2345
 Date of arrival 05.09.2004
 Date of departure 07.09.2004

Meat Despatch Information Cutting Details	
UN/ECE classification	1164353010400015000

ActivityHistory

Current step identification 5
 Next step identification 6
 Activity Type: Cutting
 Activity Step 2
 Performer Type Cutter
 Performer Identification: GLN: 4400999000016
 Approval Number: DK98767
 Date of arrival 08.09.2004
 Date of departure 10.09.2004

Meat Despatch Information Cutting Details	
UN/ECE classification	1164353010400017999

ActivityHistory

Current step identification 7
 Next step identification
 Activity Type: Mincing
 Activity Step 1
 Country of activity Netherlands
 Performer Type Mincer
 Performer Identification: GLN: 4055555999992
 Date of arrival 12.09.2004
 Date of departure 13.09.2004

Meat Despatch Information Mincing Details	
Fat content	40 %

Business Solution Design

Process step 7: Retailer

A shipment of 1 batch of consumer units from the mincer is received September 30th, 2004.

The batch is made available for sale at a retail outlet October 1st, 2004.

1.7 Implementation Considerations

1.8 Testing

1.8.1 Pass / Fail Criteria

Unit testing criteria for business solution.

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

1.8.2 Test Data

Attribute	Value

1.9 Appendices

1.10 Summary of Changes

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

Change	BMS Ver- sion	Associated CR Number
Renamed attribute in Slaughtering class. optimumMaturation→ optimumMaturationDate Updated accordingly in GDD and Class Diagram Applied Modelling Best Practice Enabled Visibility of external classes. Alphabetize attributes in OtherIdentification class Reformatted figure #'s. Assigned Unique ID to BSD.	1.0.5	

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