

Business Message Standard (BMS)

for

Invoice

**BRG: Pay
IRT: Upstream Standards**

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20050210	0.1.0	John Ryu	Initial Version in BMS/BSD template	Migration of BRD to standard BMS/BSD format	5724
20050331	0.1.1	Andrew Hearn	Context Update	Updated the context listed within the document	N/A
05.04.2005	0.0.1	Marco Schuyt	First Draft	New invoice based on Simple Invoice and Request for Payment	
03.06.05	0.2.0	Marco Schuyt	Second Draft	Second draft of the new invoice, based on the Simple Invoice.	
15.06.05	0.2.1	Marco Schuyt	Content update	Content updated on basis of comments of BRG Pay as explained in the consolidated comment sheet.	
30.06.05	0.2.2	Marco Schuyt	Public review, peer review		
11.07.05	0.2.3	Marco Schuyt	Clarification of 3 rd party usage in the invoice.	Class diagram updated with Payee. Use case descriptions and diagram updated with 3 rd party clarification.	
27.07.05	0.2.4	John Ryu	Peer Review	<p>Added Float datatype in the InvoiceTotals class.</p> <p>Updated Official Dictionary Entry Name in GDD to reflect the Float datatype</p> <p>Updated code list to remove any nonalphanumeric character.</p> <p>SELF-BILLED_INVOICE changed to SELF_BILLED_INVOICE</p> <p>Updated the Business Document Example add currency into the invoiceAllowanceChargeAmountOfOwnerShipDate→transferOfOwnershipDate</p>	<p>MDL P4CL: 7189</p> <p>BSD P4CL: 7191</p>
18.08.2005	0.2.5	John Ryu	BuildMaster incorporation and template	For consistency replaced Amount Datatype to Float in class diagram (InvoiceLineItemInformationAfter-	Build MDL P4CL:

Date of Change	Version	Changed By	Reason for Change	Summary of Change	Model Build #
			enforcement.	<p>Taxes, InvoiceAllow- anceCharge) and updated sample data to reflect this.</p> <p>Updated GDD.</p> <p>Updated class diagram per Modelling Best Practice renamed elements.</p> <p>FROM: VatTaxInform.. TO: VATTaxInformation</p> <p>FROM: EulInvoiceParty TO: EUInvoiceParty</p> <p>Reformatted per BMS/BSD template.</p>	<p>7316</p> <p>BSD P4CL: 7317</p>
03.10.2005	0.3.0	Coen Janssen	Technical Public Review - Up- stream Stan- dards	Several functional changes, see paragraph 1.10. Also adjusted the examples.	
10.10.2005	0.3.1	John Ryu	Incorporate Main Harmonized Model	See paragraph 1.10 for changes.	BSD P4CL: 7542
27.03.2007	0.3.2	Giovanni Biffi	Editorial Changes	Minor Editorial Changes to the Document	N/A

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1 Business Solution

1.1 Business Domain View

1.1.1 Problem Statement / Business Need

The Invoice Message is defined as requesting payment for goods or services under conditions agreed upon between the seller and the buyer. It contains the necessary information needed for payment consisting of parties, items, prices, amounts and quantities.

1.1.2 Objective

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

1.1.3 Audience

The audience of the standards would be any participant in the global supply chain. This would include retailers, manufacturers, service providers and other third parties.

1.1.4 Artefacts

Artefact name	State	Artefact / State description
None		

1.1.5 References

Ref	Reference Name	Description
[Ref1]	BRAD Upstream Standards –Financial Settlement 0.1.0	Financial requirements for the Upstream IRT
[Ref2]	Request for Payment – Business Requirement Document	
[Ref3]	BRD Simple Invoice Extensions	

1.1.6 Acknowledgements

1.1.6.1 BRG Members

Function	Name	Company / organisation
BRG Chair	Henry Gerstman	WELLS FARGO CENTURY
BRG Chair	Joel Goldberg	ROSENTHAL & ROSENTHAL
BRG Member	Janet Bailey	VF CORPORATION
BRG Member	J. Craig Brinkman	PROCTER & GAMBLE
BRG Member	Glenda Connoll	GS1 SOUTH AFRICA
BRG Member	Arne Dicks	GS1 GERMANY
BRG Member	Karina Duvinger	GS1 SWEDEN
BRG Member	Suzanne Fassler	JCPENNEY CO. INC.
BRG Member	Brenda Hall	WAL-MART STORES INC.
BRG Member	Sandra Hurd	THE CIT GROUP
BRG Member	Catherine Karim	GS1 FRANCE
BRG Member	Ana Paula Maniero	GS1 BRASIL
BRG Member	Patricia Owyang	LEVI STRAUSS & CO.
BRG Member	Marie Perry	COCA-COLA ENTERPRISES
BRG Member	Merriel Simmons	7-ELEVEN, INC.
BRG Member	Seiichi Saito	DCC JAPAN
BRG Member	Bill Steger	AHOLD FINANCIAL SERVICES
BRG Member	Laura Stone	PFIZER, INC.
BRG Member	Jose Falcon Tuesta	GS1 PERU
BRG Manager	Tom Heist	GS1

1.1.6.2 ITRG Members

Function	Name	Company / organisation
ITRG Chair		

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

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

1.1.6.4 Design Team Members

Function	Name	Organisation
Modeller	John Ryu	GS1
Modeller	Marco Schuyt	GS1 Netherlands
XML Technical Designer	Dipan Anarkat	GS1
EANCOM Technical Designer	Marco Schuyt	GS1 Netherlands
Peer Reviewer	John Ryu	GS1

1.2 Business Context

Context Category	Value(s)
Industry	<i>All, Consumer Packaged Goods</i> All
Geopolitical	<i>All, Global, Europe, Unites States, Japan, UK</i> All
Product	<i>All, Direct Materials, Food, Non-Food, Hard lines, Apparel</i> All
Process	<i>All, Order (Direct To Consumer), Order (Direct Store Delivery), Order, Pay (Self Billing), Deliver (Direct Store Delivery)</i> Pay
Official Constraints	<i>None, Value Added Tax, Sales Tax</i> European VAT-regulations, Sales tax(?)
Roles	<i>Buyer, Seller, Ship From, Ship To, Payer Payee, Data Source, Data Recipient</i> Buyer, Seller, Payer, Remit To, Tax Representative, Ship To
System Capabilities	<i>All, EANCOM, XML, AIDC, EPC-network</i> EANCOM, XML

If no value use, the default of “All” except for Official Constraints where default is “None”.

1.3 Additional Technical Requirements Analysis

1.3.1 Technical Requirements (optional)

Number	Statement	Rationale
	No Technical Requirements	

1.4 Business Transaction View

1.4.1 Business Transaction Use Case Diagram

The diagram below illustrates the parties and the roles they (can) play in the invoicing and payment processes.

- Amongst others, the invoice transaction sets the preconditions for the payment process. Therefore the invoice also contains information about the parties that will become active during the payment process, i.e. the payer and the payee.
- Furthermore there might be a third party involved, such as a factor.

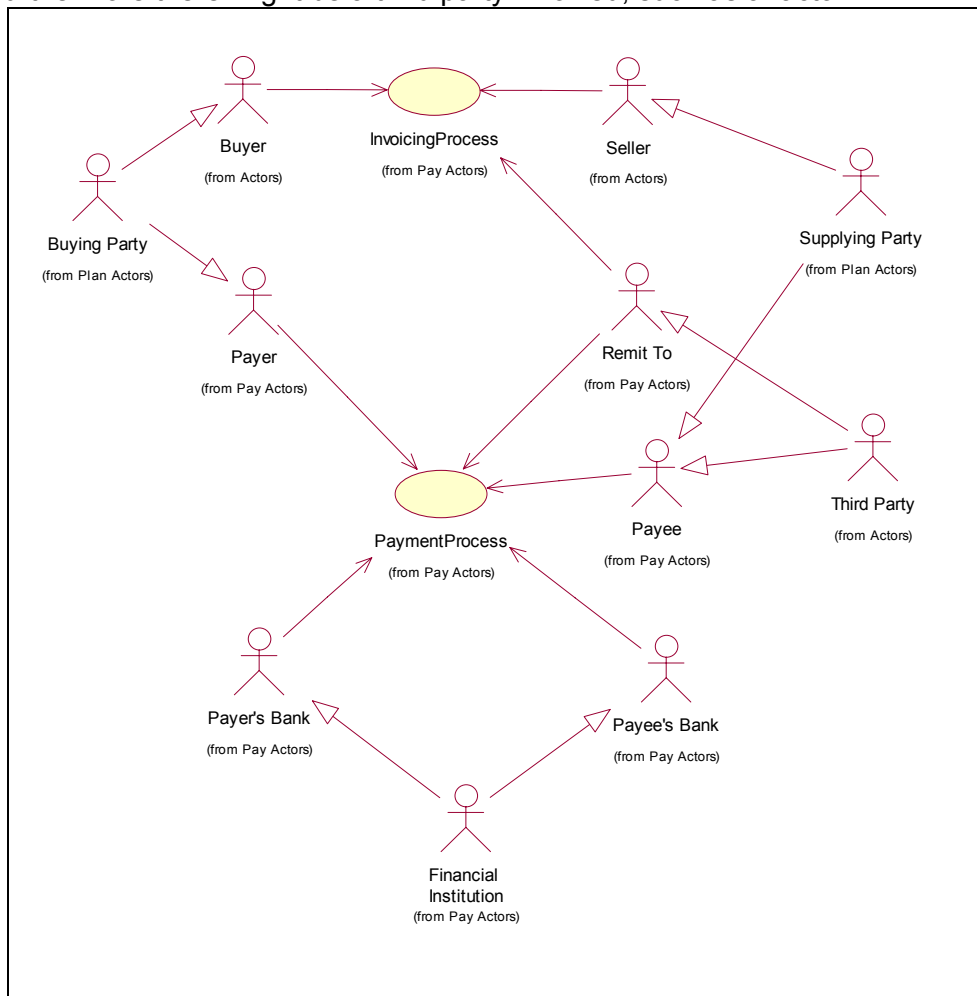


Figure 1 – Parties and roles in the invoicing and payment processes

1.4.2 Use Case Description: Invoice

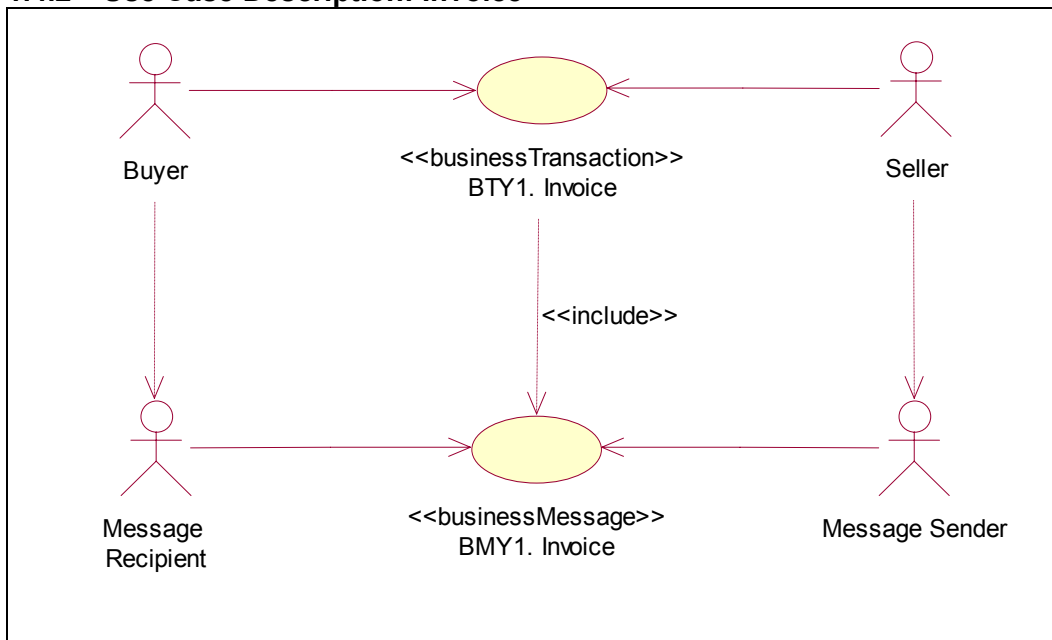


Figure 2 – Use Case Diagram: Invoice Business Transaction

Use Case ID	BTY1									
Use Case Name	Invoice									
Use Case Description	The invoice message enables the supplier to send an invoice to the manufacturer related to delivered goods (in case of non consignment scenario) or to used (consumed) goods (in case of a consignment scenario)									
Actors (Goal)	Buyer: To receive the invoice Seller: To send the invoice Remit-to: To receive the invoice									
Performance Goals										
Preconditions	Invoice created									
Post conditions	Invoice received									
Scenario	<p>Begins when: the seller generates an invoice based on the goods deliveries or consumption reports (in case of consignment).</p> <p>Continues with:</p> <table><tr><th>Step #</th><th>Actor</th><th>Activity Step</th></tr><tr><td>1.</td><td>Seller</td><td>Issue and sends the invoice to the buyer.</td></tr><tr><td>2.</td><td>Buyer</td><td>Receives the invoice.</td></tr></table> <p>Ends when:</p> <p>The buyer receives the invoice.</p>	Step #	Actor	Activity Step	1.	Seller	Issue and sends the invoice to the buyer.	2.	Buyer	Receives the invoice.
Step #	Actor	Activity Step								
1.	Seller	Issue and sends the invoice to the buyer.								
2.	Buyer	Receives the invoice.								

Alternative Scenario	Begins when: the seller generates an invoice based on the goods delivered or consumption reports (in case of consignment) and the payment is to be made to a remit-to.	
	Continues with:	
	Step #	Actor
	Activity Step	
	1.	Seller
Business Transaction Rules	Issue and sends the invoice to the Buyer and to the Remit-to	
	2.	Buyer and Remit-to
	Receive the invoice.	
	Ends when:	
	The buyer and remit-to receives the invoice.	
	1.	For this transaction the invoice type INVOICE must be used.

1.4.3 Business Transaction Activity Diagram(s)

No Activity Diagram

1.4.4 Business Transaction Sequence Diagram(s) (optional)

No Sequence Diagram

1.4.5 Use Case Description: Self Billing Invoice

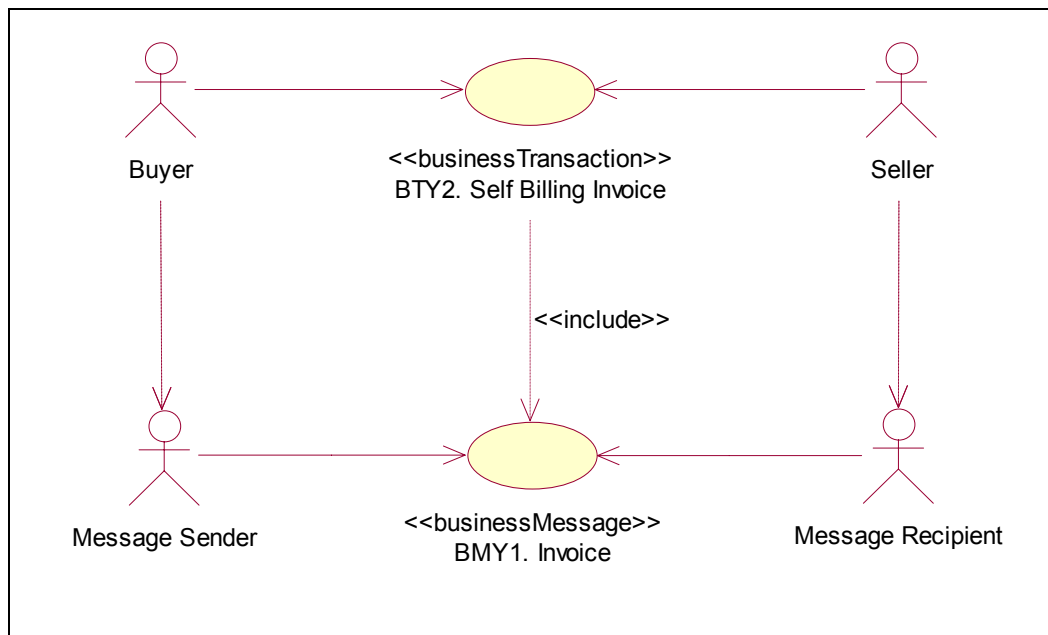


Figure 3 – Use Case Diagram: Self Billing Invoice Business Transaction

Business Solution Design

Use Case ID	BTY2											
Use Case Name	Self Billing Invoice											
Use Case Description	The Self-billing invoice enables the buyers to issue the invoice themselves and make payment accordingly. It includes information on the contract(s) referenced, the line-item quantities and prices of each line-item delivered as well as the total value of the invoice. The invoice message can reference multiple contracts, deliveries and items.											
Actors (Goal)	Buyer: To send the invoice Seller: To receive the invoice											
Performance Goals												
Preconditions	Invoice created											
Post conditions	Invoice received											
Scenario	<p>Begins when: the buyer issues an invoice based on the goods deliveries or consumption reports (in case of consignment).</p> <p>Continues with:</p> <table><tr><th>Step #</th><th>Actor</th><th>Activity Step</th></tr><tr><td>1</td><td>Buyer</td><td>Issue and sends the invoice to the seller.</td></tr><tr><td>2</td><td>Seller</td><td>Receives the invoice.</td></tr></table> <p>Ends when:</p> <p>Seller receives the invoice.</p>			Step #	Actor	Activity Step	1	Buyer	Issue and sends the invoice to the seller.	2	Seller	Receives the invoice.
Step #	Actor	Activity Step										
1	Buyer	Issue and sends the invoice to the seller.										
2	Seller	Receives the invoice.										
Alternative Scenario	No Alternative Scenario											
Business Transaction Rules	<table><tr><td>1.</td><td>In case of this transaction the invoice type SELF_BILLED_INVOICE must be used.</td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr></table>			1.	In case of this transaction the invoice type SELF_BILLED_INVOICE must be used.							
1.	In case of this transaction the invoice type SELF_BILLED_INVOICE must be used.											

1.4.6 Business Transaction Activity Diagram(s)

No Activity Diagram

1.4.7 Business Transaction Sequence Diagram(s) (optional)

No Sequence Diagram

1.4.8 Use Case Description: Credit Invoice

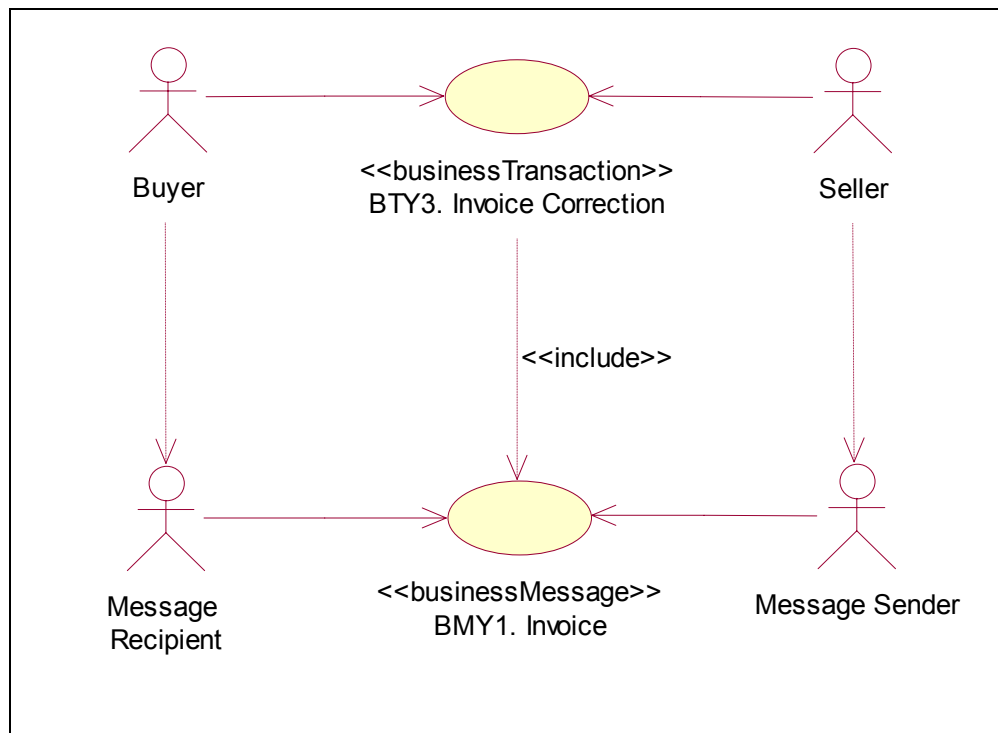


Figure 4 – Use Case Diagram: Credit Invoice Business Transaction

Use Case ID	BTY3		
Use Case Name	Invoice Correction		
Use Case Description	The invoice enables the seller to invoice corrections on previously sent invoices.		
Actors (Goal)	Buyer: To receive the invoice Seller: To send the invoice Remit-to: To receive the invoice		
Performance Goals			
Preconditions	Invoice disputed		
Post conditions	Credit or Debit note received.		
Scenario	Begins when: In case of disputes the buyer requests the invoice to be corrected.		
	Continues with:		
	Step #	Actor	Activity Step
	1	Seller	The seller issues and sends an invoice with the approved corrections.
	2	Buyer	The buyer receives the invoice.
	Ends when:		

	Buyer receives the credit invoice.		
Alternative Scenario	Begins when: In case the seller needs to make a correction, or in case of disputes the buyer requests the invoice to be corrected, and the payment is to be made to the remit-to.		
	Step #	Actor	Activity Step
	1	Seller	Issue and sends the invoice with the approved corrections to the buyer and to the Remit-to.
	2	Buyer	Receive the invoice.
	Ends when: The buyer and Remit-to receive the invoice.		
Business Transaction Rules			
	1	In case of this transaction the invoice type CREDIT_NOTE or DEBIT_NOTE must be used.	

1.4.9 Business Transaction Activity Diagram(s)

No Activity Diagram

1.4.10 Business Transaction Sequence Diagram(s) (optional)

No Sequence Diagram

1.4.11 Use Case Description: Self Billing Invoice Correction

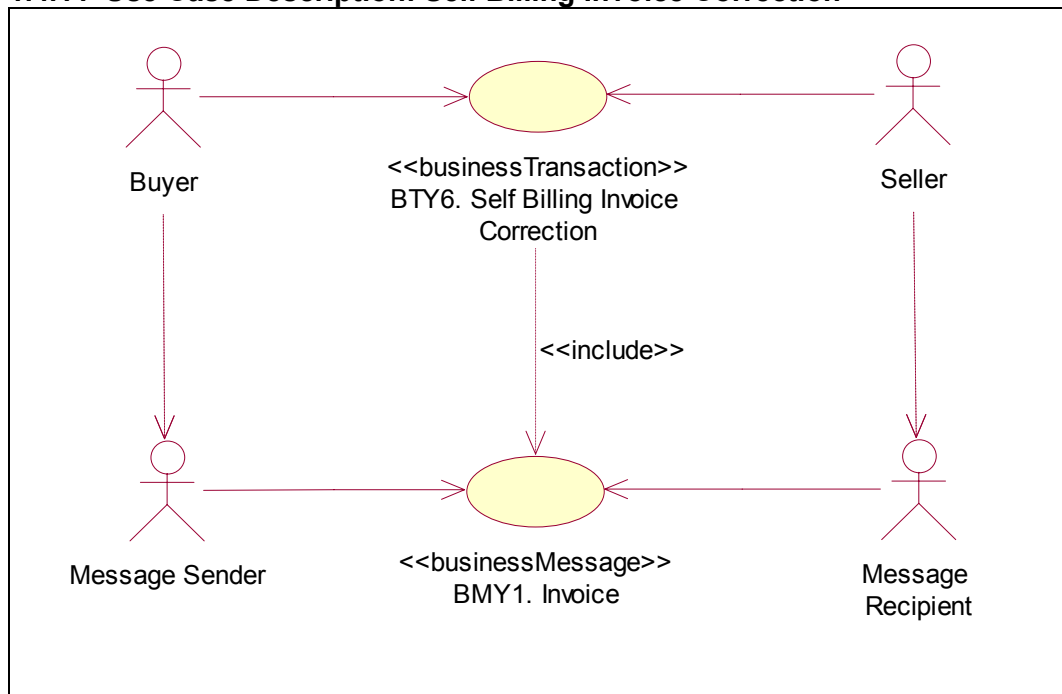


Figure 4 – Use Case Diagram: Self Billing Invoice Correction Business Transaction

Business Solution Design

Use Case ID	BTY6		
Use Case Name	Self Billing Invoice Correction		
Use Case Description	The invoice enables the buyer to invoice corrections on previously sent invoices.		
Actors (Goal)	Buyer, Seller		
Performance Goals			
Preconditions	Invoice disputed.		
Post conditions	Credit or debit note received.		
Scenario	Begins when: In case of disputes the buyer requests the invoice to be corrected.		
	Continues with:		
	Step #	Actor	Activity Step
	1	Buyer	Issues and sends an invoice with the corrections.
	2	Seller	Receives the invoice.
Scenario	Ends when:		
	Seller receives the debit invoice.		
Alternative Scenario	No Alternative Scenario		
Business Transaction Rules			
	1	In case of this transaction the invoice type CREDIT_NOTE or DEBIT_NOTE must be used.	

1.4.12 Business Transaction Activity Diagram(s)

No Activity Diagram

1.4.13 Business Transaction Sequence Diagram(s) (optional)

No Sequence Diagram

1.5 Information Model (including GDD Report)

1.5.1 Data Description:

The related requirement ties back to the original BRD/BRAD. The [...] refers to the specific BRD/BRAD and those are listed in section 1.1.5, and the specific section is depicted in the {...}

1.5.1.1 Related Requirements for Invoice

Class (ABIE)	Attribute (BBIE)	Association (ASBIE)	Secondary Class	Related Requirement
Invoice				
	invoiceType			[ref1] {7.1.1-3}
	invoiceCurrency			[ref1] {7.1.1-4}
	countryOfSupplyOf Goods			[ref1] {7.1.1-8}
		<<is a>>	Document	[ref1] {7.1.1-2+11}
		invoiceIdentification	EntityIdentification	[ref1] {7.1.1-1}
		taxCurrencyInformation	CurrencyExchangeRateInformation	[ref1] {7.1.1-9+10}
			DigitalSignature	[ref3] {1.1-1}
			PaymentTerms	[ref1] {7.1.1-7+40+41+42}
		shipTo	PartyIdentification	[ref1] {7.1.1-39}
			InvoiceAllowanceCharge	
		buyer	InvoiceParty	[ref1] {7.1.1-12+13+14+16}
		seller	InvoiceParty	[ref1] {7.1.1-18+19+20+22}
		payee	InvoiceParty	[ref1] {7.1.1-30+31+32+34}
		payer	InvoiceParty	[ref1] {7.1.1-24+25+26+28}
		remitTo	InvoiceParty	Existing requirement
		taxRepresentative	InvoiceParty	[ref1] {7.1.1-36+37+38}
			InvoiceTotals	
		invoicingPeriod	TimePeriod	[ref1] {7.1.1-5+6}
InvoiceAllowanceCharge				
	invoiceAllowanceChargeType			[ref1] {7.1.1-43+45}
	invoiceAllowanceOrChargeType			

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Class (ABIE)	Attribute (BBIE)	Association (ASBIE)	Secondary Class	Related Requirement
	invoiceAllowanceChargeAmount			[ref1] {7.1.1-44+46}
			InvoiceTaxInformation	
InvoiceLineItem				[ref1] {7.1.1-55}
	invoicedQuantity			[ref1] {7.1.1-56+57}
	transferOfOwnershipDate			[ref1] {7.1.1-54}
	amountExclusiveAllowancesCharges			[ref1] {7.1.1-59}
	amountInclusiveAllowancesCharges			[ref1] {7.1.1-58}
	itemDescription			[ref1] {7.1.1-48}
	itemPriceBaseQuantity			[ref1] {7.1.1-62+63}
	itemPriceExclusiveAllowancesCharges			[ref1] {7.1.1-61}
	itemPriceInclusiveAllowancesCharges			[ref1] {7.1.1-61}
		<<is a>>	LineItem	
			TradeItemIdentification	[ref1] {7.1.1-47}
		deliveryNote	Reference	
		orderIdentification	DocumentOrDocumentLineReference	[ref1] {7.1.1-52}
		consumptionReport	DocumentOrDocumentLineReference	[ref1] {7.1.1-51}
		receivingAdvice	DocumentOrDocumentLineReference	[ref1] {7.1.1-50}
		purchaseConditions	DocumentOrDocumentLineReference	[ref1] {7.1.1-53}
		despatchAdvice	DocumentOrDocumentLineReference	[ref1] {7.1.1-49}
		invoice	DocumentOrDocumentLineReference	[ref1] {7.1.1-49}
		invoiceLineAllowanceCharge	InvoiceAllowanceCharge	[ref1] {7.1.1-64+65+66+67}
			InvoiceLineItemInformation-AfterTaxes	
		invoicelineTaxInformation	InvoiceTaxInformation	[ref1] {7.1.1-60}
Invoice-LineItemInformationAfterTaxes				
	amountInclusiveAllowancesCharges			Added during solution design

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Class (ABIE)	Attribute (BBIE)	Association (ASBIE)	Secondary Class	Related Requirement
	amountExclusiveAllowancesCharges			Added during solution design
InvoiceParty				
	companyRegistrationNumber			[ref1] {7.1.1-17+23+29+35}
	extension			
			PartyIdentification	
			NameAndAddress	
			AccountNumber	
InvoiceTotals				
	totalInvoiceAmount			[ref1] {7.1.1-79}
	totalLineAmountInclusiveAllowancesCharges			[ref1] {7.1.1-76}
	totalLineAmountExclusiveAllowancesCharges			[ref1] {7.1.1-76}
	totalAmountLineAllowancesCharges			[ref1] {7.1.1-77}
	totalAmountInvoiceAllowancesCharges			[ref1] {7.1.1-77}
	totalTaxAmount			[ref1] {7.1.1-78}
		taxSubtotal	TaxInformation	[ref1] {7.1.1-73+74+75}
InvoiceTaxInformation				[ref1] {7.1.1-60+68+69}
	dutyTaxFeeType			[ref1] {7.1.1-70}
	extension			[ref1] {7.1.1-70}
	taxableAmount			[ref1] {7.1.1-70}
	taxAmount			[ref1] {7.1.1-78}
TaxSubTotal				
			InvoiceTaxInformation	

1.5.1.2 Related Requirements for VAT Invoice Extension

Class (ABIE)	Attribute (BBIE)	Association (ASBIE)	Secondary Class	Related Requirement
VATInvoicePartyExtension				
	vatRegistrationNumber			[ref1] {7.1.1-15+21+27+33}
		<<is a>>	InvoiceParty	[ref1] {7.1.1-13+14+19+20+24+25+31+32+37+38}

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VATTaxInformationExtension				
	vatCategory			[ref1] {7.1.1-71}
	rate			[ref1] {7.1.1-72}
		<<is a>>	InvoiceTaxInformation	

1.5.2 GDD Report :

1.5.2.1 GDD for Invoice

Class (ABIE)	Attribute (BBIE)	Association (ASBIE)	Secondary Class	Official Dictionary Entry Name (ODEN)	Definition	Multiplicity
Invoice				Invoice. Details	The Invoice message is sent by the supplier to the customer claiming payment for goods or services supplied under conditions agreed by the seller and the buyer. This same message with correct data qualification also covers the functions of proforma invoice, debit and credit note. The seller may invoice for one or more transactions referring to goods and services related to one or more order, delivery instruction, call off, etc. The invoice may contain references to payment terms, transport details and additional information for customs or statistical purposes in the case of cross-border transaction.	
	invoiceType			Invoice. Invoice Type. Code	Code specifying the type of invoice.	1..1
	invoiceCurrency			Invoice. Invoice Currency. Code	The monetary unit used for calculation in an invoice.	1..1
	countryOfSupplyOf Goods			Invoice. Country Of Supply Of Goods. Code	The country from which the delivery has taken place.	0..1
		<<is a>>	Document	Invoice. Generalization. Document	Used to specify basic information about the content of the message including version number; creation date and time.	1..1
		invoiceIdentification	EntityIdentification	Invoice. Invoice. Identification	Contains the unique identifier of the business document.	1..1
		taxCurrencyInformation	CurrencyExchangeRateInformation	Invoice. Tax Currency Information. Currency Exchange Rate Information	Contains the currency in which taxes will be paid, as well as the exchange rate against the invoice currency.	0..1
			DigitalSignature	Invoice. Association. Digital Signature	A character string, generated using an asymmetric technique, which provides message non-repudiation, integrity checking and authentication.	0..1
			Invoice-	Invoice. Association. Invoice	Contains the specification of the Invoice Line	1..*

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Class (ABIE)	Attribute (BBIE)	Association (ASBIE)	Secondary Class	Official Dictionary Entry Name (ODEN)	Definition	Multiplicity
			LineItem	Line Item	Item.	
			PaymentTerms	Invoice. Association. Payment Terms	The specification of the payment terms applicable to this invoice.	0..*
		shipTo	PartyIdentification	Invoice. Ship To. Party Identification	Party to where goods will be or have been shipped.	0..1
			InvoiceAllowanceCharge	Invoice. Association. Invoice Allowance Charge	The allowances and/or charges applicable to the invoice.	0..*
		buyer	InvoiceParty	Invoice. Buyer. Invoice Party	Party to whom merchandise and/or service is sold.	1..1
		seller	InvoiceParty	Invoice. Seller. Invoice Party	Party selling merchandise to a buyer.	1..1
		payee	InvoiceParty	Invoice. Payer. Invoice Party	Identifies the credit party when other than the beneficiary.	0..1
		payer	InvoiceParty	Invoice. Payer. Invoice Party	Party initiating payment.	0..1
		remitTo	InvoiceParty	Invoice. Remit To. Invoice Party	The party (account owner) that receives a payment when such party is not the same as the seller.	0..1
		taxRepresentative	InvoiceParty	Invoice. Tax Representative. Invoice Party	The party who is responsible for declaring the Value Added Tax (VAT) on the sale of goods or services.	0..1
			InvoiceTotals	Invoice. Association. Invoice Totals	The specification of the prepaid amounts, or total monetary values due for the entire invoice.	1..1
		invoicingPeriod	TimePeriod	Invoice. Invoicing Period. Time Period	Period for which an invoice is issued.	0..1
InvoiceAllowanceCharge				Auto Generated from GDD Platform	The allowances and/or charges applicable to the invoice.	
	invoiceAllowanceChargeAmount			Auto Generated from GDD Platform	Amount of allowance or charge applicable to the complete invoice.	0..1
	invoiceAllowanceChargeType			Auto Generated from GDD Platform	Code specifying the identification of an allowance or charge.	0..1
	invoiceAllowanceOrChargeType			Auto Generated from GDD Platform	Code specifying the identification of an allowance or charge.	0..1
			invoiceTaxInformation	Auto Generated from GDD Platform	Information about the tax applicable to the allowance and/or charge.	0..1
InvoiceLineItem				Auto Generated from GDD Platform	To identify an invoice line item and it's configuration.	
	invoicedQuantity			Auto Generated from GDD Platform	The quantity as per invoice.	1..1
	transferO-			Auto Generated from GDD	The date on which the economic transfer of	1..1

Business Solution Design

Class (ABIE)	Attribute (BBIE)	Association (ASBIE)	Secondary Class	Official Dictionary Entry Name (ODEN)	Definition	Multiplicity
	fOwnership-Date			Platform	the goods took place. The tax authorities stipulate the specification of this date in invoices for goods and services.	
	amountExclusiveAllowancesCharges			Auto Generated from GDD Platform	The sum of the line item amount. Including Invoice line charges and allowances. The line amount = quantity * Price + Charges – Allowances.	0..1
	amountInclusiveAllowancesCharges			Auto Generated from GDD Platform	The sum of the line item amount. Excluding Invoice line charges and allowances. The line amount = quantity * Price.	0..1
	itemDescription			Auto Generated from GDD Platform	A short textual description of the invoiced item. Is legally required in some countries.	0..1
	itemPriceBase-Quantity			Auto Generated from GDD Platform	To specify the basis for a unit price.	0..1
	itemPriceExclusiveAllowancesCharges			Auto Generated from GDD Platform	The price stated is the gross price excluding all allowances, charges and taxes. Allowances and charges must be stated for net calculation purposes.	0..1
	itemPriceInclusiveAllowancesCharges			Auto Generated from GDD Platform	The price stated is the net price including all allowances and charges and excluding taxes. Allowances and charges may be stated for information purposes only.	0..1
		<<is a>>	LineItem	Auto Generated from GDD Platform	Used to specify basic information about the content of the line item including line item number.	1..1
			Trade-ItemIdentification	Auto Generated from GDD Platform	The identification of any item (product or service) upon which there is a need to retrieve pre-defined information and that may be priced, ordered, or invoiced at any point in any supply chain.	1..1
		deliveryNote	Reference	Auto Generated from GDD Platform	Reference number assigned by the issuer to a delivery note.	0..1
		orderIdentification	DocumentOr-Document- tLineReference	Auto Generated from GDD Platform	Reference number assigned by the buyer to an order.	0..1
		consumption-Report	DocumentOr-Document- tLineReference	Auto Generated from GDD Platform	A reference number identifying a consumption report.	0..1
		receivingAdvice	DocumentOr-Document- tLineReference	Auto Generated from GDD Platform	A reference number identifying a receiving advice.	0..1
		purchaseCondi-	DocumentOr-	Auto Generated from GDD	A reference number identifying the purchase	0..1

Business Solution Design

Class (ABIE)	Attribute (BBIE)	Association (ASBIE)	Secondary Class	Official Dictionary Entry Name (ODEN)	Definition	Multiplicity
		tions	DocumentLineReference	Platform	conditions.	
		despatchAdvice	DocumentOrDocumentLineReference	Auto Generated from GDD Platform	A reference number identifying a dispatch advice.	0..1
		invoice	DocumentOrDocumentLineReference	Auto Generated from GDD Platform	A reference number identifying an invoice.	0..1
		invoiceLineAllowanceCharge	InvoiceAllowanceCharge	Auto Generated from GDD Platform	The allowances and/or charges applicable to the invoice line.	0..*
			InvoiceLineItemInformationAfterTaxes	Auto Generated from GDD Platform	This is the invoice line amount including tax.	0..1
		invoicelineTaxInformation	InvoiceTaxInformation	Auto Generated from GDD Platform	Information about the tax applicable to the invoice line.	0..*
InvoiceLineItemInformationAfterTaxes				Auto Generated from GDD Platform	This is the invoice line amount including tax.	
	amountInclusiveAllowancesCharges			Auto Generated from GDD Platform	The amount excluding the allowances and/or charges.	0..1
	amountExclusiveAllowancesCharges			Auto Generated from GDD Platform	The amount including the allowances and/or charges.	0..1
InvoiceParty				Invoice Party. Details	The identification of a party used in the invoice.	
	companyRegistrationNumber			Auto Generated from GDD Platform	Company registration number as legally required.	0..1
	extension			Auto Generated from GDD Platform	Extension Point	0..1
			PartyIdentification	Invoice Party. Association. Party Identification	The identification of a party.	1..1
			NameAndAddress	Invoice Party. Association. Name And Address	The specification of person and a physical location.	0..1
			AccountNumber	Invoice Party. Association. Account Number	Identification assigned by the account servicing bank to identify the account of the account owner.	0..1
InvoiceTaxInformation				Auto Generated from GDD Platform	Information about the tax applicable to the invoice.	
	dutyTaxFeeType			Auto Generated from GDD Platform	Type of duty, tax or fee.	0..1

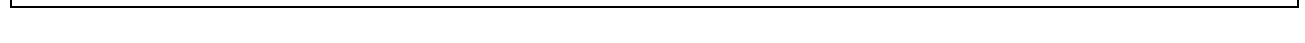
Business Solution Design

Class (ABIE)	Attribute (BBIE)	Association (ASBIE)	Secondary Class	Official Dictionary Entry Name (ODEN)	Definition	Multi- plicity
	extension			Auto Generated from GDD Platform	Extension point.	0..1
	taxableAmount			Auto Generated from GDD Platform	Amount on which a tax has to be applied.	0..1
	taxAmount			Auto Generated from GDD Platform	Tax imposed by government or other official authority related to the weight/volume charge or valuation charge.	0..1
InvoiceTotals				Invoice Totals. Details	The specification of the prepaid amounts, or total monetary values due for the entire invoice.	
	totalInvoiceAmount			Invoice Totals. Total Invoice Amount. Float_Numeric	Total sum charged in respect of a single Invoice in accordance with the terms of delivery.	1..1
	totalLineAmountInclusiveAllowancesCharges			Invoice Totals. Total Line Amount Inclusive Allowances Charges. Float_Numeric	The sum of all the line item amounts. Including Invoice line charges and allowances. The line amount = quantity * Price + Charges – Allowances.	0..1
	totalLineAmountExclusiveAllowancesCharges			Invoice Totals. Total Line Amount Exclusive Allowances Charges. Float_Numeric	The sum of all the line item amounts. Excluding Invoice line charges and allowances. The line amount = quantity * Price.	0..1
	totalAmountLineAllowancesCharges			Invoice Totals. Total Amount Line Allowances Charges. Float_Numeric	The amount specified is the total of all invoice line charges/allowances.	0..1
	totalAmountInvoiceAllowancesCharges			Invoice Totals. Total Amount Invoice Allowances Charges. Float_Numeric	The amount specified is the total of all invoice charges/allowances.	0..1
	totalTaxAmount			Invoice Totals. Total Tax Amount. Float_Numeric	Total of all duty/tax/fee amounts.	0..1
		taxSubtotal	TaxInformation	Invoice Totals. Tax Subtotal. Tax Information	The Tax sub total specifies the VAT-amounts for each VAT rate.	0..*
TaxSubTotal				Auto Generated from GDD Platform	The Tax sub total specifies the VAT-amounts for each VAT rate.	
			InvoiceTaxInformation	Auto Generated from GDD Platform	Information about the tax applicable for the invoice.	0..*

1.5.2.2 GDD for Invoice Extension

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Class (ABIE)	Attribute (BBIE)	Association (ASBIE)	Secondary Class	Official Dictionary Entry Name (ODEN)	Definition	Multiplicity
VATInvoicePartyExtension				Auto Generated from GDD Platform		
	vATRegistrationNumber			Auto Generated from GDD Platform	Unique number assigned by the relevant tax authority to identify a party for use in relation to Value Added Tax (VAT).	0..1
		<<is a>>	InvoiceParty	Auto Generated from GDD Platform	The identification of a party used in the invoice.	1..1
VATTaxInformationExtension				Auto Generated from GDD Platform		
	vATCategory			Auto Generated from GDD Platform	Code specifying a duty or tax or fee category	1..1
	rate			Auto Generated from GDD Platform	The actual rate of tax/duty.	1..1
		<<is a>>	InvoiceTaxInformation	Auto Generated from GDD Platform	Information about the tax applicable to the invoice.	1..1



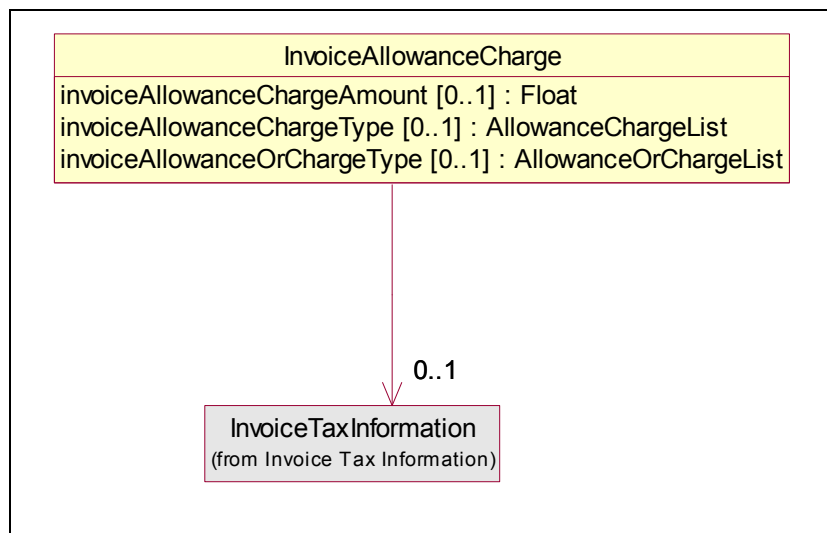


Figure 7 –Class Diagram: Invoice Allowance Charge

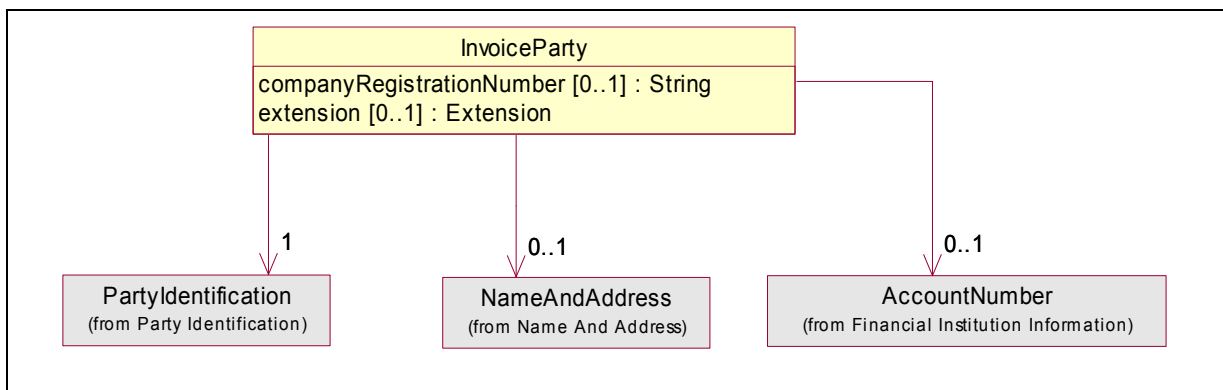


Figure 8 –Class Diagram: Invoice Party

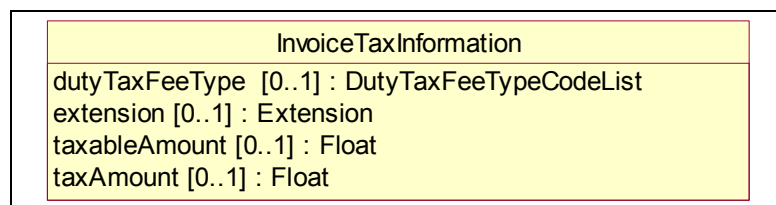


Figure 9 –Class Diagram: Invoice Tax Information

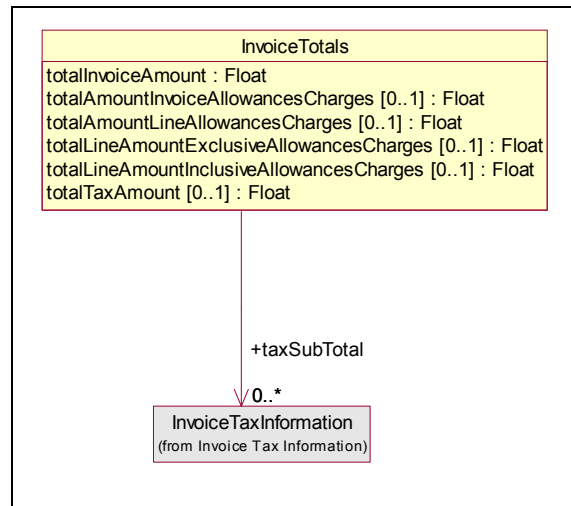


Figure 10 –Class Diagram: Invoice Totals

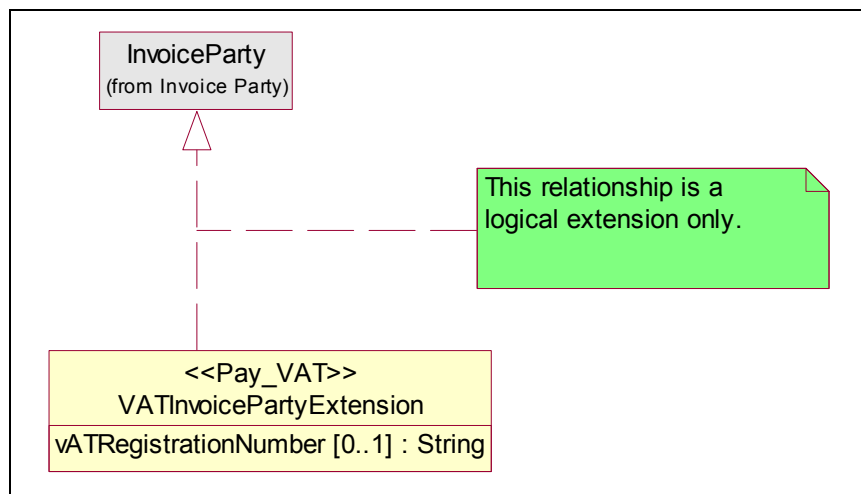


Figure 11 –Class Diagram: VAT Invoice Party Extension

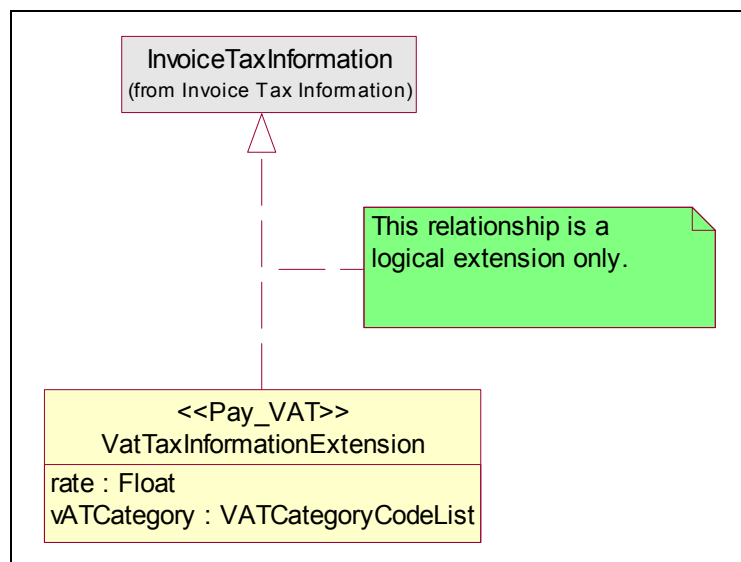


Figure 12 –Class Diagram: VAT Tax Information Extension

1.5.4 Code Lists

Code List Name	Code List Description
InvoiceTypeCodeList	
Code Name	Code Description
CREDIT_NOTE	Credit correction of an earlier exchanged claim for payment by an invoice or any other claim for an identified and agreed financial discrepancy.
DEBIT_NOTE	Debit correction of an earlier exchanged claim for payment by an invoice or any other claim for an identified and agreed financial discrepancy.
INVOICE	Claim for payment for goods or services supplied under conditions agreed between the seller and the buyer, seller originated.
SELF_BILLED_INVOICE	Claim for payment for goods or services supplied under conditions agreed between the seller and the buyer, buyer originated.

Code List Name	Code List Description
DutyTaxFeeType	
Code Name	Code Description
VALUE_ADDED_TAX	A tax on domestic or imported goods applied to the value added at each stage in the production/distribution cycle.

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Code List Name	Code List Description
VATCategoryCodeList	
Code Name	Code Description
EXEMPT_FROM_TAX	Code specifying that taxes are not applicable. All items in the transaction or a specific line item are exempt from tax.
FREE_EXPORT_ITEM	Code specifying that the item is free export and taxes are not charged.
HIGHER_RATE	Code specifying a higher rate of duty or tax or fee. All items in the transaction or a specific line item are taxed at the higher rate of tax.
MIXED_TAX_RATE	Code specifying that the rate is based on mixed tax. Transaction includes item taxed at different rates.
SERVICES_OUTSIDE_SCOPE_OF_TAX	Code specifying that taxes are not applicable to the services.
STANDARD_RATE	Code specifying the standard rate. All items in the transaction or a specific line item are taxed at the standard rate of tax.
VALUE_ADDED_TAX_NOT_NOW_DUE_F OR_PAYMENT	A code to indicate that the Value Added Tax (VAT) amount which is due on the current invoice is to be paid on receipt of a separate VAT payment request. The value added tax is not due for payment now.
ZERO_RATED_GOODS	Code specifying that the goods are at a zero rate. All items in the transaction or a specific line item are zero tax rated.

1.6 Business Document Example

The following is an example of an invoice message. The message is sent out on April 5th at 11 AM. The message is identified with the unique identifier 2005001.

The invoice is sent by the seller (8712345678913) to the buyer (8812345678903).

The invoice consists of 2 Items 08712345678906 and 08712345678883. Both are subject to 19% VAT.

Invoice	
- creationDateTime	2005-06-27T11:00:00
- documentStatus	ORIGINAL
- invoiceType	INVOICE
- invoiceCurrency	EUR
- countryOfSupplyOfGoods	NL
EntityIdentification (+invoiceIdentification)	
- uniqueCreatorIdentification	2005001
PartyIdentification (+contentOwner)	
- gLN	8712345678913
InvoiceParty (+buyer)	
- gLN	8812345678903
InvoiceParty (+seller)	
- gLN	8712345678913
InvoiceParty (+remitTo)	
- gLN	87123456789230
InvoiceAllowanceCharge	
- invoiceAllowanceChargeAmount	100
- invoiceAllowanceChargeType	ALLOWANCE_GLOBAL
- invoiceAllowanceOrChargeType	ALLOWANCE
InvoiceTaxInformation	
- dutyTaxFeeType	VALUE_ADDED_TAX
PaymentTerms	
- paymentTermsEvent	DATE_OF_INVOICE
- paymentTermsType	DISCOUNT
DiscountPayment	
- discountType	Payment within 30 days
- discountPercent	1%

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PaymentTimePeriod	
TimePeriodDue	
- timePeriod	DAYS
- value	30
VATTaxInformationExtension	
- vATCategory	STANDARD_RATE
- rate	19
InvoiceAllowanceCharge	
- invoiceAllowanceChargeAmount	50
- invoiceAllowanceChargeType	CHARGE_GLOBAL
- invoiceAllowanceOrChargeType	CHARGE
InvoiceTaxInformation	
- dutyTaxFeeType	VALUE_ADDED_TAX
VATTaxInformationExtension	
- vATCategory	STANDARD_RATE
- rate	19
InvoiceLineItem *1	
- lineItemNumber	1
- InvoicedQuantity	50
- transferOfOwnershipDate	2005-06-24
- itemPriceInclusiveAllowancesCharges	10
- amountInclusiveAllowancesCharges	500
InvoiceTaxInformation (+ invoiceLineTaxInformation)	
- dutyTaxFeeType	VALUE_ADDED_TAX
VATTaxInformationExtension	
- vATCategory	STANDARD_RATE
- rate	19
TradeItemIdentification	
- gTIN	08712345678906
DocumentOrDocumentLineReference (+despatchAdvice)	
- uniqueCreatorIdentification	200506001
InvoiceLineItem *2	
- lineItemNumber	2
- InvoicedQuantity	10
- transferOfOwnershipDate	2005-06-24
- itemPriceInclusiveAllowancesCharges	15

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- amountInclusiveAllowancesCharges	150
InvoiceTaxInformation (+ invoiceLineTaxInformation)	
- dutyTaxFeeType	VALUE_ADDED_TAX
VATTaxInformationExtension	
- vATCategory	STANDARD_RATE
- rate	19
TradeItemIdentification	
- gTIN	08712345678883
DocumentOrDocumentLineReference (+despatchAdvice)	
- uniqueCreatorIdentification	2005JE001
InvoiceTotals	
- totalInvoiceAmount	752
- totalLineAmountInclusiveAllowancesCharges	650
- totalTaxAmount	152
- totalAmountInvoiceAllowancesCharges	50
InvoiceTaxInformation (+ TaxSubTotal)	
- dutyTaxFeeType	VALUE_ADDED_TAX
- taxAmount	152
- taxableAmount	800
VATTaxInformationExtension	
- vATCategory	STANDARD_RATE
- rate	19

1.7 Implementation Considerations

No Implementation Consideration

1.8 Testing

1.8.1 Pass / Fail Criteria

No Testing

Nu mb er	Test Criteria	Related Re- quirement	Design Element	Pass Criteria	Fail Criteria
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1.8.2 Test Data

No Test Data

Business Solution Design

Attribute	Value
<i>Attribute Name. For example "orderQuantity"</i>	<i>Valid value associated with the attribute. For example "5".</i>

1.9 Appendices

No appendices

1.10 Summary of Changes

Change	BMS Version	Associated CR Number
Invoice (class) <ul style="list-style-type: none">- added new association to CurrencyExchangeRateInformation with rolename of +taxCurrencyInformation. InvoiceLineItem <ul style="list-style-type: none">- added new attribute itemDescription InvoiceParty <ul style="list-style-type: none">- added attribute companyRegistrationNumber (see next) EUInvoicePartyExtension <ul style="list-style-type: none">- renamed class into VATInvoicePartyExtension- removed attribute companyRegistrationNumber VATTaxInformationExtension <ul style="list-style-type: none">- removed attribute taxCurrency- removed attribute currencyExchangeRate	0.3.0	04-000229
Changed location of packages/folders internally in General Business Model Invoice Party Invoice Totals Invoice Tax Information Invoice Allowance Charge	0.3.1	

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