

Business Message Standard (BMS)

for

**Transportation Rate Request / Re-
sponse**

BRG: Deliver

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(dd.mm.cyyy)



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Business Solution Design

1 Business Solution

1.1 Business Domain View

1.1.1 Problem Statement / Business Need

Shippers will, at times, request spot rates from a carrier to support an immediate business need. In today's environment, this occurs via phone, or in a system-to-system scenario, using proprietary formats.

In addition, shippers will also work with a 3rd Party Logistics Provider or Payment Services Provider to rate a group of shipments for payment and/or freight auditing. Typically the rating of a group of shipments will be based on existing carrier rate contracts.

By developing a global standard for the support of motor carrier rate requests/response, the global community benefits from standardization and quicker start up.

Currently, there is no standardized ability to electronically request carrier rates and electronically respond back with a rate response. As a result, much of these activities are executed through manual processes (phone, email, spreadsheets, etc.) Where these activities are performed electronically, proprietary solutions are being employed.

1.1.2 Objective

The objective is to create a business message standard supporting the communication of transportation services provider rate requests and their corresponding responses.

1.1.3 Audience

Expected users of the BMS are: manufacturers, suppliers, retailers, carriers, transportation services providers, logistics providers, and freight payment/audit service providers.

1.1.4 Artefacts

Artefact name	State	Artefact / State description
Not applicable		

1.1.5 References

Reference Name	Description
[Ref 1]	Common Library v3.0
[Ref 2]	BRAD Transportation Rate Request / Response v1.0 r0

1.1.6 Acknowledgements

1.1.6.1 BRG Members

Function	Name	Company / organisation
BRG Chair	Debra Noyes	Johnsonville
BRG Chair	Sue Donarski	Schneider
BRG Member	Mike Osiecki	Best Buy
BRG Manager	Tom Heist	GS1 Global

1.1.6.2 ITRG Members

Function	Name	Company / organisation
...	Not applicable	

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

Function	Name	Company / organisation
...	Not applicable	

1.1.6.4 Design Team Members

Function	Name	Organisation
Modeller	Mark Van Eeghem	GS1 Global
XML Technical Designer	Dipan Anarkat	GS1 Global
EANCOM Technical Designer	Not applicable	GS1 Global
Peer Reviewer	John Ryu	GS1 Global

Business Solution Design

1.2 Business Context

Context Category	Value(s)
Industry	Motor Carrier Transportation
Geopolitical	All
Product	All
Process	Deliver
System Capabilities	EAN.UCC System
Official Constraints	None

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

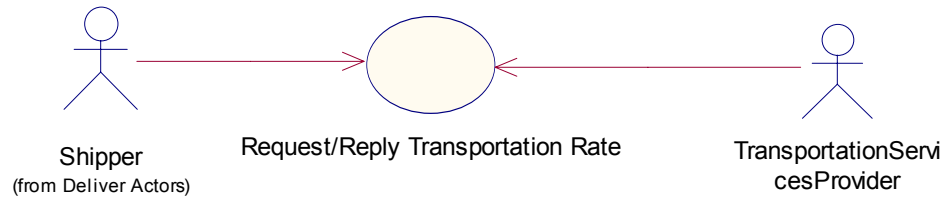
1.3 Additional Technical Requirements Analysis

1.3.1 Technical Requirements (optional)

Number	Statement	Rationale
	Not applicable	

1.4 Business Transaction View

1.4.1 Business Transaction Use Case Diagram



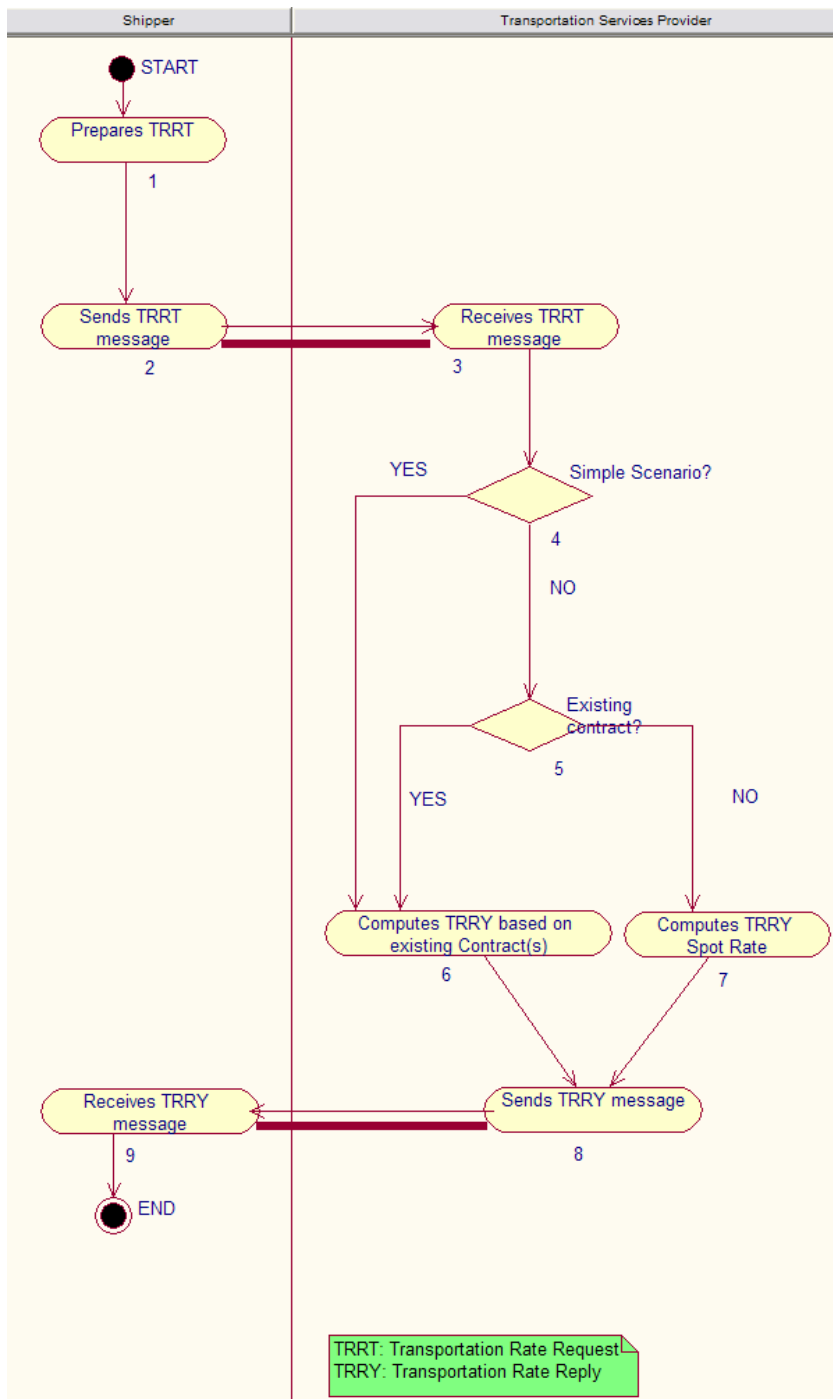
1.4.2 Use Case Description

Use Case ID	UC-1
Use Case Name	Request / Response Transportation Rate
Use Case Description	Provides the detailed processes for a shipper and a transportation services provider to conduct the request/Response transportation rate use case.
Actors (Goal)	Shipper: to be assured that the Transportation Rate Response is conform to the request and any possible pre-existing contracts. Transportation Services Provider: to be assured that the Transportation Rate Request complies with the set business requirements.
Performance Goals	To exchange Transportation Rate
Preconditions	Shipper wishes to receive a transportation rate.
Post conditions	Shipper has received a transportation rate from the transportation services provider.

Business Solution Design

Scenario	Begins when Shipper prepares Transportation Rate Request message		
	Continues with...		
	Step #	Actor	Activity Step
	2	Shipper	Sends Transportation Rate Request to Transportation Services Provider
	3	Transportation Services Provider	Receives Transportation Rate Request
	4	Transportation Services Provider	Determines whether the Request fits the simple scenario, if so, go to step 6.
	5	Transportation Services Provider	Determines whether a contract pre-exists with the Shipper. If not, skip to step 7.
	6	Transportation Services Provider	Computes Transportation Rate Response based on pre-existing contract. Skip to step 8.
	7	Transportation Services Provider	Computes Transportation Rate Response as a "Spot-Rate".
	8	Transportation Services Provider	Sends Transportation Rate Response message to Shipper
	Ends when... Shipper receives the Transportation Rate Response message		
Alternative Scenario	Step #	Actor	Activity Step
Related Requirements	1		
Related Rules			

1.4.3 Business Transaction Activity Diagram(s)



1.4.4 Business Transaction Sequence Diagram(s) (optional)

Not applicable

Information Model (including GDD Report)

Data Description:

1 Data Description Transportation Rate Simple Request:

(ABIE)	ATTRIBUTE (BBIE)	ASSOCIATION (ASBIE)	SECONDARY CLASS	RELATED REQUIREMENT
pickUp				[Ref 2] Business requirement 11
	availablePickUp- DateTime			[Ref 2] Business requirement 11
		<<Choice>> available- PickUpPeriod	TimeOrDateTimePeriod	[Ref 2] Business requirement 11
equipmentInforma-				[Ref 2] Business requirement 15
	equipmentIdentification			[Ref 2] Business requirement 15
	equipmentType			[Ref 2] Business requirement 15
		equipmentLength	MultiMeasurementValue	[Ref 2] Business requirement 15
commodityGroup				[Ref 2] Business requirement 8
	commodityDescription			[Ref 2] Business requirement 8
	commodityQuantity			[Ref 2] Business requirement 8
	commodityType			[Ref 2] Business requirement 8
		grossWeight	MultiMeasurementValue	[Ref 2] Business requirement 8
		netWeight	MultiMeasurementValue	[Ref 2] Business requirement 8
		volume	MultiMeasurementValue	[Ref 2] Business requirement 8
		commodityDimension	PackageDimension	[Ref 2] Business requirement 8
content				[Ref 2] Business requirement 14
identification				[Ref 2] Business requirement 14
	uniqueCreatorIdentifica- tion			[Ref 2] Business requirement 14
		contentOwner	PartyIdentification	[Ref 2] Business requirement 14

(ABIE)	ATTRIBUTE (BBIE)	ASSOCIATION (ASBIE)	SECONDARY CLASS	RELATED REQUIREMENT
EquipmentInforma-				[Ref 2] Business requirement 15
	equipmentIdentification			[Ref 2] Business requirement 15
	equipmentType			[Ref 2] Business requirement 15
		equipmentLength	MultiMeasurementValue	[Ref 2] Business requirement 15
Informa-				[Ref 2] Business requirement 5,6,7
		contactInformation	Contact	[Ref 2] Business requirement 5,6,7
		None	NameAndAddress	[Ref 2] Business requirement 5,6,7
		None	PartyIdentification	[Ref 2] Business requirement 5,6,7
Measure-				[Ref 2] Business requirement 8
ue	measurementValue			[Ref 2] Business requirement 8
Dimension				[Ref 2] Business requirement 8
		packageHeight	MultiMeasurementValue	[Ref 2] Business requirement 8
		packageLength	MultiMeasurementValue	[Ref 2] Business requirement 8
		packageWidth	MultiMeasurementValue	[Ref 2] Business requirement 8
Identification				[Ref 2] Business requirement 1
	globalLocationNumber			[Ref 2] Business requirement 1
		None	AdditionalPartyIdentifica- tion	[Ref 2] Business requirement 1
Terms				[Ref 2] Business requirement 2
	paymentTermsEvent			[Ref 2] Business requirement 2
	paymentTermsType			[Ref 2] Business requirement 2
	proximoCutoffDay			[Ref 2] Business requirement 2

(ABIE)	ATTRIBUTE (BBIE)	ASSOCIATION (ASBIE)	SECONDARY CLASS	RELATED REQUIREMENT
		None	DiscountPayment	[Ref 2] Business requirement 2
		None	InstallmentDue	[Ref 2] Business requirement 2
		None	NetPayment	[Ref 2] Business requirement 2
		None	PaymentMethod	[Ref 2] Business requirement 2
Requestor				[Ref 2] Business requirement 1,3
	businessIdentification-Number			[Ref 2] Business requirement 1,3
	rateRequestorRoleIdentifier			[Ref 2] Business requirement 1,3
		rateRequestor	PartyIdentification	[Ref 2] Business requirement 1,3
RequestedDelivery				[Ref 2] Business requirement 12
	requestedDelivery-DateTime			[Ref 2] Business requirement 12
		<<Choice>> requested-DeliveryPeriod	TimeOrDateTimePeriod	[Ref 2] Business requirement 12
ItemLineItem				[Ref 2] Business requirement 8
	itemHandlingUnit			[Ref 2] Business requirement 8
	packageFormCode			[Ref 2] Business requirement 8
		commodityInformation	CommodityGroup	[Ref 2] Business requirement 8
ShipmentTransportation				[Ref 2] Business requirement 9,10
	serviceLevelCode			[Ref 2] Business requirement 9,10
	shipmentSpecialHandlingCode			[Ref 2] Business requirement 9,10
	transportationMethod-Type			[Ref 2] Business requirement 9,10
		carrier	BuyingPartyIdentification	[Ref 2] Business requirement

(ABIE)	ATTRIBUTE (BBIE)	ASSOCIATION (ASBIE)	SECONDARY CLASS	RELATED REQUIREMENT
				9,10
TimePeriod				[Ref 2] Business requirement 11,12
Transportation-shipmentInformation				[Ref 2] Business requirement 16
	shipmentDeclaredValue			[Ref 2] Business requirement 16
		<<has>>	AvailablePickUp	[Ref 2] Business requirement 11
		<<has>>	EquipmentInformation	[Ref 2] Business requirement 8
		shipFrom	LocationInformation	[Ref 2] Business requirement 5
		shipTo	LocationInformation	[Ref 2] Business requirement 6
		stopOff	LocationInformation	[Ref 2] Business requirement 7
		<<may have>>	RequestedDelivery	[Ref 2] Business requirement 12
		<<has>>	ShipmentTransportation-Information	[Ref 2] Business requirement 9,10
Transportation-sampleReference				[Ref 2]
	currencyCode			[Ref 2] Business requirement 13
	numberOfShipments			[Ref 2] Business requirement 4
		<<is a>>	Document	[Ref 2] Business requirement 14
		transportationRateRequestIdentification	EntityIdentification	[Ref 2] Business requirement 14
		<<has>>	PaymentTerms	[Ref 2] Business requirement 2
		<<has>>	RateRequestor	[Ref 2] Business requirement 1,3
		shipment	TransportationRate-ShipmentInformation	[Ref 2] Business requirement 9,10

2 Data Description Transportation Rate Simple Response:

(ABIE)	ATTRIBUTE (BBIE)	ASSOCIATION (ASBIE)	SECONDARY CLASS	RELATED REQUIREMENT
nt				[Ref 2]
ntRefer-				[Ref 2] Business requirement 1,3,11
	creationDateTime			[Ref 2] Business requirement 1,3,11
		None	EntityIdentification	[Ref 2] Business requirement 1,3,11
ntification				[Ref 2]
	uniqueCreatorIdentifica- tion			[Ref 2]
		contentOwner	PartyIdentification	[Ref 2]
ntification				[Ref 2] Business requirement 6,2
	globalLocationNumber			[Ref 2] Business requirement 6,2
		None	AdditionalPartyIdentifi- cation	[Ref 2] Business requirement 6,2
ntRespon- sation				[Ref 2]
	ratedAsAmount			[Ref 2] Business requirement 4
	ratedAsType			[Ref 2] Business requirement 4
	rateExpirationDate			[Ref 2] Business requirement 8
	rateQualifierTypeCode			[Ref 2] Business requirement 4
	serviceIndicatorCode			[Ref 2] Business requirement 13
	totalGrossCharges			[Ref 2] Business requirement 10
	totalNetCharges			[Ref 2] Business requirement 9
	transitDays			[Ref 2] Business requirement 12
		accessorialRate	SpecialChargeInfor-	[Ref 2] Business requirement 5

(ABIE)	ATTRIBUTE (BBIE)	ASSOCIATION (ASBIE)	SECONDARY CLASS	RELATED REQUIREMENT
			mation	
		shipmentIdentification	EntityIdentification	[Ref 2]
		<<has>>	TariffInformation	[Ref 2] Business requirement 7
Information				[Ref 2] Business requirement 7
	tariffItem			[Ref 2] Business requirement 7
	tariffNumber			[Ref 2] Business requirement 7
	tariffSubItem			[Ref 2] Business requirement 7
		tariffIssuingAgent	BuyingPartyIdentification	[Ref 2] Business requirement 7
Transportation- Rate- Request				[Ref 2] Business requirement 1,4,11
		<<is a>>	Document	[Ref 2]
		contractReferenceIdentification	DocumentReference	[Ref 2] Business requirement 11
		rateQuoteReference	DocumentReference	[Ref 2] Business requirement 4
		transportationRateResponselIdentification	EntityIdentification	[Ref 2]
		transportationRateRequestIdentification	DocumentReference	[Ref 2] Business requirement 1
		carrier	PartyIdentification	[Ref 2] Business requirement 2
		shipment	ShipmentResponseInformation	[Ref 2] Business requirements 4,8,10,12,13

3 Data Description Transportation Rate Complex Request:

(ABIE)	Attribute (BBIE)	Association (ASBIE)	Secondary Class	Related Requirement
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ABIE	Attribute (BBIE)	Association (ASBIE)	Secondary Class	Related Requirement
AutoCalculatedDistance				[Ref 2] Business requirements, 2.14
	mileagePackageCode			[Ref 2] Business requirements 2.14
	mileagePackageVersion			[Ref 2] Business requirements 2.14.1
DistanceReference				[Ref 2] Business requirements 3
	distanceUnitOfMeasurementCalculationCode			[Ref 2] Business requirements 2.16.2
	distanceOverrideValue			[Ref 2] Business requirements 2.11
	distanceUnitOfMeasurementTypeCode			[Ref 2] Business requirements 2.16.1
	distanceValue			[Ref 2] Business requirements 2.15,2.16
	isDistanceAutoCalculated			[Ref 2] Business requirements 2.12
	isDistanceDirect			[Ref 2] Business requirements 2.15,2.16
	lookUpGeographyCode			[Ref 2] Business requirements 2.13
		autoCalculateDistancesIncluded	AutoCalculatedDistance	[Ref 2] Business requirements 2.12
DistanceReference				[Ref 2]
DistanceReference				[Ref 2] Business requirement 1.4, 2.3
DistanceReference				
	uniqueCreatorIdentification			

ABIE	Attribute (BBIE)	Association (ASBIE)	Secondary Class	Related Requirement
		contentOwner	PartyIdentification	
Qual- request				[Ref 2] Business requirement 2
	businessUnitIdentifica- tion			[Ref 2] Business requirement 2.1
	calculationDate			[Ref 2] Business requirement 2.8
	contractCrossRefer- ence			[Ref 2] Business requirement 2.7
	declaredValue			[Ref 2] Business requirement 2.17
	isReturnOfAuditsre- quired			[Ref 2] Business requirement 2.6
	maxNumberOfRe- sponses			[Ref 2] Business requirement 2.5
	rateResultCurrency- Code			[Ref 2] Business requirement 2.9
	usagIdentifier			[Ref 2] Business requirement 2.4
		has	DistanceRequest	[Ref 2] Business requirement 3
		individualRateReques- tIdentification	DocumentOrDocu- mentLineReference	[Ref 2] Business requirement 2.3
		<<has>>	Individual- RateWeightInforma- tion	
		ratingCompany	PartyInformation	[Ref 2] Business requirement 2.2
		has	ProductRequest	[Ref 2] Business requirement 8
		has	QualificationRequest	[Ref 2] Business requirement 5

ABIE	Attribute (BBIE)	Association (ASBIE)	Secondary Class	Related Requirement
		has	ServiceRequest	[Ref 2] Business requirement 6
		stopRequest	StopOffInformation	[Ref 2] Business requirement 4
Qual- weightIn- on				[Ref 2] Business requirement 2.10, 2.10.1,2.10.2
	totalGrossWeight			[Ref 2] Business requirement 2.10
	totalGrossWeightUOM			[Ref 2] Business requirement 2.10.1
	totalWeightCalcula- tionCode			[Ref 2] Business requirement 2.10.2
Information				[Ref 2] Business requirement 4.1
		contactInformation	Contact	[Ref 2] Business requirement 4.1
			NameAndAddress	[Ref 2] Business requirement 4.1
			PartyIdentification	[Ref 2] Business requirement 4.1
Information				[Ref 2] Business requirements 1.1,1.2, 2.2
	partyRole			[Ref 2] Business requirements 1.1,1.2, 2.2
			AllowanceCharge	[Ref 2] Business requirements 1.1,1.2, 2.2
			Contact	[Ref 2] Business requirements 1.1,1.2, 2.2
			FacilitySpecification	[Ref 2] Business requirements 1.1,1.2, 2.2
		bankingInformation	FinancialInstitutionIn- formation	[Ref 2] Business requirements 1.1,1.2, 2.2

ABIE	Attribute (BBIE)	Association (ASBIE)	Secondary Class	Related Requirement
			NameAndAddress	[Ref 2] Business requirements 1.1,1.2, 2.2
			PartyDates	[Ref 2] Business requirements 1.1,1.2, 2.2
			PartyTaxInformation	[Ref 2] Business requirements 1.1,1.2, 2.2
			PaymentTerms	[Ref 2] Business requirements 1.1,1.2, 2.2
			PlanningManagementProfile	[Ref 2] Business requirements 1.1,1.2, 2.2
Request				[Ref 2] Business requirement 8, 8.3,8.3.1,8.3.2
	productClass			[Ref 2] Business requirement 8.2
	productIdentification			[Ref 2] Business requirement 8.1
		productQuantityRequest	QuantityInformation	[Ref 2] Business requirement 9
Dimension				
	dimensionUnitOfMeasurementCalculationCode			
	dimensionUnitOfMeasurementTypeCode			
	productHeight			[Ref 2] Business requirement 8.3
	productLength			[Ref 2] Business requirement 8.3
	productWidth			[Ref 2] Business requirement 8.3

ABIE	Attribute (BBIE)	Association (ASBIE)	Secondary Class	Related Requirement
ationRe-				[Ref 2] Business requirement 5.5.1,5.2,5.2.1,5.2.2,5.3,
	isQualificationExcluded			[Ref 2] Business requirement 5.3
	qualificationUnitOfMeasurementCalculationCode			[Ref 2] Business requirement 5.2.2
	qualificationTypeCode			[Ref 2] Business requirement 5.2.1,5.1
	qualificationValue			[Ref 2] Business requirement 5.2
lyInforma-				[Ref 2] Business requirement 7,6.5,6.5.1,6.5.2,8.5,8.5.1,8.5.2,9
	quantity			[Ref 2] Business requirement 6.5,8.5,9
	freightClass			[Ref 2] Business requirement 8.4,6.4,9
		<<has>>	TransportationRateCodeReference	9
request-				[Ref 2] Business requirement 1,1.3
	userIdentification			[Ref 2] Business requirement 1.3
		transportationRateRequestIdentification	EntityIdentification	[Ref 2] Business requirement 1.4
		<<has>>	IndividualRateRequest	
		rateRequestor	PartyInformation	[Ref 2] Business requirement 1.1
		rateRequestReceiver	PartyInformation	[Ref 2] Business requirement 1.2
Request				[Ref 2] Business requirement 6

ABIE	Attribute (BBIE)	Association (ASBIE)	Secondary Class	Related Requirement
	isRequiredForOptimal			[Ref 2] Business requirement 6.3
	serviceIdentification			[Ref 2] Business requirement 6.1
	stopSequenceNumber			[Ref 2] Business requirement 6.2
		serviceQuantityRequest	QuantityInformation	[Ref 2] Business requirement 6.5,7,9
Information				[Ref 2] Business requirement 4
	areaInformation			[Ref 2] Business requirement 4.1
	partialInformation			
		stopOffLocationInformation	LocationInformation	[Ref 2] Business requirement 4.1
TransportationCodeRefer				[Ref 2] Business requirement 6.5.1,6.5.2,8.5.1,8.5.2
	transportationRateUnitOfMeasurementCalculationCode			[Ref 2] Business requirement 6.5.1,8.5.1
	transportationRateUnitOfMeasurementTypeCode			[Ref 2] Business requirement 6.5.2,8.5.2
				[Ref 2] Business requirement 1
		Is	Document	[Ref 2]
		Has	RateRequestGroup	[Ref 2] Business requirement 1

4 Data Description Transportation Rate Complex Response:

(ABIE)	ATTRIBUTE (BBIE)	ASSOCIATION (ASBIE)	SECONDARY CLASS	RELATED REQUIREMENT
Result				[Ref 2] BR 5
	auditDescription			[Ref 2] BR 5.1
Result				[Ref 2] BR 3
	contractDescription			[Ref 2] BR 2.4
	contractIdentification			[Ref 2] BR 2.5
	convertedAmount			[Ref 2] BR 2.6,2.7
		<<may have>>	CrossReferenceResult	
		<<may have>>	GlobalAuditResult	
		<<may have>>	AuditResult	
		<<may have>>	DistanceResult	
		<<may have>>	Qualification	
		<<may have>>	ProductResult	
		<<may have>>	ServiceResult	
		stopResult	StopOffInformation	
Refer- Result				[Ref 2] BR 4
	externalContractCross- Reference			[Ref 2] BR 4.1
Result				[Ref 2] BR 8
	distanceUnitOfMeas- urementCalculationCode			[Ref 2] BR 8.6
	distanceUnitOfMeas- urementTypeCode			[Ref 2] BR 8.5
	distanceValue			[Ref 2] BR 8.3,8.4
	isDistanceDirect			[Ref 2] BR 8.3,8.4
	mileagePackageCode			[Ref 2] BR 8.1

(ABIE)	ATTRIBUTE (BBIE)	ASSOCIATION (ASBIE)	SECONDARY CLASS	RELATED REQUIREMENT
	mileagePackageVersion			[Ref 2] BR 8.2
ent				[Ref 2]
entOr- en- ference				[Ref 2] Business requirement 1.4,2.1
entification				[Ref 2] Business requirement 1.4, 2.3
	uniqueCreatorIdentifica- tion			[Ref 2] Business requirement 1.4,2.3
		contentOwner	PartyIdentification	[Ref 2] Business requirement 1.4,2.3
uditResult				[Ref 2] BR 6
	globalAuditDescription			[Ref 2] BR 6.1
alRateRe-				[Ref 2] BR 2
	errorMessageIdentifier			[Ref 2] BR 2.2
		individualRateReques- tIdentification	DocumentOrDocumen- tLineReference	[Ref 2] BR 2.1
		ratingCompany	PartyInformation	[Ref 2] BR 2.5
		has	ContractResult	[Ref 2] BR 2.3
nInforma-				[Ref 2] BR 7.1
		contactInformation	Contact	[Ref 2] BR 7.1
			NameAndAddress	[Ref 2] BR 7.1
			PartyIdentification	[Ref 2] BR 7.1
ormation				[Ref 2] Business requirement 1.1,1.2,2.1,2.5
	partyRole			[Ref 2] Business requirement 1.1,1.2,2.1,2.5

(ABIE)	ATTRIBUTE (BBIE)	ASSOCIATION (ASBIE)	SECONDARY CLASS	RELATED REQUIREMENT
			AllowanceCharge	[Ref 2] Business requirement 1.1,1.2,2.1,2.5
			Contact	[Ref 2] Business requirement 1.1,1.2,2.1,2.5
			FacilitySpecification	[Ref 2] Business requirement 1.1,1.2,2.1,2.5
		bankingInformation	FinancialInstitutionInformation	[Ref 2] Business requirement 1.1,1.2,2.1,2.5
			NameAndAddress	[Ref 2] Business requirement 1.1,1.2,2.1,2.5
			PartyDates	[Ref 2] Business requirement 1.1,1.2,2.1,2.5
			PartyTaxInformation	[Ref 2] Business requirement 1.1,1.2,2.1,2.5
			PaymentTerms	[Ref 2] Business requirement 1.1,1.2,2.1,2.5
			PlanningManagement-Profile	[Ref 2] Business requirement 1.1,1.2,2.1,2.5
Dimension				[Ref 2] BR 10.4,10.5,10.6,11.4.3,11.4.4,11.4.5
	dimensionUnitOfMeasurementCalculationCode			[Ref 2] BR 10.6,11.4.5
	dimensionUnitOfMeasurementTypeCode			[Ref 2] BR 10.5,11.4.4
	productHeight			[Ref 2] BR 10.4,11.4.3
	productLength			[Ref 2] BR 10.4,11.4.3
	productWidth			[Ref 2] BR 10.4,11.4.3
Result				[Ref 2] BR 10,11.4

(ABIE)	ATTRIBUTE (BBIE)	ASSOCIATION (ASBIE)	SECONDARY CLASS	RELATED REQUIREMENT
	isProductCreatedByRatingSystem			
	isProductRated			[Ref 2] BR 10
	productClass			[Ref 2] BR 10.3,11.4.2,11.5.1
	productIdentification			[Ref 2] BR 10.2,11.4.1
		<<may have>>	ProductDimension	[Ref 2] BR 10.4,11.4.3,11.4.4,11.4.5
		<<has>>	RateResult	
		productQuantityResult	QuantityInformation	
Informa-				[Ref 2] BR 9.1,10.1,11.3,11.5
	quantity			[Ref 2] BR 9.1,9.6,10.8,11.3.2,11.5.2
	freightClass			[Ref 2] BR 9.1,9.5,10.7,11.3.1,11.5.1
		<<has>>	TransportationRate-CodeReference	[Ref 2] BR 9.1,10.9,10.10,11.3.3,11.3.4,11.5.3,11.5.4
ation				[Ref 2] BR 11
	contractEffectiveDate			[Ref 2] BR 11.1.2
	qualificationDescription			[Ref 2] BR 11.1.3
	qualificationValue			[Ref 2] BR 11.1.1
		<<may have>>	ProductResult	
		<<may have>>	ServiceResult	
spon-				[Ref 2] 1
D	errorMessageIdentifier			[Ref 2] 1.3
		transportationRateRe-	DocumentOrDocumen-	[Ref 2] 1.4

(ABIE)	ATTRIBUTE (BBIE)	ASSOCIATION (ASBIE)	SECONDARY CLASS	RELATED REQUIREMENT
		questIdentification	tLineReference	
		has	IndividualRateResponse	
		rateRequestor	PartyInformation	[Ref 2] 1.1
		rateRequestReceiver	PartyInformation	[Ref 2] 1.2
Result				[Ref 2] BR 11.1
	priority			[Ref 2] BR 11.2.6
	rateAmount			[Ref 2] BR 11.2.3
	totalAmount			[Ref 2] BR 11.2.1,11.2.2
		<<may have>>	TransitInformation	
		<<may have>>	TransportationRate-CodeReference	[Ref 2] BR 11.2.4,11.2.5
Result				[Ref 2] BR 9,11.2
	isServiceCreatedByRatingSystem			[Ref 2] BR 11.2.12
	isServiceRated			[Ref 2] BR 9
	isRequiredForOptimal			[Ref 2] BR 9.4
	serviceIdentification			[Ref 2] BR 9.2,11.2.10
	stopSequenceNumber			[Ref 2] BR 9.3,11.2.11
		serviceQuantityResult	QuantityInformation	
		<<has>>	RateResult	
Information				[Ref 2] BR 7
	areaInformation			[Ref 2] BR 7.1
	partialInformation			[Ref 2] BR 7.1
		stopOffLocationInformation	LocationInformation	[Ref 2] BR 7.1
Information				
	transitDurationUnitOf-			[Ref 2] BR 11.2.9

(ABIE)	ATTRIBUTE (BBIE)	ASSOCIATION (ASBIE)	SECONDARY CLASS	RELATED REQUIREMENT
	MeasurementCalculationCode			
	transitDurationUnitOfMeasurementTypeCode			[Ref 2] BR 11.2.8
	transitDurationValue			[Ref 2] BR 11.2.7
transportation- deRefer-				
	transportationRateUnitOfMeasurementCalculationCode			[Ref 2] BR 9.8,10.10, 11.2.4,11.2.5,11.3.4,11.5.4
	transportationRateUnitOfMeasurementTypeCode			[Ref 2] BR 9.7,10.9, 11.2.4,11.2.5,11.3.3,11.5.3
transportation- complexRe-				[Ref 2]
		is	Document	[Ref 2]
		transportationRateResponseIdentification	EntityIdentification	[Ref 2] 1.4
		has	RateResponseGroup	[Ref 2] 1

Business Solution Design

1.5.2 GDD Report :

1.5.2.1 Transportation Rate Request / Response (Simple Scenario) REQUEST

Transportation Rate Simple Request v1.0

Class (ABIE)	Attribute (BBIE)	Association (ASBIE)	Secondary Class	Official Dictionary Entry Name	Definition	Multiplicity
AvailablePickUp				Available Pick Up. Details	Information on the availability of a shipment for pick-up.	
	availablePickUp-DateTime			Available Pick Up. <<Choice>>_Available Pick Up date Time. Date Time	Indicates the date and/or time that the shipment is expected to be picked-up.	1..1
		<<Choice>> available-PickUpPeriod	TimeOrDateTimePeriod	Available Pick Up. Choice_ Available Pick Up Period. Time Or Date Time Period	Indicates the date/time window range or ranges that the shipment is expected to be picked up.	1..*
EquipmentInformation				Equipment. Details	Equipment Information provides the type of equipment requested for the Full Truckload Load Tender. There may be identification of the equipment and the length of the equipment.	
	equipmentIdentification			Equipment. Equipment Identification_ Equipment Number. Text	The identification of the equipment unit represented as an alphanumeric data.	0..1
	equipmentType			Equipment. Type. Equipment Type Code List_ Code	Code identifying equipment type.	1..1
		equipmentLength	MultiMeasurementValue	Equipment. Equipment Length_ Association. Multi-unit Measure	Length of equipment ordered or used to transport shipment and the associated unit of measure. This value may be converted into multi measurement formats.	0..1
CommodityGroup				Commodity Group. Details	Commodity Group provides the commodity description; commodity type; commodity weight; and the commodity quantity.	
	commodityDescription			Commodity Group. Commodity Description_ Description. Text	Description of an item as required for rating and billing purposes and customer inventory control expectations.	1..1
	commodityQuantity			Commodity Group. Commodity	The numeric value of the quantity of the commodity and	0..1

Business Solution Design

Class (ABIE)	Attribute (BBIE)	Association (ASBIE)	Secondary Class	Official Dictionary Entry Name	Definition	Multiplicity
				Quantity_ Quantity. Quantity	the optional unit of measure.	
	commodityType			Commodity Group. Commodity Type_ Code. Commodity_ Code	Code describing a commodity or group of commodities.	1..1
		grossWeight	MultiMeasurementValue	Commodity Group. Gross Weight_ Association. Multi-unit Measure	The numeric value of gross weight of the commodity and the associated unit of measure. Gross weight is defined as weight or mass of goods including packaging; but excluding the carrier's equipment. This value may be converted into multi measurement formats.	0..1
		netWeight	MultiMeasurementValue	Commodity Group. Net Weight_ Association. Multi-unit Measure	The numeric value of net weight of the commodity and the associated unit of measure. This value may be converted into multi measurement formats.	0..1
		volume	MultiMeasurementValue	Commodity Group. Volume_ Association. Multi-unit Measure	The numeric value of volume of the commodity and the associated unit of measure. It is a volumetric measurement. This value may be converted into multi measurement formats.	0..1
		commodityDimension	PackageDimension	Commodity Group. Commodity Dimension_ Association. Package Dimension	Provides the length; width; and height of a commodity with their associated unit of measure. The unit of measure may be represented in multiple formats.	0..1
Document				Document. Details	Used to specify basic information about the content of the message including version number; creation date and time.	
EntityIdentification				Entity Identification. Details	The unique identification of a document.	
	uniqueCreatorIdentification			Entity Identification. Identification. Identifier		1..1
		contentOwner	PartyIdentification	Entity Identification. Content Owner. Party Identification		1..1
EquipmentInformation				Equipment. Details	Equipment Information provides the type of equipment requested for the Full Truckload Load Tender. There may be identification of the equipment and the length of the equipment.	
	equipmentIdentification			Equipment. Equipment Identification_ Equipment Number. Text	The identification of the equipment unit represented as an alphanumeric data.	0..1
	equipmentType			Equipment. Type. Equipment	Code identifying equipment type.	1..1

Business Solution Design

Class (ABIE)	Attribute (BBIE)	Association (ASBIE)	Secondary Class	Official Dictionary Entry Name	Definition	Multiplicity
				Type Code List_ Code		
		equipmentLength	MultiMeasurementValue	Equipment. Equipment Length_ Association. Multi-unit Measure	Length of equipment ordered or used to transport shipment and the associated unit of measure. This value may be converted into multi measurement formats.	0..1
LocationInformation				Location Information. Details	Provides the contact; name and addresses; and GLN of the location	
		contactInformation	Contact	Location Information. Association. Contact	Provides the contact information.	0..*
			NameAndAddress	Location Information. Association. Party Address Group	Provides the location name and address.	1..1
			PartyIdentification	Location Information. Association. Party Identification	Provides the location Global Location Number	0..1
MultiMeasurementValue				Multi-unit Measure. Details		
	measurementValue			Multi-unit Measure. Measure. Measure		1..*
PackageDimension				Package_ Dimension. Details		
		packageHeight	MultiMeasurementValue	Package_ Dimension. Package_ Height_ Association. Multi-unit Measure	The distance from the established natural base for shipping of a non-consumer trade item to the top of the package.	1..1
		packageLength	MultiMeasurementValue	Package_ Dimension. Package_ Length_ Association. Multi-unit Measure	The longest dimension of the established base for shipping for a non-consumer trade item.	1..1
		packageWidth	MultiMeasurementValue	Package_ Dimension. Package_ Width_ Association. Multi-unit Measure	The shortest dimension of the established natural base for shipping of a non consumer trade item.	1..1
PartyIdentification				Party Identification. Details	Unique location number identifying the Party for which the rest of the message defines.	
	globalLocationNumber			Party Identification. Primary_ Identification. GLN_ Identifier	The Global Location Number (GLN) is a structured Identification of a physical location; legal or functional entity within an enterprise. The GLN is the primary party identifier. Each party identified in the trading	1..1

Business Solution Design

Class (ABIE)	Attribute (BBIE)	Association (ASBIE)	Secondary Class	Official Dictionary Entry Name	Definition	Multiplicity
					relationship must have a primary party Identification.	
			AdditionalPartyIdentification	Party Identification. Additional. Non GLN_ Party Identification		0..*
PaymentTerms				Payment Terms. Details	This class is the root class for the message.	
	paymentTermsEvent			Payment Terms. Event Type. Payment Terms Event_ Code		1..1
	paymentTermsType			Payment Terms. Payment Terms Type. Payment Terms_ Code	Required to define specific payment terms.	1..1
	proximoCutoffDay			Payment Terms. Proximo Cut-off Day. DD_ Date Time	This class is used in conjunction with the payment term 'Proximo'. It contains a numeric value for the day of the month. Value – The day of the month payment becomes due. Value is mandatory.	0..1
			DiscountPayment	Payment Terms. Association. Discount_ Payment Due		0..*
			InstallmentDue	Payment Terms. Association. Installment_ Payment Due		0..1
			NetPayment	Payment Terms. Association. Net_ Payment Due		0..1
			PaymentMethod	Payment Terms. Association. Pay_ Payment Method		0..*
RateRequestor				Rate Requestor. Details	The party requesting a rate for transportation of goods.	
	businessIdentification-Number			Rate Requestor. Business Identification Number. Text	Identifies the party requesting the rate	1..1
	rateRequestorRoleIdentifier			Rate Requestor. Rate Requestor Role Identifier. Rate Requestor Role Identifier_ Code	Relationship of the customer location and the shipment	1..1
		rateRequestor	PartyIdentification	Rate Requestor. Rate Requestor. Party Identification	Contains the Party Information for the company requesting the Transportation Rate	1..1
RequestedDelivery				Requested Delivery. Details	Information on the delivery of goods as per request	
	requestedDelivery-DateTime			Requested Delivery. Choice_ Requested Delivery Date Time. Date Time	Indicates the date and/or time that the shipment is expected to be delivered	1..1
		<<Choice>> requested-	TimeOrDateTimePeriod	Requested Delivery. Choice_	Indicates the date/time window range or ranges that the	1..*

Business Solution Design

Class (ABIE)	Attribute (BBIE)	Association (ASBIE)	Secondary Class	Official Dictionary Entry Name	Definition	Multiplicity
		DeliveryPeriod		Requested Delivery Period. Time Or Date Time Period	shipment is expected to be delivered.	
ShipmentLineItem				Shipment Line Item. Details	Information on individual items within a shipment for which a transportation rate is requested	
	itemHandlingUnit			Shipment Line Item. Item Handling Unit. Text	Identifies any specific unit that will have to be used to handle an item within a shipment.	0..1
	packageFormCode			Shipment Line Item. Package Form Code. Text	Description of the packaging form.	0..1
		commodityInformation	CommodityGroup	Shipment Line Item. Commodity Information. Commodity Group	Commodity Group provides the commodity description; commodity type; commodity weight; and the commodity quantity for shipment line items.	0..1
ShipmentTransportationInformation				Shipment Transportation Information. Details	When shipments from the Supplier to a Buyer or other non-Retail party are made; the Buyer may stipulate the method of shipment and/or the carrier to be used for the shipment.	
	serviceLevelCode			Shipment Transportation Information. Code. Service Level Code	Allows to specify the service level of shipment - in addition to designating the transportation method.	0..1
	shipmentSpecialHandlingCode			Shipment Transportation Information. Special Handling Code. Shipment Special Handling Code	Allows to specify special handling instructions - in addition to designating the transportation method.	0..*
	transportationMethodType			Shipment Transportation Information. Method Type. Transportation Method Type Code List Code	The shipment designation. Examples: FedEx; UPS; air; ground; etc.	0..1
		<<has>>	ShipmentLineItem	Shipment Transportation Information. Association. Shipment Line Item	Provides information on individual items within a shipment.	0..*
		carrier	BuyingPartyIdentification	Shipment Transportation Information. Carrier Association. Buying Party Identification	Allows to specify the carrier to be used for the shipment.	0..1
TimeOrDateTimePeriod				Time Or Date Time Period. Details	None	

Business Solution Design

Class (ABIE)	Attribute (BBIE)	Association (ASBIE)	Secondary Class	Official Dictionary Entry Name	Definition	Multiplicity
Transportation-RateShipmentInformation				Transportation Rate Shipment Information. Details	Information regarding a shipment within the context of Transportation Rate Request/Rate	
	shipmentDeclaredValue			Transportation Rate Shipment Information. Shipment Declared Value. Amount	The value of the shipment as declared for tax or customs purposes.	0..1
		<<has>>	AvailablePickUp	Transportation Rate Shipment Information. Association. Available Pick Up	Availability information of a particular shipment of goods for pick-up purposes	0..1
		<<Has>>	EquipmentInformation	Transportation Rate Shipment Information. Association. Equipment	Identification of the equipment used for this shipment within the context of the transportation rate request.	0..*
				Transportation Rate Shipment Information. Ship From. Location Information	Identifies the Shipment Origin Location	1..1
				Transportation Rate Shipment Information. Ship To. Location Information	Identifies the shipment final destination location.	1..1
				Transportation Rate Shipment Information. Stop Off. Location Information	Identifies any intermediary stop-off location between the origin and final destination of the shipment.	0..*
		<<may have>>	RequestedDelivery	Transportation Rate Shipment Information. Association. Requested Delivery	Availability information of a particular shipment of goods for expected delivery purposes	0..1
		<<may have>>	ShipmentTransportationInformation	Transportation Rate Shipment Information. Association. Shipment Transportation Information	Additional information on shipment transportation; such as the Service Level; Special Handling Codes and the type of transportation method.	0..1
Transportation-RateSimpleRequest				Transportation Rate Simple Request. Details	Request for a rate for transportation of goods; based on either a contract or a spot-rate.	
	currencyCode			Transportation Rate Simple Request. Currency Code. ISO4217_Code	The 3 character ISO code for the currency to be used in the Transportation Rate Simple Response	0..1
	numberOfShipments			Transportation Rate Simple	Indicates the number of shipments to be rated for	1..1

Business Solution Design

Class (ABIE)	Attribute (BBIE)	Association (ASBIE)	Secondary Class	Official Dictionary Entry Name	Definition	Multiplicity
				Request. Number Of Shipments. Float_ Numeric	transportation. More than one shipment with the same origin and destination pairing can be requested to rate within a single message.	
		<<Is a>>	Document	Transportation Rate Simple Request. is a. Document	Indicates that the Transportation Rate Simple request is an electronic document.	1..1
		transportationRateRequestIdentification	EntityIdentification	Transportation Rate Simple Request. Transportation Rate Request Identification. Entity Identification	A unique reference identification number generated by the rate requestor that will be returned in the rate response message.	1..1
		<<Has>>	PaymentTerms	Transportation Rate Simple Request. Has. Payment Terms	Identifies the terms and conditions of payment if the rate response is executed.	1..1
		<<Has a>>	RateRequestor	Transportation Rate Simple Request. Has. Rate Requestor	Mandatory link between the Rate Request and the party requesting the rate.	1..1
		shipment	TransportationRate-ShipmentInformation	Transportation Rate Simple Request. Shipment. Transportation Rate Shipment Information	Information at shipment level for a transportation simple request.	1..*

Business Solution Design

1.5.2.2 Transportation Rate Request / Response (Simple Scenario) RESPONSE Transportation Rate Simple Response v1.0

Class (ABIE)	Attribute (BBIE)	Association (ASBIE)	Secondary Class	Official Dictionary Entry Name	Definition	Multiplicity
Document				Document. Details	Used to specify basic information about the content of the message including version number; creation date and time.	
DocumentReference				Document Reference. Details	Reference to another GS1 Business Document.	
	creationDateTime			Document Reference. Creation_ Date Time. Date Time	Date and time of creation of the referenced document.	0..1
			EntityIdentification	Document Reference. Association. Entity Identification	Identification of the referenced business document.	1..1
EntityIdentification				Entity Identification. Details	The unique identification of a document.	
	uniqueCreatorIdentification			Entity Identification. Identification. Identifier		1..1
		contentOwner	PartyIdentification	Entity Identification. Content Owner. Party Identification		1..1
PartyIdentification				Party Identification. Details	Unique location number identifying the Party for which the rest of the message defines.	
	globalLocationNumber			Party Identification. Primary_ Identification. GLN_ Identifier	The Global Location Number (GLN) is a structured Identification of a physical location; legal or functional entity within an enterprise. The GLN is the primary party identifier. Each party identified in the trading relationship must have a primary party Identification.	1..1
			AdditionalPartyIdentification	Party Identification. Additional. Non GLN_ Party Identification		0..*
ShipmentResponseInformation				Shipment Response Information. Details	Detailed information with regards to a shipment for which a transportation rate is given	
	ratedAsAmount			Shipment Response Information. Rated As Amount. Amount	Rate as given for a specific shipment within a transportation rate Response.	1..1
	ratedAsType			Shipment Response Information. Rated As Type. Billed Rate As Quantity Qualifier Type_ Code	Indication as to how a particular shipment is rated for transportation. This can e.g. be by weight or class.	1..1

Business Solution Design

Class (ABIE)	Attribute (BBIE)	Association (ASBIE)	Secondary Class	Official Dictionary Entry Name	Definition	Multiplicity
	rateExpirationDate			Shipment Response Information. Rate Expiration Date. Date_ Date Time	Indication of when a particular given rate for transportation for a shipment expires.	1..1
	rateQualifierTypeCode			Shipment Response Information. Rate Qualifier Type Code. Rate Qualifier Type_ Code	The exact type of the rate for transportation of a given shipment. E.g. "Per mile" or "Flat rate".	1..1
	serviceIndicatorCode			Shipment Response Information. Service Indicator Code. Service Indicator Code_ Code	Indication of the service level associated with the rate response for transportation.	0..1
	totalNetCharges			Shipment Response Information. Total Net Charges. Float_ Numeric	The total net of all charges applicable for the rate of a given shipment in the Transportation Rate Response.	1..1
	totalGrossCharges			Shipment Response Information. Total Gross Charges. Float_ Numeric	The total of all charges applicable for the rate of a given shipment in the Transportation Rate Response.	0..1
	transitDays			Shipment Response Information. Transit Days. Float_ Numeric	Indication of the estimated number of days a shipment is expected to be in transit.	0..1
		accessorialRate	SpecialChargeInformation	Shipment Response Information. Accessorial Rate. Special Charge Information	Special accessorial rate information applying to the rate composition for a shipment when giving a transportation rate Response.	0..*
		shipmentIdentification	EntityIdentification	Shipment Response Information. Shipment Identification. Entity Identification	Unique identifier for a shipment when giving a transportation rate Response. Used for referencing back afterwards.	1..1
		<<Has>>	TariffInformation	Shipment Response Information. Association. Tariff Information	Tariff Information used for the calculation of the rate of a shipment.	0..1
SpecialChargeInformation				Freight_Charge_ Allowance Charge. Details	This contains the special charge amount and the special charge qualifier type.	
	specialChargeAmount			Freight_Charge_ Allowance Charge. Special Charge_ Amount. Indicator	A monetary value associated with a type of allowance and charge.	1..1
	specialChargeType			Freight_Charge_ Allowance Charge. Special Charge_ Type. Special Charge_ Code	The qualifier for the special charge type, and the available special charge type can reference from the ATA X12 Data Element 150 list.	1..1
TariffInformation				Tariff Information. Details	Information with regards to the tariff applied on the rate	

Business Solution Design

Class (ABIE)	Attribute (BBIE)	Association (ASBIE)	Secondary Class	Official Dictionary Entry Name	Definition	Multiplicity
					calculation for a shipment within Transportation Rate.	
	tariffItem			Tariff Information. Tariff Item. Text	Item on the tariff list used for rating the transportation of a shipment.	0..1
	tariffNumber			Tariff Information. Tariff Number. Text	Identification of an Item / Sub Item on the tariff list used for rating the transportation of a shipment.	0..1
	tariffSubItem			Tariff Information. Tariff Sub Item. Text	Sub Item of an Item on the tariff list used for rating the transportation of a shipment.	0..1
		tariffIssuingAgent	PartyIdentification	Tariff Information. Tariff Issuing Agent. Party Identification	Identification of the agent issuing the tariff used for rating a shipment.	0..1
Transportation-RateSimpleResponse				Transportation Rate Simple Response. Details	Response to a request for transportation rate within a simple scenario.	
		<<Is a>>	Document	Transportation Rate Simple Response. Generalization. Document	The Response to a Transportation Rate Request is an electronic document.	1..1
		contractReferenceIdentification	DocumentReference	Transportation Rate Simple Response. Contract Reference Identification. Document Reference	The Response to a request for a transportation rate can include a reference to a pre-existing contract between the shipper and the carrier.	0..1
		rateQuoteReference	DocumentReference	Transportation Rate Simple Response. Rate Quote Reference. Document Reference	A unique identification for the quote. In the event that a shipment gets tendered to the carrier providing the quote; this reference number is used to link the tender back to a previous rate response.	1..1
		transportationRateResponseIdentification	EntityIdentification	Transportation Rate Simple Response. Transportation Rate Response Identification. Entity Identification	Unique identification of the electronic document Transportation Rate Response. Used in case of follow-up or audit.	1..1
		transportationRateRequestIdentification	DocumentReference	Transportation Rate Simple Response. Transportation Rate Request Identification. Document Reference	The unique reference identification number of the request this document is a Response to. Used to match the response back to the original request.	1..1
		carrier	PartyIdentification	Transportation Rate Simple Response. Carrier. Party Identification	Identifies the carrier returning the rate response for transportation.	1..1

Business Solution Design

Class (ABIE)	Attribute (BBIE)	Association (ASBIE)	Secondary Class	Official Dictionary Entry Name	Definition	Multiplicity
		shipment	ShipmentResponseIn-formation	Transportation Rate Simple Response. Shipment. Shipment Response Information	Information at shipment level for a transportation simple Response.	1..*

1.5.2.3 Transportation Rate Request / Response (Complex Scenario) REQUEST

Transportation Rate Complex Request v1.0

Class (ABIE)	Attribute (BBIE)	Association (ASBIE)	Secondary Class	Official Dictionary Entry Name	Definition	Multiplicity
AutoCalculated-Distance				Auto Calculated Distance. Details	Contains the mandatory information required if the distance request contains distances generated by a mileage package.	
	mileagePackageCode			Auto Calculated Distance. Mileage Package Code. Mileage Package Code List_Code	The code of the mileage package to be used when determining the distance from origin to destination in a request for transportation rate.	1..1
	mileagePackageVersion			Auto Calculated Distance. Mileage Package Version. Text	Identifies the version of the mileage package to be used when determining the distance from origin to destination in a request for transportation rate.	1..1
DistanceRequest				Distance Request. Details	Defines any distance information that needs to be used in a rate request calculation.	
	distanceUnitOfMeasurementCalculationCode			Distance Request. Distance Unit Of Measurement Calculation Code. Distance Calculation Code List_Code	Identifies the calculation code of the unit of measure for the distance used in Transportation Rate/Response	0..1
	distanceOverrideValue			Distance Request. Distance Override Value. Float_Numeric	Specifies the overriding distance. Used as basis for calculating a rate if the contract so specifies.	0..1
	distanceUnitOfMeasurementTypeCode			Distance Request. Distance Unit Of Measurement Type Code. Distance Type Code List_Code	Identifies the type code of the unit of measure for the distance used in Transportation Rate/Response.	0..1
	distanceValue			Distance Request. Distance Value. Float_Numeric	Distance from the origin to the destination of a transportation.	0..1

Business Solution Design

Class (ABIE)	Attribute (BBIE)	Association (ASBIE)	Secondary Class	Official Dictionary Entry Name	Definition	Multiplicity
	isDistanceAutoCalculated			Distance Request. Is Distance Auto Calculated. Indicator	Indicates whether a distance should be automatically calculated and then used when calculating a rate for transportation.	1..1
	isDistanceDirect			Distance Request. Is Distance Direct. Indicator	Indicates how the distance should be taken for calculating a rate for transportation. When YES; it identifies the distance from the origin to the destination as such. When NO; it identifies the distance from the origin of the shipment to the destination through all the stops.	1..1
	lookUpGeographyCode			Distance Request. Look Up Geography Code. Look Up Geography Code_ Code	Determines the degree of matching to be used in matching geography information in the rate request to a rate contract.	1..1
		autoCalculateDistancesIncluded	AutoCalculatedDistance	Distance Request. Auto Calculate Distance Is Included. Auto Calculated Distance	Identifies the conditions that need to be met in case distance is calculated automatically.	0..1
Document				Document. Details	Used to specify basic information about the content of the message including version number; creation date and time.	
DocumentOrDocumentLineReference				Document Or Document Line Reference. Details	Provides the detail line reference or the document reference.	
EntityIdentification				Entity Identification. Details	The unique identification of a document.	
	uniqueCreatorIdentification			Entity Identification. Identification. Identifier	The unique creator identification for the message.	1..1
		contentOwner	PartyIdentification	Entity Identification. Content Owner. Party Identification		1..1
IndividualRateRequest				Individual Rate Request. Details	Identifies the properties of an individual rate request for transportation within a Rate Request Group	
	businessUnitIdentification			Individual Rate Request. Business Unit Identification. Text	Represents a business division associated with the organization requesting the rate. It enables differentiating business divisions within a company with different security access authority.	0..1

Business Solution Design

Class (ABIE)	Attribute (BBIE)	Association (ASBIE)	Secondary Class	Official Dictionary Entry Name	Definition	Multiplicity
	calculationDate			Individual Rate Request. Calculation Date. Date_ Date Time	The date to be used when performing rate calculations. It is used to match the request against the correct rate contract; matching to effective dates within a rate contract.	1..1
	contractCrossReference			Individual Rate Request. Contract Cross Reference. Text	Identification of an external contract. It allows for matching to a specific rating contract and also indicates the rating system which contract to rate from.	0..1
	declaredValue			Individual Rate Request. Declared Value. Amount	Identifies the value that was declared for tax or customs purposes for a shipment.	0..1
	isReturnOfAuditsrequired			Individual Rate Request. Is Return Of Audits Required. Indicator	This identifier specifies; in case an audit was placed on the contract for transportation; whether the requestor of the rates wants to receive that audit information back on the rate response.	1..1
	maxNumberOfResponses			Individual Rate Request. Max Number Of Responses. Integer_ Numeric	Specifies the maximum number of responses the rate requestor wants to be returned on the rate Response for transportation.	0..1
	rateResultCurrencyCode			Individual Rate Request. Rate Result Currency Code. ISO4217_ Code	Identifies which currency the rate result should be returned in. If blank; no currency conversions will be performed; and the rate response is sent back in the same currency as in the rate contract. when sent; the rate response will be converted from the rate contract currency to the currency sent in the rate response.	0..1
	usageIdentifier			Individual Rate Request. Usage Identifier. Usage Identifier_ Code	Identifies the intended use of the rate request for transportation.	1..1
		has	DistanceRequest	Individual Rate Request. Association. Distance Request	Each individual rate request for transportation can have specific information on the distance necessary for rating.	0..1
		individualRateRequestIdentification	DocumentOrDocumentLineReference	Individual Rate Request. Individual Rate Request Identification. Document Or Document Line Reference	A user defined number that uniquely identifies the individual rate request for transportation. It allows the requestor to match each individual result back to the request.	1..1

Business Solution Design

Class (ABIE)	Attribute (BBIE)	Association (ASBIE)	Secondary Class	Official Dictionary Entry Name	Definition	Multiplicity
		<<has>>	Individual-RateWeightInformation	Individual Rate Request. Association. Individual Rate Weight Information	Provides information on Weight for an individual rate request	0..1
		ratingCompany	PartyInformation	Individual Rate Request. Rating Company. Party Information Group	Identifies the rating company for which rates are being requested.	0..1
		has	ProductRequest	Individual Rate Request. Association. Product Request	Identifies the product to be used when rating an individual rate request for transportation.	0..*
		has	QualificationRequest	Individual Rate Request. Association. Qualification Request	Each individual rate request can have additional information necessary to rate a transportation on qualification	0..*
		has	ServiceRequest	Individual Rate Request. Association. Service Request	Each individual rate request for transportation can have information on a service needed for being able to calculate the rate.	0..*
		stopRequest	StopOffInformation	Individual Rate Request. Stop Request. Stop Off Information	Each individual rate request can have information on Stop-Offs; necessary for rating shipments for transportation.	0..*
Individual-RateWeightInformation				Individual Rate Weight Information. Details	Information on Weight for an individual rate request	
	totalGrossWeight			Individual Rate Weight Information. Total Gross Weight. Float_Numeric	The total weight of the rate request. Used to calculate a rate based on the total weight of the load if the contract so specifies.	0..1
	totalGrossWeightUOM			Individual Rate Weight Information. Total Gross Weight UOM. Weight Measure Type Code List_Code	The type code of the unit of measure for the total weight of a shipment that needs to be rated.	0..1
	totalWeightCalculationCode			Individual Rate Weight Information. Total Weight Calculation Code. Weight Calculation Code List_Code	Identifies the calculation code of the unit of measure for the total weight of a shipment within the Transportation Rate/Response scenario.	0..1
LocationInformation				Location Information. Details	Provides the contact; name and addresses; and GLN of the location	

Business Solution Design

Class (ABIE)	Attribute (BBIE)	Association (ASBIE)	Secondary Class	Official Dictionary Entry Name	Definition	Multiplicity
		contactInformation	Contact	Location Information. Association. Contact	Provides the contact information.	0..*
			NameAndAddress	Location Information. Association. Party Address Group	Provides the locatio name and address.	1..1
			PartyIdentification	Location Information. Association. Party Identification	Provides the location Global Location Number	0..1
PartyInformation				Party Information Group. Details	This class contains all party related information as described in this section.	
	partyRole			Party Information Group. Party Role. Code	A code that identifies the role of a party	1..*
			AllowanceCharge	Party Information Group. Association. Allowance Charge		0..*
			Contact	Party Information Group. Association. Contact		0..*
			FacilitySpecification	Party Information Group. Association. Facility Specification		0..*
		bankingInformation	FinancialInstitutionInformation	Party Information Group. Banking Information. Financial Institution	The financial institution information of the party. Comment: Each party will identify the banking information required to conduct trade. This is a prerequisite to the pay process and includes:- banking institution's name and address- routing information	0..1
			NameAndAddress	Party Information Group. Association. Party Address Group	The financial institution information of the party. Comment: Each party will identify the banking information required to conduct trade. This is a prerequisite to the pay process and includes:- banking institution's name and address- routing information	1..1
			PartyDates	Party Information Group. Association. Trade Party_ Date Group	The financial institution information of the party. Comment: Each party will identify the banking information required to conduct trade. This is a prerequisite to the pay process and includes:- banking institution's name and address- routing information	1..1

Business Solution Design

Class (ABIE)	Attribute (BBIE)	Association (ASBIE)	Secondary Class	Official Dictionary Entry Name	Definition	Multi- plicity
			PartyTaxInformation	Party Information Group. Association. Party_ Tax Information Group	The financial institution information of the party. Comment: Each party will identify the banking information required to conduct trade. This is a prerequisite to the pay process and includes:· banking institution's name and address· routing information	0..*
			PaymentTerms	Party Information Group. Association. Payment Terms	The financial institution information of the party. Comment: Each party will identify the banking information required to conduct trade. This is a prerequisite to the pay process and includes:· banking institution's name and address· routing information	0..*
			PlanningManagementProfile	Party Information Group. Association. Planning Management Profile	The financial institution information of the party. Comment: Each party will identify the banking information required to conduct trade. This is a prerequisite to the pay process and includes:· banking institution's name and address· routing information	0..1
ProductRequest				Product Request. Details	All criteria necessary for a product to be rated for transportation.	
	productClass			Product Request. Product Class. Text	Identifies the class a product belongs to. Used when calculating a rate for transportation.	0..1
	productIdentification			Product Request. Product Identification. Text	Identifies the product to be used when calculating the rate for transportation. Matches a product as outlined in the rate contract.	0..1
		productQuantityRequest	QuantityInformation	Product Request. Product Quantity Request. Quantity Information	the total quantity and unit of measure for a product. Necessary for calculating the rate of transportation.	0..*
		<<has>>	ProductDimension	Product request. Association. Product Dimension	A product may have dimensions (length, width, height) on which the transportation rate is being calculated.	0..1
ProductDimension				Product Dimension. Details	All dimensions necessary for rating a product within the context of transportation rate and response complex scenario.	

Business Solution Design

Class (ABIE)	Attribute (BBIE)	Association (ASBIE)	Secondary Class	Official Dictionary Entry Name	Definition	Multi-licity
	dimensionUnitOf-MeasurementCalculationCode			Product Dimension. Dimension Unit Of Measurement Calculation Code. Dimension Calculation Code List_ Code	Identifies the codes for unit of measure used for calculating a rate for transportation based on a product dimension	0..1
	dimensionUnitOf-MeasurementType-Code			Product Dimension. Dimension Unit Of Measurement Type Code. Dimension Type Code List_ Code	Identifies the type of the codes for unit of measure used for calculating a rate for transportation based on a product dimension	0..1
	productHeight			Product Dimension. Product Height. Measure	Height of the product that is the basis for calculating a rate for transportation.	0..1
	productLength			Product Dimension. Product Length. Measure	Length of the product that is the basis for calculating a rate for transportation.	0..1
	productWidth			Product Dimension. Product Width. Measure	Width of the product that is used as the basis for calculating a rate for transportation.	0..1
QualificationRequest				Qualification Request. Details	Defines all the values that are used for a rate request to qualify for a particular rate.	
	isQualificationExcluded			Qualification Request. Is Qualification Excluded. Indicator	Specifies whether the receiver of the rate request should exclude all rate results that contain the specified qualification.	1..1
	qualificationUnitOf-MeasurementCalculationCode			Qualification Request. Qualification Unit Of Measurement Calculation Code. Qualification Calculation Code List_ Code	Defines how a request qualifies for a rate. The qualification unit of measurement calculation code is determined by how the rate contract for transportation is set up. Contracts can be set up by many different calculation types.	0..1
	qualificationTypeCode			Qualification Request. Qualification Unit Of Measurement Type Code. Qualification Type Code List_ Code	Defines how a request qualifies for a rate. The qualification type code is determined by how the rate contract for transportation is set up. Contracts can be set up by many different calculation types.	0..1
	qualificationValue			Qualification Request. Qualification Value. Text	The actual value of the qualification that is used in the request for rate of transportation.	0..1
QuantityInformation				Quantity Information. Details	The total quantity and its associated unit of measure necessary for rating a product or service for transportation.	

Business Solution Design

Class (ABIE)	Attribute (BBIE)	Association (ASBIE)	Secondary Class	Official Dictionary Entry Name	Definition	Multi-licity
	quantity			Quantity Information. Quantity. Float_Numeric	Identifies the quantity of a given product or service when calculating a rate for transportation.	1..1
	freightClass			Quantity Information. Freight Class. Integer_Numeric	Industry term identifying the value placed upon the contents of a shipment. The higher the number; the more valued a shipment is.	0..*
		<<has>>	TransportationRate-CodeReference	Quantity Information. Association. Transportation Rate Code Reference	Provides additional information as to the unit of measurement used as basis for calculating a rate for transportation based on product; service or quantity.	0..1
RateRequest-Group				Rate Request Group. Details	Identifies a logical grouping of Rate Requests for Transportation within a single rate request document	
	userIdentification			Rate Request Group. User Identification. Text	Identifies who is authorized to access rate information. Represents a valid user identification assigned by the organization receiving the rate request. If the contract expects a user to be identified; then the user identifier is required.	0..1
		transportationRateRequestIdentification	EntityIdentification	Rate Request Group. Transportation Rate Request Identification. Entity Identification	A unique reference identification number generated by the requestor for a group of rate requests for transportation. It is used by the requestor to match the replies back to the original request group.	0..1
		<<has>>	IndividualRateRequest	Rate Request Group. Association. Individual Rate Request	Information regarding individual rate requests within a rate request group.	1..*
		rateRequestor	PartyInformation	Rate Request Group. Rate Requestor. Party Information Group	Identifies uniquely the party requesting the rate for transportation.	1..1
		rateRequestReceiver	PartyInformation	Rate Request Group. Rate Request Receiver. Party Information Group	Identifies the party receiving the rate request uniquely. this party will also be preparing the rate Response.	1..1
ServiceRequest				Service Request. Details	Defines a particular service that is to be rated in a rate request.	
	isRequiredForOptimal			Service Request. Is Required For Optimal. Indicator	Identifies whether the service is required when the usage flag for the rate of transportation is "OPTIMAL".	0..1
	serviceIdentification			Service Request. Service Identification. Text	Identifies the service to be used when calculating the rate for transportation.	1..1

Business Solution Design

Class (ABIE)	Attribute (BBIE)	Association (ASBIE)	Secondary Class	Official Dictionary Entry Name	Definition	Multi- plicity
	stopSequenceNumber			Service Request. Stop Sequence Number. Integer_Numeric	Number used to tie a service to a specific stop within the trajectory between origin of shipment and the destination. The field is not actually used when calculating the rate; but is returned on the rate result file.	0..1
		serviceQuantityRequest	QuantityInformation	Service Request. Service Quantity Request. Quantity Information	The total quantity and unit of measure for a given service as well as any freight class information for that service. Necessary to calculate the rate of transportation for a service.	0..*
StopOffInformation				Stop Off Information. Details	Defines all stop information that is required to perform a rate request.	
	areaInformation			Stop Off Information. Area Information. Code	A code allowing for providing area information, such as SPLC, as opposed to a specific location.	0..1
	partialInformation			Stop Off Information. Partial Information. Code	A code allowing for providing partial location information, such as partial zip codes, as opposed to a specific location.	0..1
		stopOffLocationInformation	LocationInformation	Stop Request. Stop Off Location Information. Location Information	Specific information regarding stop-offs for a shipment; necessary for calculating a rate for transportation.	0..1
TransportationRateCodeReference				Transportation Rate Code Reference. Details	Identifies the codes for unit of measure used for calculating a rate for transportation based on product; service or quantity. Also identifies the measurement type used for calculating the transportation rate based on product, service or quantity.	
	transportationRateUnitOfMeasurementCalculationCode			Transportation Rate Code Reference. Transportation Rate Unit Of Measurement Calculation Code. Transportation Rate Calculation Code List_Code	Identifies the codes for unit of measure used for calculating a rate for transportation based on product; service or quantity	0..1

Business Solution Design

Class (ABIE)	Attribute (BBIE)	Association (ASBIE)	Secondary Class	Official Dictionary Entry Name	Definition	Multi- plicity
	transportationRateUnitOfMeasurement-TypeCode			Transportation Rate Code Reference. Transportation Rate Unit Of Measurement Type Code. Transportation Rate Type Code List_Code	Identifies the measurement type used for calculating the transportation rate based on product, service or quantity.	0..1
TransportationRateComplexRequest				Transportation Rate Complex Request. Details	Electronic document requesting rate for transportation for one or more shipments. This document applies for the complex scenario only.	
		Is	Document	Transportation Rate Complex Request. Generalization. Electronic_Document	The Request for transportation Rate is an electronic document.	1..1
		Has	RateRequestGroup	Transportation Rate Complex Request. Association. Rate Request Group	Each Transportation rate request is composed of one or more logical groupings of rate requests.	1..*

Business Solution Design

1.5.2.4 Transportation Rate Request / Response (Complex Scenario) RESPONSE

Transportation Rate Complex Response v1.0

Class (ABIE)	Attribute (BBIE)	Association (ASBIE)	Secondary Class	Official Dictionary Entry Name	Definition	Multi-plicity
PartyInformation				Party Information Group. Details	This class contains all party related information as described in this section.	
	partyRole			Party Information Group. Party Role. Code	A code that identifies the role of a party	1..*
			AllowanceCharge	Party Information Group. Association. Allowance Charge		0..*
			Contact	Party Information Group. Association. Contact		0..*
			FacilitySpecification	Party Information Group. Association. Facility Specification		0..*
		bankingInformation	FinancialInstitutionInformation	Party Information Group. Banking Information. Financial Institution	The financial institution information of the party. Comment: Each party will identify the banking information required to conduct trade. This is a prerequisite to the pay process and includes:· banking institution's name and address· routing information	0..1
			NameAndAddress	Party Information Group. Association. Party Address Group	The financial institution information of the party. Comment: Each party will identify the banking information required to conduct trade. This is a prerequisite to the pay process and includes:· banking institution's name and address· routing information	1..1
			PartyDates	Party Information Group. Association. Trade Party_ Date Group	The financial institution information of the party. Comment: Each party will identify the banking information required to conduct trade. This is a prerequisite to the pay process and includes:· banking institution's name and address· routing information	1..1

Business Solution Design

Class (ABIE)	Attribute (BBIE)	Association (ASBIE)	Secondary Class	Official Dictionary Entry Name	Definition	Multi- plicity
			PartyTaxInformation	Party Information Group. Association. Party_ Tax Information Group	The financial institution information of the party. Comment: Each party will identify the banking information required to conduct trade. This is a prerequisite to the pay process and includes: banking institution's name and address; routing information	0..*
			PaymentTerms	Party Information Group. Association. Payment Terms	The financial institution information of the party. Comment: Each party will identify the banking information required to conduct trade. This is a prerequisite to the pay process and includes: banking institution's name and address; routing information	0..*
			PlanningManagementProfile	Party Information Group. Association. Planning Management Profile	The financial institution information of the party. Comment: Each party will identify the banking information required to conduct trade. This is a prerequisite to the pay process and includes: banking institution's name and address; routing information	0..1
TransportationRateComplexResponse				Transportation Rate Complex Response. Details	Electronic Response document to a Transportation Rate Request (within the complex scenario).	
		is	Document	Transportation Rate Complex Response. Generalization. Document	The transportation rate Response is an electronic document.	1..1
		transportationRateResponseIdentification	EntityIdentification	Transportation Rate Complex Response. Transportation Rate Response Identification. Entity Identification	Identifies the transportation rate Response uniquely.	1..1
		has	RateResponseGroup	Transportation Rate Complex Response. Association. Rate Response Group	Each transportation Response document has at least one header level record.	1..*
Document				Document. Details	Used to specify basic information about the content of the message including version number; creation date and time.	
DocumentOrDocumentLineReference				Document Or Document Line Reference. Details	Provides the detail line reference or the document reference.	

Business Solution Design

Class (ABIE)	Attribute (BBIE)	Association (ASBIE)	Secondary Class	Official Dictionary Entry Name	Definition	Multiplicity
EntityIdentification				Entity Identification. Details	The unique identification of a document.	
	uniqueCreatorIdentification			Entity Identification. Identification. Identifier	The unique creator identification for the message.	1..1
		contentOwner	PartyIdentification	Entity Identification. Content Owner. Party Identification		1..1
RateResponseGroup				Rate Response Group. Details	Logical Grouping of information in Response to a Request for Transportation Rate	
	errorMessageIdentifier			Rate Response Group. Error Message Identifier. Text	High level description of any errors that were returned when calculating the rate for transportation; and which resulted in the rate not being successfully calculated.	0..1
		transportationRateRequestIdentification	DocumentOrDocumentLineReference	Rate Response Group. Transportation Rate Request Identification. Document Or Document Line Reference	Unique identification of the Transportation Rate Request; used for matching back to the original rate request.	0..1
		has	IndividualRateResponse	Rate Response Group. Association. Individual Rate Response	Each rate Response group has at least one record containing information on individual rate requests.	0..*
		rateRequestor	PartyInformation	Rate Response Group. Rate Requestor. Party Information Group	Party information on the company requesting a rate for transportation.	1..1
		rateRequestReceiver	PartyInformation	Rate Response Group. Rate Request Receiver. Party Information Group	Party information on the receiver of the rate request.	1..1
IndividualRateResponse				Individual Rate Response. Details	Defines the start of a new rate Response for transportation. There is a one to one relationship between these records and the original individual rate requests that were sent for rating.	
	errorMessageIdentifier			Individual Rate Response. Error Message Identifier. Text	A unique error identification assigned to an error that applies to the entire rate result file.	0..1

Business Solution Design

Class (ABIE)	Attribute (BBIE)	Association (ASBIE)	Secondary Class	Official Dictionary Entry Name	Definition	Multiplicity
		individualRateRequestIdentification	DocumentOrDocumentLineReference	Individual Rate Response. Individual Rate Request Identification. Document Or Document Line Reference	Unique identification of each individual Rate Request; which originates the "Response" document.	1..1
		ratingCompany	PartyInformation	Individual Rate Response. Rating Company. Party Information Group	Unique identification of the company that is providing the rating for transportation.	0..1
		has	ContractResult	Individual Rate Response. Association. Contract Result	Each individual rate Response has information on the rate result identified by the individual associated contracts.	0..*
ContractResult				Contract Result. Details	Identifies the rate contract information for individual rate results within the electronic document "Transportation Rate Complex Response"	
	contractDescription			Contract Result. Contract Description. Text	Description of the contract that produced this particular rate result.	0..*
	contractIdentification			Contract Result. Contract Identification. Text	Specifies the identification of the contract that produced this particular result.	0..*
	convertedAmount			Contract Result. Converted Amount. Amount	Specifies the total amount for all rate result records for the individual rate request. If the requested currency on the rate is different from the base currency on the rate result; this will be the total amount in the "requested" currency.	0..*
		<<may have>>	CrossReferenceResult	Contract Result. Association. Cross Reference Result	Specifies the external reference for the contract that produced this particular rate result.	0..*
		<<may have>>	GlobalAuditResult	Contract Result. Association. Global Audit Result	Specifies the global audits that exist for this particular rate result.	0..*
		<<may have>>	AuditResult	Contract Result. Association. Global Audit Result	Specifies the description of any audits that exist for this particular rate result.	0..*
		<<may have>>	DistanceResult	Contract Result. Association. Distance Result	Each contract result can have a record with information on the distance between the origin and destination of the shipment.	0..*

Business Solution Design

Class (ABIE)	Attribute (BBIE)	Association (ASBIE)	Secondary Class	Official Dictionary Entry Name	Definition	Multi- plicity
		<<may have>>	Qualification	Contract Result. Association. Qualification	Each contract result can have a record with information about the qualification from which the rate result was generated within the Transportation Rate Complex Scenario.	0..*
		<<may have>>	ProductResult	Contract Result. Association. Product Result	Each contract result can have a record with information about the product from which the rate result was generated within the Transportation Rate Complex Scenario.	0..*
		<<may have>>	ServiceResult	Contract Result. Association. Service Result	Each contract result can have a record with information about the service from which the rate result was generated within the Transportation Rate Complex Scenario.	0..*
		stopResult	StopOffInformation	Contract Result. Stop Result. Stop Off Information	Each contract result can have a record with information on the stops between the origin and destination of the shipment.	0..*
CrossReferenceResult				Cross Reference Result. Details	Identifies the cross reference rate contract information for individual rate results within the electronic document "Transportation Rate Complex Response"	
	externalContractCrossReference			Cross Reference Result. External Contract Cross Reference. Text	Specifies the external reference for the contract that produced this particular rate result.	0..1
GlobalAuditResult				Global Audit Result. Details	Identifies the global audits that exist for this rate result	
	globalAuditDescription			Global Audit Result. Global Audit Description. Text	Specifies the description of any global audits which exist for this rate result. Global audits are audits that exist on a service type.	0..1
AuditResult				Audit Result. Details	Identifies the audits that exist for this rate result	
	auditDescription			Audit Result. Audit description. Text	Specifies the description of any audits which exist for a rate result. This field would only be populated if the Audit Flag is set to "YES" on the Rate Request.	0..1
DistanceResult				Distance Result. Details	Defines any distance information that could have been used in the calculation of the rate result.	

Business Solution Design

Class (ABIE)	Attribute (BBIE)	Association (ASBIE)	Secondary Class	Official Dictionary Entry Name	Definition	Multiplicity
	distanceUnitOfMeasurementCalculationCode			Distance Result. Distance Unit Of Measurement Calculation Code. Distance Calculation Code List_ Code	Identifies the calculation code of the unit of measure for the distance of the transportation.	0..1
	distanceUnitOfMeasurementTypeCode			Distance Result. Distance Unit Of Measurement Type Code. Distance Type Code List_ Code	Identifies the type code for the unit of measurement for the distance in a Transportation Rate.	0..1
	distanceValue			Distance Result. Distance Value. Float_ Numeric	Distance from the origin to the destination of a transportation	0..1
	isDistanceDirect			Distance Result. Is Distance Direct. Indicator	Indicates how the distance should be taken for calculating a rate for transportation. When YES; it identifies the distance from the origin to the destination as such. When NO; it identifies the distance from the origin of the shipment to the destination through all the stops.	1..1
	mileagePackageCode			Distance Result. Mileage Package Code. Mileage Package Code List_ Code	The code of the mileage package to be used when determining the distance from origin to destination in a request for transportation rate.	0..1
	mileagePackageVersion			Distance Result. Mileage Package Version. Text	Identifies the version of the mileage package to be used when determining the distance from origin to destination in a request for transportation rate.	0..1
StopOffInformation				Stop Off Information. Details	Defines all stop information that is required to perform a rate request.	
	areaInformation			Stop Off Information. Area Information. Code	A code allowing for providing area information, such as SPLC, as opposed to a specific location.	0..1
	partialInformation			Stop Off Information. Partial Information. Code	A code allowing for providing partial location information, such as partial zip codes, as opposed to a specific location.	0..1
		stopOffLocationInformation	LocationInformation	Stop Off Information. Stop Off Location Information. Location Information	Specific information regarding stop-offs for a shipment; necessary for calculating a rate for transportation.	0..1
LocationInformation				Location Information. Details	Provides the contact; name and address; and GLN of the location	

Business Solution Design

Class (ABIE)	Attribute (BBIE)	Association (ASBIE)	Secondary Class	Official Dictionary Entry Name	Definition	Multiplicity
		contactInformation	Contact	Location Information. Association. Contact	Provides the contact information.	0..*
			NameAndAddress	Location Information. Association. Party Address Group	Provides the location name and address.	1..1
			PartyIdentification	Location Information. Association. Party Identification	Provides the location Global Location Number	0..1
Qualification				Qualification. Details	Information about the qualification from which the rate result was generated within the Transportation Rate Complex Scenario.	
	contractEffectiveDate			Qualification. Contract Effective Date. Date Date Time	Date as of which the rate result is valid; based on contractual clauses.	0..1
	qualificationDescription			Qualification. Qualification Description. Text	Identifies the description of the qualification from which the rate result was generated.	0..1
	qualificationValue			Qualification. Qualification Value. Text	Identifies the qualification from which the rate of transportation was generated.	0..1
		<<may have>>	ProductResult	Qualification. Association. Product Result	Identifies the product result for which this qualification is valid.	0..*
		<<may have>>	ServiceResult	Qualification. Association. Service Result	Identifies the service result for which this qualification is valid.	0..*
ServiceResult				Service Result. Details	Information about the service that was rated for transportation.	
	isServiceCreated-ByRatingSystem			Service Result. Is Service Created By Rating System. Indicator	Indicates whether or not the service being rated was created by an automated rating system. If so; it is a service that appears on the rate result; but it has not been passed in on the rate request.	1..1
	isServiceRated			Service Result. Is Service Rated. Indicator	Indicates whether or not the service has been rated in the Transportation Rate Response or not.	1..1
	isRequiredForOptimal			Service Result. Is Required For Optimal. Indicator	Indicates whether or not the service being rates is required for the "OPTIMAL" scenario within the complex Transportation Rate scenario.	1..1
	serviceIdentification			Service Result. Service Identification. Text	Identifier for the Service being rated in the Transportation rate Response.	1..1

Business Solution Design

Class (ABIE)	Attribute (BBIE)	Association (ASBIE)	Secondary Class	Official Dictionary Entry Name	Definition	Multiplicity
	stopSequenceNumber			Service Result. Stop Sequence Number. Integer_Numeric	Associates a unique identifier for a stop to a particular service for the rate Response.	1..1
		serviceQuantityResult	QuantityInformation	Service Result. Service Quantity Result. Quantity Information	The total quantity and unit of measure for a service. Necessary for calculating the rate of transportation.	1..*
		<<has>>	RateResult	Service result. Association. Rate Result	Each individual service result has information on the rate result amounts and the composition of those amounts.	1..1
ProductResult				Product Result. Details	Defines the information about the product that has been rated for transportation.	
	isProductCreated-ByRatingSystem			Product Result. Is Product Created By Rating System. Indicator	Indicates whether or not the product being rated was created by an automated rating system. If so, it is a product that appears on the rate result; but it has not been passed in on the rate request.	1..1
	isProductRated			Product Result. Is Product Rated. Indicator	Indicates whether a product could be rated from the current rate contract which generated the current rate result or not.	1..1
	productClass			Product Result. Product Class. Text	The class for the product being used. There is a one on one match with the Transportation Rate Request.	0..1
	productIdentification			Product Result. Product Identification. Text	Identifies the product to be used when calculating the rate. This is the same product identifier as in the Transportation Rate Request.	0..1
		<<may have>>	ProductDimension	Product Result. Association. Product Dimension	Information on the dimensions of a product and its associated unit of measurements in the Transportation Rate and Response message	0..1
		<<has>>	RateResult	Product Result. Association. Rate Result	Each individual product result has information on the rate result amounts and the composition of those amounts.	1..1
		productQuantityResult	QuantityInformation	Product Result. Product Quantity Result. Quantity Information	Information on the quantity of the product that serves as the basis of calculation for the transportation rate Response.	1..*

Business Solution Design

Class (ABIE)	Attribute (BBIE)	Association (ASBIE)	Secondary Class	Official Dictionary Entry Name	Definition	Multi- plicity
ProductDimension				Product Dimension. Details	All dimensions necessary for rating a product within the context of transportation rate and response complex scenario.	
	dimensionUnitOfMeasurementCalculationCode			Product Dimension. Dimension Unit Of Measurement Calculation Code. Dimension Calculation Code List_ Code	Identifies the codes for unit of measure used for calculating a rate for transportation based on a product dimension	0..1
	dimensionUnitOfMeasurementTypeCode			Product Dimension. Dimension Unit Of Measurement Type Code. Dimension Type Code List_ Code	Identifies the type of the codes for unit of measure used for calculating a rate for transportation based on a product dimension	0..1
	productHeight			Product Dimension. Product Height. Measure	Height of the product that is the basis for calculating a rate for transportation.	0..1
	productLength			Product Dimension. Product Length. Measure	Length of the product that is the basis for calculating a rate for transportation.	0..1
	productWidth			Product Dimension. Product Width. Measure	Width of the product that is used as the basis for calculating a rate for transportation.	0..1
QuantityInformation				Quantity Information. Details	The total quantity and its associated unit of measure necessary for rating a product or service for transportation.	
	quantity			Quantity Information. Quantity. Float_ Numeric	Identifies the quantity of a given product or service when calculating a rate for transportation.	1..1
	freightClass			Quantity Information. Freight Class. Integer_ Numeric	Industry term identifying the value placed upon the contents of a shipment. The higher the number; the more valued a shipment is.	0..*
		<<has>>	TransportationRateCodeReference	Quantity Information. Association. Transportation Rate Code Reference	Provides additional information as to the unit of measurement used as basis for calculating a rate for transportation based on product; service or quantity.	0..1
TransportationRateCodeReference				Transportation Rate Code Reference. Details	Identifies the codes for unit of measure used for calculating a rate for transportation based on product; service or quantity. Also identifies the measurement type used for calculating the transportation rate based on product, service or quantity.	

Business Solution Design

Class (ABIE)	Attribute (BBIE)	Association (ASBIE)	Secondary Class	Official Dictionary Entry Name	Definition	Multi- plicity
	transportationRateUnitOfMeasurementCalculationCode			Transportation Rate Code Reference. Transportation Rate Unit Of Measurement Calculation Code. Transportation Rate Calculation Code List_Code	Identifies the codes for unit of measure used for calculating a rate for transportation based on product; service or quantity	0..1
	transportationRateUnitOfMeasurementTypeCode			Transportation Rate Code Reference. Transportation Rate Unit Of Measurement Type Code. Transportation Rate Type Code List_Code	Identifies the measurement type used for calculating the transportation rate based on product,service or quantity.	0..1
RateResult				Rate Result. Details	The Rate for every product and/or service that was rated by a Rate server Application.	
	priority			Rate Result. Priority. Numeric_Float	Identifies the priority as defined on the rate contract from which the rate result was derived.	0..1
	rateAmount			Rate Result. Rate Amount. Amount	Amount and currency of the rate for transportation Response.	0..1
	totalAmount			Rate Result. Total Amount. Amount	Total amount and currency for the whole rate result within the context of the Transportation rate Response.	0..1
		<<may have>>	TransitInformation	Rate Result. Association. Transit Information	Additional information on transit time for this particular rate result.	0..1
		<<may have>>	TransportationRateCodeReference	Rate Result. Association. Transportation Rate Code Reference	Additional information on the unit of measure and the type of codes used for the rate result for transportation.	0..1
TransitInformation				Transit Information. Details	Identifies specific transit information for a rate result.	
	transitDurationUnitOfMeasurementCalculationCode			Transit Information. Transit Duration Unit Of Measure Calculation Code. Transit Duration Calculation Code List_Code	Identifies the calculation code of the unit of measure for the transit duration.	0..1

Business Solution Design

Class (ABIE)	Attribute (BBIE)	Association (ASBIE)	Secondary Class	Official Dictionary Entry Name	Definition	Multiplicity
	transitDurationUnitOfMeasurementTypeCode			Service Result. Transit Duration Unit Of Measure Type Code. Transit Duration Type Code List_ Code	Identifies the type code of the unit of measure for the transit duration.	0..1
	transitDurationValue			Service Result. Transit Duration Value. Text	Value of the transit duration.	0..1

Transportation Rate Request / Response (Common)

StopOffInformation

Class (ABIE)	Attribute (BBIE)	Association (ASBIE)	Secondary Class	Official Dictionary Entry Name	Definition	Multiplicity
StopOffInformation				Stop Off Information. Details	Defines all stop information that is required to perform a rate request.	
	areaInformation			Stop Off Information. Area Information. Code	A code allowing for providing area information, such as SPLC, as opposed to a specific location.	0..1
	partialInformation			Stop Off Information. Partial Information. Code	A code allowing for providing partial location information, such as partial zip codes, as opposed to a specific location.	0..1
		stopOffLocationInformation	LocationInformation	Stop Off Information. Stop Off Location Information. Location Information	Specific information regarding stop-offs for a shipment; necessary for calculating a rate for transportation.	0..1
LocationInformation				Location Information. Details	Provides the contact; name and address; and GLN of the location	
		contactInformation	Contact	Location Information. Association. Contact	Provides the contact information.	0..*
			NameAndAddress	Location Information. Association. Party Address Group	Provides the location name and address.	1..1

Business Solution Design

Class (ABIE)	Attribute (BBIE)	Association (ASBIE)	Secondary Class	Official Dictionary Entry Name	Definition	Multiplicity
			PartyIdentification	Location Information. Association. Party Identification	Provides the location Global Location Number	0..1

QuantityInformation

Class (ABIE)	Attribute (BBIE)	Association (ASBIE)	Secondary Class	Official Dictionary Entry Name	Definition	Multiplicity
QuantityInformation				Quantity Information. Details	The total quantity and its associated unit of measure necessary for rating a product or service for transportation.	
	quantity			Quantity Information. Quantity. Float_Numeric	Identifies the quantity of a given product or service when calculating a rate for transportation.	1..1
	freightClass			Quantity Information. Freight Class. Integer_Numeric	Industry term identifying the value placed upon the contents of a shipment. The higher the number; the more valued a shipment is.	0..*
		<<has>>	TransportationRateCodeReference	Quantity Information. Association. Transportation Rate Code Reference	Provides additional information as to the unit of measurement used as basis for calculating a rate for transportation based on product; service or quantity.	0..1
TransportationRateCodeReference				Transportation Rate Code Reference. Details	Identifies the codes for unit of measure used for calculating a rate for transportation based on product; service or quantity. Also identifies the measurement type used for calculating the transportation rate based on product, service or quantity.	
	transportationRateUnitOfMeasurementCalculationCode			Transportation Rate Code Reference. Transportation Rate Unit Of Measurement Calculation Code. Transportation Rate Calculation Code List_Code	Identifies the codes for unit of measure used for calculating a rate for transportation based on product; service or quantity	0..1
	transportationRateUnitOfMeasurementTypeCode			Transportation Rate Code Reference. Transportation Rate Unit Of Measurement Type Code. Transportation Rate Type Code List_Code	Identifies the measurement type used for calculating the transportation rate based on product, service or quantity.	0..1

Business Solution Design

ProductDimension

Class (ABIE)	Attribute (BBIE)	Association (ASBIE)	Secondary Class	Official Dictionary Entry Name	Definition	Multiplicity
ProductDimension				Product Dimension. Details	All dimensions necessary for rating a product within the context of transportation rate and response complex scenario.	
	dimensionUnitOfMeasurementCalculationCode			Product Dimension. Dimension Unit Of Measurement Calculation Code. Dimension Calculation Code List_Code	Identifies the codes for unit of measure used for calculating a rate for transportation based on a product dimension	0..1
	dimensionUnitOfMeasurementTypeCode			Product Dimension. Dimension Unit Of Measurement Type Code. Dimension Type Code List_Code	Identifies the type of the codes for unit of measure used for calculating a rate for transportation based on a product dimension	0..1
	productHeight			Product Dimension. Product Height. Measure	Height of the product that is the basis for calculating a rate for transportation.	0..1
	productLength			Product Dimension. Product Length. Measure	Length of the product that is the basis for calculating a rate for transportation.	0..1
	productWidth			Product Dimension. Product Width. Measure	Width of the product that is used as the basis for calculating a rate for transportation.	0..1

1.5.3 Class Diagrams

1.5.3.1 Class Diagrams Transportation Rate Request / Response (Simple Scenario)

Business Solution Design

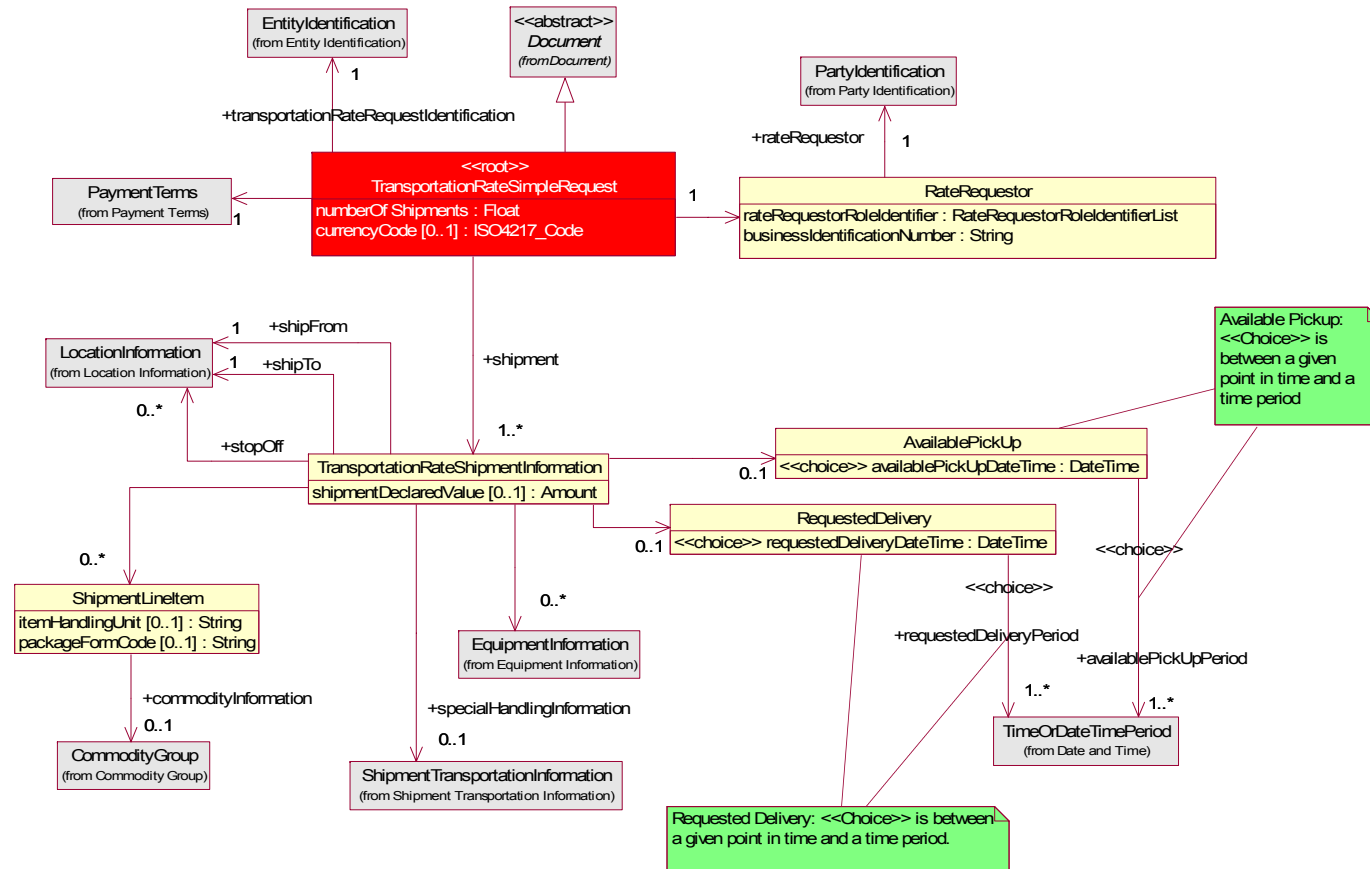


figure 1 – Class diagram: Transportation Rate Request (Simple Scenario)

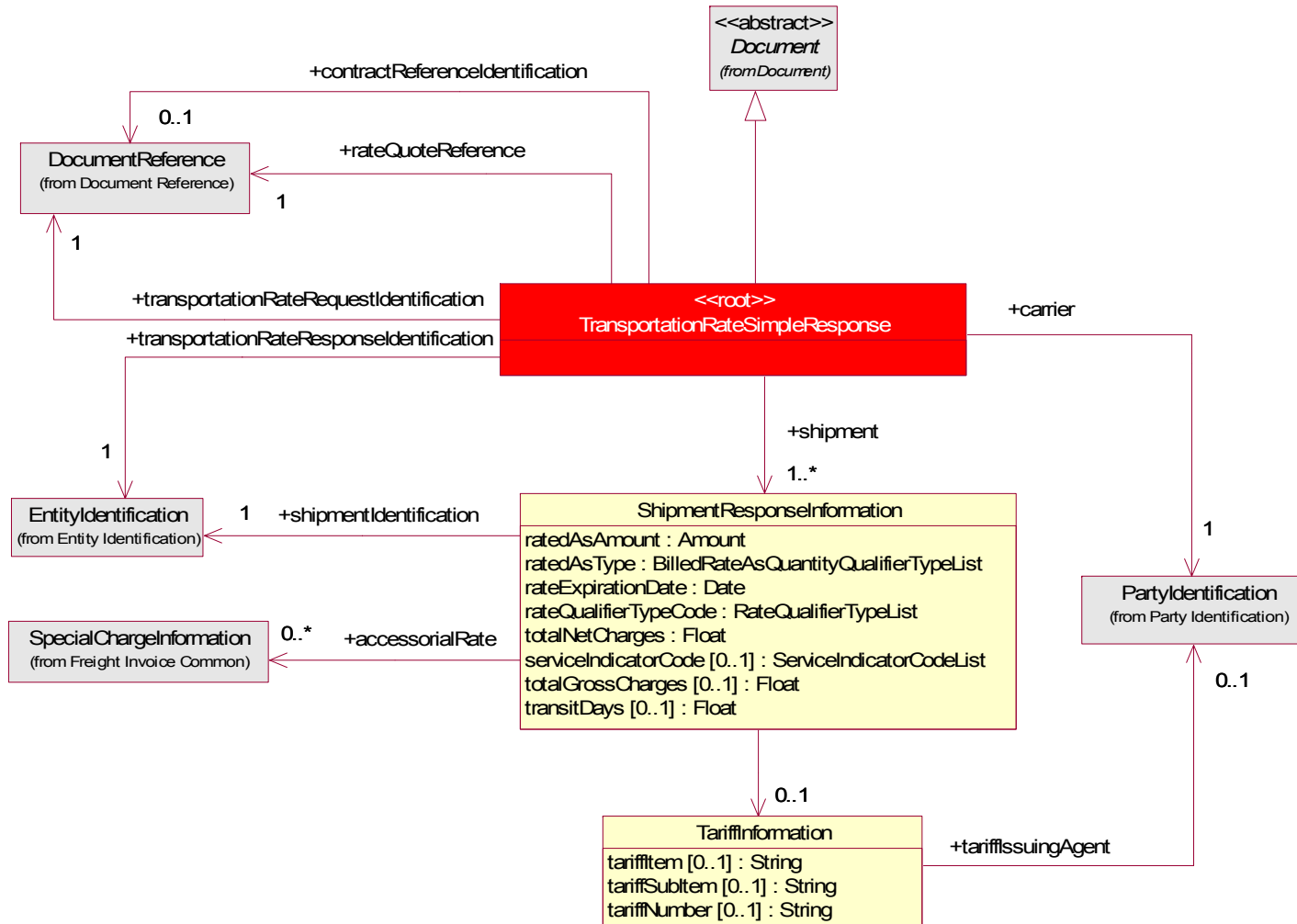


figure 2 – Class diagram: Transportation Rate Response (Simple Scenario)

1.5.3.2 Class Diagrams Transportation Rate Request / Response (Complex Scenario)

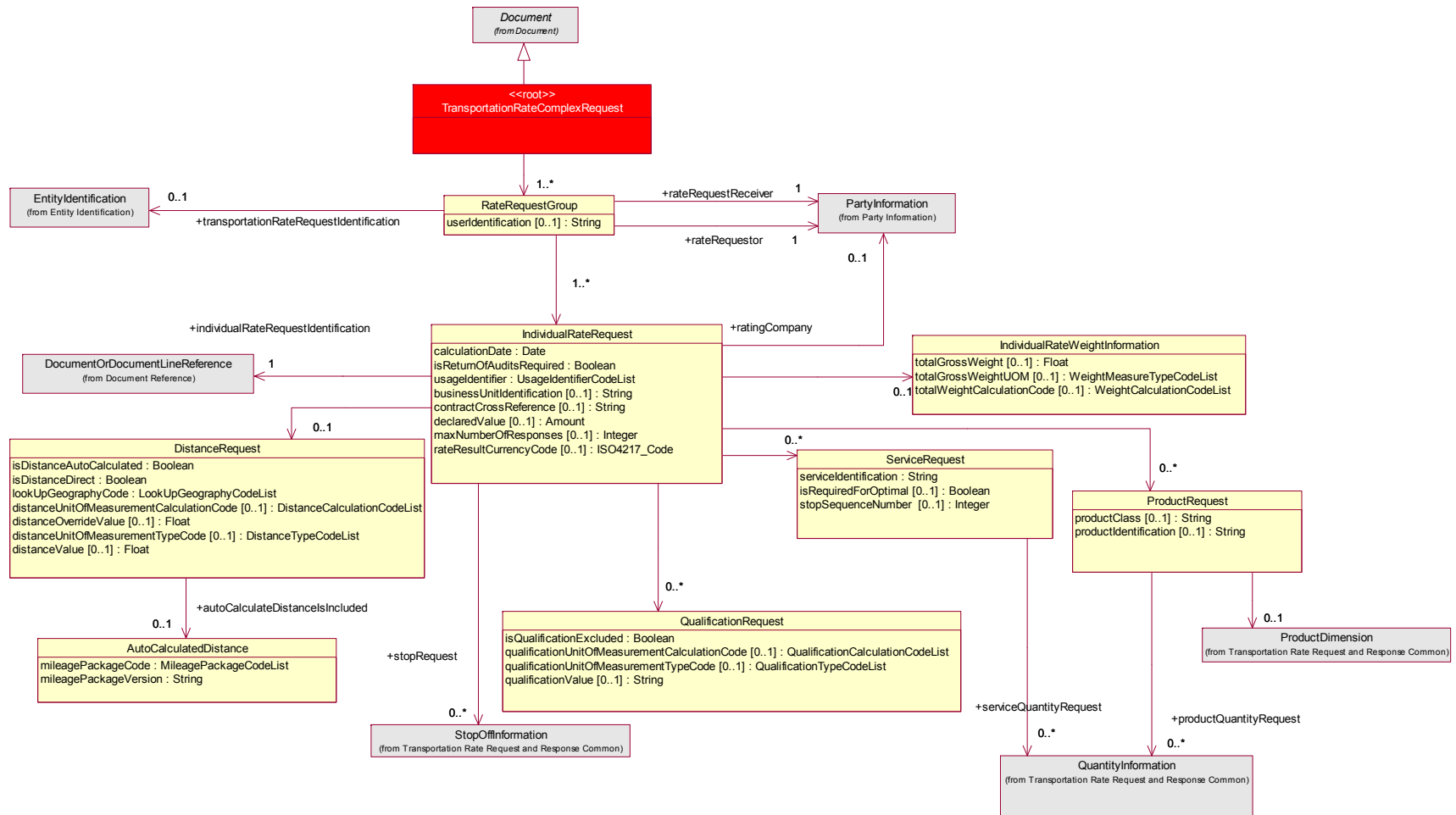


figure 3 – Class diagram: Transportation Rate Request (Complex Scenario)

1.5.3.3 Class Diagrams Transportation Rate Request / Response Common

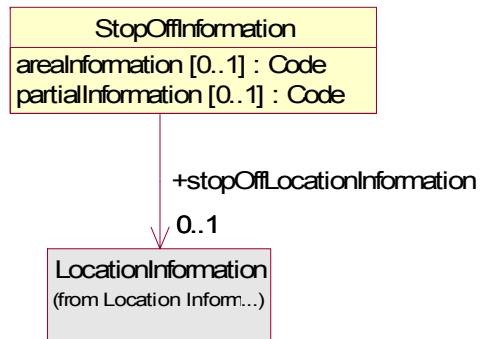


figure 5 – Class diagram: Transportation Rate Response Common (StopOffInformation)

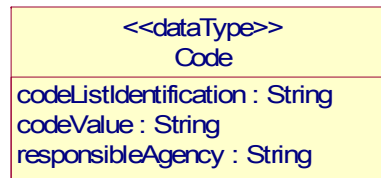


figure 6 – Class diagram: Common Library – Compound Data Types (Code)

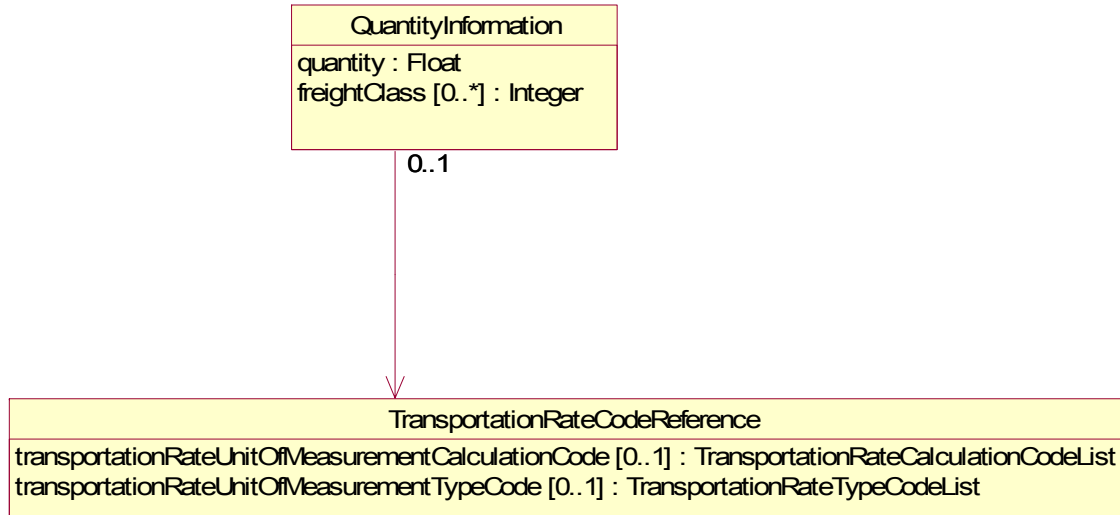


figure 7 – Class diagram: Transportation Rate Response Common (QuantityInformation)

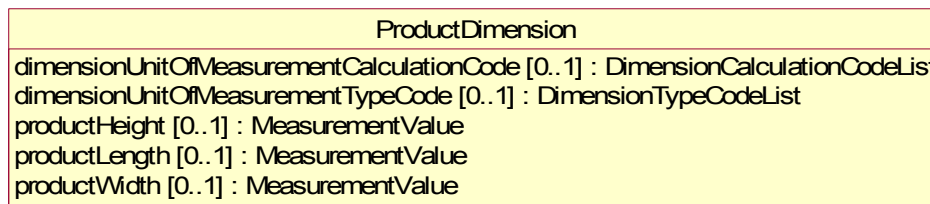


figure 8 – Class diagram: Transportation Rate Response Common (ProductDimension)

Business Solution Design

1.5.4 Code Lists

1.5.4.1 Transportation Rate Request/Response : Simple Scenario – REQUEST

Code List Name	Code List Description
RateRequestorRoleIdentifierList	
Code Name	Code Description
CONSIGNEE	N/A
SHIPPER	N/A
THIRD_PARTY	N/A

1.5.4.2 Transportation Rate Request/Response : Simple Scenario – RESPONSE

Code List Name	Code List Description
ServiceIndicatorCodeList	
Code Name	Code Description
DIRECT	N/A
INTERLINE	N/A
NON_DIRECT	N/A

1.5.4.3 Transportation Rate Request/Response : Complex Scenario – REQUEST

Code List Name	Code List Description
DistanceCalculationCodeList	
Code Name	Code Description
DRCT	Direct Kilometers or Miles
LINE	Line Kilometers or Miles
SPL	Special Kilometers or Miles

Business Solution Design

Code List Name	Code List Description
DistanceTypeCodeList	
Code Name	Code Description
KM	Kilometers
MI	Miles

Code List Name	Code List Description
LookUpGeographyCodeList	
Code Name	Code Description
NO	Exact geography information is used from the rate request to determine the rate response. For example, if the contract is based on zip code, but the rate request sent only contains a city/state, then a rate will not be returned.
YES_FAIL_DUPLICATE	The geography information sent in the request is used to compile the rate response. If two or more rates are found that match the geography information in the request, then the response will come back with a failure message.
YES_FIND_FIRST	The geography information sent in the request is used to compile the rate response. If two or more rates are found that match the geography information in the request, then the first rate found will be sent back in the response.

Code List Name	Code List Description
MileagePackageCodeList	Code for identification of Mileage-package used for calculating distance
Code Name	Code Description
ANY	Other mileage package not otherwise defined
MMMF	Milemaker
PTVU	PTV Unix (Europe)
PCMU	PC Miler

Business Solution Design

Code List Name	Code List Description
UsageIdentifierCodeList	Identification of the intended usage of the rate request for transportation rate.
Code Name	Code Description
AUDIT	An "AUDIT" request will only return the exact rate. "Audit" is typically used when auditing an invoice that is to be paid.
OPTIMAL	An "OPTIMAL" request will return the best possible rate based on the given criteria. "Optimal" is typically used when trying to find the lowest rate carrier to move a shipment.

Business Solution Design

Code List Name	Code List Description
QualificationTypeCodeList	
Code Name	Code Description
BSEG	Business segment
COMD	Product Commodity Type
DACT	Dedicated account code
DOW	Day of the week
DOY	Day of the year
EQP	Equipment Type
FRT	Freight Class Type
HGT	Height
LTH	Length
MODE	Mode type
MOVE	Movement type
MOY	Month of the year
PRD	Product Class Type
SLVL	Service level
SRV	Service Type
TERM	Terms
VOL	Volume
WGT	Weight
WTH	Width

Business Solution Design

Code List Name	Code List Description
QualificationCalculationCodeList	Codes for unit of measure used for calculating a rate for transportation based on product, service or quantity.
Code Name	Code Description
BPLT	Block pallet. Unit of measure used for calculating a rate for transportation based on product, service or quantity
BRD	Board feet. Unit of measure used for calculating a rate for transportation based on product, service or quantity.
CUBE	Cubic feet or meters. Unit of measure used for calculating a rate for transportation based on product, service or quantity.
DRCT	Direct kilometres or miles. Unit of measure used for calculating a rate for transportation based on product, service or quantity.
DRVR	Drivers. Unit of measure used for calculating a rate for transportation based on product, service or quantity.
EPLT	Euro Pallet. Unit of measure used for calculating a rate for transportation based on product, service or quantity.
FLAT	Flat. Unit of measure used for calculating a rate for transportation based on product, service or quantity.
LDMT	Loading meters. Unit of measure used for calculating a rate for transportation based on product, service or quantity.
LINE	Line kilometres or miles. Unit of measure used for calculating a rate for transportation based on product, service or quantity.
OPLT	One-way pallet. Unit of measure used for calculating a rate for transportation based on product, service or quantity.
PCTS	Percent of linehaul. Unit of measure used for calculating a rate for transportation based on product, service or quantity.
SPL	Special kilometres or miles. Unit of measure used for calculating a rate for transportation based on product, service or quantity.
UNIT	Units. Unit of measure used for calculating a rate for transportation based on product, service or quantity.
UOM	Unit of measure. Used for calculating a rate for transportation based on product, service or quantity.
WPLT	Wire-mesh pallets. Unit of measure used for calculating a rate for transportation based on product, service or quantity.

Business Solution Design

Code List Name	Code List Description
TransportationRateCalculationCodeList	Codes for unit of measure used for calculating a rate for transportation based on product, service or quantity.
Code Name	Code Description
BPLT	Block pallet. Unit of measure used for calculating a rate for transportation based on product, service or quantity
BRD	Board feet. Unit of measure used for calculating a rate for transportation based on product, service or quantity.
CUBE	Cubic feet or meters. Unit of measure used for calculating a rate for transportation based on product, service or quantity.
DRCT	Direct kilometres or miles. Unit of measure used for calculating a rate for transportation based on product, service or quantity.
DRVR	Drivers. Unit of measure used for calculating a rate for transportation based on product, service or quantity.
EPLT	Euro Pallet. Unit of measure used for calculating a rate for transportation based on product, service or quantity.
FLAT	Flat. Unit of measure used for calculating a rate for transportation based on product, service or quantity.
LDMT	Loading meters. Unit of measure used for calculating a rate for transportation based on product, service or quantity.
LINE	Line kilometres or miles. Unit of measure used for calculating a rate for transportation based on product, service or quantity.
OPLT	One-way pallet. Unit of measure used for calculating a rate for transportation based on product, service or quantity.
PCTS	Percent of linehaul. Unit of measure used for calculating a rate for transportation based on product, service or quantity.
SPL	Special kilometres or miles. Unit of measure used for calculating a rate for transportation based on product, service or quantity.
UNIT	Units. Unit of measure used for calculating a rate for transportation based on product, service or quantity.
UOM	Unit of measure. Used for calculating a rate for transportation based on product, service or quantity.
WPLT	Wire-mesh pallets. Unit of measure used for calculating a rate for transportation based on product, service or quantity.

Business Solution Design

Code List Name	Code List Description
TransportationRateTypeCodeList	
Code Name	
DAYS	Days. Identifier for the measurement type used for calculating the transportation rate based on product, service or quantity.
FT	Feet. Identifier for the measurement type used for calculating the transportation rate based on product, service or quantity.
GL	Gallons. Identifier for the measurement type used for calculating the transportation rate based on product, service or quantity.
HRS	Hours. Identifier for the measurement type used for calculating the transportation rate based on product, service or quantity.
KG	Kilograms. Identifier for the measurement type used for calculating the transportation rate based on product, service or quantity.
KM	Kilometres. Identifier for the measurement type used for calculating the transportation rate based on product, service or quantity.
KPH	Kilometres per hour. Identifier for the measurement type used for calculating the transportation rate based on product, service or quantity.
LBS	Pounds. Identifier for the measurement type used for calculating the transportation rate based on product, service or quantity.
LT	Litres. Identifier for the measurement type used for calculating the transportation rate based on product, service or quantity.
MI	Miles. Identifier for the measurement type used for calculating the transportation rate based on product, service or quantity.
MINS	Minutes. Identifier for the measurement type used for calculating the transportation rate based on product, service or quantity.
MPH	Miles per hour. Identifier for the measurement type used for calculating the transportation rate based on product, service or quantity.
MT	Meters. Identifier for the measurement type used for calculating the transportation rate based on product, service or quantity.
NONE	Not applicable in conjunction with the given calculation code. Identifier for the measurement type used for calculating the transportation rate based on product, service or quantity.
TON	Tons. Identifier for the measurement type used for calculating the transportation rate based on product, service or quantity.

Business Solution Design

TONN	Tons. Identifier for the measurement type used for calculating the transportation rate based on product, service or quantity.
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Code List Name	Code List Description
WeightCalculationCodeList	Identifies the calculation code of the unit of measure for the total weight within transportation rate.
Code Name	
100	100 Kilograms or pounds. Identifies the calculation code of the unit of measure for the total weight within transportation rate.
1000	1000 kilograms or pounds. Identifies the calculation code of the unit of measure for the total weight within transportation rate.
50	50 Kilograms. Identifies the calculation code of the unit of measure for the total weight within transportation rate.
UOM	Unit of measure for kilograms, pounds, or tons. Identifies the calculation code of the unit of measure for the total weight within transportation rate.

Code List Name	Code List Description
WeightMeasureTypeCodeList	The type code of the unit of measure for the total weight of a shipment that needs to be rated.
Code Name	
KG	Kilogram
LBS	Pounds
TON	Ton
TONN	Tonn

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1.5.4.4 Transportation Rate Request/Response : Complex Scenario – RESPONSE

Code List Name	Code List Description
DimensionCalculationCodeList	Codes for unit of measure used for calculating a rate for transportation based on product, service or quantity.
Code Name	Code Description
BPLT	Block pallet. Unit of measure used for calculating a rate for transportation based on product, service or quantity
BRD	Board feet. Unit of measure used for calculating a rate for transportation based on product, service or quantity.
CUBE	Cubic feet or meters. Unit of measure used for calculating a rate for transportation based on product, service or quantity.
EPLT	Euro Pallet. Unit of measure used for calculating a rate for transportation based on product, service or quantity.
FLAT	Flat. Unit of measure used for calculating a rate for transportation based on product, service or quantity.
LDMT	Loading meters. Unit of measure used for calculating a rate for transportation based on product, service or quantity.
OPLT	One-way pallet. Unit of measure used for calculating a rate for transportation based on product, service or quantity.
UNIT	Units. Unit of measure used for calculating a rate for transportation based on product, service or quantity.
UOM	Unit of measure. Used for calculating a rate for transportation based on product, service or quantity.
WPLT	Wire-mesh pallets. Unit of measure used for calculating a rate for transportation based on product, service or quantity.

Code List Name	Code List Description
DimensionTypeCodeList	
Code Name	Code Description
FT	Feet. Identifier for the measurement type used for calculating the transportation rate based on product, service or quantity.
MT	Meters. Identifier for the measurement type used for calculating the transportation rate based on product, service or quantity.
NONE	Not applicable in conjunction with the given calculation code. Identifier for the measurement type used for calculating the transportation rate based on product, service or quantity.

Business Solution Design

Code List Name	Code List Description
DistanceCalculationCodeList	
Code Name	Code Description
DRCT	Direct Kilometres or Miles
LINE	Line Kilometres or Miles
SPL	Special Kilometres or Miles

Code List Name	Code List Description
DistanceTypeCodeList	
Code Name	Code Description
KM	Kilometres
MI	Miles

Code List Name	Code List Description
MileagePackageCodeList	Code for identification of Mileage-package used for calculating distance
Code Name	Code Description
ANY	Other mileage package not otherwise defined
MMMF	Milemaker
PTVU	PTV Unix (Europe)
PCMU	PC Miler

Business Solution Design

Code List Name	Code List Description
TransportationRateCalculationCodeList	Codes for unit of measure used for calculating a rate for transportation based on product, service or quantity.
Code Name	Code Description
BPLT	Block pallet. Unit of measure used for calculating a rate for transportation based on product, service or quantity
BRD	Board feet. Unit of measure used for calculating a rate for transportation based on product, service or quantity.
CUBE	Cubic feet or meters. Unit of measure used for calculating a rate for transportation based on product, service or quantity.
DRCT	Direct kilometres or miles. Unit of measure used for calculating a rate for transportation based on product, service or quantity.
DRVR	Drivers. Unit of measure used for calculating a rate for transportation based on product, service or quantity.
EPLT	Euro Pallet. Unit of measure used for calculating a rate for transportation based on product, service or quantity.
FLAT	Flat. Unit of measure used for calculating a rate for transportation based on product, service or quantity.
LDMT	Loading meters. Unit of measure used for calculating a rate for transportation based on product, service or quantity.
LINE	Line kilometres or miles. Unit of measure used for calculating a rate for transportation based on product, service or quantity.
OPLT	One-way pallet. Unit of measure used for calculating a rate for transportation based on product, service or quantity.
PCTS	Percent of linehaul. Unit of measure used for calculating a rate for transportation based on product, service or quantity.
SPL	Special kilometres or miles. Unit of measure used for calculating a rate for transportation based on product, service or quantity.
UNIT	Units. Unit of measure used for calculating a rate for transportation based on product, service or quantity.
UOM	Unit of measure. Used for calculating a rate for transportation based on product, service or quantity.
WPLT	Wire-mesh pallets. Unit of measure used for calculating a rate for transportation based on product, service or quantity.

Business Solution Design

Code List Name	Code List Description
TransportationRateTypeCodeList	
Code Name	
DAYS	Days. Identifier for the measurement type used for calculating the transportation rate based on product, service or quantity.
FT	Feet. Identifier for the measurement type used for calculating the transportation rate based on product, service or quantity.
GL	Gallons. Identifier for the measurement type used for calculating the transportation rate based on product, service or quantity.
HRS	Hours. Identifier for the measurement type used for calculating the transportation rate based on product, service or quantity.
KG	Kilograms. Identifier for the measurement type used for calculating the transportation rate based on product, service or quantity.
KM	Kilometres. Identifier for the measurement type used for calculating the transportation rate based on product, service or quantity.
KPH	Kilometres per hour. Identifier for the measurement type used for calculating the transportation rate based on product, service or quantity.
LBS	Pounds. Identifier for the measurement type used for calculating the transportation rate based on product, service or quantity.
LT	Litres. Identifier for the measurement type used for calculating the transportation rate based on product, service or quantity.
MI	Miles. Identifier for the measurement type used for calculating the transportation rate based on product, service or quantity.
MINS	Minutes. Identifier for the measurement type used for calculating the transportation rate based on product, service or quantity.
MPH	Miles per hour. Identifier for the measurement type used for calculating the transportation rate based on product, service or quantity.
MT	Meters. Identifier for the measurement type used for calculating the transportation rate based on product, service or quantity.
NONE	Not applicable in conjunction with the given calculation code. Identifier for the measurement type used for calculating the transportation rate based on product, service or quantity.
TON	Tons. Identifier for the measurement type used for calculating the transportation rate based on product, service or quantity.
TONN	Tons. Identifier for the measurement type used for calculating the transportation rate based on product, service or quantity.

Business Solution Design

Code List Name	Code List Description
TransitDurationCalculationCodeList	
Code Name	
10	10 Minutes. Identifies the unit of measure for the transit duration as defined on the rate contract from which the rate result for transportation was derived.
15	15 Minutes. Identifies the unit of measure for the transit duration as defined on the rate contract from which the rate result for transportation was derived.
30	30 Minutes. Identifies the unit of measure for the transit duration as defined on the rate contract from which the rate result for transportation was derived.
6	6 minutes. Identifies the unit of measure for the transit duration as defined on the rate contract from which the rate result for transportation was derived.
UOM	Unit of measure. Identifies the unit of measure for the transit duration as defined on the rate contract from which the rate result for transportation was derived.

Code List Name	Code List Description
TransitDurationTypeCodeList	
Code Name	
DAYS	Days. Identifies the unit of measure type code for the transit duration as defined on the rate contract from which the rate result for transportation was derived
HRS	Hours. Identifies the unit of measure type code for the transit duration as defined on the rate contract from which the rate result for transportation was derived.
MINS	Minutes. Identifies the unit of measure type code for the transit duration as defined on the rate contract from which the rate result for transportation was derived.
MNTH	Month. Identifies the unit of measure type code for the transit duration as defined on the rate contract from which the rate result for transportation was derived.

Business Solution Design

1.6 Business Document Example

1.6.1 Business Document Example Transportation Rate Simple Request

The following is an example of a Transportation Rate Simple Request message. The message is sent out on February 21st at 11 AM. The message is identified with the unique identifier 2006009. The content owner is the sending party,(Rate Requestor 8712345678913).

The simple request for Transportation Rate consists of

TransportationRateSimpleRequest	
- creationDateTime	2006-02-21T11:00:00
- documentStatus	ORIGINAL
- currencyCode	USD
- numberOfShipments	1
EntityIdentification (+transportationRateRequestIdentification)	
- uniqueCreatorIdentification	2006009
PaymentTerms	
- paymentTermsType	PREVIOUSLY_AGREED_UPON
RateRequestor	
- businessIdentificationNumber	GS08457
- rateRequestorRoleIdentifier	SHIPPER
PartyIdentification (+rateRequestor)	
- globalLocationNumber	8712345678913
TransportationRateShipmentInformation (+shipment)	
- shipmentDeclaredValue	35000
LocationInformation (+shipFrom)	
- globalLocationNumber	87123456789223
LocationInformation (+shipTo)	
- globalLocationNumber	87123456789233
RequestedDelivery	
- requestedDeliveryDateTime	2006-03-27T10:00:00
EquipmentInformation	
- equipmentIdentification	ICSU295056
- equipmentType	TRAILER DRY FREIGHT
ShipmentTransportationInformation(+specialHandlingInformation)	
- serviceLevelCode	EXPEDITED_SERVICE
ShipmentLineItem	
- itemHandlingUnit	
- packageFormCode	
CommodityGroup(+commodityInformation)	
- commodityDescription	WP37A
- commodityQuantity	50000
- commodityType	SENDERS_COMMODITY_CODE
- volume	200CUFT

1.6.2 Business Document Example Transportation Rate Simple Response

Business Solution Design

The following is an example of a Transportation Rate Simple Response message. The message is sent out on February 22nd at 11 AM. The message is identified with the unique identifier 2006049. The simple Response for Transportation Rate consists of

TransportationRateSimpleResponse	
- creationDateTime	2006-02-22T11:00:00
- documentStatus	ORIGINAL
DocumentReference (+contractReferenceIdentification)	
- creationDateTime	2005-01-16T17:00:00
- uniqueCreatorIdentification	2005010
DocumentReference (+rateQuoteReference)	
- creationDateTime	2006-02-22T11:00:00
- uniqueCreatorIdentification	2006059
DocumentReference(+transportationRateRequestIdentification)	
- creationDateTime	2006-02-21T11:00:00
- uniqueCreatorIdentification	2006009
DocumentReference(+transportationRateResponseIdentification)	
- creationDateTime	2006-02-22T11:00:00
- uniqueCreatorIdentification	2006049
PartyIdentification(+carrier)	
- globalLocationNumber	8712345678943
ShipmentResponseInformation (+shipment)	
- ratedAsAmount	3000USD
- ratedAsType	LOAD
- rateExpirationDate	2006-02-24T16:00:00
- rateQualifierTypeCode	PER_LOAD
- serviceIndicatorCode	DIRECT
- transitDays	1
EntityIdentification (+shipmentIdentification)	
- uniqueCreatorIdentification	2006549

1.6.3 Business Document Example Transportation Rate Complex Request

TransportationRateComplexRequest	
- creationDateTime	2006-02-21T11:00:00
- documentStatus	ORIGINAL
RateRequestGroup	
- userIdentification	GS08457
EntityIdentification (+transportationRateRequestIdentification)	
- uniqueCreatorIdentification	2006009
PartyIdentification(+rateRequestor)	
- globalLocationNumber	8712345678901
PartyIdentification(+rateRequestReceiver)	
- globalLocationNumber	8712345678921
IndividualRateRequest	
- businessUnitIdentification	SHLOG01
- calculationDate	2006-02-21T10:59:00
- contractCrossReference	SCHNE0507413
- declaredValue	5000USD
- isReturnOfAuditsrequired	NO
- maxNumberOfResponses	1
- rateResultCurrencyCode	USD
- usageIdentification	OPTIMAL
DocumentOrDocumentLineReference (+IndividualRateRequestIdentification)	
- uniqueCreatorIdentification	2006059
PartyInformation (+ratingCompany)	
- globalLocationNumber	8712345678921
DistanceRequest	
- isDistanceDirect	YES
- distanceValue	140
- isAutoCalculateDistanceIncluded	NO
- lookUpGeographyCode	YES
- distanceCalculationCode	DRCT
- distanceTypeCode	MI
ServiceRequest	
- freightClass	2
- isServiceRequiredForOptimal	YES
- serviceIdentification	GSOPG
QuantityRequest	
- quantity	40
TransportationRateCodeReference	
- transportationRateCalculationCode	UOM
- transportationRateTypeCode	TON

1.6.4 Business Document Example Transportation Rate Complex Response

TransportationRateComplexResponse	
- creationDateTime	2006-02-22T11:00:00
- documentStatus	ORIGINAL
EntityIdentification (+transportationRateResponseIdentification)	
- uniqueCreatorIdentification	2006039
RateResponseGroup	
DocumentOrDocumentLineReference (+transportationRateRequestIdentification)	
- uniqueCreatorIdentification	2006009
PartyInformation(+rateRequestor)	
- globalLocationNumber	8712345678913
PartyIdentification(+rateRequestReceiver)	
- globalLocationNumber	8712345678921
IndividualRateResponse	
- contractDescription	BACK TO BACK
- contractIdentification	2006054213
PartyInformation(+ratingCompany)	
- globalLocationNumber	8712345678921
DocumentOrDocumentLineReference (+IndividualRateRequestIdentification)	
- uniqueCreatorIdentification	2006059
DistanceResult	
- isDistanceDirect	YES
- distanceValue	140
- distanceCalculationCode	DRCT
- distanceTypeCode	MI
RateResult	
- rateAmount	340USD
- totalAmount	340USD
ContractResult	
- externalContractCrossReference	SCHNE0507413
ServiceResult	
- freightClass	2
- isServiceCreatedByRatingSystem	NO
- isServiceRated	YES
- isServiceRequiredForOptimal	YES
- serviceIdentification	GSOPG
- servicePriority	1
QuantityResult	
- quantity	40
TransportationRateCodeReference	
- transportationRateCalculationCode	UOM
- transportationRateTypeCode	TON

Business Solution Design

1.7 Implementation Considerations

Not applicable

1.8 Testing

1.8.1 Pass / Fail Criteria

Number	Test Criteria	Related Requirement	Design Element	Pass Criteria	Fail Criteria
	Not applicable				

1.8.2 Test Data

1.8.2.1 Transportation Rate (Simple Scenario) Request

Attribute	Value
availablePickUpDateTime	2006-02-22T11:00:00
equipmentIdentification	ICSU295056
equipmentType	TRAILER_DRY_FREIGHT
commodityDescription	WP37A
commodityQuantity	50000
commodityType	SENDERS_COMMODITY_CODE
uniqueCreatorIdentification	2006009
globalLocationNumber	87123456789223
paymentTermsEvent	RECEIPT_OF_GOODS
paymentTermsType	NO_CHARGE
proximoCutoffDay	2006-02-22
businessIdentificationNumber	GS08457
rateRequestorRoleIdentifier	SHIPPER
requestedDeliveryDateTime	2006-02-21T11:00:00
itemHandlingUnit	FORKLIFT
packageFormCode	PALLET
serviceLevelCode	EXPEDITED_SERVICE
shipmentSpecialHandlingCode	BLIND_SHIPMENT
transportationMethodType	EXPEDITED_TRUCK
shipmentDeclaredValue	5000USD
currencyCode	USD
numberOfShipments	1

1.8.2.2 Transportation Rate (Simple Scenario) Response

Attribute	Value
allowanceChargeType	CHARGE_GLOBAL
allowanceOrChargeType	CHARGE
effectiveDateType	LAST_SHIP_DATE
sequenceNumber	5
settlementType	BILL_BACK
creationDateTime	2006-02-22T11:00:00
uniqueCreatorIdentification	2006059
globalLocationNumber	8712345678943
ratedAsAmount	3000USD
ratedAsType	LOAD
rateExpirationDate	2006-02-24T16:00:00
rateQualifierTypeCode	PER_LOAD
serviceIndicatorCode	DIRECT
totalGrossCharges	2000USD
transitDays	5
tariffItem	NONHAZMAT
tariffNumber	564897
tariffSubItem	CLEAN

Business Solution Design

1.8.2.3 Transportation Rate (Complex Scenario) Request

Attribute	Value
mileagePackageCode	MMMF
mileagePackageVersion	4 . 5A
partyRole	SHIPPER
distanceCalculationCode	DRCT
distanceOverrideValue	250
distanceTypeCode	MI
distanceValue	350
isAutoCalculateDistanceIncluded	YES
isDistanceDirect	YES
lookUpGeographyCode	NO
uniqueCreatorIdentification	2005010
businessUnitIdentification	SHLOG01
calculationDate	2006-02-22
contractCrossReference	SCHNE0507413
declaredValue	5000USD
isReturnOfAuditsrequired	NO
maxNumberOfResponses	5
rateResultCurrencyCode	CAD
usageIdentification	OPTIMAL
totalGrossWeight	40TON
totalGrossWeightUOM	TON
totalWeightCalculationCode	UOM
freightClass	2
productClass	4
productHeight	30FT
productIdentification	ARGOS05
productLength	20FT
productQuantity	50
productWidth	10FT
isQualificationExcluded	YES
qualificationTypeCode	PRD
qualificationValue	10
rateQualifierTypeCode	PER_SQUARE_YARD_OR_PER_SQUARE_METRE
quantity	100
userIdentification	GS08547
isServiceRequiredForOptimal	YES
serviceIdentification	GSOPG
stopSequenceNumber	5
transportationRateCalculationCode	UOM
transportationRateTypeCode	TONN

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1.8.2.4 Transportation Rate (Complex Scenario) Response

Attribute	Value
partyRole	SHIPPER
auditDescription	GLOBAL
externalContractCrossReference	SCHNE0507413
globalAuditDescription	AUTHORIZED_RETURN
distanceCalculationCode	DRCT
distanceTypeCode	MI
distanceValue	150
isDistanceDirect	YES
mileagePackageCode	MMMF
mileagePackageVersion	4.5A
uniqueCreatorIdentification	2006059
contractDescription	BACK TO BACK
contractIdentification	2006054321
convertedAmount	1500USD
errorMessageIdentifier	EFFECTIVE_DATE_MISSING
freightClass	1
isProductRated	YES
productClass	1
productHeight	30FT
productIdentification	ARGOS05
productLength	20FT
productWidth	10FT
contractEffectiveDate	2006-02-20
qualificationDescription	Business segment only
qualificationValue	10
quantity	100
rateAmount	1500USD
totalAmount	1500USD
isServiceCreatedByRatingSystem	YES
isServiceRated	YES
isServiceRequiredForOptimal	YES
serviceIdentification	GSOPG
servicePriority	1
stopSequenceNumber	5
transitDurationCalculationCode	UOM
transitDurationTypeCode	DAYS
transitDurationValue	5
transportationRateCalculationCode	BPLT
transportationRateTypeCode	UOM

1.9 Appendices

Not applicable

1.10 Summary of Changes

Change	BMS Ver- sion	Associated CR Number
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Business Solution Design

<ul style="list-style-type: none">• Section 1.5.3.1 Figure 1• Change to model in Simple Scenario (Request): was RateRequestorRoleIdentificationList was changed to RateRequestorRoleIdentifierList based on stopgap	1.3.5	
<ul style="list-style-type: none">• Section 1.5.3.1 Figure 1• Change to model in Simple Scenario (Request): stopOff role was on wrong line	1.3.6	

2 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