Transport Capacity Booking and Response

Business Message Standard (BMS)

Release 3.2

01-Dec-2014, Issue 1

Document Summary

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Business Requirements Document (BRAD) Reference

BRAD Title	BRAD Issue Date	BRAD Version
Transport Planning	March 2011	1.0

Document Change History

Date of Change	Version	Changed By	Reason for Change	Summary of Change
12-Jan-2012	BMS 3.0 – Issue 1	Mark Van Eeghem	BMS Release 3.0	See summary of changes
01-May-2013	BMS 3.1 – Issue 1	Coen Janssen	BMS Release 3.1	See summary of changes
01-Dec-2014	BMS 3.2 – Issue 1	Ewa Iwicka	BMS Release 3.2	See summary of changes

Disclaimer

Table of Contents

1. Business Domain View

1.1. Introduction

Message Definition

Transport Capacity Booking Message Definition

Transport Capacity Booking is the process to reserve space for estimated consignments or shipments. Typically the booking process covers a period of less than a week prior to actual shipments covered by capacity booking moving through the Logistics Network. The Logistic Services Buyer will send transport capacity booking requests to the Logistic Services Seller.

Transport Capacity Response Message Definition

The Transport Capacity Booking Response is sent by the Logistic Services Seller to the Logistic Services Buyer, accepting or rejecting the Transport Capacity Booking.

Principles

Capacity booking requests are used to reserve space *prior to the goods being ready for despatch*. At the point that the goods are actually ready to be moved and have been assigned a shipment or consignment identification, the Transport Execution process begins with the Transport Instruction message. The Transport Execution process is supported by separate Business Message Standards.

In cases where the Logistic Services Buyer and Logistic Services Seller share capacity forecasts, the capacity booking process will be used to drive the short-term Capacity Planning process of the Logistic Services Seller based on more detailed information from the Logistic Services Buyer in terms of quantities (volume, weights, pallets, trucks, etc..) than was shared during the capacity forecasting process. In this case the booking process "consumes" the long-term reservation of capacity expressed in the forecast. If all runs well, the total long-term forecasted capacity for the period should be close to the total capacity booked in the short-term capacity booking process for the same period. The forecasting process is supported by separate Business Message Standards.

1.2. References

Reference Name	Description
BRAD Transport Planning (GS1, 2011)	
Logistics Interoperability Model (GS1, 2007)	
BMS eCom Domain Common Library Release 3.2	The documented design of components that are used in multiple messages within the eCom domain.
BMS Shared Common Library Release 3.2	The documented design of components that are used in multiple messages within the eCom domain and GDSN.

2. Business Context

Context Category	Value(s)
Industry	All
Geopolitical	All

Context Category	Value(s)
Product	All
Process	Transport Management
System Capabilities	GS1 System
Official Constraints	None

3. Business Transaction View

3.1. Business Transaction – Manage Transport Capacity Booking

Use Case Diagram
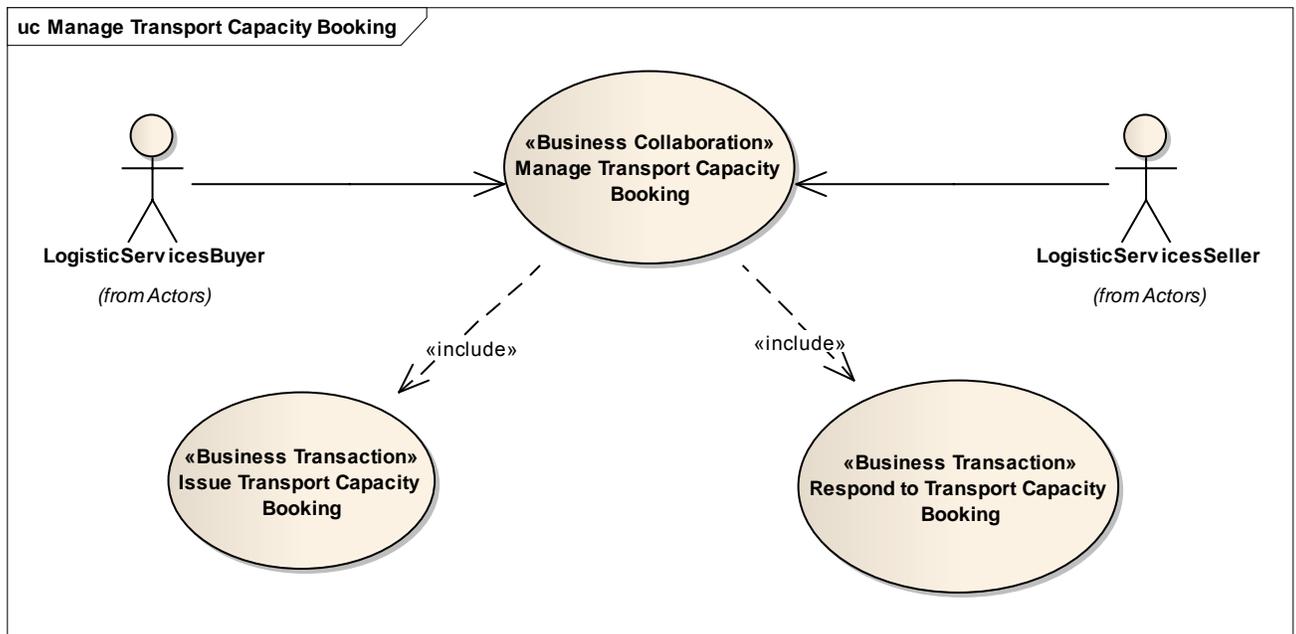
Use Case Description

Use Case ID	UC-2
Use Case Name	Manage Transport Capacity Booking
Use Case Description	The Logistic Services Buyer (LSB) requests the Logistics Services Seller (LSS) to reserve space on a means of transport for goods items to be transported together. The LSS may accept the booking, conditionally accept the booking, or reject the booking.
Actors (Goal)	Logistic Services Buyer (LSB) Logistic Services Seller (LSS)
Performance Goals	

Use Case ID	UC-2
Preconditions	The LSB and LSS have a relationship. The LSB has plans for goods items to be transported and knows: ▪ The mode of transport ▪ The type of means of transport
Post conditions	The LSB and LSS may or may not have a commercial agreement on the requested space booking. An agreement has been made between the LSB and the LSS as to whether or not final transport instructions and/or transport arrangements are required and what will be the next steps to take in either case.
Scenario	The Logistics Service Buyer sends a request to the Logistic Service Seller to make a reservation for space for movement of goods items. The LSS checks the availability of space for the requested booking on the means of transport and either confirms the space booking or does not accept the space booking.
Alternative Scenario	

Activity Diagram(s)

Not applicable

Sequence Diagram(s)
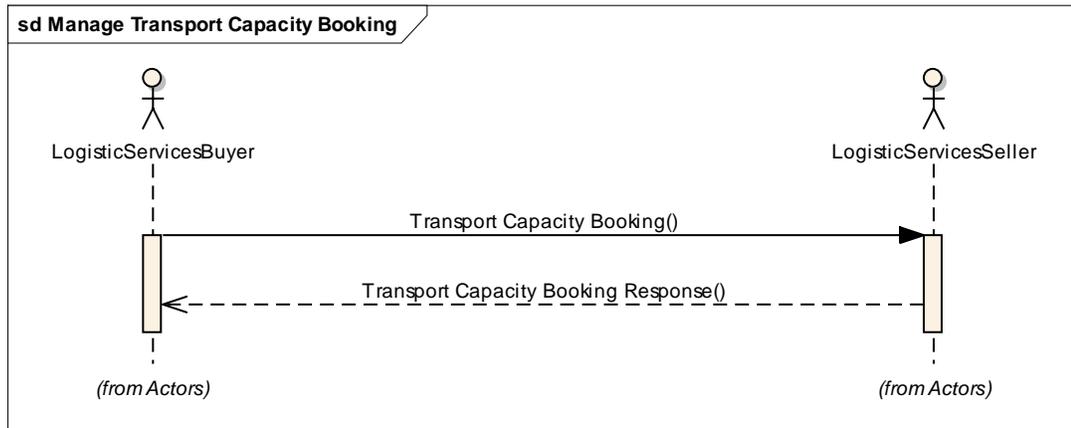
## 3.2. Business Transaction - Issue Transport Capacity Booking

Use Case ID	UC-2A
Use Case Name	Issue Transport Capacity Booking
Use Case Description	The Logistic Services Buyer requests the Logistic Services Seller to reserve space on a means of transport for goods items to be transported together.
Actors (Goal)	Logistic Services Buyer (LSB) Logistic Services Seller (LSS)
Performance Goals	

Use Case ID	UC-2A
Preconditions	The LSB has goods items to be transported and knows: ■ The mode of transport ■ The type of means of transport
Post conditions	The LSS receives a booking request.
Scenario	The LSB sends a request to the LSS to reserve space on a means of transport for goods items to be transported together.
Alternative Scenario	

3.3. Business Transaction - Respond to Transport Capacity Booking

Use Case ID	UC-2B
Use Case Name	Respond to Transport Capacity Booking
Use Case Description	The Logistic Services Seller confirms space booking or does not accept the space booking
Actors (Goal)	Logistic Services Buyer (LSB) Logistic Services Seller (LSS)
Performance Goals	
Preconditions	The LSB and LSS have a relationship. The LSB has submitted a booking request to the LSS. In their interoperation agreement the LSB and LSS have agreed to use a response as mandatory step in the transport capacity booking process.
Post conditions	The LSB and LSS may or may not have a commercial agreement on the requested space booking. An agreement has been made between the LSB and the LSS on the next steps.
Scenario	The LSS checks availability of the requested space booking on the means of transport and either confirms the space booking or does not accept the space booking The LSS sends the response to the LSB.
Alternative Scenario	

4. Business Information View

4.1. Transport Capacity Booking

Class Diagram
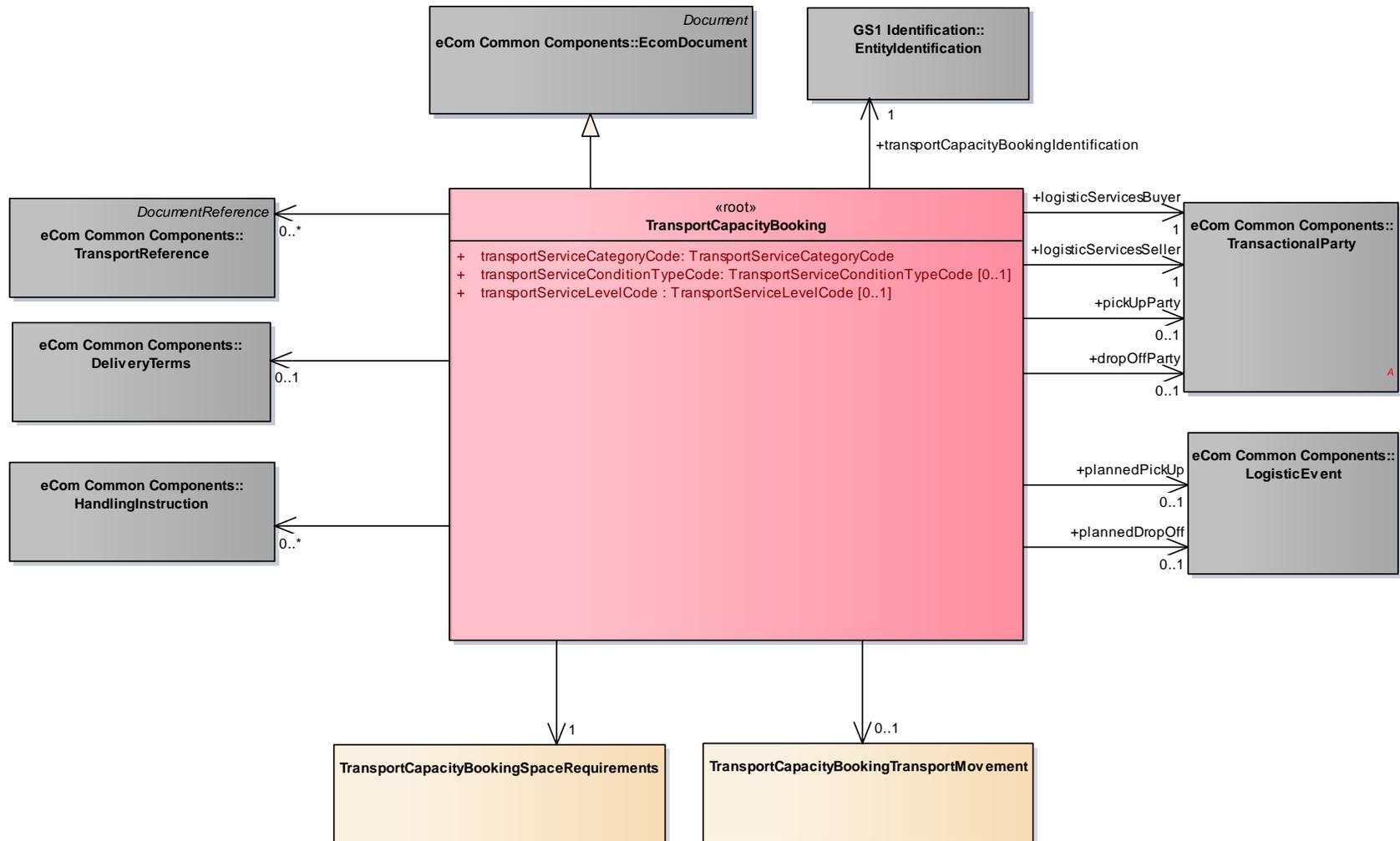
GDD Report

The content of the TransportCapacityBooking class, its structure and component definitions can be accessed in the Global Data Dictionary: http://apps.gs1.org/GDD/bms/Version3_2/Pages/bieDetails.aspx?semanticURN=urn:gs1:gdd:bie:TransportCapacityBooking

| Content	Attribute / Role	Datatype /Secondary class	Multiplicity	Definition	Requirements
TransportCapacity Booking				The Transport Capacity Booking is sent by the Logistic Services Buyer to the Logistic Services Seller, to reserve transport resources for estimated consignments or shipments.	
Association	plannedDropOff	LogisticEvent	0..1	Details on the planned delivery of the goods.	BRAD Transport Planning - BKH8
Generalization		EcomDocument		Basic information about the content of the message including version number, creation date and time.	BRAD Transport Planning - BKH2, BKH3
Association		DeliveryTerms	0..1	The applicable legal, customs, financial and insurance terms that have been agreed for a goods delivery.	BRAD Transport Planning - BKH11
Association	pickUpParty	TransactionalParty	0..1	The party where the goods will be collected.	BRAD Transport Planning - BKH6, BKH7
Association	logisticServices Seller	TransactionalParty	1..1	A party that provides logistics services to another party.	BRAD Transport Planning - BKH5
Association		TransportCapacityBoo kingTransportMoveme nt	0..1	Details for the booked movement of the goods	BRAD Transport Planning - BKH14
Association		HandlingInstruction	0..*	Instructions on the way to treat the goods during transport and storage.	BRAD Transport Planning - BKH9
Association		TransportReference	0..*	References to associated information in support of related business processes. For example: purchase order number, bank account number.	BRAD Transport Planning - BKH10
Association	plannedPickUp	LogisticEvent	0..1	Details on the planned collection of the goods.	BRAD Transport Planning - BKH8

Content	Attribute / Role	Datatype /Secondary class	Multiplicity	Definition	Requirements
Association	dropOffParty	TransactionalParty	0..1	The party where the goods will be delivered.	BRAD Transport Planning - BKH6, BKH7
Association	logisticServices Buyer	TransactionalParty	1..1	A party that purchases logistics services from another party.	BRAD Transport Planning - BKH4
Association	transportCapaci tyBookingIdentif ication	EntityIdentification	1..1	The identification of the transport capacity booking document.	BRAD Transport Planning - BKH1
Association		TransportCapacityBoo kingSpaceRequiremen ts	1..1	Details on the booked transport space, such as volume, weight, transport equipment.	BRAD Transport Planning - BKH13
Attribute	transportServic eCategoryCode	TransportServiceCate goryCode	1..1	Code specifying the type of transport service that will be provided. For example: Courier service.	BRAD Transport Planning - BKH12
Attribute	transportServic eConditionType Code	TransportServiceCond itionTypeCode	0..1	Code specifying the type of contractual conditions applicable to the transport service. For example: Port to port.	BRAD Transport Planning - BKH12
Attribute	transportServic eLevelCode	TransportServiceLevel Code	0..1	Code specifying the service level requested for the transport service. For example: Express service.	BRAD Transport Planning - BKH12

4.1.1. Transport Capacity Booking Space Requirements

Class Diagram
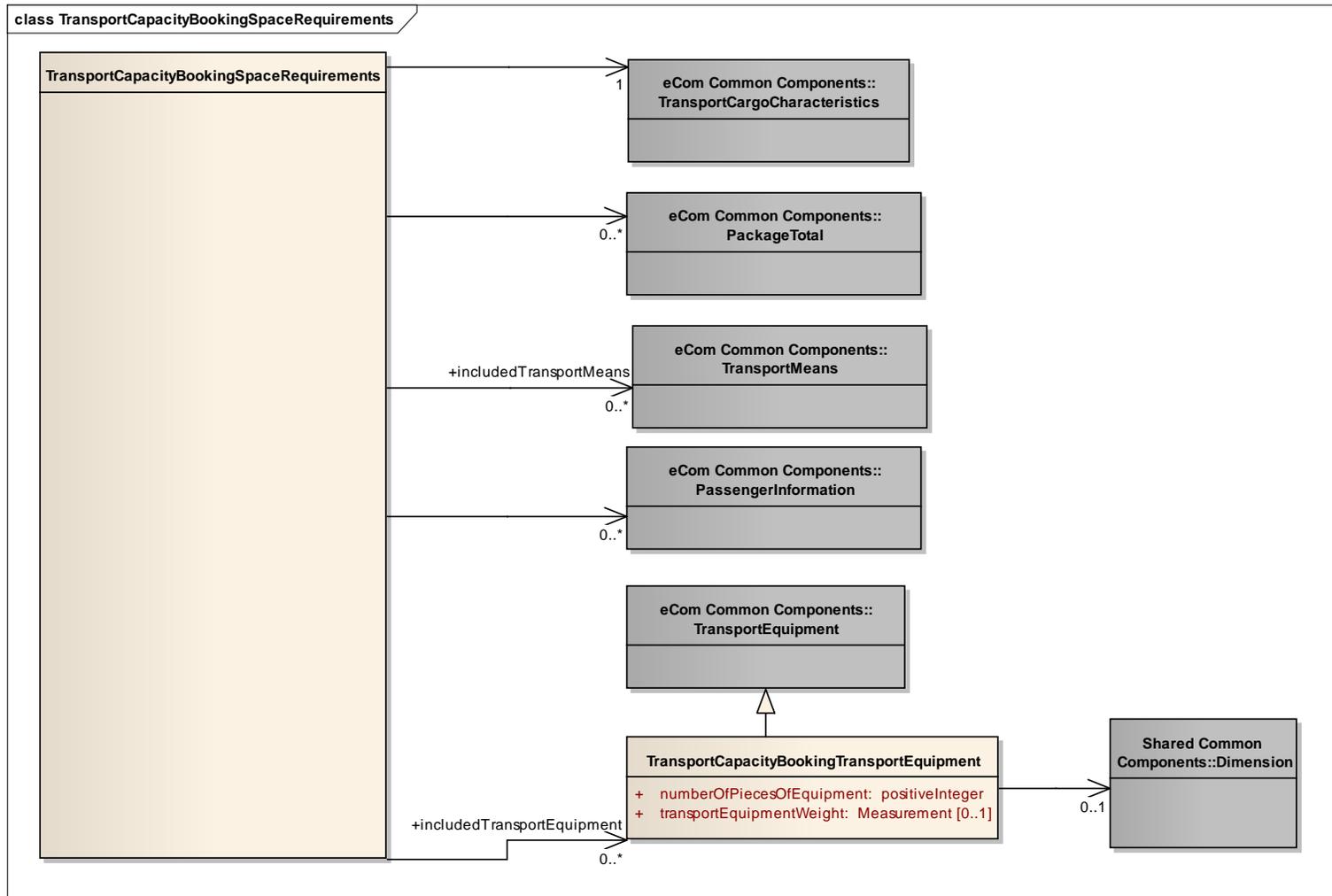
GDD Report

The content of the TransportCapacityBookingSpaceRequirements class, its structure and component definitions can be accessed in the Global Data Dictionary:
http://apps.gs1.org/GDD/bms/Version3_2/Pages/bieDetails.aspx?semanticURN=urn:gs1:gdd:bie:TransportCapacityBookingSpaceRequirements

Content	Attribute / Role	Datatype / Secondaryclass	Multiplicity	Definition	Requirements
TransportCapacity BookingSpaceReq uirements				Details on the booked transport space, such as volume, weight, transport equipment.	
Association		PassengerInformation	0..*	Information on passengers for which capacity is being booked.	BRAD Transport Planning - TBC6
Association		PackageTotal	0..*	Aggregate information per type of package to be transported.	BRAD Transport Planning - TBC3
Association		TransportCargoChara cteristics	1..1	Aggregate information on the goods to be transported.	BRAD Transport Planning - TBC1, TBC2
Association	includedTransp ortEquipment	TransportCapacityBoo kingTransportEquipme nt	0..*	Information on transport means to be transported as part of the cargo.	BRAD Transport Planning - TBC4
Association	includedTransp ortMeans	TransportMeans	0..*	Information on transport means to be transported as part of the cargo.	BRAD Transport Planning - TBC5
TransportCapacity BookingTransportE quipment				Information on transport means to be transported as part of the cargo.	
Generalization		TransportEquipment			
Association		Dimension	0..1	Dimensions for one piece of this type of transport equipment.	
Attribute	numberOfPiece sOfEquipment	positiveInteger	1..1	The total number of pieces of the specified type of transport equipment.	
Attribute	transportEquip mentWeight	Measurement	0..1	A measure of the mass for one piece of transport equipment.	

4.1.2. Transport Capacity Booking Transport Movement

Class Diagram
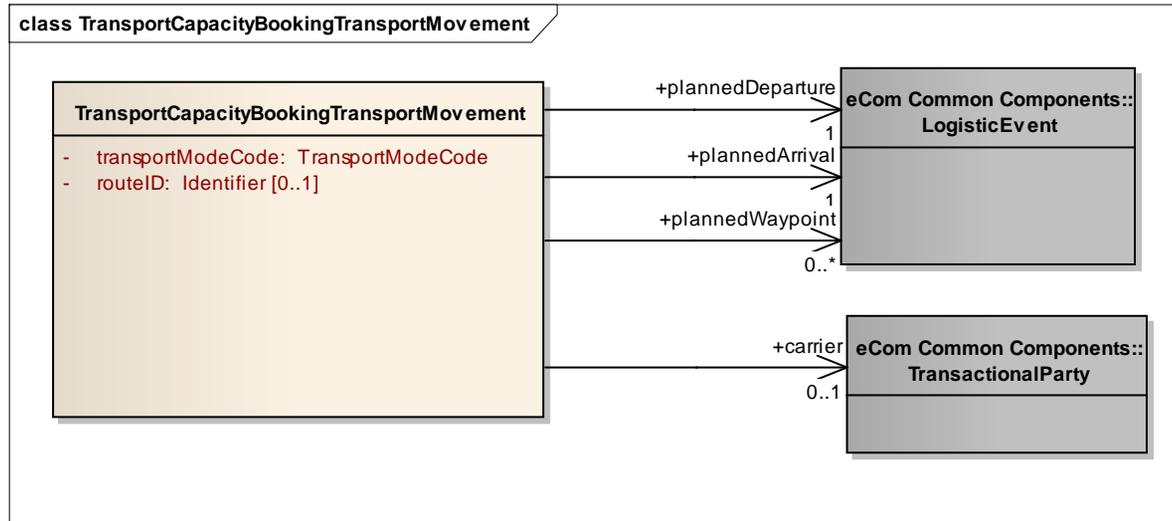
GDD Report

The content of the TransportCapacityBookingTransportMovement class, its structure and component definitions can be accessed in the Global Data Dictionary:
http://apps.gs1.org/GDD/bms/Version3_2/Pages/bieDetails.aspx?semanticURN=urn:gs1:gdd:bie:TransportCapacityBookingTransportMovement

Content	Attribute / Role	Datatype / Secondaryclass	Multiplicity	Definition	Requirements
TransportCapacity BookingTransportM ovement				Details of the booked movement of the goods, such as mode of transport, locations, departure, and arrival date(s) and time(s).	
Association	plannedWaypoi nt	LogisticEvent	0..*	An administrative procedure taking place at a specific location that may have an effect on the lead time of a transport movement, such as dangerous goods handling, customs clearance.	

Content	Attribute / Role	Datatype / Secondaryclass	Multiplicity	Definition	Requirements
Association	plannedArrival	LogisticEvent	1..1	The location and date and time on which the means of transport for this transport movement is scheduled to arrive.	BRAD Transport Planning - TBM3
Association	plannedDeparture	LogisticEvent	1..1	The location and date and time on which the means of transport for this transport movement is scheduled to depart.	BRAD Transport Planning - TBM2
Association	carrier	TransactionalParty	0..1	A party which physically transports goods from one place to another.	BRAD Transport Planning - new requirement
Attribute	transportModeCode	TransportModeCode	1..1	Code specifying the transportation mode used for this transport movement.	
Attribute	routeID	Identifier	0..1	Unique identifier of the standard route that will be used for this transport movement.	BRAD Transport Planning - TBM1

4.2. Transport Capacity Booking Response

Class Diagram
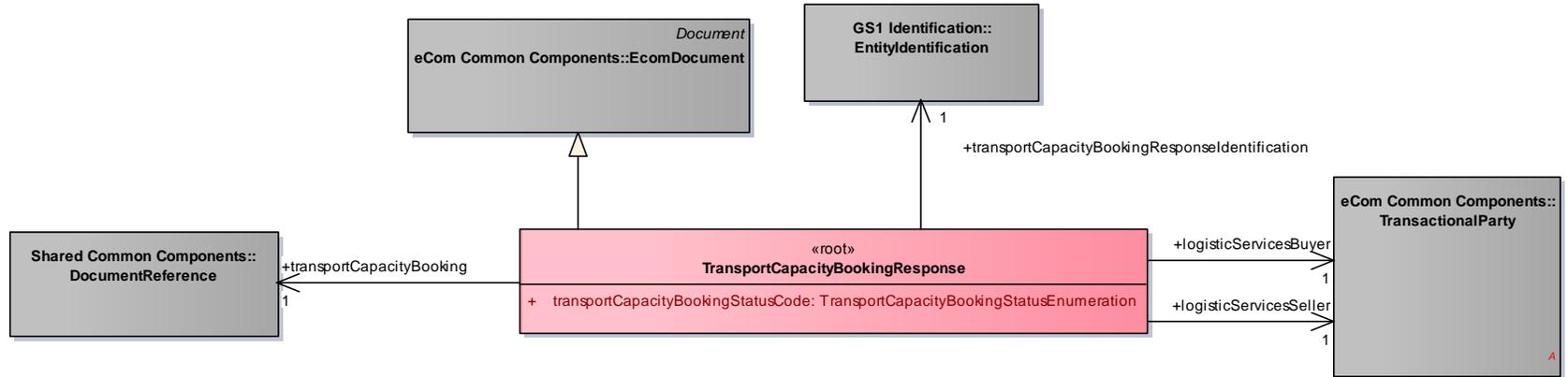
GDD Report

The content of the TransportCapacityBookingResponse class, its structure and component definitions can be accessed in the Global Data Dictionary:
http://apps.gs1.org/GDD/bms/Version3_2/Pages/bieDetails.aspx?semanticURN=urn:gs1:gdd:bie:TransportCapacityBookingResponse

Content	Attribute / Role	Datatype / Secondaryclass	Multiplicity	Definition	Requirements
TransportCapacity BookingResponse				The Transport Capacity Booking Response is sent by the Logistic Services Seller to the Logistic Services Buyer, accepting or rejecting the Transport Capacity Booking.	
Association	logisticServices Seller	TransactionalParty	1..1	A party that provides logistics services to another party.	BRAD Transport Planning - CBCH7
Association	transportCapaci tyBooking	DocumentReference	1..1	Reference to the Transport Capacity Booking document being confirmed.	BRAD Transport Planning - CBCH2

Content	Attribute / Role	Datatype / Secondaryclass	Multiplicity	Definition	Requirements
Association	transportCapacityBookingResponseIdentification	EntityIdentification	1..1	The identification of the transport capacity booking response document.	BRAD Transport Planning - CBCH1
Association	logisticServicesBuyer	TransactionalParty	1..1	A party that purchases logistics services from another party.	BRAD Transport Planning - CBCH6
Generalization		EcomDocument		Basic information about the content of the message including version number, creation date and time.	BRAD Transport Planning - CBCH3, CBCH4
Attribute	transportCapacityBookingStatusCode	TransportCapacityBookingStatusEnumeration	1..1	Code specifying the type of response. Example: ACCEPTED.	BRAD Transport Planning - CBCH5

Note: Reference Shared Common Library Business Message (BMS) Release 3.2.0 and eCom Domain Common Library Business Message (BMS) Release 3.2.0 for all common information.

4.3. Code Lists

Class	Codelist	GDD Link
TransportCapacityBookingResponse	TransportCapacityBookingStatusEnumeration	http://apps.gs1.org/GDD/Pages/clDetails.aspx?semanticURN=urn:gs1:gdd:cl:TransportCapacityBookingStatusEnumeration
TransportCapacityBooking	TransportServiceCategoryCode	http://apps.gs1.org/GDD/Pages/clDetails.aspx?semanticURN=urn:gs1:gdd:cl:TransportServiceCategoryCode
TransportCapacityBooking	TransportServiceConditionTypeCode	http://apps.gs1.org/GDD/Pages/clDetails.aspx?semanticURN=urn:gs1:gdd:cl:TransportServiceConditionTypeCode
TransportCapacityBooking	TransportServiceLevelCode	http://apps.gs1.org/GDD/Pages/clDetails.aspx?semanticURN=urn:gs1:gdd:cl:TransportServiceLevelCode
TransportCapacityBookingTransportMovement	TransportModeCode	http://apps.gs1.org/GDD/Pages/clDetails.aspx?semanticURN=urn:gs1:gdd:cl:TransportModeCode

Note: Refer to the Global Data Dictionary (GDD) for the code values.

5. Business Message Examples

5.1. Example 1

Logistic Service Buyer, CAB_Manufacturing identified by GLN 1234567890128 sends a booking BOOK1234 in reference to the Transport Contract with reference 12345678 based on requirements of RQMT1234 to Logistics Service Seller XYZ_Logistics, identified by GLN 9876543212344. The pickup party is company A, identified by GLN 1275432190141, the drop off party is company B, identified by GLN 4567891234533.

Party Information

GS1 Global Location Number	Party Type
1234567890128	Logistic Service Buyer
9876543212344	Logistic Service Seller
1275432190141	Pickup Party
4567891234533	Drop Off Party

Message Example 1

Attribute	Value
TransportCapacityBooking	
creationDateTime	2011-02-11T12:00:00
documentStatusCode	ORIGINAL
documentActionCode	ADD
transportServiceCategoryCode	60 (multimode)
EntityIdentification (+transportCapacityBookingIdentification)	
entityIdentification	BOOK1234

Attribute	Value
TransactionalParty (+logisticServicesBuyer)	
Gln	1234567890128
TransactionalParty (+logisticServicesSeller)	
Gln	9876543212344
TransactionalParty (+pickUpParty)	
Gln	4567891234533
Contact	
personName	Mr Sven Ole Pedersen
departmentName	Log547
CommunicationChannel	
communicationChannelCode	TELEPHONE
communicationValue	+3227887827
CommunicationChannel	
communicationChannelCode	TELEPHONE
communicationValue	+32496123923
CommunicationChannel	
communicationChannelCode	TELEFAX
communicationValue	+3227887899
CommunicationChannel	
communicationChannelCode	EMAIL
communicationValue	svenole.pedersen@a.com
TransactionalParty (+dropOffParty)	
Gln	22754321901233
Contact	
personName	Herr. Uwe Haas
departmentName	LOG
CommunicationChannel	
communicationChannelCode	TELEPHONE
communicationValue	+3237887827
LogisticEvent (+plannedPickUp)	
DateTimeRange (+logisticEventPeriod)	
beginDate	2011-02-17
beginTime	17:00:00
endTime	18:00:00
LogisticEvent (+plannedDropOff)	
DateOptionalTime (+logisticEventDateTime)	
Date	2011-02-21

Attribute	Value
DeliveryTerms	
incotermsCode	DDP
TransportCapacityBookingSpaceRequirements	
TransportCargoCharacteristics	
cargoTypeDescription	Mobile Phones and Accessories
totalGrossWeight	4500 KGM
totalGrossVolume	40 CBM

5.2. Example 2

Booking from Company B to Company D ferry for second leg (Gothenburg-Kiel).

Message Example 2

Attribute	Value
TransportCapacityBooking	
creationDateTime	2011-02-12T12:00:00
documentStatusCode	ORIGINAL
documentActionCode	ADD
transportServiceCategoryCode	10
transportServiceConditionTypeCode	36
EntityIdentification (+transportCapacityBookingIdentification)	
entityIdentification	BOOK1236
TransactionalParty (+logisticServicesBuyer)	
Gln	9876543212344
TransactionalParty (+logisticServicesSeller)	
Gln	1234567892316
LogisticEvent (+plannedPickUp)	
DateTimeRange (+logisticEventDateTime)	
Date	2011-02-18
Time	15:00:00
LogisticEvent (+plannedDropOff)	
DateOptionalTime (+logisticEventDateTime)	
Date	2011-02-19
Time	06:00:00
DeliveryTerms	
incotermsCode	DDP
TransportCapacityBookingTransportMovement	

Attribute	Value
transportModeCode	10
routeID	GOTKIE-17
LogisticEvent (+plannedDeparture)	
DateOptionalTime (+logisticEventDateTime)	
Date	2011-02-18
Time	17:00:00
LogisticEvent (+plannedArrival)	
DateOptionalTime (+logisticEventDateTime)	
Date	2011-02-19
Time	04:00:00
TransportCapacityBookingSpaceRequirements	
TransportCargoCharacteristics	
cargoTypeCode	4
cargoTypeDescription	Mobile Phones and Accessories
totalGrossWeight	4500 KGM
totalGrossVolume	40 CBM

5.3.   Example 3

This is an example of a response to the booking from Company B to Company D ferry for second leg (Gothenburg-Kiel).

Message Example 3

Attribute	Value
TransportCapacityBookingResponse	
creationDateTime	2011-02-12T12:01:00
documentStatusCode	ORIGINAL
documentActionCode	ADD
transportCapacityBookingStatusCode	ACCEPTED
EntityIdentification (+transportCapacityBookingResponseIdentification)	
entityIdentification	BOOKRESP1236
DocumentReference (+transportCapacityBooking)	
entityIdentification	BOOK1236
TransactionalParty (+logisticServicesBuyer)	
gln	9876543212344
TransactionalParty (+logisticServicesSeller)	
gln	1234567892316

6. Implementation Considerations

6.1. User Guide

The Functional User Guide contains more information about the structure and content of the Transport Capacity Booking and Response message: http://www.gs1.org/docs/ecom/xml/3/3.2/eCom-Trade_messages.html#TransportCapacityBookingandResponse

6.2. Message Specific Considerations

Not applicable

7. Summary of Changes

Any change in the GS1 standards is done based on the Work Request (WR) submitted by the GS1 User Companies or Member Organisations. All Work Requests are documented in the Work Request system available on the GS1 website: **http://wr.gs1.org**. The system is accessible to registered users. New visitors need to register first, to be able to access it. WRs can be searched by the number referenced in tables below, see: Search Work Requests. The number starts with the two last digits of the year when it was submitted, followed by the consecutive number within that year.

Note: WRs submitted earlier than February 2012 should be searched in Old Change Requests.

7.1. BMS Release 3.0

Change	BSD Version	Associated CR Number
■ In class diagram and GDD report for Transport Capacity Booking Response: Changed role name transportCapacityBookingConfirmationIdentification into transportCapacityBookingResponseIdentification ■ Corrected sample data in paragraphs 6.1 (wrong GLN format) and 6.3 (missing reference).	1.0 (28-nov-2011)	

7.2. BMS Release 3.1

No work requests. Indirect changes due to upgrade to new Shared and eCom Common libraries.

7.3. BMS Release 3.2

Change	Associated WR
Added Attribute Value Pair at the root, line item and sub line item levels	14-000110

class TransportCapacityBooking - maintenance view

«root»
TransportCapacityBooking

+ transportServiceCategoryCode :TransportServiceCategoryCode
+ transportServiceConditionTypeCode :TransportServiceConditionTypeCode [0..1]
+ transportServiceLevelCode :TransportServiceLevelCode [0..1]

maintenance
Change: (Verified) 3.2 changed generalisation from Document to eComDocument class to include AVP (WR 14-110)

class TransportCapacityBookingResponse - maintenance view

«root»
TransportCapacityBookingResponse

+ transportCapacityBookingStatusCode :TransportCapacityBookingStatusEnumeration

maintenance
Change: (Verified) 3.2 changed generalisation from Document to eComDocument class to include AVP (WR 14-110)

8. Appendices

Not applicable

9. Acknowledgements

The following is a list of individuals (and their companies) who participated in the creation, review and approval of this BMS.

9.1.1. Work Group

Function	Name	Company / organisation
Work Group Chair	Fred Kempkes	Unilever
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Work Group Member	Richard Chresta	GS1 Switzerland & UNCEFACT TGB3
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9.1.2. Development Team Members

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Technical Development Lead	Ewa Iwicka	GS1 Global Office
Peer Review	Eric Kauz	GS1 Global Office