STRATEGIC EUROPEAN DEPLOYMENT PLAN FOR THE EUROPEAN-WIDE IMPLEMENTATION OF THE TECHNICAL SPECIFICATION FOR INTEROPERABILITY TELEMATIC APPLICATIONS FOR FREIGHT (TAF TSI)

PROJECT No: 2005-EU-93008-S

Deliverable 2 - Definition Of The Functional And Performance Requirements And Of The Associated Data Necessary To Deliver The Taf System.

Appendix A (Wagon/ILU Trip Planning)

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1 Introduction

1.1 Purpose

The requirements for RUs to generate ETIs and ETAs are specified in many locations in the TAF TSI however they are most clearly stated in § 4.2.7.3 "…..sending ETI or updated ETI from one RU to the next in the transport chain. The last RU in the transport chain of the wagon sends the ETA to the LRU."

In § 4.2.12.2 (Other Databases) the TAF TSI states that "….This Database shows the movement of a wagon and of an intermodal unit from departure through to final delivery at customer siding with ETIs and actual times at different locations until the final delivery time ETA."

In § 2.3.2 (Considered Processes) the TAF TSI states "… The LRU then prepares the preliminary wagon order individually for each RU…... The addressed RUs check the availability of of the train path. The responses from the RUs enable the LRU to …until the trip plan finially fits the customer requirements." Note: This requirement is covered in the Movement Planning Cycle defined in this guideline.

In § 4.3.4 (Interfaces with the …) the TAF TSI states that "….The subsystem, Telematic Application for Freight specifies applications for freight services including real time monitoring of freight and trains and the management of connections with other modes."

The descriptions listed above define what capability RUs must have. The purpose of this document is to provide implementation guidance to RUs as to how these requirements can best be fulfilled. These guidelines are based upon experience gained from the operation and use of existing systems which are currently in operation in Europe and North America.

1.2 Intended Audience

This document is one of the references to be used by designers and engineers responsible for the deployment of the TAF TSI requirements.

1.3 Evolution of the Guidance Document:

1.3.1 Distribution

The Guidance Document will be distributed to the Representative Bodies from the railway sector acting on a European level as defined in Article 3 (2) of Regulation (EC) No 881/2004 and made available to the stakeholders of the European Rail Freight Industry.

The Guidance Document will be delivered by electronic means in MS-Word format or in PDF Format and published on the SEDP Web-site: extranet.uic.asso.fr

New versions will be accessible electronically.

1.3.2 Configuration Management

A new version of the document will be created:

- if there is a change in the requirements which influences the implementation

- if information is added to or deleted from the Guidance Document, e.g. adding test cases to the field checking in messages or databases.

The changes will be included in the Guidance Document. They must be marked in the new document for better realizing them.

1.4 References

1.4.1 Regulatory References

Id	Title	Doc ID, Edition	Date	Author / Publisher
1	On the allocation of railway infrastructure capacity and the levying of charges for the use of railway infrastructure and safety certification	Directive 2001/14/EC	26/02/01	EC
2	On the interoperability of the Trans-European conventional rail system	Directive 2001/16/EC	19/03/01	EC
3	Technical Specification for Interoperability subsystem« Operation and traffic management	Decision 01/16-ST03 part 2 version EN06	13/05/05	EC
4	Technical Specification for Interoperability subsystem« Telematic Applications for freight	Commission Regulation (EC) No 62/2006 concerning the technical specification for interoperability relating to the telematic applications for freight subsystem of the trans-European conventional rail system.	23/12/05	EC
4.1	CR Telematic Applications for freight: Data Definitions and Messages	AEIF_TAF_MesData_V10_040322.doc Version 1.0	22/03/04	AEIF
4.2	CR Telematic Applications for freight: Glossary (English)	AEIF_TAF_Glossary_V10_040622.doc Version 1.0	22/06/04	AEIF
4.3	CR Telematic Applications for freight: figures and sequence diagrams of the taf tsi messages	AEIF_TAF_FigSeq_V10_040622.doc Version 1.0	22/06/04	AEIF
4.4	CR Telematic Applications for freight: the train path data and description	AEIF_TAF_PatData_V10_040622.doc Version 1.0	22/06/04	AEIF
4.5	CR Telematic Applications for freight: the consignment note data and description	AEIF_TAF_ConData_V10_040622.doc Version 1.0	22/06/04	AEIF
4.6	CR Telematic Applications for freight: the infrastructure data and the rolling stock data	AEIF_TAF_DbsData_V10_040622.doc Version 1.0	22/06/04	AEIF

1.4.2 Other References

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

- TAF TSI CWA Coding for Railways Business Locations
- TAF TSI CWA Coding for Customers in the Rail Transport Chain,
- TAF TSI CWA Coding for Railway Undertakings, Infrastructure Managers and other Companies involved in the Rail Transport chain,
- TAF TSI CWA Numbering of and Coding System for Trains
- List of Wagonload and Intermodal Events (Normal & Exception)
- The SEDP Phasing Plan

1.5 Definitions and Acronyms:

For all definitions and acronyms see Common TAF Glossary

1.6 Responsibilities

This Guidance Document is written under the responsibility of the SEDP project team with support of nominated experts from European IMs, RUs and others. It is a deliverable of the SEDP project for the implementation of the TAF TSI.

2 Recommendations

2.1 Overview: Dynamic Trip Plans (DTPs): TAF TSI ref 1.1 (see Appendix 1)

Dynamic Trip Plans provide very significant benefits in terms of transit time reliability, wagon fleet and infrastructure productivity. Dynamic Trip Plans can be applied to all wagons in transit (loaded or empty – for single & multiple RU trips). When applied to all wagons, DTP functionality also provides individual RUs with a production management system which can be used to manage trainloads and yard workloads.

When a Wagon Order (see Appendix 4) and the release or consignor's siding departure are received, a Dynamic Trip Plan is automatically generated from the files and tables which represent the operating situation of all the RUs in the route of the wagon trip. These linked systems also automatically generate "re-trips" when a wagon fails to follow the current trip plan (see Appendix 5).

Special RUs will not require Dynamic Trip Plan capability but will need to have dynamic ETI/ETA capability delivered by systems using a from/to table concept which is less sophisticated than Dynamic Trip Planning. See § 2.2. Individual RUs will determine if Dynamic Trip Planning or ETIs/ETAs from tables are applicable to their situation.

2.1.1 Benefits – Dynamic Trip Plannings (DTP) TAF TSI ref 1.1

The purpose of Dynamic Trip Planning is to improve transit time reliability, generate ETIs at RU interchange points, ETAs at the consignee's sidings and to support the management of delayed wagons while they are en route.

Since Dynamic Trip Plans can be applied to all traffic (loads & empties, local & interoperable), they have the additional benefit of becoming a short term traffic (or production) management system since all wagons are scheduled to specific trains and are scheduled through specific yards. One of the major benefits of this type of production management system is the ability to increase tons/wagons per train.

2.1.2 Scope – Dynamic Trip Plans:

In a planning mode, the LRU works with the customer(s) and the potential RU service providers to establish mutually agreeable target transit times for the complete trip (from consignor's to consignee's siding) and for transit times on each RU. This may involve the use of "what if" trip plans or off line trip plan generators that would utilise the electronic operating plans components described below. These processes and functional capabilities are outside the scope of this Guidance Document.

The Dynamic Trip Planning functionality is for wagonload (&empty) traffic, local (single RU) and interoperable (multiple RU) wagon trips. The RU systems should be developed in a manner which would allow for similar capability for Intermodal Loading Units (ILUs) moving from a consignor's dock to consignee's dock (including gateway terminals), from a port to a consignee's dock and from a consignor's dock to a port. See Appendix 2 for an illustrative list of ILU events.

Outside the scope of this Guidance Document are:

- structure of operating plan files and tables on individual RUs, the LRU systems required to compare ETAs with customer commitments and
- train load & yard workload management systems which can be based on DTPs. These workload management systems are critical to improving RU & IM productivity.

2.1.3 Logical Model – Dynamic Trip Plans (see flow charts in Appendix 4)

Effective Dynamic Trip Planning capability requires that individual RU operating plans be maintained in up to the minute electronic files at each RU. These plans must reflect day of week and holiday impacts.

The primary components of these individual electronic operating plans are as follows:

- Time of day/day of week and holiday cut off times and schedules for release, departure and delivery for each consignor's siding, consignee's siding and interchange point.
- These cut of times must be related to scheduled siding service for each industrial switcher.
- Connection standards between industrial switchers and trains and between trains at each yard.
- Train specifications which include origin, destination and through yards: schedules, and traffic handled (destination, commodity, RID codes, wagon types, max weight/axle, max weight/metre loading gauges etc)

Note that these plans must be current (up to the minute) on a 24 x 7 basis, i.e. must reflect train cancellations, extra trains, changes to train/switcher specs etc.

The scenario outlined below is for a wagon trip involving three RUs: an OriginRU, a TransitRU and a DestinationRU. The LRU could be any one of the three or could be a fourth entity. Note that all Consignment Notes are processed as described below . Also note that if a Consignment Note contains multiple wagon numbers, they are processed individually with separate Wagon Orders.

When the LRU receives a Consignment Note from the customer, it creates a Preliminary Wagon Order (PWO) and determines if a movement planning cycle – as shown in appendix 4 - is required The criteria for this decision is determined by the LRU which could include items such as:

- are alternative routings involving multiple RUs available?

If a planning cycle is not required, the LRU creates a Wagon Order and sends it to the Origin RU's Dynamic Trip Planning system and to the WIMO using the CI.

The OriginRU's Dynamic Trip Planning system retains the Wagon Order until it also receives a release or departure message via the CI (departures come from the Origin RU's operating system, releases can come from the LRU or Origin RU systems:

- the OriginRU's Dynamic Trip Planning system then automatically generates a detailed wagon trip plan from the logical linking of the operating plan components described above. (Note that train specs include commodities, RID codes, wagon types, max axle weights, max weight/meter, loading gauges etc). The detailed wagon trip plan includes all events on the RU, (See list of normal events Guidance Document 5 for WagonEvent) event locations, days, times and train numbers (if applicable). The last forecasted event on the OriginRU will be ETI#1 (Estimated Time, Date and Location of Interchange delivery notice – train # is optional) at the Interchange location specified in the Wagon Order. The OriginRU sends this ETI#1 to the LRU, the TransitRU and the WIMO using the CI.

- The TransitRU's system (which has also received the Wagon Order from the LRU via the CI) generates a detailed wagon trip plan (triggered by ETI#1) that ends with ETI#2 at the Interchange location specified in the Wagon Order and sends ETI#2 to the LRU, the DestinationRU and the WIMO using the CI.

- The DestinationRU's system (which has also received Wagon Order from the LRU via the CI) generates a detailed wagon trip plan based upon ETI#2 and generates the ETA at the consignee's siding identified in the Wagon Order from the LRU and sends the ETA to the LRU and the WIMO using the CI.

- The LRU compares the ETA with what has been promised to / contracted with the customer(s) (TAF TSI ref 4.2.7), the ETIs with the transit time agreements between the LRU and the OrginRU, TransitRU and DestinationRU and takes corrective action if required (TAF TSI ref 4.2.8.7)

(In the case of a release event, the process described above should take place before the wagon leaves the consignor's siding. In the case of a siding departure event which preceeds a release event, the process described above should take place within minutes of the departure reporting.)

The TAF TSI did not address the message requirements which could arise from exceptions caused by ETAs which are not acceptable to the customer. The section shown below addresses this point.

Corrective actions by the LRU could include:

- Advising the customer(s) of the delay
- Cancelling the, Wagon Order (WagonOrderCancellation) sent to the OriginRU, TransitRU and DestinationRU and trying other RUs - if feasible. If this is done the original ETIs, the ETA and the Tranport Dossier sent to the WIMO must be retained but replaced,with the new values. Using the CI.
- A request to one or more RUs to manually modify (improve) their ETI(s)/ETA. As above the new ETIs and ETA must be sent to the WIMO (Using the CI) even though they have been manually generated In the RU"s system.

If a Movement Planning cycle is required as determined by the LRU's system:

- the "No Planning Cycle Required" process described above is followed except that the Wagon Order sent by the LRU to each RU is defined as a Preliminary Wagon Order. Note that the Preliminary Wagon Order sent to the OriginRU contains an estimated release date and time.
- When a Preliminary Wagon Order is received via the CI, each RU has the option of sending a negative response (PreliminaryWagonOrderReject) or responding with an ETI or - in the case of the DRU - with an ETA from their DTP Systems using the CI.. (Wagon ETI/ETA Message to LRU only – not to the WIMO)
- this Movement Planning cycle is repeated until the LRU sends an ETI/ETA accepted (ETI_ETA_Confirmed) (plus a Wagon Order) message to the RUs in the route. This ETI/ETA accepted message is also sent to the WIMO, using the CI)
- RUs with ETI/ETAs that have not been accepted by the LRU must be sent a cancellation message (PreliminaryWagon OrderCancellation) for the previous Movement Request using the CI.

Once an acceptable Dynamic Trip Plan has been established (and the successful RUs have been sent a Wagon Order to replace the previous Preliminary Wagon Order) and the ETA and ETIs have been sent to the WIMO (using the CI) the OriginRU monitors actual events, locations and times against the detailed trip plan ("equal" or "later than"). If events, locations or times do not match the original trip plan or if there is a non event according to the clock (reporting tolerance times determined by the OriginRU) :

- the OriginRU's system automatically calculates a revised ETI#1 at the interchange point (using the logic that links operating plan components, as described above) with the TransitRU specified in the Movement Dossier and, if it is different than the original ETI#1 sends the the revision in a new ETI/ETA Message to the LRU, TransitRU and the WIMO (using the CI) with a reason code from a pick list (see Appendix 3)
- The TRU calculates a revised trip plan and if the new ETI#2 is different than the original ETI#2, sends a new ETI/ETA Message to the LRU, DestinationRU and the WIMO using the CI.
- The DestinationRU calculates a new ETA and if it is different than the original ETA, sends a new ETA Message to the LRU and the WIMO using the CI.
- The LRU's system compares the revised ETA with what has been promised to the customer and takes corrective action if required as described above. The LRU is responsible for recording a Corrective Action Code from a pick list. (see Appendix 3).
- The processes described above (comparing actual events and non events with the detailed wagon trip plan) is performed in the OriginRU, TransitRU and DestinationRUs Dynamic Trip Planning systems as the wagon progresses through its trip. Only the ETIs/ETAs from these detailed Trip Plans are sent to the LRU and the WIMO using the CI.

The Dynamic Trip Planning Systems of the RUs must capture all versions of the detailed trip plans plus the actual events for detailed analysis and corrective action lead by the LRU.

2.1.4 Operational requirements

The best way for large RUs to deliver these DTP capabilities is to have them integrated into their operations systems that are used to process Consignment Notes, report events, create switch lists, train composition lists etc. Experience has shown that adding these DTP and ETI/ETA capabilities to existing systems is a difficult and risky modification/integration task.

2.1.5 Data Security and access rights

Access to the detailed Trip Plans is limited to the individual RUs and they are not available to the LRU or sent to the WIMO. High level DTPs (containing releases or origin siding departure, ETI(s) date times and locations and the ETA date time and location are available for authorised users in the WIMO. TAF TSI Ref 4.2.12.2

2.1.6 Reliability

Any system that is part of railway operations such as a DTP system must have a high degree of reliability and availability since if the systems stop operating – so does the railway – or at least the operations are severely curtailed. It is up to individual RUs to determine the level of reliability required. .

2.1.7 External System Reference

Reporting of all versions of ETIs and ETAs, the actual events and the Delay Reason Codes must be stored in the WIMO in a manner which will allow analysis of performance on a trip (Consignor's siding to Consignee's siding) basis by the LRU however the most detailed information involving individual RU trip plans and the actual events will be at the RUs.

2.2 ETI/ETA capability for Special RUs

(see Appendix 6 for a flow chart. and Appendix 7 for a sample matrix)

2.2.1 General

Special RUs can be defined as those who have a small number of network nodes (i.e. few yards where wagons are switched between trains, few interchange locations and few consignor/consignee sidings.). These Special RUs can have significant volumes as measured by tons, ton km, daily loadings or trains per day, or limited wagonload traffic.

As opposed to the Dynamic Trip Plan approach described in § 2.1 above, ETIs/ETAs for special RUs can be automatically calculated using a “FROM / TO” matrix. See Appendix 7 for an example.

On one axis, this matrix would identify all locations where wagons could become available for special RU handling such as customer sidings and interchange points (the "FROM" points). This "FROM" axis could also specify time of day ranges and day of week for each point. Additional details such as wagon types and commodity could be added but this would not normally be required.

On the other axis, the matrix would identify all possible wagon destinations (the "TO" points).

At the intersection of the "FROM" line and the "TO" column the elapsed hours would be shown which would provide the basis for ETI or ETA calculations by adding these hours to the trip start event or cut off time.

2.2.2 Scope

The special RU ETI/ETA capability described above is best delivered within an operations system that can deliver yard inventory/switch list, train composition lists, dialogues with IMs as well as the WIMO event reporting specified in the TAF TSI. The functional requirements for these operations systems are outside the scope of this Guidance Document.

Normally special RUs will not be LRUs therefore these requirements have not been specified.

2.2.3 Logical Model

Upon the receipt of a Consignment Note from a local customer and the creation of a Wagon Order, or the receipt of a Wagon Order or a Preliminary Wagon Order from a LRU, the special RU’s ETI/ETA system would flag potential matrix hits awaiting a local release/siding departure, ETI or interchange delivery event. The Wagon Order or Preliminary Wagon Order would be associated with the appropriate lines in the matrix . No hit would trigger an alert to the Special RU.

Note that when a Special RU receives a Consignment Note, it will also create a Wagon Order and sends it to the WIMO.

Note that if the Consignment Note contains multiple wagon numbers, they are processed individually and that Preliminary Wagon Orders contain estimated release times, dates and locations.

When an actual release, siding departure, ETI or interchange delivered event is reported to the special RUs system or received via the CI, the appropriate single matrix hit is selected (No match would trigger an Alert to the Special RU.). The elapsed time in hours from the matrix is used to generate the ETI at an interchange point or the ETA at the consignors siding in terms of date and time.. The ETA or the ETI are sent to; the WIMO, the next RU (if any), and the LRU using the CI.

A clock within the RU’s ETI/ETA system would trigger a periodic (table based – default 5 min) check of event reporting of consignee’s sidings deliveries or interchange notices

If an event reporting is overdue by a tolerance threshold (table based – default 30 min) an alert would be generated to the Special RU. The Special RU would then manually create a revised ETI or ETA. A revised ETI would be sent to the next RU in the route and to the WIMO. A revised ETA

would go to the LRU and to the WIMO. When a wagon is reported delivered to a consignee's siding or to an interchange, the appropriate data are moved to a history file (or status) in the special RUs system for service quality measurement and corrective action.

*****

APPENDIX 1

DTP Example 0054								
Location *)	**trip plan details**						**Event**	
	Day	elapsed time > from release cut off	reporting time tolerance	Time of day		Train number	Code **	**Description**
				date	time			
CZ343940000005	0	-	60'	24.10.05	22:00	VZ05	078	Release from client siding
CZ343940000005	*1*	*02:25*	*60'*	*25.10.05*	*01:25*	*VZ05*	*024*	*Departure from origin siding*
CZ343940000005	1	02:30	60'	25.10.05	01:30	VZ05	024	Departure from origin siding
CZ34364	*1*	*02:40*	*60'*	*25.10.05*	*01:40*	*VZ05*	*364*	*Arrival at yard*
CZ34364	1	02:45	60'	25.10.05	01:45	VZ05	364	Arrival at yard
CZ34364	*1*	*04:26*	*60'*	*25.10.05*	*03:26*	*45011*	*365*	*Departure from yard*
CZ34364	1	04:25	60'	25.10.05	03:25	45011	365	Departure from yard
CZ33425	1	08:58	60'	25.10.05	07:58	45011	*364*	Arrival at yard
CZ33425	1	09:43	60'	25.10.05	07:31	45011	364	Arrival at yard
CZ33425	*1*	*09:05*	*60'*	*25.10.05*	*08:05*	*45011*	*349*	*Delivered at Interchange*
CZ33425	1	09:50	60'	25.10.05	08:48	45011	349	Delivered at Interchange

*) see for more details the relevant refernce files and tables
**) Event codes based on UN Recommendation No. 24
N.B. in italic fond/schadow: scheduled events - normal font/clear: current events

DTP Example 2181								
Location *)	**trip plan details**						**Event**	
				Time of day				
	Day	elapsed time > from release cut off	reporting time tolerance	date	time	Train number	Code **	**Description**
AT02831	*0*	*11:12*	*60'*	*25.10.05*	*10:12*	*45011*	*366*	*Accepted at Interchange*
AT02831	0	11:10	60'	25.10.05	10:10	45011	366	Accepted at Interchange
AT02831	*0*	*11:58*	*60'*	*25.10.05*	*10:58*	*45011*	*365*	*Departure from yard*
AT02831	0	11:42	60'	25.10.05	10:42	45011	365	Departure from yard
AT02962	0	13:20	60'	25.10.05	12:20	45011	364	Arrival at yard
AT02962	0	13:07	60'	25.10.05	12:07	45011	364	Arrival at yard
AT02962	*0*	*17:55*	*60'*	*25.10.05*	*16:55*	*44037*	*365*	*Departure from yard*
AT02962	0	17:28	60'	25.10.05	16:28	44037	365	Departure from yard
AT03664	*1*	*25:15*	*60'*	*26.10.05*	*00:10*	*44037*	*364*	*Arrival at yard*
AT03664	0	24:42	60'	25.10.05	23:42	44037	364	Arrival at yard
AT03664	*1*	*30:55*	*60'*	*26.10.05*	*05:55*	*45265*	*365*	*Departure from yard*
AT03664	1	41:47	60'	26.10.05	16:47	45265	365	Departure from yard
AT03668	*1*	*31:33*	*60'*	*26.10.05*	*06:33*	*45265*	*364*	*Arrival at yard*
AT03668	1	42:14	60'	26.10.05	17:14	45265	364	Arrival at yard
AT03668	*1*	*31:45*	*60'*	*26.10.05*	*06:45*	*45265*	*349*	*Delivered at Interchange*
AT03668	1	42:30	60'	26.10.05	17:30	45265	349	Delivered at Interchange

*) see for more details the relevant refernce files and tables
**) Event codes based on UN Recommendation No. 24
N.B. in italic fond/schadow: scheduled events - normal font/clear: current events

DTP Example 0083								
Location *)	**trip plan details**						**Event**	
	Day	elapsed time > from release cut off	reporting time tolerance	Time of day		Train number	Code **	**Description**
				date	time			
IT03001	*0*	*32:22*	*60'*	*26.10.05*	*07:22*	*45265*	*366*	*Accepted at Interchange*
IT03001	0	43:07	60'	26.10.05	18:07	45265	366	Accepted at Interchange
IT03001	*0*	*32:45*	*60'*	*26.10.05*	*06:35*	*45265*	*365*	*Departure from yard*
IT03001	0	43:14	60'	26.10.05	18:14	45265	365	Departure from yard
IT01702	*0*	*42:30*	*60'*	*26.10.05*	*17:30*	*45265*	*364*	Arrival at yard
IT01702	1	52:11	60'	27.10.05	03:11	45265	364	Arrival at yard
IT01702	*1*	*51:48*	*60'*	*27.10.05*	*02:48*	*45265*	*365*	*Departure from yard*
IT01702	1	78:08	60'	28.10.05	05:08	45265	365	Departure from yard
IT00472	*1*	*58:23*	*60'*	*27.10.05*	*09:23*	*51571*	*364*	*Arrival at yard for detach*
IT00472	2	80:27	60'	28.10.05	07:27	51571	364	Arrival at yard for detach
IT00472	*1*	*69:33*	*60'*	*27.10.05*	*20:33*	*99999*	*365*	*Departure from yard attach*
IT00472	2	88:30	60'	28.10.05	15:30	99999	365	Departure from yard attach
IT00472000010	*1*	*69:48*	*60'*	*27.10.05*	*20:48*	*99999*	*021*	*Delivery to client*
IT00472000010	2	88:50	60'	28.10.05	15:50	99999	021	Delivery to client

*) see for more details the relevant refernce files and tables
**) Event codes based on UN Recommendation No. 24
N.B. in italic fond/schadow: scheduled events - normal font/clear: current events

APPENDIX 2

TSI - ILU Events	
Event	**Comment**
Consignor's Dock Pick up Appointment	Similar to release
Dock actual Pick up	Similar to departure
In Gate - Intermodal terminal / port	
Ramped (loaded on wagon)	ILU# must be related to wagon# in event or via wagon consignment data
Departure - from Intermodal terminal /port	this is a wagon event which must be translated into an ILU event
Yard arrival / departure (1-n) RU 1	this is a wagon event which must be translated into an ILU event
Interchange delivered (ETI) & received	this is a wagon event which must be translated into an ILU event
Yard arrival / departure (1-n) RU 2	could be gateway terminal - this is a wagon event which must be translated into an ILU event
Delivery o Intermodal terminal / port	this is a wagon event which must be translated into an ILU event
Deramped (Unloaded from wagon)	Availability time for road haulage
Out gate - Intermodal terminal / port	
Consignee's Dock Delivery - ETA	

APPENDIX 3

EVENT, ACTION AND REASONS CODE LIST FOR WAGONS

Note: Multiple Codes Can Apply

EVENT	UN-Code *
Release from customer siding	078
Departure from origin siding	024
Arrival at yard	364 **
Departure from yard	365 **
Delivered at interchange	349
Accepted at interchange	366 **
Deliverey to client	021

*) see UN Trade & Transport status codes recommendation No. 24 1.7.2004
**) provisional - new code request in process

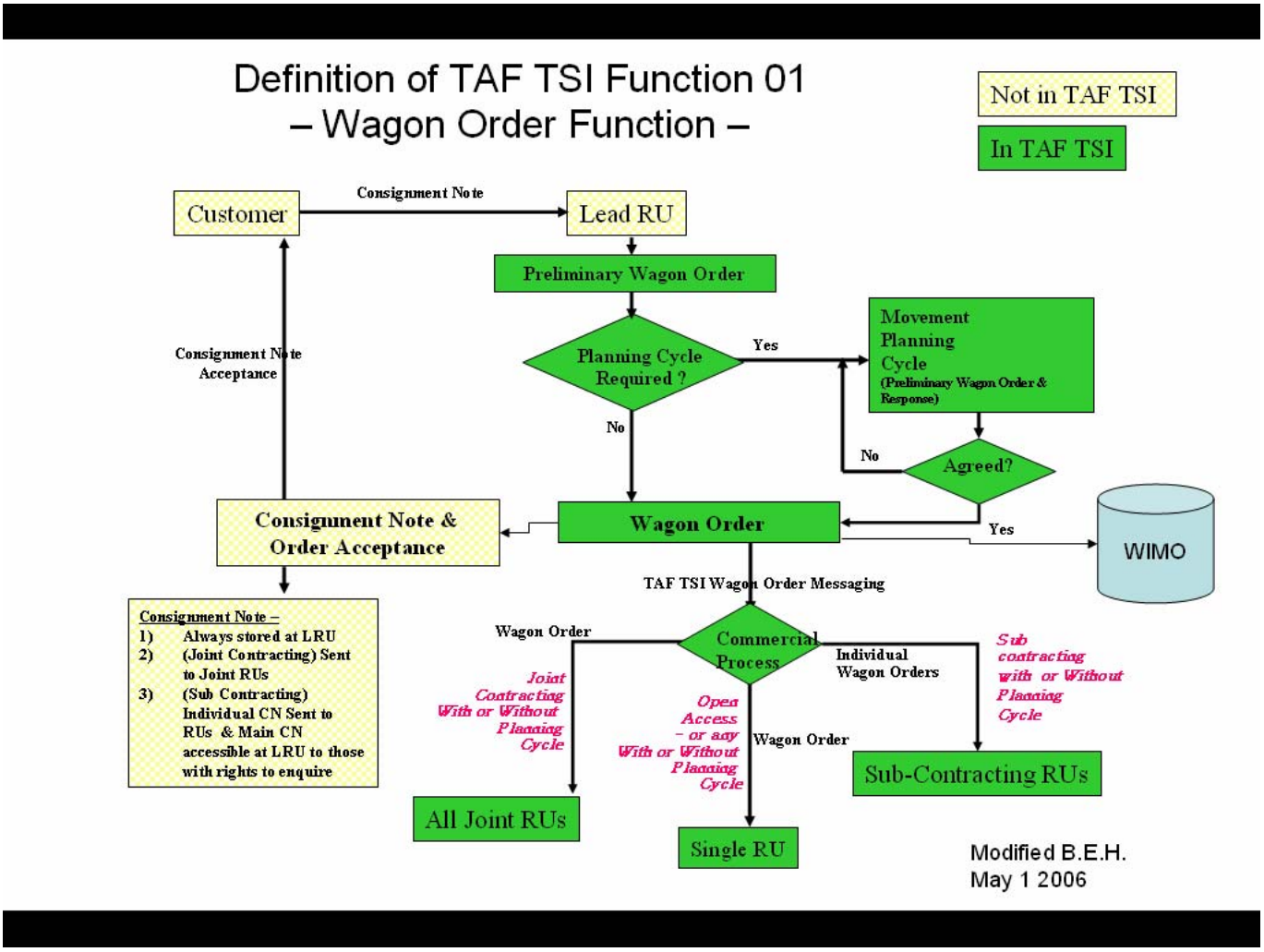
ACTION	UN-Code *
trip plan revised manually	369 **
customer advised	242
special wagon handling arranged	370 **
New shipment by another mode	100
Goods transshipped to another wagon	368 **
no action taken	367 **

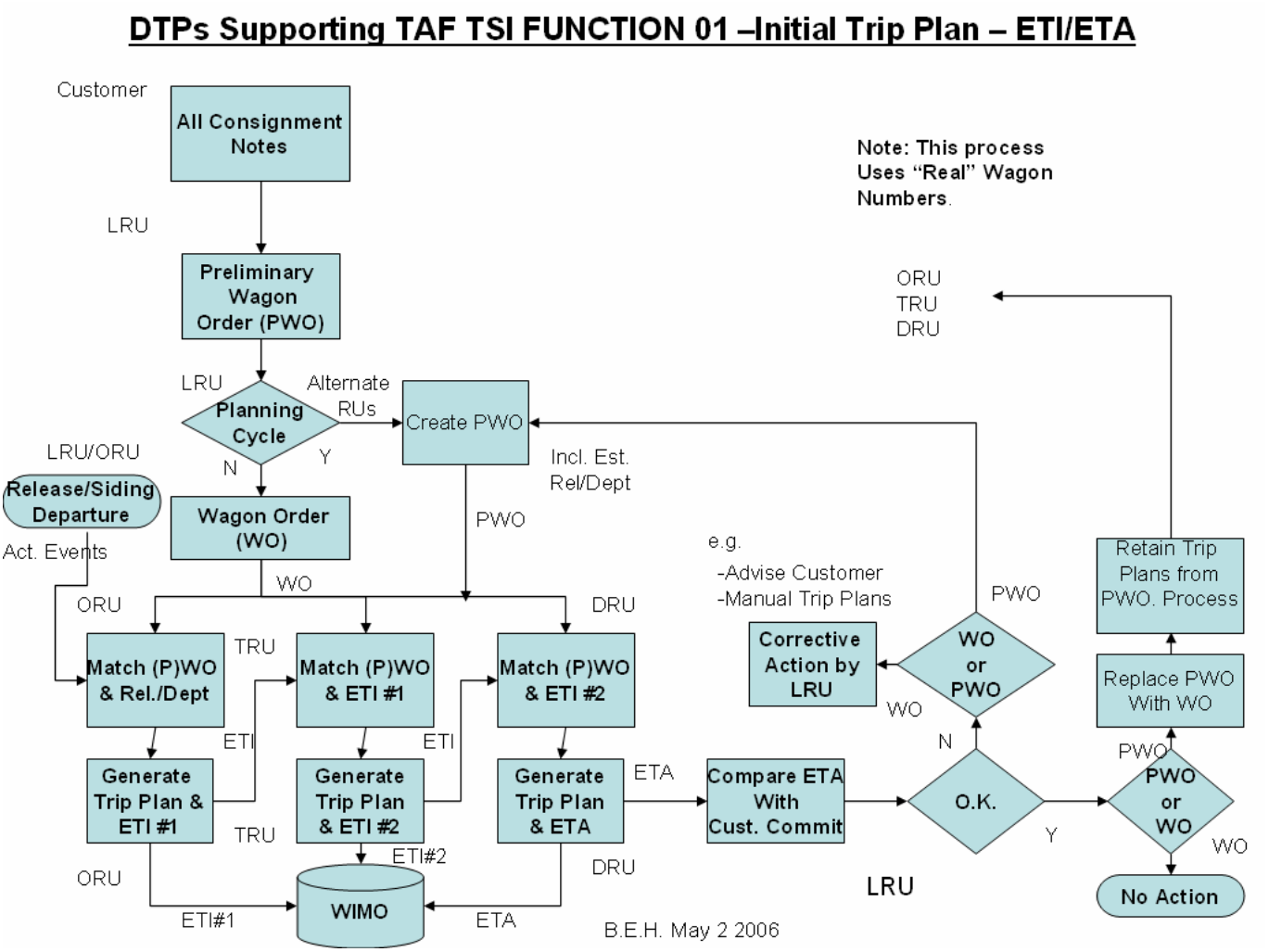
*) see UN Trade & Transport status codes recommendation No. 24 1.7.2004
**) provisional - new code request in process

DELAY REASONS	UIC-code *
Bad weather (flooding, …, snow, etc)	86
Faults involving wagons	53
Technical faults in equipment / installations - ancillary equipments / instalations: Handling equipment, rolling stock handling/servicing facilities	66
Technical faults in equipment / installations - other	69
Missed connection - bad weather	91
Missed connection - train full	93
No release	92
Motive power unit breakdown (…)	43

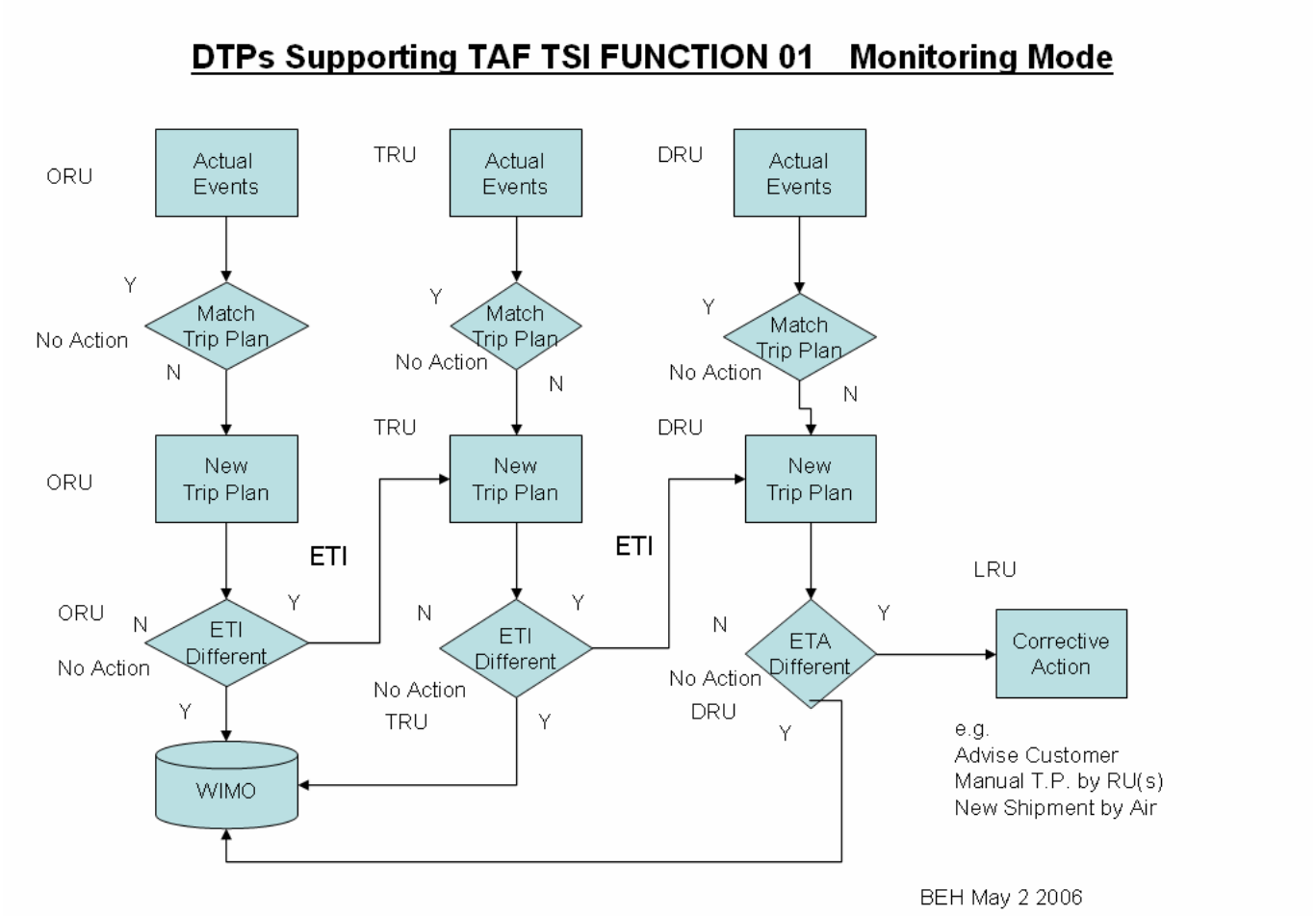
*) see AEIF_TAF_MesData_V11_041021.doc: CR TAF - data definitions and messages

APPENDIX 4

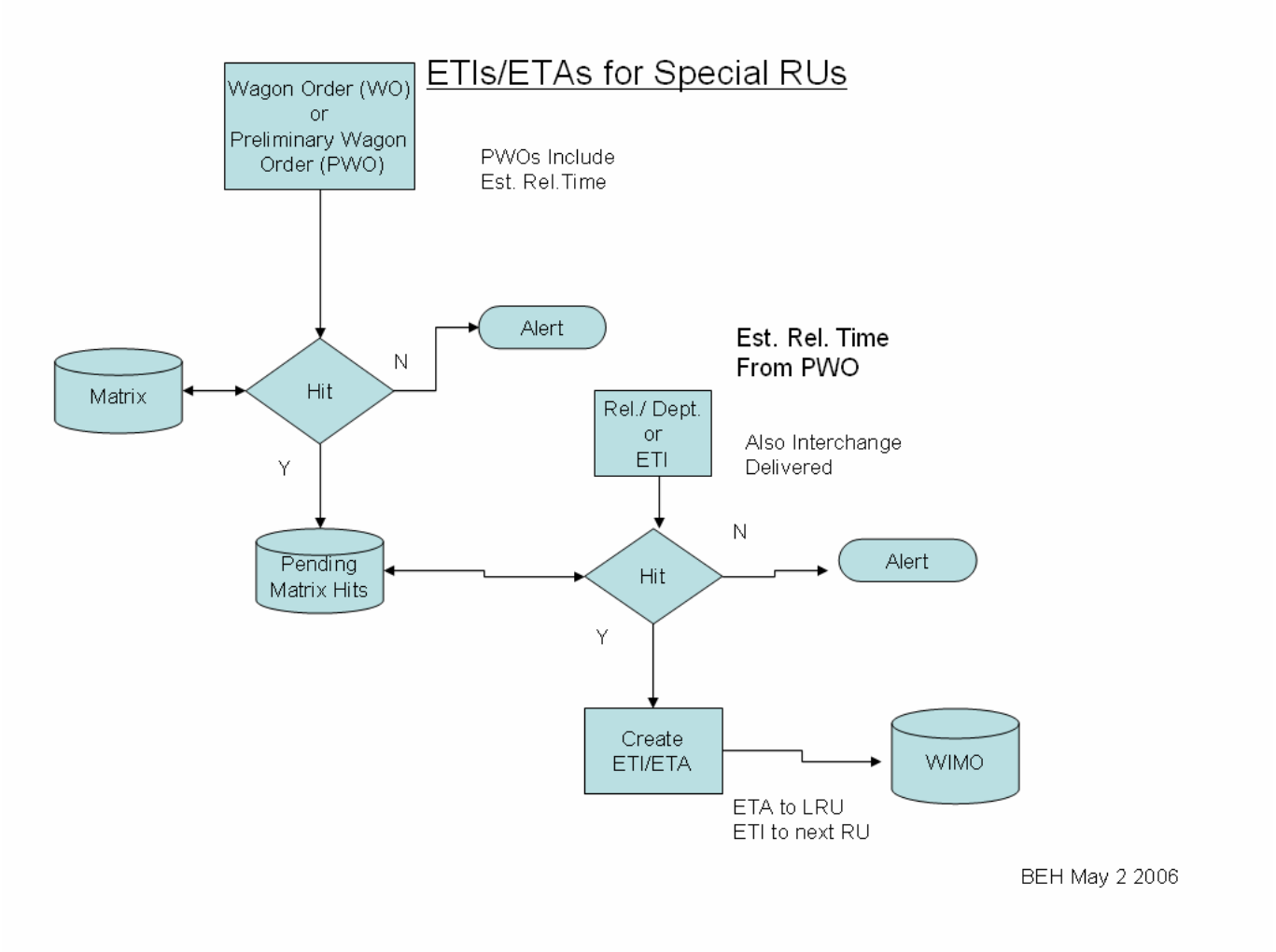

Definition of TAF TSI Function 01
– Wagon Order Function –
Not in TAF TSI
In TAF TSI
Customer
Consignment Note
Lead RU
Preliminary Wagon Order
Planning Cycle Required ?
Yes
No
Movement Planning Cycle
(Preliminary Wagon Order & Response)
No
Agreed?
Consignment Note Acceptance
Consignment Note & Order Acceptance
Wagon Order
Yes
WIMO
TAF TSI Wagon Order Messaging
Consignment Note –
1) Always stored at LRU
2) (Joint Contracting) Sent to Joint RUs
3) (Sub Contracting) Individual CN Sent to RUs & Main CN accessible at LRU to those with rights to enquire
Wagon Order
Commercial Process
Individual Wagon Orders
Joint Contracting With or Without Planning Cycle
Open Access – or any With or Without Planning Cycle
Wagon Order
Sub contracting with or Without Planning Cycle
All Joint RUs
Single RU
Sub-Contracting RUs
Modified B.E.H.
May 1 2006


DTPs Supporting TAF TSI FUNCTION 01 –Initial Trip Plan – ETI/ETA
Customer
All Consignment Notes
LRU
Preliminary Wagon Order (PWO)
LRU
Planning Cycle
Alternate RUs
Create PWO
N
Y
LRU/ORU
Release/Siding Departure
Act. Events
Wagon Order (WO)
Incl. Est. Rel/Dept
PWO
WO
ORU
TRU
DRU
Match (P)WO & Rel./Dept
Match (P)WO & ETI #1
Match (P)WO & ETI #2
ETI
ETI
Generate Trip Plan & ETI #1
Generate Trip Plan & ETI #2
Generate Trip Plan & ETA
TRU
ETI#2
ETA
ORU
DRU
ETI#1
WIMO
ETA
Compare ETA With Cust. Commit
O.K.
N
Y
WO
PWO
e.g.
-Advise Customer
-Manual Trip Plans
Corrective Action by LRU
WO or PWO
PWO
WO
LRU
Note: This process Uses "Real" Wagon Numbers.
ORU
TRU
DRU
Retain Trip Plans from PWO. Process
Replace PWO With WO
PWO
PWO or WO
WO
No Action
B.E.H. May 2 2006

APPENDIX 5


DTPs Supporting TAF TSI FUNCTION 01 Monitoring Mode
ORU
Actual Events
Match Trip Plan
Y
No Action
N
New Trip Plan
ETI Different
ETI
WIMO
TRU
DRU
ETA Different
LRU
Corrective Action
e.g.
Advise Customer
Manual T.P. by RU(s)
New Shipment by Air
BEH May 2 2006

APPENDIX 6


ETIs/ETAs for Special RUs
Wagon Order (WO) or Preliminary Wagon Order (PWO)
PWOs Include Est. Rel.Time
Alert
Est. Rel. Time From PWO
Matrix
Hit
N
Y
Rel./ Dept. or ETI
Also Interchange Delivered
Pending Matrix Hits
Hit
N
Alert
Y
Create ETI/ETA
WIMO
ETA to LRU
ETI to next RU
BEH May 2 2006

APPENDIX 7

MATRIX for ETA/ETI Capability

Operation			Cut off times		planningcriteria									from		to											
period	day of week	not valid on:	release	departure	Load, Empty, Residue	wagon type		comodity code		danger ous		max. weight / axle	max weight/meter	Location	Consignor	Location	Consignee	Location	Consignee	Location	Consignee	Location	Consignee	Location	Consignee	Location	Consignee
						range	exception	range	exception	range	exception					CZ343940000005	Alphadescription	CZ34364	Alphadescription	CZ33425	Alphadescription	CZ33456	Alphadescription	CZ65432	Alphadescription	CZZ34560000005	Alphadescription
12.12.04-10-12-05	1 - 5	362, 363	23:00	00:45	L/E/R (ALL)	ALL	1234, 6789, 7654	ALL	NONE	ALL	NONE	22,50	5	CZ343940000005	Alphadescription			1	7	9	6	42					
12.12.04-10-12-05	6 - 7	362, 363	23:00	00:45	L/E/R (ALL)	ALL	1234, 6789, 7654	1234, 6789, 7654	123456, 765432, 098765	0-50	14, 33	22,50	5	CZ343940000005	Alphadescription			1	7	8	12	63					
12.12.04-10-12-05	1 - 5	362, 363, 105, 18	23:00	00:45	L/E/R (ALL)	0001-9000	NONE	ALL	NONE	ALL	NONE	17,50	5	CZ33425	Alphadescription	7	4			4	8	36					
12.12.04-10-12-05	6 - 7	362, 363, 105, 18	23:00	00:45	L/E/R (ALL)	0001-9000	NONE	1234, 6789, 7654	123456, 765432, 098765	0-50 (ALL)	0-50	14, 33	5	CZ33456	Alphadescription	8	8			12	50	60					
12.12.04-10-12-05	1 - 5	362, 363, 105, 18	21:00	00:45	L/E/R (ALL)	0001-9000	1234, 6789, 7654 (NONE)	ALL	NONE	ALL	NONE	17,50	5	CZ65432	Alphadescription	1	4	6	5			30					
12.12.04-10-12-05	6 - 7	362, 363, 105, 18	21:00	00:45	L/E/R (ALL)	0001-9000	1234, 6789, 7654 (NONE)	1234, 6789, 7654	123456, 765432, 098765 (NONE)	0-50 (ALL)	0-50	14, 33	5	CZZ34560000005	Alphadescription	13	15	16	16			40					

APPENDIX 8 Trip Plan Data & Messaging

The following data catalogue may be used as a basis for the implementation of Dynamic Trip Planning on an industry or bi-lateral basis. The messages defined herein are not contained in the TAF-TSI and offered to the stakeholders as guidance.

Elements

ActivityType
ActualEndDateTime
AdditionalInstruction
BrakeType
BrakeWeight
ClosingTime
CommodityCodeRange
Company
CompanyIdent
Consignee
ConsignmentDescription
ConsignmentNumber
ConsignmentReference
Consignor
ConsignorAssignedReference
ContractInformation
ContractNumberCustomer
ContractNumberMovement
ControlContactIdent
CountryCode
CustomerIdent
CustomerName
CutOffTime
DangerousGoodsIndication
DangerousGoodsIndicator
DangerousGoodsRange
DayOfWeek
DeliveryInstruction
DeliveryTimeAtInterchange
DepartureAtOrigin
DepartureTimeAtLocation
DepartureTrackAtLocation
Destination
DestinationYard
ETI_ETA_ConfirmedMessage
ExceptionalGaugingInd
FinalDestination
GoodsDescription
GrossWeight
HandlingInstruction
IntermediateArrivalTime
IntermediateDepartureTime
IntermediateDestination
InterruptionDescription
LeadRU
LoadLevel
LoadType
Location
MaxAxleWeight

Complex types

CargoCodeType
ConsignmentIdent
CustomerCode
DanGoodsType
DimensionValue
LocationIdent
MessageCode
TrainIdent
YesNoIndicator

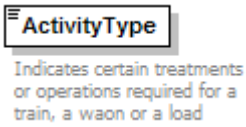
Simple types

ActivityCode
CapacityIndicator
CommunicationRefID
CompanyCode
ConsignmentTypeCode
ContactIdent
CountryIdent
DateTime
FreeText
IdentCode
InfoIndex
Name
Numeric1-5
Numeric1-6
Numeric2-2
Numeric3-3
Numeric4-4
PathIdent
Speed
String1-14
String1-5
String1-7
String5-5
String5-6
String5-8
Time
UnitType
VolumeValue
WagonIdent
WeightValueKilo
WeightValueTonne

MessageHeader
MessageIdent
MessageReference
MessageStatus
MessageType
Name
NextIntermediateDestination
NextResponsibleIM
NextResponsibleRU
Origin
PickupTimeAtLocation
PreliminaryWagonOrder
PreliminaryWagonOrderCancellation
PreliminaryWagonOrderReject
PreviousConsignmentNumber
PreviousResponsibleRU
Recipient
RelatedReference
RequestedTimeOfDelivery
ResponsibleRU
RouteInformation
RoutingInformation
RU_Partner
Sender
SequenceNumber
TotalLoadWeight
TotalWeighDim
TrainIdent
TransportDimension
TransportFrom
TransportInstruction
TransportTo
TransportUnit
TripPlanEventCode
TripPlanIdentification
TripPlanSchedule
UnitCapacityUsed
VesselIndication
VesselName
Volume
WagonData
WagonEvents
WagonGauge
WagonInformation
WagonInstruction
WagonLength
WagonMaxSpeed
WagonNumberFreight
WagonNumberOfAxles
WagonOrderCancellation
WagonPickupAtCustomer
WagonPickupAtOrigin
WagonPreviousNumberFreight
WagonShortInformation
WagonTechData
WagonType
WagonWeightEmpty

element **ActivityType**

diagram



type **ActivityCode**

used by element **WagonData**

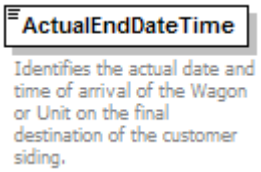
facets
enumeration 11
enumeration 12
enumeration 13
enumeration 14
enumeration 21
enumeration 22
enumeration 23
enumeration 24
enumeration 25
enumeration 26
enumeration 41
enumeration 42
enumeration 43
enumeration 44
enumeration 45
enumeration 46
enumeration 74
enumeration 76
enumeration 77

annotation documentation Indicates certain treatments or operations required for a train, a waon or a load

source
```
<xs:element name="ActivityType" type="ActivityCode">
  <xs:annotation>
    <xs:documentation>Indicates certain treatments or operations required for a train, a waon or a load</xs:documentation>
  </xs:annotation>
</xs:element>
```

element **ActualEndDateTime**

diagram



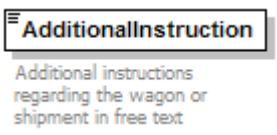
type **DateTime**

annotation documentation Identifies the actual date and time of arrival of the Wagon or Unit on the final destination of the customer siding.

source
```
<xs:element name="ActualEndDateTime" type="DateTime">
  <xs:annotation>
    <xs:documentation>Identifies the actual date and time of arrival of the Wagon or Unit on the final destination of the customer siding.</xs:documentation>
  </xs:annotation>
</xs:element>
```

element **AdditionalInstruction**

diagram



type **FreeText**

used by element **WagonInstruction**

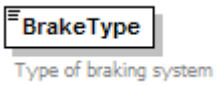
facets length 255

annotation documentation Additional instructions regarding the wagon or shipment in free text

source
```
<xs:element name="AdditionalInstruction" type="FreeText">
 <xs:annotation>
  <xs:documentation>Additional instructions regarding the wagon or shipment in free text</xs:documentation>
 </xs:annotation>
</xs:element>
```

element **BrakeType**

diagram



type restriction of **IdentCode**

used by element **WagonTechData**

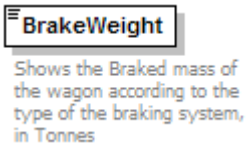
facets enumeration G
enumeration P
enumeration R

annotation documentation Type of braking system

source
```
<xs:element name="BrakeType">
 <xs:annotation>
  <xs:documentation>Type of braking system</xs:documentation>
 </xs:annotation>
 <xs:simpleType>
  <xs:restriction base="IdentCode">
   <xs:enumeration value="G"/>
   <xs:enumeration value="P"/>
   <xs:enumeration value="R"/>
  </xs:restriction>
 </xs:simpleType>
</xs:element>
```

element **BrakeWeight**

diagram



type restriction of **xs:int**

used by element **WagonTechData**

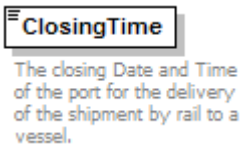
facets minInclusive 1
maxInclusive 999

annotation documentation Shows the Braked mass of the wagon according to the type of the braking system, in Tonnes

source
```
<xs:element name="BrakeWeight">
 <xs:annotation>
  <xs:documentation>Shows the Braked mass of the wagon according to the type of the braking system, in
Tonnes</xs:documentation>
 </xs:annotation>
 <xs:simpleType>
  <xs:restriction base="xs:int">
   <xs:minInclusive value="1"/>
   <xs:maxInclusive value="999"/>
  </xs:restriction>
 </xs:simpleType>
</xs:element>
```

element **ClosingTime**

diagram



type **DateTime**

used by element **VesselIndication**

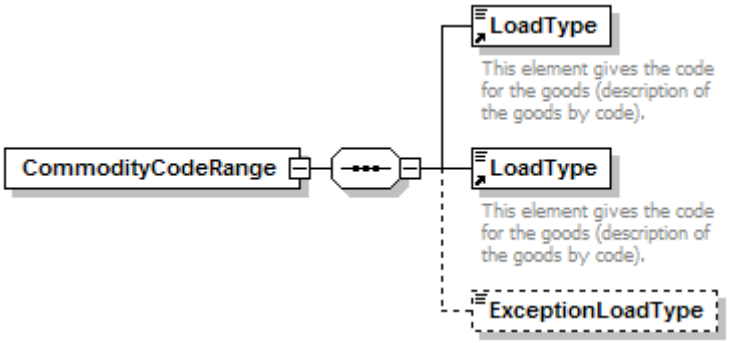
annotation documentation The closing Date and Time of the port for the delivery of the shipment by rail to a vessel.

source

```
<xs:element name="ClosingTime" type="DateTime">
  <xs:annotation>
    <xs:documentation>The closing Date and Time of the port for the delivery of the shipment by rail to a
vessel.</xs:documentation>
  </xs:annotation>
</xs:element>
```

element **CommodityCodeRange**

diagram



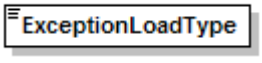
children **LoadType** **ExceptionLoadType**

source

```
<xs:element name="CommodityCodeRange">
  <xs:complexType>
    <xs:sequence>
      <xs:element ref="LoadType"/>
      <xs:element ref="LoadType"/>
      <xs:element name="ExceptionLoadType" type="CargoCodeType" minOccurs="0"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

element **CommodityCodeRange/ExceptionLoadType**

diagram



type **CargoCodeType**

facets length 255

attributes

Name	Type	Use	Default	Fixed	Annotation
CargoCodingType	IdentCode				

source

```
<xs:element name="ExceptionLoadType" type="CargoCodeType" minOccurs="0"/>
```

element **Company**

diagram

type **CompanyCode**

facets
minInclusive 0001
maxInclusive 9999

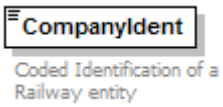
annotation
documentation Identifies a railway company (RU or IM)

source

```
<xs:element name="Company" type="CompanyCode">
 <xs:annotation>
  <xs:documentation>Identifies a railway company (RU or IM)</xs:documentation>
 </xs:annotation>
</xs:element>
```

element **CompanyIdent**

diagram



type **CompanyCode**

facets
minInclusive 0001
maxInclusive 9999

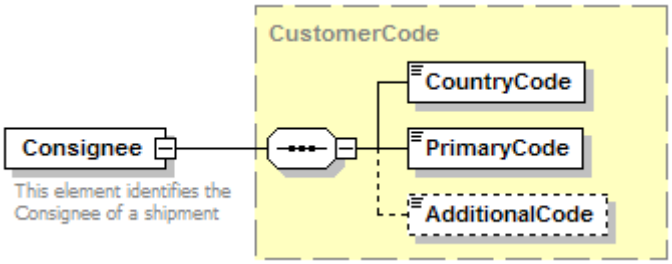
annotation
documentation Coded Identification of a Railway entity

source

```
<xs:element name="CompanyIdent" type="CompanyCode">
 <xs:annotation>
  <xs:documentation>Coded Identification of a Railway entity</xs:documentation>
 </xs:annotation>
</xs:element>
```

element **Consignee**

diagram



type **CustomerCode**

children **CountryCode** **PrimaryCode** **AdditionalCode**

used by
element **PreliminaryWagonOrder**

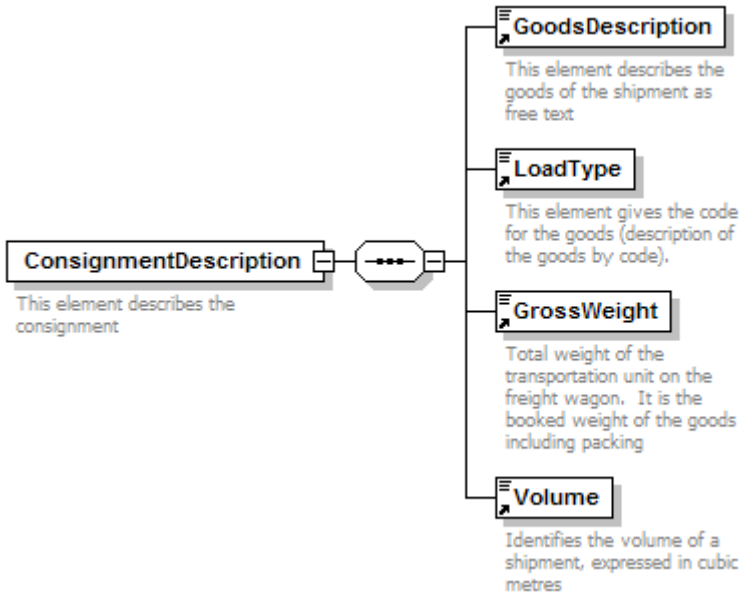
annotation
documentation This element identifies the Consignee of a shipment

source

```
<xs:element name="Consignee" type="CustomerCode">
 <xs:annotation>
  <xs:documentation>This element identifies the Consignee of a shipment</xs:documentation>
 </xs:annotation>
</xs:element>
```

element **ConsignmentDescription**

diagram



children **GoodsDescription** **LoadType** **GrossWeight** **Volume**

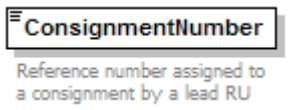
used by element **PreliminaryWagonOrder**

annotation documentation This element describes the consignment

source
```
<xs:element name="ConsignmentDescription">
 <xs:annotation>
  <xs:documentation>This element describes the consignment</xs:documentation>
 </xs:annotation>
 <xs:complexType>
  <xs:sequence>
   <xs:element ref="GoodsDescription"/>
   <xs:element ref="LoadType"/>
   <xs:element ref="GrossWeight"/>
   <xs:element ref="Volume"/>
  </xs:sequence>
 </xs:complexType>
</xs:element>
```

element **ConsignmentNumber**

diagram



type **ConsignmentIdent**

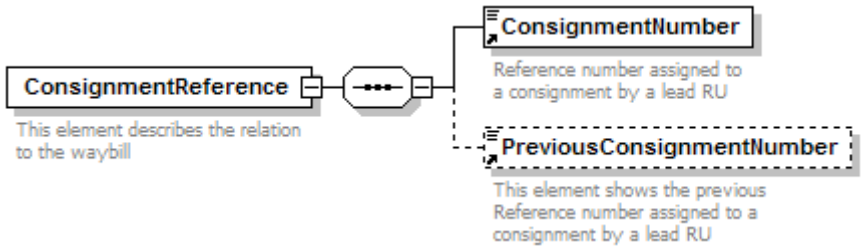
used by element **ConsignmentReference**

annotation documentation Reference number assigned to a consignment by a lead RU

source
```
<xs:element name="ConsignmentNumber" type="ConsignmentIdent">
 <xs:annotation>
  <xs:documentation>Reference number assigned to a consignment by a lead RU</xs:documentation>
 </xs:annotation>
</xs:element>
```

element **ConsignmentReference**

diagram



children **ConsignmentNumber** **PreviousConsignmentNumber**

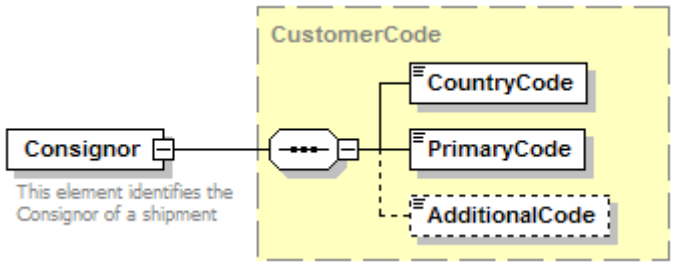
used by element **PreliminaryWagonOrder**

annotation documentation This element describes the relation to the waybill

source
```
<xs:element name="ConsignmentReference">
 <xs:annotation>
  <xs:documentation>This element describes the relation to the waybill</xs:documentation>
 </xs:annotation>
 <xs:complexType>
  <xs:sequence>
   <xs:element ref="ConsignmentNumber"/>
   <xs:element ref="PreviousConsignmentNumber" minOccurs="0"/>
  </xs:sequence>
 </xs:complexType>
</xs:element>
```

element **Consignor**

diagram



type **CustomerCode**

children **CountryCode** **PrimaryCode** **AdditionalCode**

used by element **PreliminaryWagonOrder**

annotation documentation This element identifies the Consignor of a shipment

source
```
<xs:element name="Consignor" type="CustomerCode">
 <xs:annotation>
  <xs:documentation>This element identifies the Consignor of a shipment</xs:documentation>
 </xs:annotation>
</xs:element>
```

element **ConsignorAssignedReference**

diagram

type **xs:string**

used by element **PreliminaryWagonOrder**

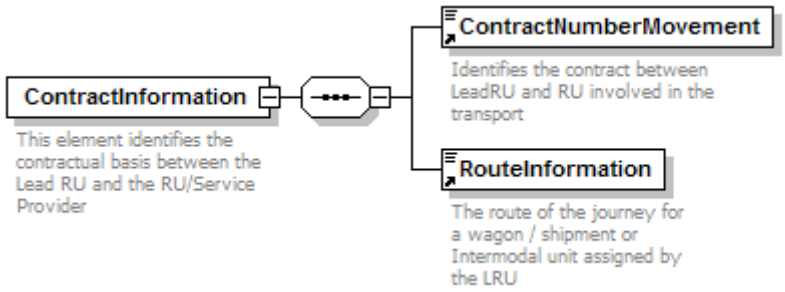
annotation documentation Reference identifier for the consignment, assigned by Conignor

source
```
<xs:element name="ConsignorAssignedReference" type="xs:string">
```

```
  <xs:annotation>
    <xs:documentation>Reference identifier for the consignment, assigned by Conignor</xs:documentation>
  </xs:annotation>
</xs:element>
```

element **ContractInformation**

diagram



children **ContractNumberMovement** **RouteInformation**

used by element **PreliminaryWagonOrder**

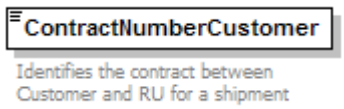
annotation documentation This element identifies the contractual basis between the Lead RU and the RU/Service Provider

source

```
<xs:element name="ContractInformation">
  <xs:annotation>
    <xs:documentation>This element identifies the contractual basis between the Lead RU and the RU/Service
Provider</xs:documentation>
  </xs:annotation>
  <xs:complexType>
    <xs:sequence>
      <xs:element ref="ContractNumberMovement"/>
      <xs:element ref="RouteInformation"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

element **ContractNumberCustomer**

diagram



type **FreeText**

facets length 255

annotation documentation Identifies the contract between Customer and RU for a shipment

source

```
<xs:element name="ContractNumberCustomer" type="FreeText">
  <xs:annotation>
    <xs:documentation>Identifies the contract between Customer and RU for a shipment</xs:documentation>
  </xs:annotation>
</xs:element>
```

element **ContractNumberMovement**

diagram

type **FreeText**

used by element **ContractInformation**

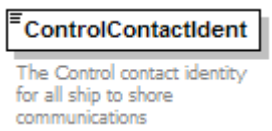
facets length 255

annotation documentation Identifies the contract between LeadRU and RU involved in the transport

source
```
<xs:element name="ContractNumberMovement" type="FreeText">
  <xs:annotation>
    <xs:documentation>Identifies the contract between LeadRU and RU involved in the transport</xs:documentation>
  </xs:annotation>
</xs:element>
```

element **ControlContactIdent**

diagram



type **CommunicationRefID**

facets length 70

annotation documentation The Control contact identity for all ship to shore communications

source
```
<xs:element name="ControlContactIdent" type="CommunicationRefID">
  <xs:annotation>
    <xs:documentation>The Control contact identity for all ship to shore communications</xs:documentation>
  </xs:annotation>
</xs:element>
```

element **CountryCode**

diagram

type **CountryIdent**

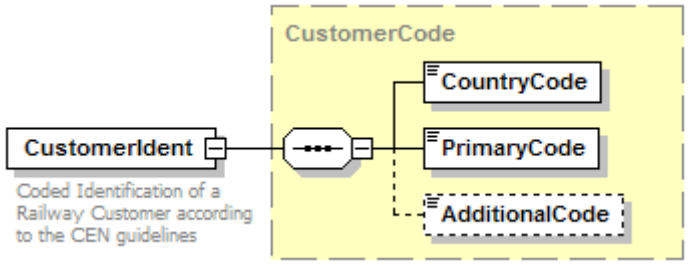
facets minLength 2
maxLength 2

annotation documentation Identifies a County or State by code (ISO 3166-1)

source
```
<xs:element name="CountryCode" type="CountryIdent">
  <xs:annotation>
    <xs:documentation>Identifies a County or State by code (ISO 3166-1)</xs:documentation>
  </xs:annotation>
</xs:element>
```

element **CustomerIdent**

diagram



type **CustomerCode**

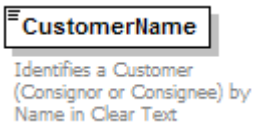
children **CountryCode** **PrimaryCode** **AdditionalCode**

annotation documentation Coded Identification of a Railway Customer according to the CEN guidelines

source
```
<xs:element name="CustomerIdent" type="CustomerCode">
  <xs:annotation>
    <xs:documentation>Coded Identification of a Railway Customer according to the CEN guidelines</xs:documentation>
  </xs:annotation>
</xs:element>
```

element **CustomerName**

diagram



type **Name**

facets length 254

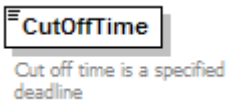
annotation documentation Identifies a Customer (Consignor or Consignee) by Name in Clear Text

source

```
<xs:element name="CustomerName" type="Name">
 <xs:annotation>
  <xs:documentation>Identifies a Customer (Consignor or Consignee) by Name in Clear Text</xs:documentation>
 </xs:annotation>
</xs:element>
```

element **CutOffTime**

diagram



type extension of **xs:time**

attributes

Name	Type	Use	Default	Fixed	Annotation
CutoffTimeCode	IdentCode				

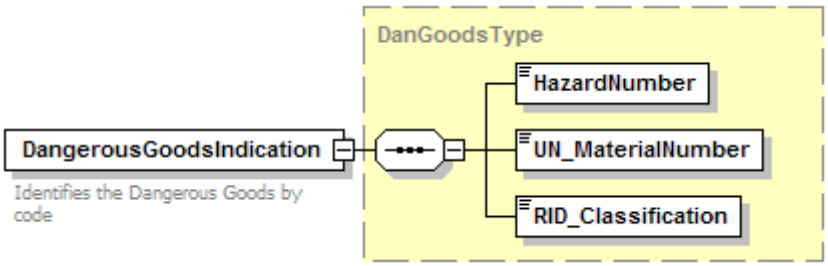
annotation documentation Cut off time is a specified deadline

source

```
<xs:element name="CutOffTime">
 <xs:annotation>
  <xs:documentation>Cut off time is a specified deadline</xs:documentation>
 </xs:annotation>
 <xs:complexType>
  <xs:simpleContent>
   <xs:extension base="xs:time">
    <xs:attribute name="CutoffTimeCode">
     <xs:simpleType>
      <xs:restriction base="IdentCode">
       <xs:enumeration value="Dep"/>
       <xs:enumeration value="Arr"/>
      </xs:restriction>
     </xs:simpleType>
    </xs:attribute>
   </xs:extension>
  </xs:simpleContent>
 </xs:complexType>
</xs:element>
```

element **DangerousGoodsIndication**

diagram



type **DanGoodsType**

children **HazardNumber** **UN_MaterialNumber** **RID_Classification**

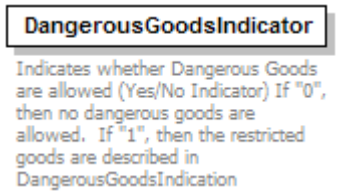
used by elements **DangerousGoodsRange** **DangerousGoodsRange** **PreliminaryWagonOrder** **WagonData**

annotation documentation Identifies the Dangerous Goods by code

source
```
<xs:element name="DangerousGoodsIndication" type="DanGoodsType">
  <xs:annotation>
    <xs:documentation>Identifies the Dangerous Goods by code</xs:documentation>
  </xs:annotation>
</xs:element>
```

element **DangerousGoodsIndicator**

diagram



type **YesNoIndicator**

attributes

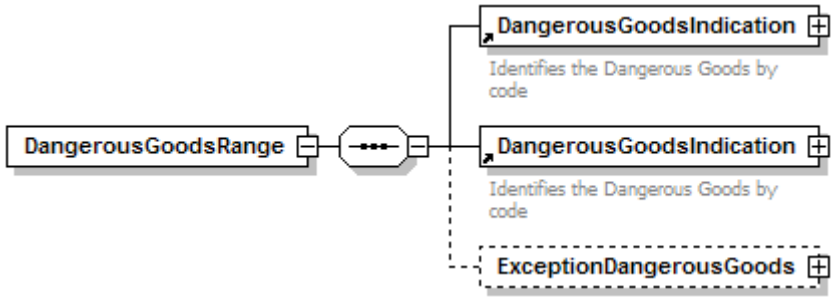
Name	Type	Use	Default	Fixed	Annotation
YesNo	IdentCode				

annotation documentation Indicates whether Dangerous Goods are allowed (Yes/No Indicator) If "0", then no dangerous goods are allowed. If "1", then the restricted goods are described in DangerousGoodsIndication

source
```
<xs:element name="DangerousGoodsIndicator" type="YesNoIndicator">
  <xs:annotation>
    <xs:documentation>Indicates whether Dangerous Goods are allowed (Yes/No Indicator) If "0", then no dangerous goods are allowed. If "1", then the restricted goods are described in DangerousGoodsIndication</xs:documentation>
  </xs:annotation>
</xs:element>
```

element **DangerousGoodsRange**

diagram

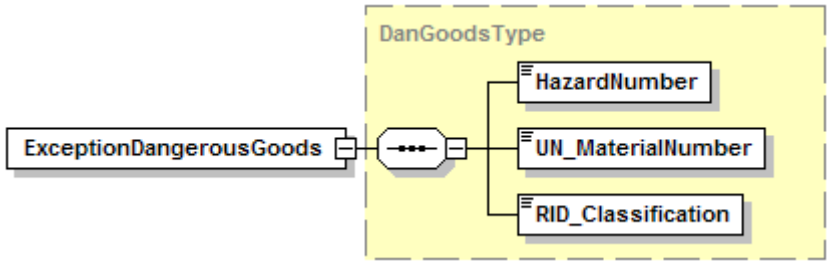


children **DangerousGoodsIndication** **ExceptionDangerousGoods**

source
```
<xs:element name="DangerousGoodsRange">
  <xs:complexType>
    <xs:sequence>
      <xs:element ref="DangerousGoodsIndication"/>
      <xs:element ref="DangerousGoodsIndication"/>
      <xs:element name="ExceptionDangerousGoods" type="DanGoodsType" minOccurs="0"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

element **DangerousGoodsRange/ExceptionDangerousGoods**

diagram



type **DanGoodsType**

children **HazardNumber** **UN_MaterialNumber** **RID_Classification**

source
```
<xs:element name="ExceptionDangerousGoods" type="DanGoodsType" minOccurs="0"/>
```

element **DayOfWeek**

diagram

type restriction of **IdentCode**

used by element **TripPlanSchedule**

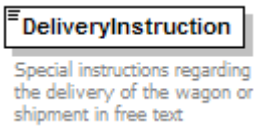
facets
enumeration 1
enumeration 2
enumeration 3
enumeration 4
enumeration 5
enumeration 6
enumeration 7

annotation documentation Indicates the day of week

source
```
<xs:element name="DayOfWeek">
  <xs:annotation>
    <xs:documentation>Indicates the day of week</xs:documentation>
  </xs:annotation>
  <xs:simpleType>
    <xs:restriction base="IdentCode">
      <xs:enumeration value="1"/>
      <xs:enumeration value="2"/>
      <xs:enumeration value="3"/>
      <xs:enumeration value="4"/>
      <xs:enumeration value="5"/>
      <xs:enumeration value="6"/>
      <xs:enumeration value="7"/>
    </xs:restriction>
  </xs:simpleType>
</xs:element>
```

element **DeliveryInstruction**

diagram



type **FreeText**

used by element **PreliminaryWagonOrder**

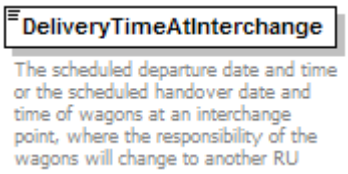
facets length 255

annotation documentation Special instructions regarding the delivery of the wagon or shipment in free text

source
```
<xs:element name="DeliveryInstruction" type="FreeText">
  <xs:annotation>
    <xs:documentation>Special instructions regarding the delivery of the wagon or shipment in free
text</xs:documentation>
  </xs:annotation>
</xs:element>
```

element **DeliveryTimeAtInterchange**

diagram



type **DateTime**

used by element **NextIntermediateDestination**

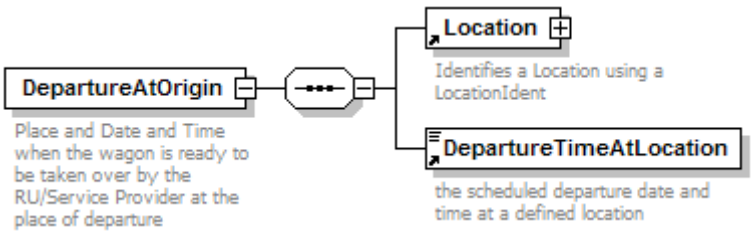
annotation documentation The scheduled departure date and time or the scheduled handover date and time of wagons at an interchange point, where the responsibility of the wagons will change to another RU

source

```
<xs:element name="DeliveryTimeAtInterchange" type="DateTime">
  <xs:annotation>
    <xs:documentation>The scheduled departure date and time or the scheduled handover date and time of wagons at an interchange point, where the responsibility of the wagons will change to another RU</xs:documentation>
  </xs:annotation>
</xs:element>
```

element **DepartureAtOrigin**

diagram



children **Location** **DepartureTimeAtLocation**

used by element **PreliminaryWagonOrder**

annotation documentation Place and Date and Time when the wagon is ready to be taken over by the RU/Service Provider at the place of departure

source

```
<xs:element name="DepartureAtOrigin">
  <xs:annotation>
    <xs:documentation>Place and Date and Time when the wagon is ready to be taken over by the RU/Service Provider at the place of departure</xs:documentation>
  </xs:annotation>
  <xs:complexType>
    <xs:sequence>
      <xs:element ref="Location"/>
      <xs:element ref="DepartureTimeAtLocation"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

element **DepartureTimeAtLocation**

diagram

type **DateTime**

used by elements **DepartureAtOrigin** **WagonPickupAtOrigin**

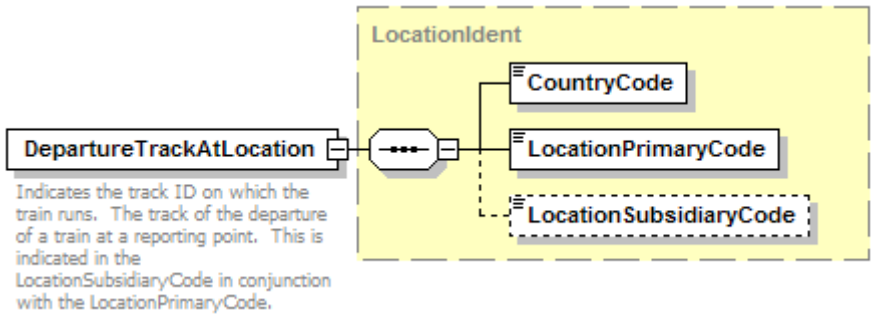
annotation documentation the scheduled departure date and time at a defined location

source

```
<xs:element name="DepartureTimeAtLocation" type="DateTime">
  <xs:annotation>
    <xs:documentation>the scheduled departure date and time at a defined location</xs:documentation>
  </xs:annotation>
</xs:element>
```

element **DepartureTrackAtLocation**

diagram



type **LocationIdent**

children **CountryCode** **LocationPrimaryCode** **LocationSubsidiaryCode**

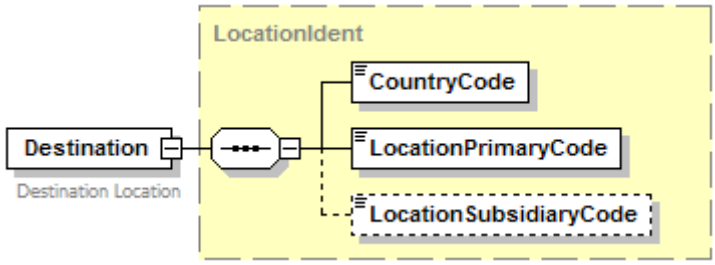
annotation
documentation Indicates the track ID on which the train runs. The track of the departure of a train at a reporting point. This is indicated in the LocationSubsidiaryCode in conjunction with the LocationPrimaryCode.

source

```
<xs:element name="DepartureTrackAtLocation" type="LocationIdent">
  <xs:annotation>
    <xs:documentation>Indicates the track ID on which the train runs. The track of the departure of a train at a reporting point. This is indicated in the LocationSubsidiaryCode in conjunction with the LocationPrimaryCode.</xs:documentation>
  </xs:annotation>
</xs:element>
```

element **Destination**

diagram



type **LocationIdent**

children **CountryCode** **LocationPrimaryCode** **LocationSubsidiaryCode**

used by
element **TripPlanIdentification**

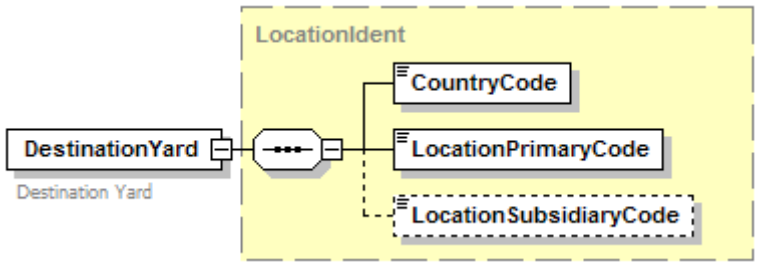
annotation
documentation Destination Location

source

```
<xs:element name="Destination" type="LocationIdent">
  <xs:annotation>
    <xs:documentation>Destination Location</xs:documentation>
  </xs:annotation>
</xs:element>
```

element **DestinationYard**

diagram



type **LocationIdent**

children **CountryCode** **LocationPrimaryCode** **LocationSubsidiaryCode**

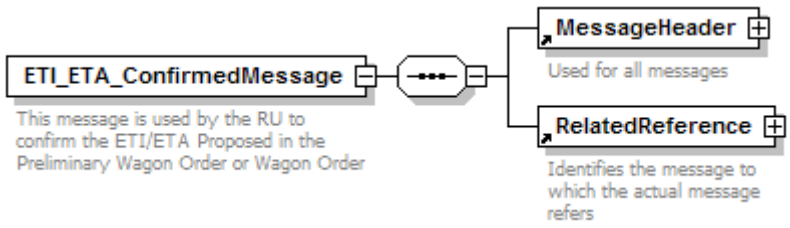
used by element **PreliminaryWagonOrder**

annotation documentation Destination Yard

source
```
<xs:element name="DestinationYard" type="LocationIdent">
  <xs:annotation>
    <xs:documentation>Destination Yard</xs:documentation>
  </xs:annotation>
</xs:element>
```

element **ETI_ETA_ConfirmedMessage**

diagram



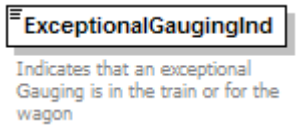
children **MessageHeader** **RelatedReference**

annotation documentation This message is used by the RU to confirm the ETI/ETA Proposed in the Preliminary Wagon Order or Wagon Order

source
```
<xs:element name="ETI_ETA_ConfirmedMessage">
  <xs:annotation>
    <xs:documentation>This message is used by the RU to confirm the ETI/ETA Proposed in the Preliminary Wagon Order or Wagon Order</xs:documentation>
  </xs:annotation>
  <xs:complexType>
    <xs:sequence>
      <xs:element ref="MessageHeader"/>
      <xs:element ref="RelatedReference"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

element **ExceptionalGaugingInd**

diagram



type **InfoIndex**

used by element **WagonData**

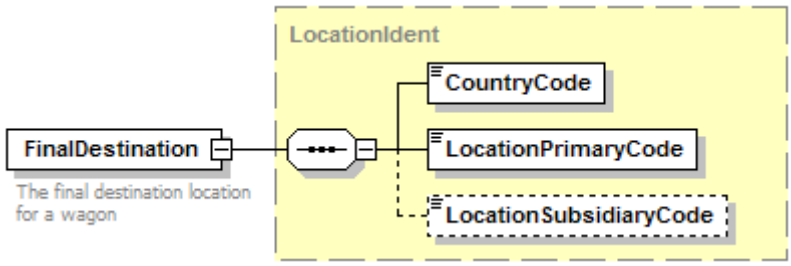
facets enumeration 10
enumeration 20
enumeration 30

annotation documentation Indicates that an exceptional Gauging is in the train or for the wagon

source
```
<xs:element name="ExceptionalGaugingInd" type="InfoIndex">
  <xs:annotation>
    <xs:documentation>Indicates that an exceptional Gauging is in the train or for the wagon</xs:documentation>
  </xs:annotation>
</xs:element>
```

element **FinalDestination**

diagram



type **LocationIdent**

children **CountryCode** **LocationPrimaryCode** **LocationSubsidiaryCode**

used by element **PreliminaryWagonOrder**

annotation documentation The final destination location for a wagon

source
```
<xs:element name="FinalDestination" type="LocationIdent">
  <xs:annotation>
    <xs:documentation>The final destination location for a wagon</xs:documentation>
  </xs:annotation>
</xs:element>
```

element **GoodsDescription**

diagram

type **FreeText**

used by element **ConsignmentDescription**

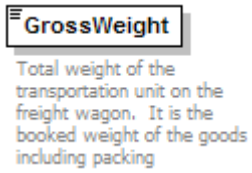
facets length 255

annotation documentation This element describes the goods of the shipment as free text

source
```
<xs:element name="GoodsDescription" type="FreeText">
  <xs:annotation>
    <xs:documentation>This element describes the goods of the shipment as free text</xs:documentation>
  </xs:annotation>
</xs:element>
```

element **GrossWeight**

diagram



type **WeightValueKilo**

used by element **ConsignmentDescription**

facets minInclusive 1
maxInclusive 999999
whiteSpace collapse

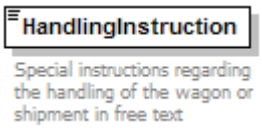
annotation documentation Total weight of the transportation unit on the freight wagon. It is the booked weight of the goods including packing

source
```
<xs:element name="GrossWeight" type="WeightValueKilo">
  <xs:annotation>
    <xs:documentation>Total weight of the transportation unit on the freight wagon. It is the booked weight of the goods
including packing</xs:documentation>
  </xs:annotation>
```

```
</xs:element>
```

element **HandlingInstruction**

diagram



type **FreeText**

used by element **WagonInstruction**

facets length 255

annotation documentation Special instructions regarding the handling of the wagon or shipment in free text

source

```
<xs:element name="HandlingInstruction" type="FreeText">
  <xs:annotation>
    <xs:documentation>Special instructions regarding the handling of the wagon or shipment in free text</xs:documentation>
  </xs:annotation>
</xs:element>
```

element **IntermediateArrivalTime**

diagram

type **DateTime**

annotation documentation The Date and Time of the train arrival at an Intermediate point on the train path

source

```
<xs:element name="IntermediateArrivalTime" type="DateTime">
  <xs:annotation>
    <xs:documentation>The Date and Time of the train arrival at an Intermediate point on the train path</xs:documentation>
  </xs:annotation>
</xs:element>
```

element **IntermediateDepartureTime**

diagram

type **DateTime**

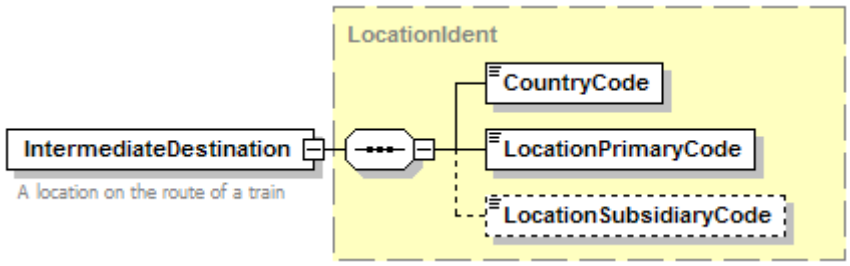
annotation documentation The Date and Time of the train departure at an Intermediate point on the train path

source

```
<xs:element name="IntermediateDepartureTime" type="DateTime">
  <xs:annotation>
    <xs:documentation>The Date and Time of the train departure at an Intermediate point on the train path</xs:documentation>
  </xs:annotation>
</xs:element>
```

element **IntermediateDestination**

diagram



type **LocationIdent**

children **CountryCode** **LocationPrimaryCode** **LocationSubsidiaryCode**

used by element **NextIntermediateDestination**

annotation documentation A location on the route of a train

source
```
<xs:element name="IntermediateDestination" type="LocationIdent">
  <xs:annotation>
    <xs:documentation>A location on the route of a train</xs:documentation>
  </xs:annotation>
</xs:element>
```

element **InterruptionDescription**

diagram

type **FreeText**

facets length 255

annotation documentation The free text description of an interruption

source
```
<xs:element name="InterruptionDescription" type="FreeText">
  <xs:annotation>
    <xs:documentation>The free text description of an interruption</xs:documentation>
  </xs:annotation>
</xs:element>
```

element **LeadRU**

diagram

type **CompanyCode**

used by element **TripPlanIdentification**

facets minInclusive 0001
maxInclusive 9999

annotation documentation Lead Railway Undertaking

source
```
<xs:element name="LeadRU" type="CompanyCode">
  <xs:annotation>
    <xs:documentation>Lead Railway Undertaking</xs:documentation>
  </xs:annotation>
</xs:element>
```

element **LoadLevel**

diagram

type restriction of **xs:integer**

used by element **WagonInformation**

facets minInclusive 1
maxInclusive 9999

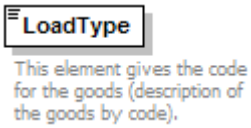
annotation documentation Height of load level above upper surface of rail in unloaded status. Measured in mms

source

```
<xs:element name="LoadLevel">
 <xs:annotation>
  <xs:documentation>Height of load level above upper surface of rail in unloaded status. Measured in mms</xs:documentation>
 </xs:annotation>
 <xs:simpleType>
  <xs:restriction base="xs:integer">
   <xs:minInclusive value="1"/>
   <xs:maxInclusive value="9999"/>
  </xs:restriction>
 </xs:simpleType>
</xs:element>
```

element **LoadType**

diagram



type **CargoCodeType**

used by elements **CommodityCodeRange** **CommodityCodeRange** **ConsignmentDescription**

facets length 255

attributes

Name	Type	Use	Default	Fixed	Annotation
CargoCodingType	IdentCode				

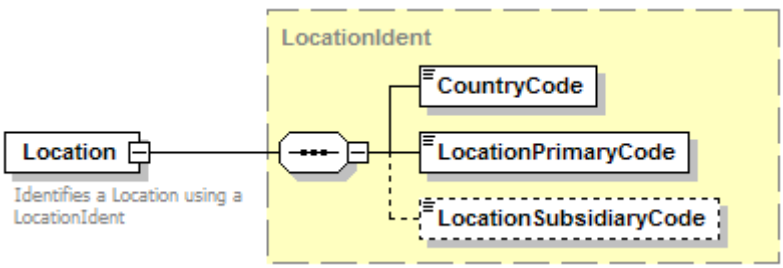
annotation documentation This element gives the code for the goods (description of the goods by code).

source

```
<xs:element name="LoadType" type="CargoCodeType">
 <xs:annotation>
  <xs:documentation>This element gives the code for the goods (description of the goods by code).</xs:documentation>
 </xs:annotation>
</xs:element>
```

element **Location**

diagram



type **LocationIdent**

children **CountryCode** **LocationPrimaryCode** **LocationSubsidiaryCode**

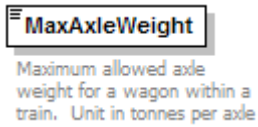
used by elements DepartureAtOrigin TransportFrom TransportTo TripPlanSchedule WagonPickupAtCustomer WagonPickupAtOrigin

annotation documentation Identifies a Location using a LocationIdent

source
```
<xs:element name="Location" type="LocationIdent">
 <xs:annotation>
  <xs:documentation>Identifies a Location using a LocationIdent</xs:documentation>
 </xs:annotation>
</xs:element>
```

element **MaxAxleWeight**

diagram



type restriction of **xs:int**

used by element WagonTechData

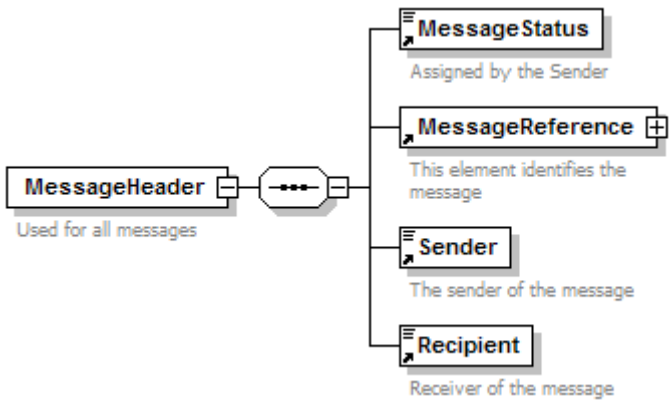
facets minInclusive 01
maxInclusive 99

annotation documentation Maximum allowed axle weight for a wagon within a train. Unit in tonnes per axle

source
```
<xs:element name="MaxAxleWeight">
 <xs:annotation>
  <xs:documentation>Maximum allowed axle weight for a wagon within a train. Unit in tonnes per
axle</xs:documentation>
 </xs:annotation>
 <xs:simpleType>
  <xs:restriction base="xs:int">
   <xs:minInclusive value="01"/>
   <xs:maxInclusive value="99"/>
  </xs:restriction>
 </xs:simpleType>
</xs:element>
```

element **MessageHeader**

diagram



children MessageStatus MessageReference Sender Recipient

used by elements ETI_ETA_ConfirmedMessage PreliminaryWagonOrder PreliminaryWagonOrderCancellation PreliminaryWagonOrderReject WagonOrderCancellation

annotation documentation Used for all messages

source
```
<xs:element name="MessageHeader">
 <xs:annotation>
  <xs:documentation>Used for all messages</xs:documentation>
 </xs:annotation>
 <xs:complexType>
  <xs:sequence>
   <xs:element ref="MessageStatus"/>
   <xs:element ref="MessageReference"/>
   <xs:element ref="Sender"/>
   <xs:element ref="Recipient"/>
```

```
  </xs:sequence>
 </xs:complexType>
</xs:element>
```

element **MessageIdent**

diagram

type **Numeric1-6**

facets
minInclusive 1
maxInclusive 999999

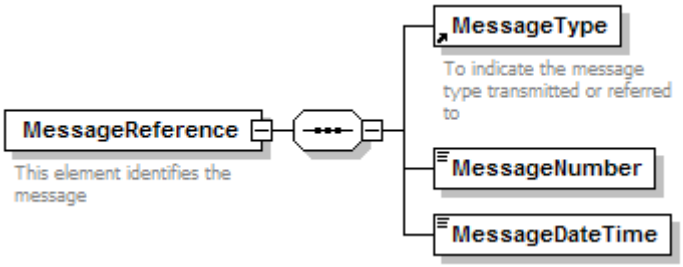
annotation
documentation Number generated by the sender of the message

source

```
<xs:element name="MessageIdent" type="Numeric1-6">
 <xs:annotation>
  <xs:documentation>Number generated by the sender of the message</xs:documentation>
 </xs:annotation>
</xs:element>
```

element **MessageReference**

diagram



children **MessageType** **MessageNumber** **MessageDateTime**

used by
element **MessageHeader**

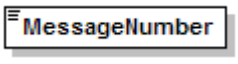
annotation
documentation This element identifies the message

source

```
<xs:element name="MessageReference">
 <xs:annotation>
  <xs:documentation>This element identifies the message</xs:documentation>
 </xs:annotation>
 <xs:complexType>
  <xs:sequence>
   <xs:element ref="MessageType"/>
   <xs:element name="MessageNumber" type="Numeric1-6"/>
   <xs:element name="MessageDateTime" type="DateTime"/>
  </xs:sequence>
 </xs:complexType>
</xs:element>
```

element **MessageReference/MessageNumber**

diagram



type **Numeric1-6**

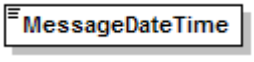
facets
minInclusive 1
maxInclusive 999999

source

```
<xs:element name="MessageNumber" type="Numeric1-6"/>
```

element **MessageReference/MessageDateTime**

diagram



type **DateTime**

source
```
<xs:element name="MessageDateTime" type="DateTime"/>
```

element **MessageStatus**

diagram

type restriction of **IdentCode**

used by element **MessageHeader**

facets
enumeration 1
enumeration 2
enumeration 3

annotation documentation Assigned by the Sender

source
```
<xs:element name="MessageStatus">
 <xs:annotation>
  <xs:documentation>Assigned by the Sender </xs:documentation>
 </xs:annotation>
 <xs:simpleType>
  <xs:restriction base="IdentCode">
   <xs:enumeration value="1"/>
   <xs:enumeration value="2"/>
   <xs:enumeration value="3"/>
  </xs:restriction>
 </xs:simpleType>
</xs:element>
```

element **MessageType**

diagram

type **MessageCode**

used by element **MessageReference**

attributes

Name	Type	Use	Default	Fixed	Annotation
MessageTypeCode	IdentCode	required			

annotation documentation To indicate the message type transmitted or referred to

source
```
<xs:element name="MessageType" type="MessageCode">
 <xs:annotation>
  <xs:documentation>To indicate the message type transmitted or referred to</xs:documentation>
 </xs:annotation>
</xs:element>
```

element **Name**

diagram

type **FreeText**

used by elements **PreliminaryWagonOrder** **PreliminaryWagonOrder**

facets length 255

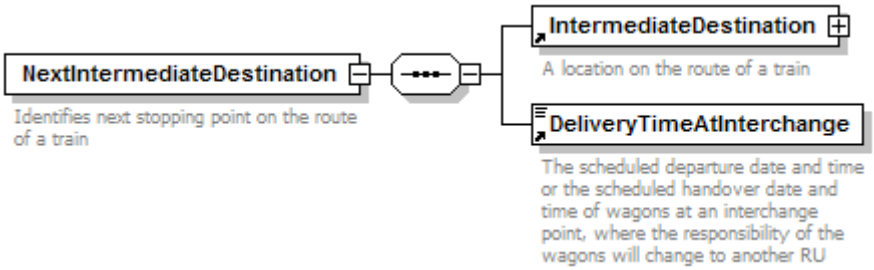
annotation documentation Generic Name in Free Text

source
```
<xs:element name="Name" type="FreeText">
 <xs:annotation>
  <xs:documentation>Generic Name in Free Text</xs:documentation>
 </xs:annotation>
```

```
</xs:element>
```

element **NextIntermediateDestination**

diagram



children **IntermediateDestination** **DeliveryTimeAtInterchange**

used by element **PreliminaryWagonOrder**

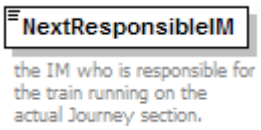
annotation documentation Identifies next stopping point on the route of a train

source

```
<xs:element name="NextIntermediateDestination">
 <xs:annotation>
  <xs:documentation>Identifies next stopping point on the route of a train</xs:documentation>
 </xs:annotation>
 <xs:complexType>
  <xs:sequence>
   <xs:element ref="IntermediateDestination"/>
   <xs:element ref="DeliveryTimeAtInterchange"/>
  </xs:sequence>
 </xs:complexType>
</xs:element>
```

element **NextResponsibleIM**

diagram



type **CompanyCode**

facets minInclusive 0001
maxInclusive 9999

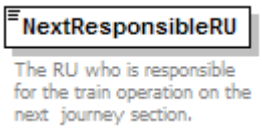
annotation documentation the IM who is responsible for the train running on the actual Journey section.

source

```
<xs:element name="NextResponsibleIM" type="CompanyCode">
 <xs:annotation>
  <xs:documentation>the IM who is responsible for the train running on the actual Journey section.</xs:documentation>
 </xs:annotation>
</xs:element>
```

element **NextResponsibleRU**

diagram



type **CompanyCode**

used by element **PreliminaryWagonOrder**

facets minInclusive 0001
maxInclusive 9999

annotation documentation The RU who is responsible for the train operation on the next journey section.

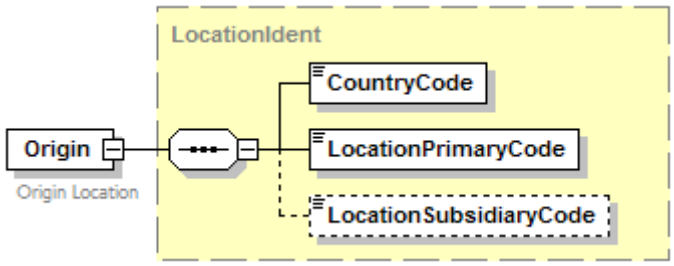
source

```
<xs:element name="NextResponsibleRU" type="CompanyCode">
 <xs:annotation>
  <xs:documentation>The RU who is responsible for the train operation on the next  journey
```

```
section.</xs:documentation>
  </xs:annotation>
</xs:element>
```

element **Origin**

diagram



type **LocationIdent**

children **CountryCode** **LocationPrimaryCode** **LocationSubsidiaryCode**

used by element **TripPlanIdentification**

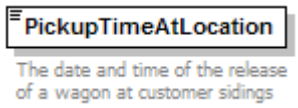
annotation documentation Origin Location

source

```
<xs:element name="Origin" type="LocationIdent">
  <xs:annotation>
    <xs:documentation>Origin Location</xs:documentation>
  </xs:annotation>
</xs:element>
```

element **PickupTimeAtLocation**

diagram



type **DateTime**

used by element **WagonPickupAtCustomer**

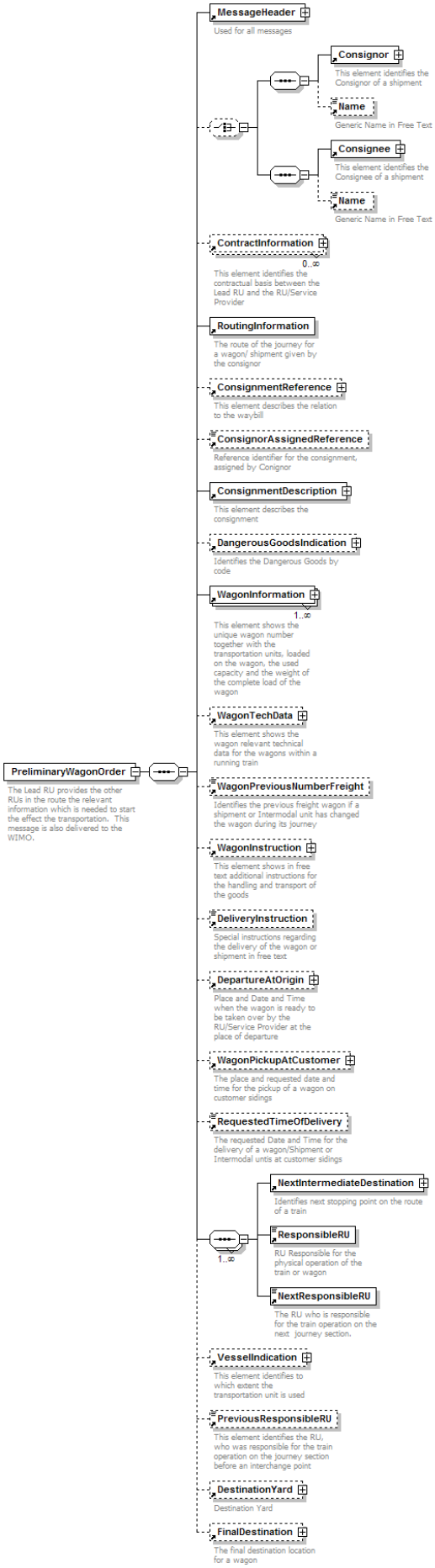
annotation documentation The date and time of the release of a wagon at customer sidings

source

```
<xs:element name="PickupTimeAtLocation" type="DateTime">
  <xs:annotation>
    <xs:documentation>The date and time of the release of a wagon at customer sidings</xs:documentation>
  </xs:annotation>
</xs:element>
```

element **PreliminaryWagonOrder**

diagram


PreliminaryWagonOrder
The Lead RU provides the other RUs in the route the relevant information which is needed to start the effect the transportation. This message is also delivered to the WIMO.
MessageHeader
Used for all messages
Consignor
This element identifies the Consignor of a shipment
Name
Generic Name in Free Text
Consignee
This element identifies the Consignee of a shipment
Name
Generic Name in Free Text
ContractInformation
0..∞
This element identifies the contractual basis between the Lead RU and the RU/Service Provider
RoutingInformation
The route of the journey for a wagon/ shipment given by the consignor
ConsignmentReference
This element describes the relation to the waybill
ConsignorAssignedReference
Reference identifier for the consignment, assigned by Conignor
ConsignmentDescription
This element describes the consignment
DangerousGoodsIndication
Identifies the Dangerous Goods by code
WagonInformation
1..∞
This element shows the unique wagon number together with the transportation units, loaded on the wagon, the used capacity and the weight of the complete load of the wagon
WagonTechData
This element shows the wagon relevant technical data for the wagons within a running train
WagonPreviousNumberFreight
Identifies the previous freight wagon if a shipment or Intermodal unit has changed the wagon during its journey
WagonInstruction
This element shows in free text additional instructions for the handling and transport of the goods
DeliveryInstruction
Special instructions regarding the delivery of the wagon or shipment in free text
DepartureAtOrigin
Place and Date and Time when the wagon is ready to be taken over by the RU/Service Provider at the place of departure
WagonPickupAtCustomer
The place and requested date and time for the pickup of a wagon on customer sidings
RequestedTimeOfDelivery
The requested Date and Time for the delivery of a wagon/Shipment or Intermodal untis at customer sidings
NextIntermediateDestination
Identifies next stopping point on the route of a train
ResponsibleRU
1..∞
RU Responsible for the physical operation of the train or wagon
NextResponsibleRU
The RU who is responsible for the train operation on the next journey section.
VesselIndication
This element identifies to which extent the transportation unit is used
PreviousResponsibleRU
This element identifies the RU, who was responsible for the train operation on the journey section before an interchange point
DestinationYard
Destination Yard
FinalDestination
The final destination location for a wagon

children **MessageHeader** **Consignor** **Name** **Consignee** **ContractInformation** **RoutingInformation** **ConsignmentReference** **ConsignorAssignedReference** **ConsignmentDescription** **DangerousGoodsIndication** **WagonInformation** **WagonTechData** **WagonPreviousNumberFreight** **WagonInstruction** **DeliveryInstruction** **DepartureAtOrigin** **WagonPickupAtCustomer** **RequestedTimeOfDelivery** **NextIntermediateDestination** **ResponsibleRU** **NextResponsibleRU** **VesselIndication** **PreviousResponsibleRU** **DestinationYard** **FinalDestination**

annotation documentation The Lead RU provides the other RUs in the route the relevant information which is needed to start the effect the transportation. This message is also delivered to the WIMO.

source

```
<xs:element name="PreliminaryWagonOrder">
 <xs:annotation>
  <xs:documentation>The Lead RU provides the other RUs in the route the relevant information which is needed to start the effect the transportation. This message is also delivered to the WIMO.</xs:documentation>
 </xs:annotation>
 <xs:complexType>
  <xs:sequence>
   <xs:element ref="MessageHeader"/>
   <xs:choice minOccurs="0">
    <xs:sequence>
     <xs:element ref="Consignor"/>
     <xs:element ref="Name" minOccurs="0"/>
    </xs:sequence>
    <xs:sequence>
     <xs:element ref="Consignee"/>
     <xs:element ref="Name" minOccurs="0"/>
    </xs:sequence>
   </xs:choice>
   <xs:element ref="ContractInformation" minOccurs="0" maxOccurs="unbounded"/>
   <xs:element ref="RoutingInformation"/>
   <xs:element ref="ConsignmentReference" minOccurs="0"/>
   <xs:element ref="ConsignorAssignedReference" minOccurs="0"/>
   <xs:element ref="ConsignmentDescription"/>
   <xs:element ref="DangerousGoodsIndication" minOccurs="0"/>
   <xs:element ref="WagonInformation" maxOccurs="unbounded"/>
   <xs:element ref="WagonTechData" minOccurs="0"/>
   <xs:element ref="WagonPreviousNumberFreight" minOccurs="0"/>
   <xs:element ref="WagonInstruction" minOccurs="0"/>
   <xs:element ref="DeliveryInstruction" minOccurs="0"/>
   <xs:element ref="DepartureAtOrigin" minOccurs="0"/>
   <xs:element ref="WagonPickupAtCustomer" minOccurs="0"/>
   <xs:element ref="RequestedTimeOfDelivery" minOccurs="0"/>
   <xs:sequence maxOccurs="unbounded">
    <xs:element ref="NextIntermediateDestination"/>
    <xs:element ref="ResponsibleRU"/>
    <xs:element ref="NextResponsibleRU"/>
   </xs:sequence>
   <xs:element ref="VesselIndication" minOccurs="0"/>
   <xs:element ref="PreviousResponsibleRU" minOccurs="0"/>
   <xs:element ref="DestinationYard" minOccurs="0"/>
   <xs:element ref="FinalDestination" minOccurs="0"/>
  </xs:sequence>
 </xs:complexType>
</xs:element>
```

element **PreliminaryWagonOrderCancellation**

diagram

children **MessageHeader** **RelatedReference**

annotation documentation This message is used by the LRU to cancel a WagonOrder

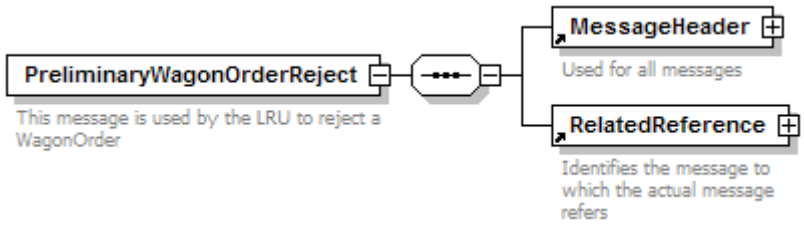
source

```
<xs:element name="PreliminaryWagonOrderCancellation">
 <xs:annotation>
  <xs:documentation>This message is used by the LRU to cancel a WagonOrder</xs:documentation>
 </xs:annotation>
 <xs:complexType>
  <xs:sequence>
   <xs:element ref="MessageHeader"/>
```

```
    <xs:element ref="RelatedReference"/>
   </xs:sequence>
  </xs:complexType>
 </xs:element>
```

element **PreliminaryWagonOrderReject**

diagram



children **MessageHeader** **RelatedReference**

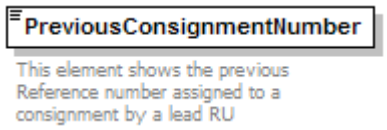
annotation documentation This message is used by the LRU to reject a WagonOrder

source

```
<xs:element name="PreliminaryWagonOrderReject">
 <xs:annotation>
  <xs:documentation>This message is used by the LRU to reject a WagonOrder</xs:documentation>
 </xs:annotation>
 <xs:complexType>
  <xs:sequence>
   <xs:element ref="MessageHeader"/>
   <xs:element ref="RelatedReference"/>
  </xs:sequence>
 </xs:complexType>
</xs:element>
```

element **PreviousConsignmentNumber**

diagram



type **ConsignmentIdent**

used by element **ConsignmentReference**

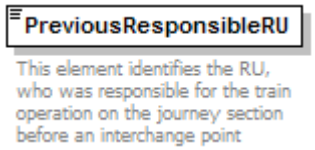
annotation documentation This element shows the previous Reference number assigned to a consignment by a lead RU

source

```
<xs:element name="PreviousConsignmentNumber" type="ConsignmentIdent">
 <xs:annotation>
  <xs:documentation>This element shows the previous Reference number assigned to a consignment by a lead
RU</xs:documentation>
 </xs:annotation>
</xs:element>
```

element **PreviousResponsibleRU**

diagram



type **CompanyCode**

used by element **PreliminaryWagonOrder**

facets minInclusive 0001
maxInclusive 9999

annotation documentation This element identifies the RU, who was responsible for the train operation on the journey section before an interchange point

source

```
<xs:element name="PreviousResponsibleRU" type="CompanyCode">
 <xs:annotation>
```

```
    <xs:documentation>This element identifies the RU, who was responsible for the train operation on the journey section
before an interchange point</xs:documentation>
  </xs:annotation>
</xs:element>
```

element **Recipient**

diagram

type **CompanyCode**

used by element **MessageHeader**

facets minInclusive 0001
maxInclusive 9999

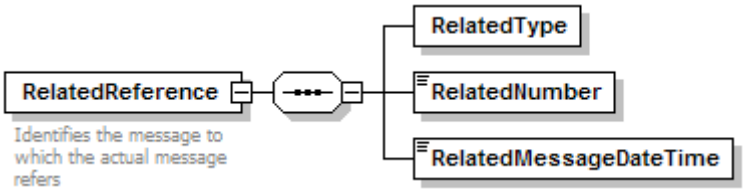
annotation documentation Receiver of the message

source

```
<xs:element name="Recipient" type="CompanyCode">
  <xs:annotation>
    <xs:documentation>Receiver of the message</xs:documentation>
  </xs:annotation>
</xs:element>
```

element **RelatedReference**

diagram



children **RelatedType** **RelatedNumber** **RelatedMessageDateTime**

used by elements **ETI_ETA_ConfirmedMessage** **PreliminaryWagonOrderCancellation** **PreliminaryWagonOrderReject** **WagonOrderCancellation**

annotation documentation Identifies the message to which the actual message refers

source

```
<xs:element name="RelatedReference">
  <xs:annotation>
    <xs:documentation>Identifies the message to which the actual message refers</xs:documentation>
  </xs:annotation>
  <xs:complexType>
    <xs:sequence>
      <xs:element name="RelatedType" type="MessageCode"/>
      <xs:element name="RelatedNumber" type="Numeric1-6"/>
      <xs:element name="RelatedMessageDateTime" type="DateTime"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

element **RelatedReference/RelatedType**

diagram

type **MessageCode**

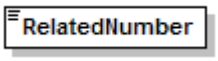
attributes

Name	Type	Use	Default	Fixed	Annotation
MessageTypeCode	IdentCode	required			

source

```
<xs:element name="RelatedType" type="MessageCode"/>
```

element **RelatedReference/RelatedNumber**

diagram 

type **Numeric1-6**

facets minInclusive 1
maxInclusive 999999

source
```
<xs:element name="RelatedNumber" type="Numeric1-6"/>
```

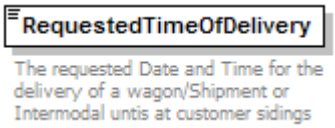
element **RelatedReference/RelatedMessageDateTime**

diagram 

type **DateTime**

source
```
<xs:element name="RelatedMessageDateTime" type="DateTime"/>
```

element **RequestedTimeOfDelivery**

diagram 

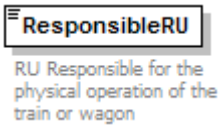
type **DateTime**

used by element **PreliminaryWagonOrder**

annotation documentation The requested Date and Time for the delivery of a wagon/Shipment or Intermodal untis at customer sidings

source
```
<xs:element name="RequestedTimeOfDelivery" type="DateTime">
  <xs:annotation>
    <xs:documentation>The requested Date and Time for the delivery of a wagon/Shipment or Intermodal untis at customer sidings</xs:documentation>
  </xs:annotation>
</xs:element>
```

element **ResponsibleRU**

diagram 

type **CompanyCode**

used by element **PreliminaryWagonOrder**

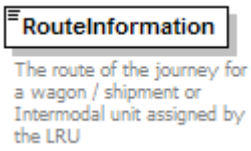
facets minInclusive 0001
maxInclusive 9999

annotation documentation RU Responsible for the physical operation of the train or wagon

source
```
<xs:element name="ResponsibleRU" type="CompanyCode">
  <xs:annotation>
    <xs:documentation>RU Responsible for the physical operation of the train or wagon</xs:documentation>
  </xs:annotation>
</xs:element>
```

element **RouteInformation**

diagram



type **FreeText**

used by element **ContractInformation**

facets length 255

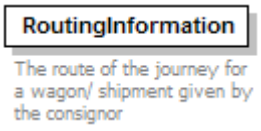
annotation documentation The route of the journey for a wagon / shipment or Intermodal unit assigned by the LRU

source

```
<xs:element name="RouteInformation" type="FreeText">
  <xs:annotation>
    <xs:documentation>The route of the journey for a wagon / shipment or Intermodal unit assigned by the
LRU</xs:documentation>
  </xs:annotation>
</xs:element>
```

element **RoutingInformation**

diagram



used by element **PreliminaryWagonOrder**

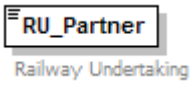
annotation documentation The route of the journey for a wagon/ shipment given by the consignor

source

```
<xs:element name="RoutingInformation">
  <xs:annotation>
    <xs:documentation>The route of the journey for a wagon/ shipment given by the consignor</xs:documentation>
  </xs:annotation>
</xs:element>
```

element **RU_Partner**

diagram



type **CompanyCode**

used by elements **TransportFrom** **TransportTo** **TripPlanIdentification** **TripPlanSchedule**

facets minInclusive 0001
maxInclusive 9999

annotation documentation Railway Undertaking

source

```
<xs:element name="RU_Partner" type="CompanyCode">
  <xs:annotation>
    <xs:documentation>Railway Undertaking</xs:documentation>
  </xs:annotation>
</xs:element>
```

element **Sender**

diagram

type **CompanyCode**

used by element **MessageHeader**

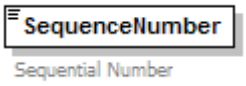
facets minInclusive 0001
maxInclusive 9999

annotation documentation The sender of the message

source
```
<xs:element name="Sender" type="CompanyCode">
  <xs:annotation>
    <xs:documentation>The sender of the message</xs:documentation>
  </xs:annotation>
</xs:element>
```

element **SequenceNumber**

diagram



type restriction of **xs:int**

used by element **TripPlanSchedule**

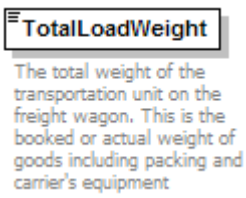
facets minInclusive 1
maxInclusive 999

annotation documentation Sequential Number

source
```
<xs:element name="SequenceNumber">
  <xs:annotation>
    <xs:documentation>Sequential Number</xs:documentation>
  </xs:annotation>
  <xs:simpleType>
    <xs:restriction base="xs:int">
      <xs:minInclusive value="1"/>
      <xs:maxInclusive value="999"/>
    </xs:restriction>
  </xs:simpleType>
</xs:element>
```

element **TotalLoadWeight**

diagram



type **WeightValueKilo**

used by elements **TotalWeighDim** **WagonData**

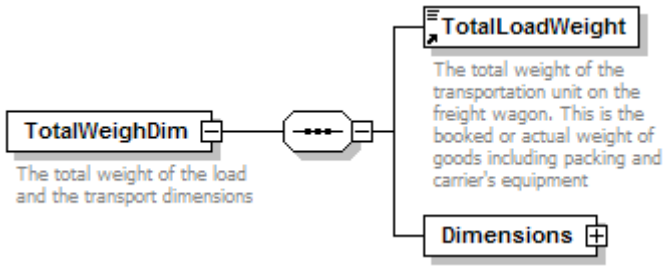
facets minInclusive 1
maxInclusive 999999
whiteSpace collapse

annotation documentation The total weight of the transportation unit on the freight wagon. This is the booked or actual weight of goods including packing and carrier's equipment

source
```
<xs:element name="TotalLoadWeight" type="WeightValueKilo">
  <xs:annotation>
    <xs:documentation>The total weight of the transportation unit on the freight wagon. This is the booked or actual weight of goods including packing and carrier's equipment</xs:documentation>
  </xs:annotation>
</xs:element>
```

element **TotalWeighDim**

diagram



children **TotalLoadWeight** **Dimensions**

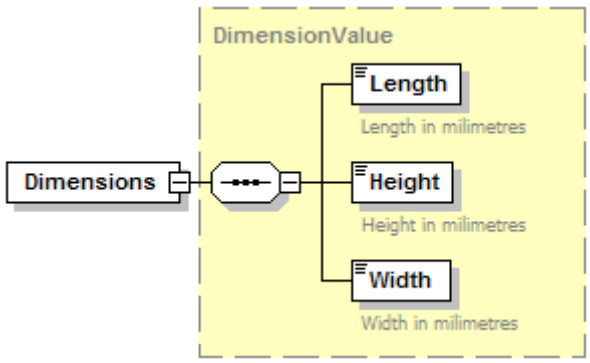
used by element **WagonInformation**

annotation documentation The total weight of the load and the transport dimensions

source
```
<xs:element name="TotalWeighDim">
 <xs:annotation>
  <xs:documentation>The total weight of the load and the transport dimensions</xs:documentation>
 </xs:annotation>
 <xs:complexType>
  <xs:sequence>
   <xs:element ref="TotalLoadWeight"/>
   <xs:element name="Dimensions" type="DimensionValue"/>
  </xs:sequence>
 </xs:complexType>
</xs:element>
```

element **TotalWeighDim/Dimensions**

diagram



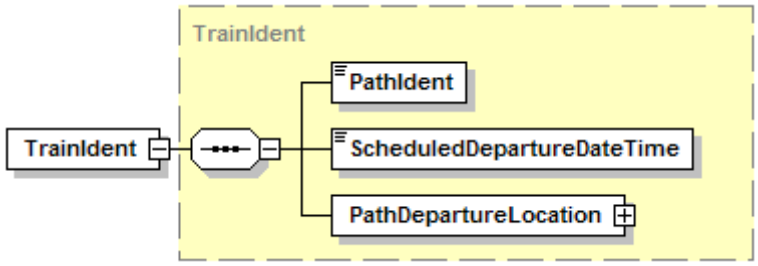
type **DimensionValue**

children **Length** **Height** **Width**

source
```
<xs:element name="Dimensions" type="DimensionValue"/>
```

element **TrainIdent**

diagram



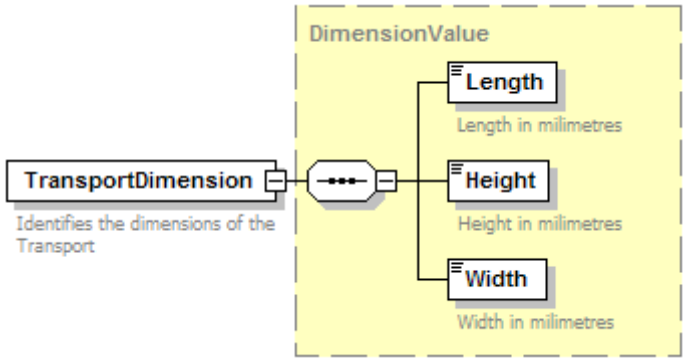
type **TrainIdent**

children **PathIdent** **ScheduledDepartureDateTime** **PathDepartureLocation**

source
```
<xs:element name="TrainIdent" type="TrainIdent"/>
```

element **TransportDimension**

diagram



type **DimensionValue**

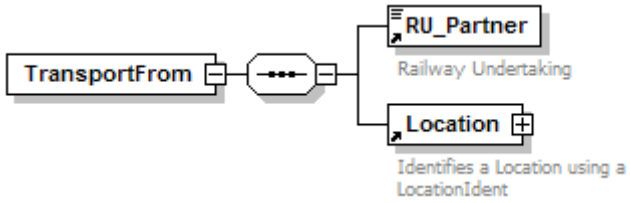
children **Length** **Height** **Width**

annotation
documentation Identifies the dimensions of the Transport

source
```
<xs:element name="TransportDimension" type="DimensionValue">
  <xs:annotation>
    <xs:documentation>Identifies the dimensions of the Transport</xs:documentation>
  </xs:annotation>
</xs:element>
```

element **TransportFrom**

diagram



children **RU_Partner** **Location**

source
```
<xs:element name="TransportFrom">
  <xs:complexType>
    <xs:sequence>
      <xs:element ref="RU_Partner"/>
      <xs:element ref="Location"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

element **TransportInstruction**

diagram

type **FreeText**

used by
element **WagonInstruction**

facets
length 255

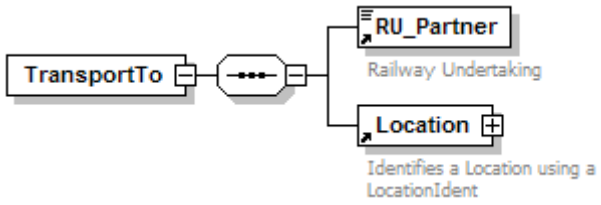
annotation
documentation Special instructions regarding the transportation of the wagon or shipment in free text

source
```
<xs:element name="TransportInstruction" type="FreeText">
  <xs:annotation>
    <xs:documentation>Special instructions regarding the transportation of the wagon or shipment in free
```

```
text</xs:documentation>
  </xs:annotation>
</xs:element>
```

element **TransportTo**

diagram

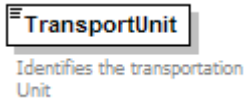


children **RU_Partner** **Location**

source
```
<xs:element name="TransportTo">
  <xs:complexType>
    <xs:sequence>
      <xs:element ref="RU_Partner"/>
      <xs:element ref="Location"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

element **TransportUnit**

diagram



type extension of **xs:string**

used by elements **WagonInformation** **WagonShortInformation**

attributes

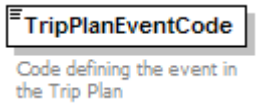
Name	Type	Use	Default	Fixed	Annotation
UnitTypeCode	UnitType				

annotation documentation Identifies the transportation Unit

source
```
<xs:element name="TransportUnit">
  <xs:annotation>
    <xs:documentation>Identifies the transportation Unit</xs:documentation>
  </xs:annotation>
  <xs:complexType>
    <xs:simpleContent>
      <xs:extension base="xs:string">
        <xs:attribute name="UnitTypeCode" type="UnitType"/>
      </xs:extension>
    </xs:simpleContent>
  </xs:complexType>
</xs:element>
```

element **TripPlanEventCode**

diagram



type restriction of **IdentCode**

used by element **TripPlanSchedule**

facets
- enumeration 01
- enumeration 02
- enumeration 03
- enumeration 04
- enumeration 05
- enumeration 06
- enumeration 07
- enumeration 08

enumeration 09
enumeration 10
enumeration 11
enumeration 12
enumeration 13
enumeration 14
enumeration 15
enumeration 16
enumeration 17
enumeration 18
enumeration 19
enumeration 20
enumeration 21
enumeration

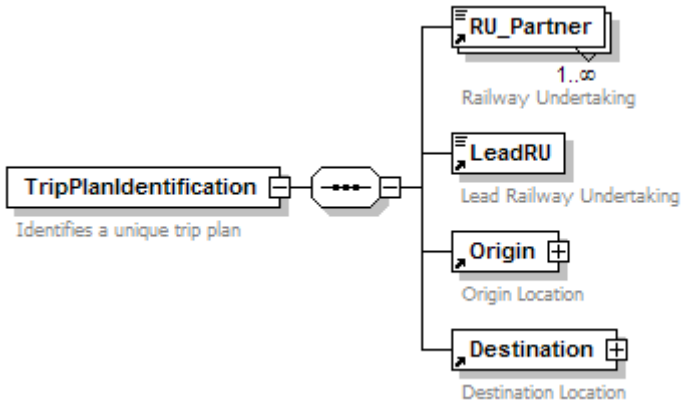
annotation documentation Code defining the event in the Trip Plan

source

```
<xs:element name="TripPlanEventCode">
 <xs:annotation>
  <xs:documentation>Code defining the event in the Trip Plan</xs:documentation>
 </xs:annotation>
 <xs:simpleType>
  <xs:restriction base="IdentCode">
   <xs:enumeration value="01"/>
   <xs:enumeration value="02"/>
   <xs:enumeration value="03"/>
   <xs:enumeration value="04"/>
   <xs:enumeration value="05"/>
   <xs:enumeration value="06"/>
   <xs:enumeration value="07"/>
   <xs:enumeration value="08"/>
   <xs:enumeration value="09"/>
   <xs:enumeration value="10"/>
   <xs:enumeration value="11"/>
   <xs:enumeration value="12"/>
   <xs:enumeration value="13"/>
   <xs:enumeration value="14"/>
   <xs:enumeration value="15"/>
   <xs:enumeration value="16"/>
   <xs:enumeration value="17"/>
   <xs:enumeration value="18"/>
   <xs:enumeration value="19"/>
   <xs:enumeration value="20"/>
   <xs:enumeration value="21"/>
   <xs:enumeration value=""/>
  </xs:restriction>
 </xs:simpleType>
</xs:element>
```

element **TripPlanIdentification**

diagram



children **RU_Partner** **LeadRU** **Origin** **Destination**

annotation documentation Identifies a unique trip plan

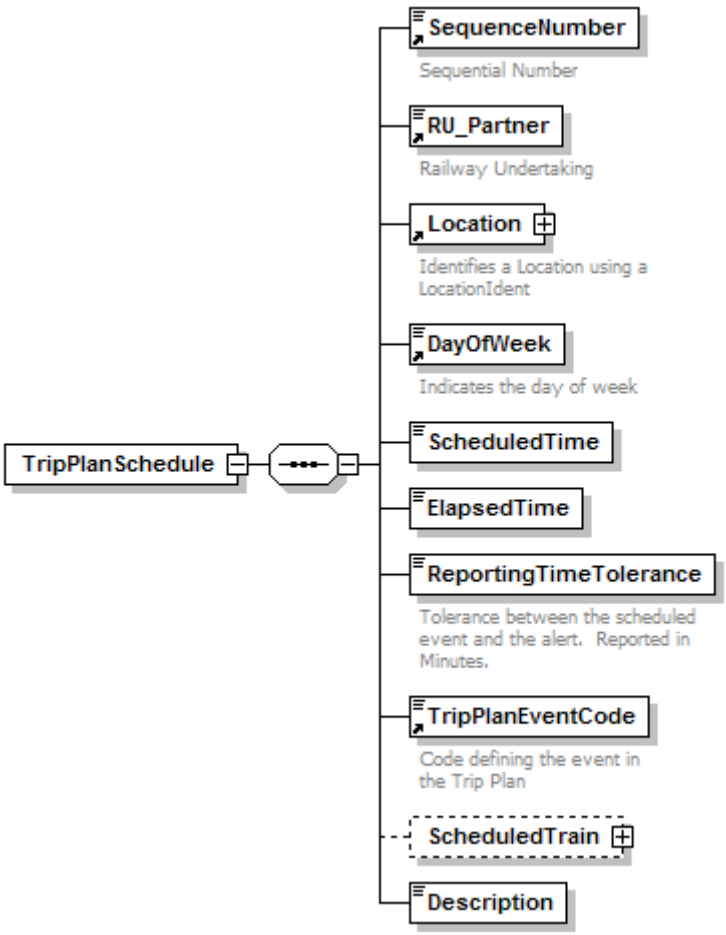
source

```
<xs:element name="TripPlanIdentification">
 <xs:annotation>
  <xs:documentation>Identifies a unique trip plan</xs:documentation>
 </xs:annotation>
 <xs:complexType>
```

```
    <xs:sequence>
      <xs:element ref="RU_Partner" maxOccurs="unbounded"/>
      <xs:element ref="LeadRU"/>
      <xs:element ref="Origin"/>
      <xs:element ref="Destination"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

element **TripPlanSchedule**

diagram



children **SequenceNumber** **RU_Partner** **Location** **DayOfWeek** **ScheduledTime** **ElapsedTime** **ReportingTimeTolerance** **TripPlanEventCode** **ScheduledTrain** **Description**

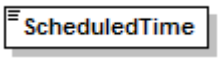
source

```
<xs:element name="TripPlanSchedule">
  <xs:complexType>
    <xs:sequence>
      <xs:element ref="SequenceNumber"/>
      <xs:element ref="RU_Partner"/>
      <xs:element ref="Location"/>
      <xs:element ref="DayOfWeek"/>
      <xs:element name="ScheduledTime" type="Time"/>
      <xs:element name="ElapsedTime" type="Time"/>
      <xs:element name="ReportingTimeTolerance">
        <xs:annotation>
          <xs:documentation>Tolerance between the scheduled event and the alert.  Reported in
Minutes.</xs:documentation>
        </xs:annotation>
        <xs:simpleType>
          <xs:restriction base="xs:integer">
            <xs:minInclusive value="1"/>
            <xs:maxInclusive value="999"/>
          </xs:restriction>
        </xs:simpleType>
      </xs:element>
      <xs:element ref="TripPlanEventCode"/>
      <xs:element name="ScheduledTrain" minOccurs="0">
        <xs:complexType>
```

```
        <xs:sequence>
          <xs:element name="Identification" type="TrainIdent"/>
          <xs:element name="TrainRunningDays" type="xs:string">
            <xs:annotation>
              <xs:documentation>The days of the week that the train is scheduled (i.e. 1-7)</xs:documentation>
            </xs:annotation>
          </xs:element>
        </xs:sequence>
      </xs:complexType>
    </xs:element>
    <xs:element name="Description" type="FreeText"/>
  </xs:sequence>
 </xs:complexType>
</xs:element>
```

element **TripPlanSchedule/ScheduledTime**

diagram

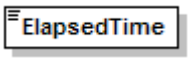


type **Time**

source
```
<xs:element name="ScheduledTime" type="Time"/>
```

element **TripPlanSchedule/ElapsedTime**

diagram



type **Time**

source
```
<xs:element name="ElapsedTime" type="Time"/>
```

element **TripPlanSchedule/ReportingTimeTolerance**

diagram

type restriction of **xs:integer**

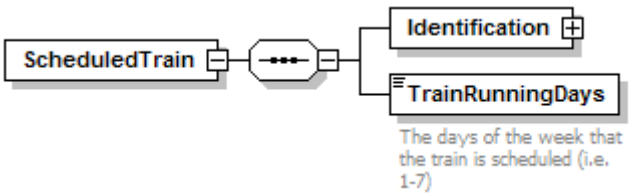
facets
minInclusive 1
maxInclusive 999

annotation
documentation Tolerance between the scheduled event and the alert. Reported in Minutes.

source
```
<xs:element name="ReportingTimeTolerance">
 <xs:annotation>
  <xs:documentation>Tolerance between the scheduled event and the alert.  Reported in Minutes.</xs:documentation>
 </xs:annotation>
 <xs:simpleType>
  <xs:restriction base="xs:integer">
   <xs:minInclusive value="1"/>
   <xs:maxInclusive value="999"/>
  </xs:restriction>
 </xs:simpleType>
</xs:element>
```

element **TripPlanSchedule/ScheduledTrain**

diagram

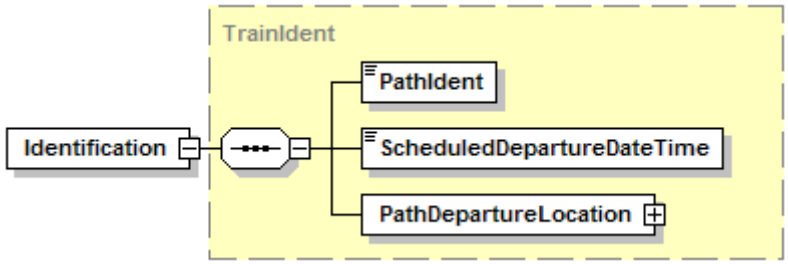


children **Identification** **TrainRunningDays**

source
```
<xs:element name="ScheduledTrain" minOccurs="0">
  <xs:complexType>
    <xs:sequence>
      <xs:element name="Identification" type="TrainIdent"/>
      <xs:element name="TrainRunningDays" type="xs:string">
        <xs:annotation>
          <xs:documentation>The days of the week that the train is scheduled (i.e. 1-7)</xs:documentation>
        </xs:annotation>
      </xs:element>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

element **TripPlanSchedule/ScheduledTrain/Identification**

diagram



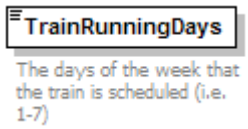
type **TrainIdent**

children **PathIdent** **ScheduledDepartureDateTime** **PathDepartureLocation**

source
```
<xs:element name="Identification" type="TrainIdent"/>
```

element **TripPlanSchedule/ScheduledTrain/TrainRunningDays**

diagram



type **xs:string**

annotation
documentation The days of the week that the train is scheduled (i.e. 1-7)

source
```
<xs:element name="TrainRunningDays" type="xs:string">
  <xs:annotation>
    <xs:documentation>The days of the week that the train is scheduled (i.e. 1-7)</xs:documentation>
  </xs:annotation>
</xs:element>
```

element **TripPlanSchedule/Description**

diagram

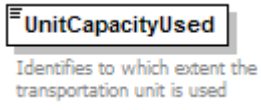
type **FreeText**

facets
length 255

source
```
<xs:element name="Description" type="FreeText"/>
```

element **UnitCapacityUsed**

diagram



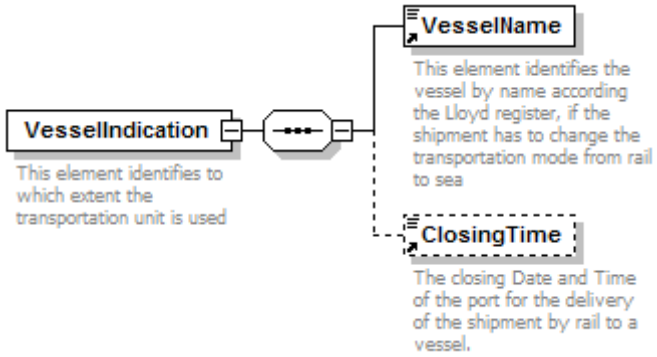
type **CapacityIndicator**

facets
enumeration 0
enumeration 1
enumeration 2
annotation
documentation Identifies to which extent the transportation unit is used

source
```
<xs:element name="UnitCapacityUsed" type="CapacityIndicator">
 <xs:annotation>
  <xs:documentation>Identifies to which extent the transportation unit is used</xs:documentation>
 </xs:annotation>
</xs:element>
```

element **VesselIndication**

diagram

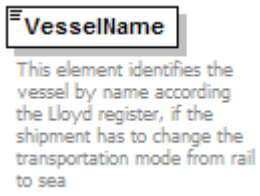


children **VesselName** **ClosingTime**
used by
element **PreliminaryWagonOrder**
annotation
documentation This element identifies to which extent the transportation unit is used

source
```
<xs:element name="VesselIndication">
 <xs:annotation>
  <xs:documentation>This element identifies to which extent the transportation unit is used</xs:documentation>
 </xs:annotation>
 <xs:complexType>
  <xs:sequence>
   <xs:element ref="VesselName"/>
   <xs:element ref="ClosingTime" minOccurs="0"/>
  </xs:sequence>
 </xs:complexType>
</xs:element>
```

element **VesselName**

diagram



type **Name**
used by
element **VesselIndication**
facets
length 254
annotation
documentation This element identifies the vessel by name according the Lloyd register, if the shipment has to change the transportation mode from rail to sea

source
```
<xs:element name="VesselName" type="Name">
 <xs:annotation>
  <xs:documentation>This element identifies the vessel by name according the Lloyd register, if the shipment has to change the transportation mode from rail to sea</xs:documentation>
 </xs:annotation>
</xs:element>
```

element **Volume**

diagram

type **VolumeValue**

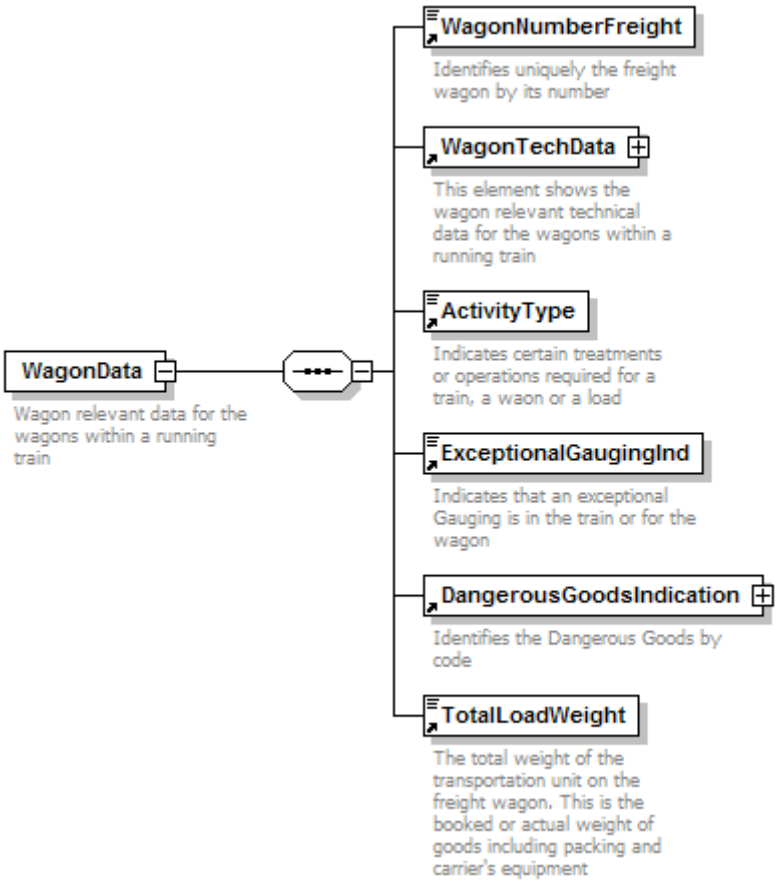
used by element **ConsignmentDescription**

annotation documentation Identifies the volume of a shipment, expressed in cubic metres

source
```
<xs:element name="Volume" type="VolumeValue">
  <xs:annotation>
    <xs:documentation>Identifies the volume of a shipment, expressed in cubic metres</xs:documentation>
  </xs:annotation>
</xs:element>
```

element **WagonData**

diagram



children **WagonNumberFreight** **WagonTechData** **ActivityType** **ExceptionalGaugingInd** **DangerousGoodsIndication** **TotalLoadWeight**

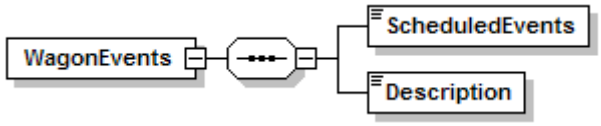
annotation documentation Wagon relevant data for the wagons within a running train

source
```
<xs:element name="WagonData">
  <xs:annotation>
    <xs:documentation>Wagon relevant data for the wagons within a running train</xs:documentation>
  </xs:annotation>
  <xs:complexType>
    <xs:sequence>
      <xs:element ref="WagonNumberFreight"/>
      <xs:element ref="WagonTechData"/>
      <xs:element ref="ActivityType"/>
      <xs:element ref="ExceptionalGaugingInd"/>
```

```
      <xs:element ref="DangerousGoodsIndication"/>
      <xs:element ref="TotalLoadWeight"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

element **WagonEvents**

diagram



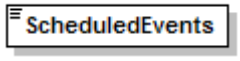
children **ScheduledEvents** **Description**

source

```
<xs:element name="WagonEvents">
  <xs:complexType>
    <xs:sequence>
      <xs:element name="ScheduledEvents">
        <xs:simpleType>
          <xs:restriction base="IdentCode">
            <xs:enumeration value="1"/>
            <xs:enumeration value="2"/>
            <xs:enumeration value="3"/>
            <xs:enumeration value="4"/>
            <xs:enumeration value=""/>
          </xs:restriction>
        </xs:simpleType>
      </xs:element>
      <xs:element name="Description" type="FreeText"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

element **WagonEvents/ScheduledEvents**

diagram



type restriction of **IdentCode**

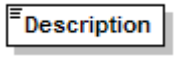
facets
- enumeration 1
- enumeration 2
- enumeration 3
- enumeration 4
- enumeration

source

```
<xs:element name="ScheduledEvents">
  <xs:simpleType>
    <xs:restriction base="IdentCode">
      <xs:enumeration value="1"/>
      <xs:enumeration value="2"/>
      <xs:enumeration value="3"/>
      <xs:enumeration value="4"/>
      <xs:enumeration value=""/>
    </xs:restriction>
  </xs:simpleType>
</xs:element>
```

element **WagonEvents/Description**

diagram



type **FreeText**

facets length 255

source

```
<xs:element name="Description" type="FreeText"/>
```

element **WagonGauge**

diagram

type restriction of **xs:int**

used by element **WagonTechData**

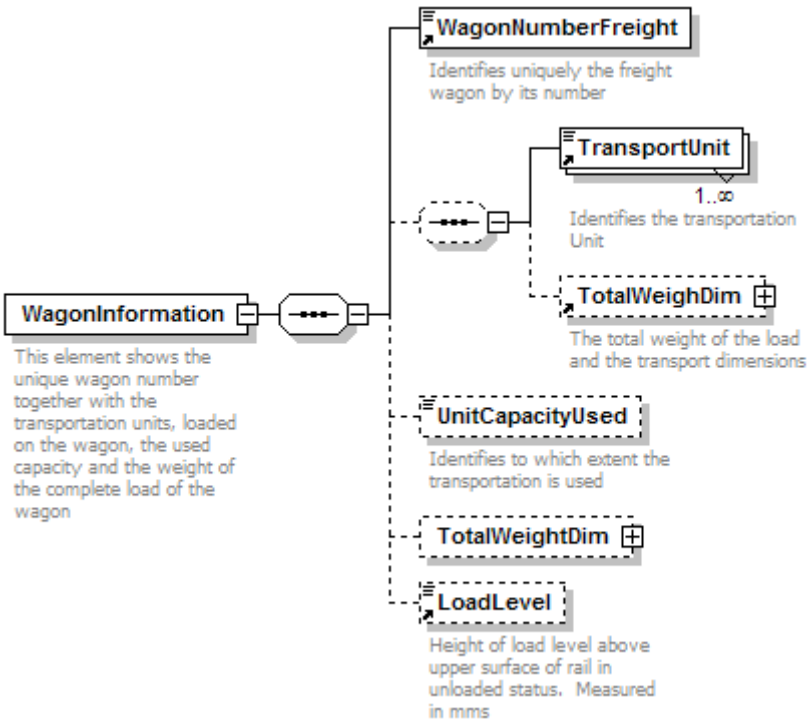
facets minInclusive 001
maxInclusive 999

annotation documentation The gauge of the wagon according to the entry in the rolling stock databases

source
```
<xs:element name="WagonGauge">
  <xs:annotation>
    <xs:documentation>The gauge of the wagon according to the entry in the rolling stock databases</xs:documentation>
  </xs:annotation>
  <xs:simpleType>
    <xs:restriction base="xs:int">
      <xs:minInclusive value="001"/>
      <xs:maxInclusive value="999"/>
    </xs:restriction>
  </xs:simpleType>
</xs:element>
```

element **WagonInformation**

diagram



children **WagonNumberFreight** **TransportUnit** **TotalWeighDim** **UnitCapacityUsed** **TotalWeightDim** **LoadLevel**

used by element **PreliminaryWagonOrder**

annotation documentation This element shows the unique wagon number together with the transportation units, loaded on the wagon, the used capacity and the weight of the complete load of the wagon

source
```
<xs:element name="WagonInformation">
  <xs:annotation>
    <xs:documentation>This element shows the unique wagon number together with the transportation units, loaded on the wagon, the used capacity and the weight of the complete load of the wagon</xs:documentation>
  </xs:annotation>
  <xs:complexType>
    <xs:sequence>
      <xs:element ref="WagonNumberFreight"/>
```

```
    <xs:sequence minOccurs="0">
      <xs:element ref="TransportUnit" maxOccurs="unbounded"/>
      <xs:element ref="TotalWeighDim" minOccurs="0"/>
    </xs:sequence>
    <xs:element name="UnitCapacityUsed" type="CapacityIndicator" minOccurs="0">
      <xs:annotation>
        <xs:documentation>Identifies to which extent the transportation is used</xs:documentation>
      </xs:annotation>
    </xs:element>
    <xs:element name="TotalWeightDim" type="DimensionValue" minOccurs="0"/>
    <xs:element ref="LoadLevel" minOccurs="0"/>
  </xs:sequence>
 </xs:complexType>
</xs:element>
```

element **WagonInformation/UnitCapacityUsed**

diagram

type **CapacityIndicator**

facets
- enumeration 0
- enumeration 1
- enumeration 2

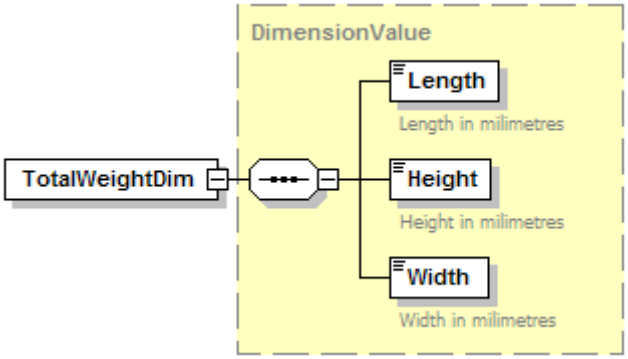
annotation
- documentation Identifies to which extent the transportation is used

source

```
<xs:element name="UnitCapacityUsed" type="CapacityIndicator" minOccurs="0">
  <xs:annotation>
    <xs:documentation>Identifies to which extent the transportation is used</xs:documentation>
  </xs:annotation>
</xs:element>
```

element **WagonInformation/TotalWeightDim**

diagram



type **DimensionValue**

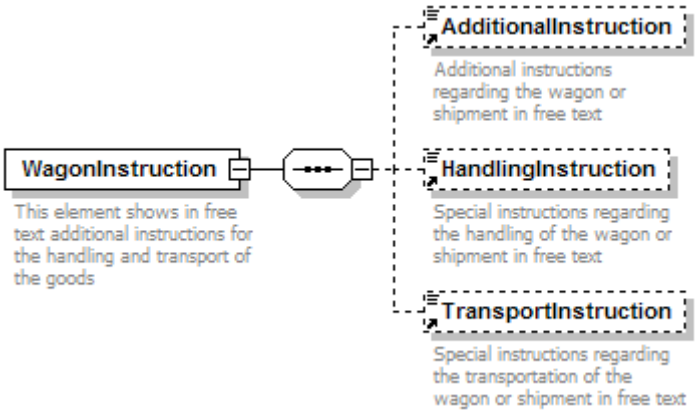
children **Length** **Height** **Width**

source

```
<xs:element name="TotalWeightDim" type="DimensionValue" minOccurs="0"/>
```

element **WagonInstruction**

diagram



children **AdditionalInstruction** **HandlingInstruction** **TransportInstruction**

used by element **PreliminaryWagonOrder**

annotation documentation This element shows in free text additional instructions for the handling and transport of the goods

source
```
<xs:element name="WagonInstruction">
  <xs:annotation>
    <xs:documentation>This element shows in free text additional instructions for the handling and transport of the goods</xs:documentation>
  </xs:annotation>
  <xs:complexType>
    <xs:sequence>
      <xs:element ref="AdditionalInstruction" minOccurs="0"/>
      <xs:element ref="HandlingInstruction" minOccurs="0"/>
      <xs:element ref="TransportInstruction" minOccurs="0"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

element **WagonLength**

diagram

type restriction of **xs:int**

used by element **WagonTechData**

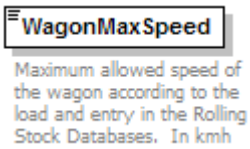
facets minInclusive 1
maxInclusive 999999

annotation documentation Length over buffers in cms

source
```
<xs:element name="WagonLength">
  <xs:annotation>
    <xs:documentation>Length over buffers in cms</xs:documentation>
  </xs:annotation>
  <xs:simpleType>
    <xs:restriction base="xs:int">
      <xs:minInclusive value="1"/>
      <xs:maxInclusive value="999999"/>
    </xs:restriction>
  </xs:simpleType>
</xs:element>
```

element **WagonMaxSpeed**

diagram



type restriction of **xs:int**

used by element **WagonTechData**

facets minInclusive 001
maxInclusive 999

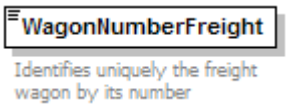
annotation documentation Maximum allowed speed of the wagon according to the load and entry in the Rolling Stock Databases. In kmh

source

```
<xs:element name="WagonMaxSpeed">
  <xs:annotation>
    <xs:documentation>Maximum allowed speed of the wagon according to the load and entry in the Rolling Stock Databases. In kmh</xs:documentation>
  </xs:annotation>
  <xs:simpleType>
    <xs:restriction base="xs:int">
      <xs:minInclusive value="001"/>
      <xs:maxInclusive value="999"/>
    </xs:restriction>
  </xs:simpleType>
</xs:element>
```

element **WagonNumberFreight**

diagram



type **WagonIdent**

used by elements **WagonData** **WagonInformation** **WagonShortInformation**

facets length 12

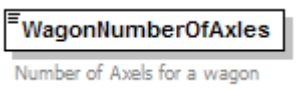
annotation documentation Identifies uniquely the freight wagon by its number

source

```
<xs:element name="WagonNumberFreight" type="WagonIdent">
  <xs:annotation>
    <xs:documentation>Identifies uniquely the freight wagon by its number</xs:documentation>
  </xs:annotation>
</xs:element>
```

element **WagonNumberOfAxles**

diagram



type restriction of **xs:int**

used by element **WagonTechData**

facets minInclusive 2
maxInclusive 99

annotation documentation Number of Axels for a wagon

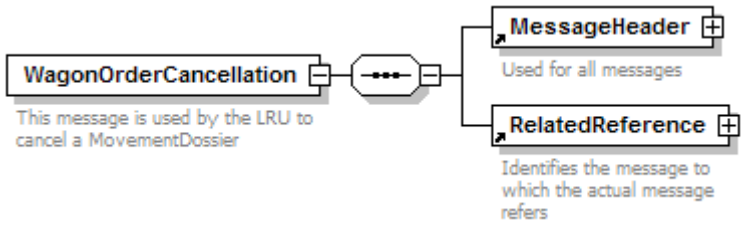
source

```
<xs:element name="WagonNumberOfAxles">
  <xs:annotation>
    <xs:documentation>Number of Axels for a wagon</xs:documentation>
  </xs:annotation>
  <xs:simpleType>
    <xs:restriction base="xs:int">
      <xs:minInclusive value="2"/>
      <xs:maxInclusive value="99"/>
```

```
    </xs:restriction>
  </xs:simpleType>
</xs:element>
```

element **WagonOrderCancellation**

diagram



children **MessageHeader** **RelatedReference**

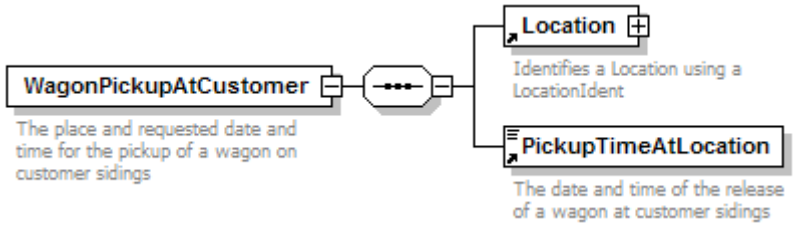
annotation
documentation This message is used by the LRU to cancel a MovementDossier

source

```
<xs:element name="WagonOrderCancellation">
  <xs:annotation>
    <xs:documentation>This message is used by the LRU to cancel a MovementDossier</xs:documentation>
  </xs:annotation>
  <xs:complexType>
    <xs:sequence>
      <xs:element ref="MessageHeader"/>
      <xs:element ref="RelatedReference"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

element **WagonPickupAtCustomer**

diagram



children **Location** **PickupTimeAtLocation**

used by
element **PreliminaryWagonOrder**

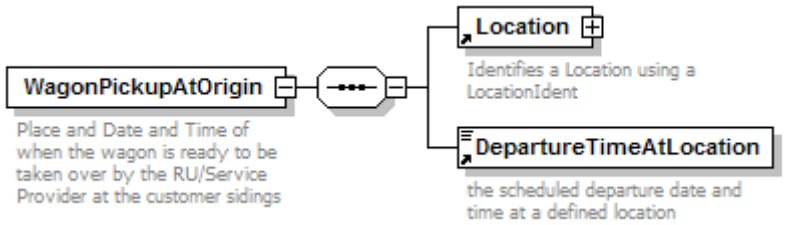
annotation
documentation The place and requested date and time for the pickup of a wagon on customer sidings

source

```
<xs:element name="WagonPickupAtCustomer">
  <xs:annotation>
    <xs:documentation>The place and requested date and time for the pickup of a wagon on customer
sidings</xs:documentation>
  </xs:annotation>
  <xs:complexType>
    <xs:sequence>
      <xs:element ref="Location"/>
      <xs:element ref="PickupTimeAtLocation"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

element **WagonPickupAtOrigin**

diagram



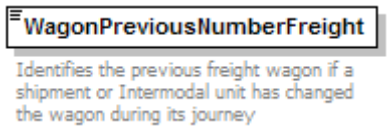
children **Location** **DepartureTimeAtLocation**

annotation documentation Place and Date and Time of when the wagon is ready to be taken over by the RU/Service Provider at the customer sidings

source
```
<xs:element name="WagonPickupAtOrigin">
  <xs:annotation>
    <xs:documentation>Place and Date and Time of when the wagon is ready to be taken over by the RU/Service Provider at the customer sidings</xs:documentation>
  </xs:annotation>
  <xs:complexType>
    <xs:sequence>
      <xs:element ref="Location"/>
      <xs:element ref="DepartureTimeAtLocation"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

element **WagonPreviousNumberFreight**

diagram



type **WagonIdent**

used by element **PreliminaryWagonOrder**

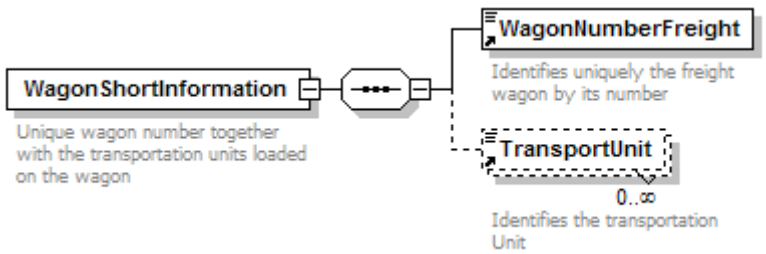
facets length 12

annotation documentation Identifies the previous freight wagon if a shipment or Intermodal unit has changed the wagon during its journey

source
```
<xs:element name="WagonPreviousNumberFreight" type="WagonIdent">
  <xs:annotation>
    <xs:documentation>Identifies the previous freight wagon if a shipment or Intermodal unit has changed the wagon during its journey</xs:documentation>
  </xs:annotation>
</xs:element>
```

element **WagonShortInformation**

diagram



children **WagonNumberFreight** **TransportUnit**

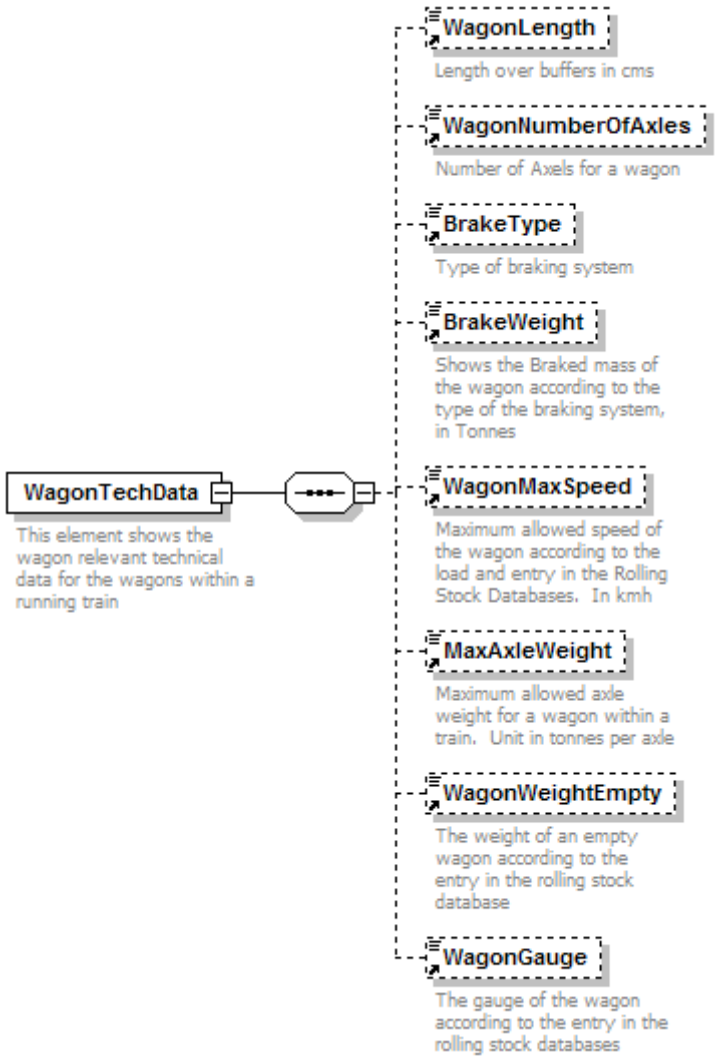
annotation documentation Unique wagon number together with the transportation units loaded on the wagon

source
```
<xs:element name="WagonShortInformation">
  <xs:annotation>
    <xs:documentation>Unique wagon number together with the transportation units loaded on the
```

```
wagon</xs:documentation>
  </xs:annotation>
  <xs:complexType>
    <xs:sequence>
      <xs:element ref="WagonNumberFreight"/>
      <xs:element ref="TransportUnit" minOccurs="0" maxOccurs="unbounded"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

element **WagonTechData**

diagram



children **WagonLength** **WagonNumberOfAxles** **BrakeType** **BrakeWeight** **WagonMaxSpeed** **MaxAxleWeight** **WagonWeightEmpty** **WagonGauge**

used by elements **PreliminaryWagonOrder** **WagonData**

annotation documentation This element shows the wagon relevant technical data for the wagons within a running train

source

```
<xs:element name="WagonTechData">
  <xs:annotation>
    <xs:documentation>This element shows the wagon relevant technical data for the wagons within a running
train</xs:documentation>
  </xs:annotation>
  <xs:complexType>
    <xs:sequence>
      <xs:element ref="WagonLength" minOccurs="0"/>
      <xs:element ref="WagonNumberOfAxles" minOccurs="0"/>
      <xs:element ref="BrakeType" minOccurs="0"/>
      <xs:element ref="BrakeWeight" minOccurs="0"/>
      <xs:element ref="WagonMaxSpeed" minOccurs="0"/>
      <xs:element ref="MaxAxleWeight" minOccurs="0"/>
      <xs:element ref="WagonWeightEmpty" minOccurs="0"/>
```

```
    <xs:element ref="WagonGauge" minOccurs="0"/>
   </xs:sequence>
  </xs:complexType>
 </xs:element>
```

element **WagonType**

diagram

type restriction of **IdentCode**

facets
- enumeration E
- enumeration F
- enumeration G
- enumeration H
- enumeration I
- enumeration K
- enumeration L
- enumeration O
- enumeration R
- enumeration S
- enumeration T
- enumeration U
- enumeration Z

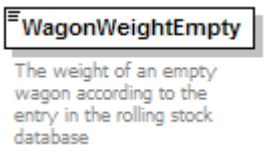
annotation
- documentation Category Code as defined in UIC Leaflet 438-1

source

```
<xs:element name="WagonType">
 <xs:annotation>
  <xs:documentation>Category Code as defined in UIC Leaflet 438-1</xs:documentation>
 </xs:annotation>
 <xs:simpleType>
  <xs:restriction base="IdentCode">
   <xs:enumeration value="E"/>
   <xs:enumeration value="F"/>
   <xs:enumeration value="G"/>
   <xs:enumeration value="H"/>
   <xs:enumeration value="I"/>
   <xs:enumeration value="K"/>
   <xs:enumeration value="L"/>
   <xs:enumeration value="O"/>
   <xs:enumeration value="R"/>
   <xs:enumeration value="S"/>
   <xs:enumeration value="T"/>
   <xs:enumeration value="U"/>
   <xs:enumeration value="Z"/>
  </xs:restriction>
 </xs:simpleType>
</xs:element>
```

element **WagonWeightEmpty**

diagram



type **WeightValueKilo**

used by
- element **WagonTechData**

facets
- minInclusive 1
- maxInclusive 999999
- whiteSpace collapse

annotation
- documentation The weight of an empty wagon according to the entry in the rolling stock database

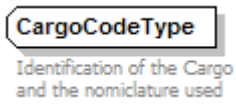
source

```
<xs:element name="WagonWeightEmpty" type="WeightValueKilo">
 <xs:annotation>
  <xs:documentation>The weight of an empty wagon according to the entry in the rolling stock
database</xs:documentation>
 </xs:annotation>
```

```
</xs:element>
```

complexType **CargoCodeType**

diagram



type extension of **FreeText**

used by elements **CommodityCodeRange/ExceptionLoadType** **LoadType**

facets length 255

attributes

Name	Type	Use	Default	Fixed	Annotation
CargoCodingType	IdentCode				

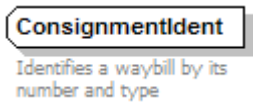
annotation documentation Identification of the Cargo and the nomiclature used

source

```
<xs:complexType name="CargoCodeType">
 <xs:annotation>
  <xs:documentation>Identification of the Cargo and the nomiclature used</xs:documentation>
 </xs:annotation>
 <xs:simpleContent>
  <xs:extension base="FreeText">
   <xs:attribute name="CargoCodingType">
    <xs:simpleType>
     <xs:restriction base="IdentCode">
      <xs:length value="3"/>
      <xs:enumeration value="NHM"/>
      <xs:enumeration value="CN"/>
     </xs:restriction>
    </xs:simpleType>
   </xs:attribute>
  </xs:extension>
 </xs:simpleContent>
</xs:complexType>
```

complexType **ConsignmentIdent**

diagram



type extension of **xs:string**

used by elements **ConsignmentNumber** **PreviousConsignmentNumber**

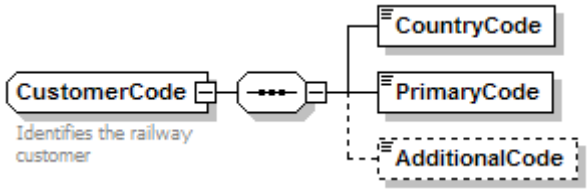
annotation documentation Identifies a waybill by its number and type

source

```
<xs:complexType name="ConsignmentIdent">
 <xs:annotation>
  <xs:documentation>Identifies a waybill by its number and type</xs:documentation>
 </xs:annotation>
 <xs:simpleContent>
  <xs:extension base="xs:string"/>
 </xs:simpleContent>
</xs:complexType>
```

complexType **CustomerCode**

diagram



children **CountryCode** **PrimaryCode** **AdditionalCode**

used by elements **Consignee** **Consignor** **CustomerIdent**

annotation documentation Identifies the railway customer

source
```
<xs:complexType name="CustomerCode">
 <xs:annotation>
  <xs:documentation>Identifies the railway customer</xs:documentation>
 </xs:annotation>
 <xs:sequence>
  <xs:element name="CountryCode" type="CountryIdent"/>
  <xs:element name="PrimaryCode" type="String1-14"/>
  <xs:element name="AdditionalCode" type="String1-7" minOccurs="0"/>
 </xs:sequence>
</xs:complexType>
```

element **CustomerCode/CountryCode**

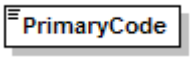
diagram 

type **CountryIdent**

facets minLength 2
maxLength 2

source
```
<xs:element name="CountryCode" type="CountryIdent"/>
```

element **CustomerCode/PrimaryCode**

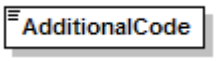
diagram 

type **String1-14**

facets length 1
minLength 14

source
```
<xs:element name="PrimaryCode" type="String1-14"/>
```

element **CustomerCode/AdditionalCode**

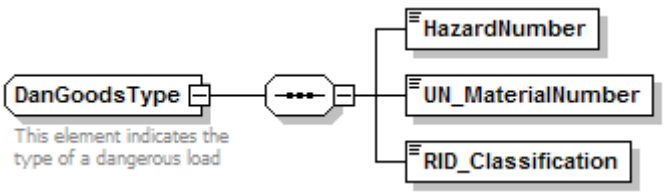
diagram 

type **String1-7**

facets minLength 1
maxLength 7

source
```
<xs:element name="AdditionalCode" type="String1-7" minOccurs="0"/>
```

complexType **DanGoodsType**

diagram 

children **HazardNumber** **UN_MaterialNumber** **RID_Classification**

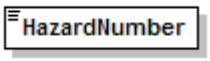
used by elements **DangerousGoodsIndication** **DangerousGoodsRange/ExceptionDangerousGoods**

annotation documentation This element indicates the type of a dangerous load

source
```
<xs:complexType name="DanGoodsType">
 <xs:annotation>
  <xs:documentation>This element indicates the type of a dangerous load</xs:documentation>
 </xs:annotation>
 <xs:sequence>
  <xs:element name="HazardNumber">
   <xs:simpleType>
```

```
      <xs:restriction base="xs:string">
       <xs:length value="4"/>
      </xs:restriction>
     </xs:simpleType>
    </xs:element>
    <xs:element name="UN_MaterialNumber">
     <xs:simpleType>
      <xs:restriction base="xs:integer">
       <xs:minInclusive value="0001"/>
       <xs:maxInclusive value="9999"/>
      </xs:restriction>
     </xs:simpleType>
    </xs:element>
    <xs:element name="RID_Classification">
     <xs:simpleType>
      <xs:restriction base="xs:string">
       <xs:length value="6"/>
      </xs:restriction>
     </xs:simpleType>
    </xs:element>
   </xs:sequence>
  </xs:complexType>
```

element **DanGoodsType/HazardNumber**

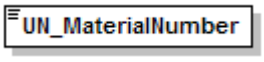
diagram 

type restriction of **xs:string**

facets length 4

source
```
<xs:element name="HazardNumber">
 <xs:simpleType>
  <xs:restriction base="xs:string">
   <xs:length value="4"/>
  </xs:restriction>
 </xs:simpleType>
</xs:element>
```

element **DanGoodsType/UN_MaterialNumber**

diagram 

type restriction of **xs:integer**

facets minInclusive 0001
maxInclusive 9999

source
```
<xs:element name="UN_MaterialNumber">
 <xs:simpleType>
  <xs:restriction base="xs:integer">
   <xs:minInclusive value="0001"/>
   <xs:maxInclusive value="9999"/>
  </xs:restriction>
 </xs:simpleType>
</xs:element>
```

element **DanGoodsType/RID_Classification**

diagram 

type restriction of **xs:string**

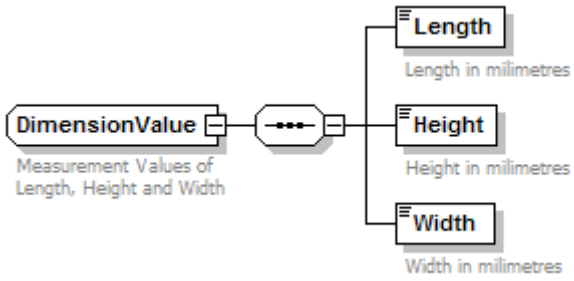
facets length 6

source
```
<xs:element name="RID_Classification">
 <xs:simpleType>
  <xs:restriction base="xs:string">
   <xs:length value="6"/>
  </xs:restriction>
 </xs:simpleType>
```

```
</xs:element>
```

complexType **DimensionValue**

diagram



children **Length** **Height** **Width**

used by elements **TotalWeighDim/Dimensions** **WagonInformation/TotalWeightDim** **TransportDimension**

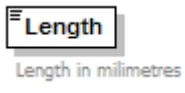
annotation documentation Measurement Values of Length, Height and Width

source

```
<xs:complexType name="DimensionValue">
 <xs:annotation>
  <xs:documentation>Measurement Values of Length, Height and Width</xs:documentation>
 </xs:annotation>
 <xs:sequence>
  <xs:element name="Length">
   <xs:annotation>
    <xs:documentation>Length in milimetres</xs:documentation>
   </xs:annotation>
   <xs:simpleType>
    <xs:restriction base="xs:int">
     <xs:minInclusive value="1"/>
     <xs:maxInclusive value="999999"/>
    </xs:restriction>
   </xs:simpleType>
  </xs:element>
  <xs:element name="Height">
   <xs:annotation>
    <xs:documentation>Height in milimetres</xs:documentation>
   </xs:annotation>
   <xs:simpleType>
    <xs:restriction base="xs:integer">
     <xs:minInclusive value="1"/>
     <xs:maxInclusive value="999999"/>
    </xs:restriction>
   </xs:simpleType>
  </xs:element>
  <xs:element name="Width">
   <xs:annotation>
    <xs:documentation>Width in milimetres</xs:documentation>
   </xs:annotation>
   <xs:simpleType>
    <xs:restriction base="xs:int">
     <xs:minInclusive value="1"/>
     <xs:maxInclusive value="999999"/>
    </xs:restriction>
   </xs:simpleType>
  </xs:element>
 </xs:sequence>
</xs:complexType>
```

element **DimensionValue/Length**

diagram



type restriction of **xs:int**

facets minInclusive 1
maxInclusive 999999

annotation documentation Length in milimetres

source
```
<xs:element name="Length">
 <xs:annotation>
  <xs:documentation>Length in milimetres</xs:documentation>
 </xs:annotation>
 <xs:simpleType>
  <xs:restriction base="xs:int">
   <xs:minInclusive value="1"/>
   <xs:maxInclusive value="999999"/>
  </xs:restriction>
 </xs:simpleType>
</xs:element>
```

element **DimensionValue/Height**

diagram

type restriction of **xs:integer**

facets
- minInclusive 1
- maxInclusive 999999

annotation
- documentation Height in milimetres

source
```
<xs:element name="Height">
 <xs:annotation>
  <xs:documentation>Height in milimetres</xs:documentation>
 </xs:annotation>
 <xs:simpleType>
  <xs:restriction base="xs:integer">
   <xs:minInclusive value="1"/>
   <xs:maxInclusive value="999999"/>
  </xs:restriction>
 </xs:simpleType>
</xs:element>
```

element **DimensionValue/Width**

diagram

type restriction of **xs:int**

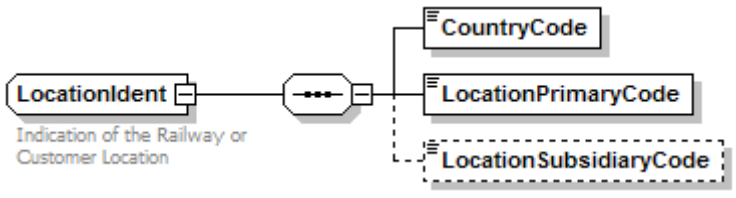
facets
- minInclusive 1
- maxInclusive 999999

annotation
- documentation Width in milimetres

source
```
<xs:element name="Width">
 <xs:annotation>
  <xs:documentation>Width in milimetres</xs:documentation>
 </xs:annotation>
 <xs:simpleType>
  <xs:restriction base="xs:int">
   <xs:minInclusive value="1"/>
   <xs:maxInclusive value="999999"/>
  </xs:restriction>
 </xs:simpleType>
</xs:element>
```

complexType **LocationIdent**

diagram



children **CountryCode** **LocationPrimaryCode** **LocationSubsidiaryCode**

used by elements DepartureTrackAtLocation Destination DestinationYard FinalDestination IntermediateDestination Location Origin TrainIdent/PathDepartureLocation

annotation documentation Indication of the Railway or Customer Location

source

```
<xs:complexType name="LocationIdent">
 <xs:annotation>
  <xs:documentation>Indication of the Railway or Customer Location</xs:documentation>
 </xs:annotation>
 <xs:sequence>
  <xs:element name="CountryCode" type="CountryIdent"/>
  <xs:element name="LocationPrimaryCode" type="Numeric1-5"/>
  <xs:element name="LocationSubsidiaryCode" minOccurs="0">
   <xs:complexType>
    <xs:simpleContent>
     <xs:extension base="String1-7">
      <xs:attribute name="LocationSubsidiaryTypeCode" use="required">
       <xs:simpleType>
        <xs:restriction base="IdentCode">
         <xs:enumeration value="00"/>
         <xs:enumeration value="01"/>
         <xs:enumeration value="02"/>
         <xs:enumeration value="03"/>
         <xs:enumeration value="04"/>
         <xs:enumeration value="05"/>
         <xs:enumeration value="06"/>
         <xs:enumeration value="07"/>
         <xs:enumeration value="08"/>
         <xs:enumeration value="09"/>
         <xs:enumeration value=""/>
        </xs:restriction>
       </xs:simpleType>
      </xs:attribute>
     </xs:extension>
    </xs:simpleContent>
   </xs:complexType>
  </xs:element>
 </xs:sequence>
</xs:complexType>
```

element **LocationIdent/CountryCode**

diagram 

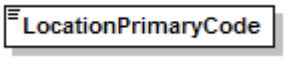
type **CountryIdent**

facets minLength 2
maxLength 2

source

```
<xs:element name="CountryCode" type="CountryIdent"/>
```

element **LocationIdent/LocationPrimaryCode**

diagram 

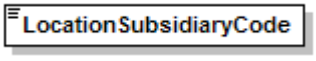
type **Numeric1-5**

facets minInclusive 1
maxInclusive 99999

source

```
<xs:element name="LocationPrimaryCode" type="Numeric1-5"/>
```

element **LocationIdent/LocationSubsidiaryCode**

diagram 

type extension of **String1-7**

facets minLength 1
maxLength 7

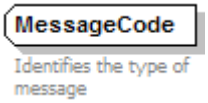
attributes

Name	Type	Use	Default	Fixed	Annotation
LocationSubsidiaryTypeCode	IdentCode	required			

source
```
<xs:element name="LocationSubsidiaryCode" minOccurs="0">
 <xs:complexType>
  <xs:simpleContent>
   <xs:extension base="String1-7">
    <xs:attribute name="LocationSubsidiaryTypeCode" use="required">
     <xs:simpleType>
      <xs:restriction base="IdentCode">
       <xs:enumeration value="00"/>
       <xs:enumeration value="01"/>
       <xs:enumeration value="02"/>
       <xs:enumeration value="03"/>
       <xs:enumeration value="04"/>
       <xs:enumeration value="05"/>
       <xs:enumeration value="06"/>
       <xs:enumeration value="07"/>
       <xs:enumeration value="08"/>
       <xs:enumeration value="09"/>
       <xs:enumeration value=""/>
      </xs:restriction>
     </xs:simpleType>
    </xs:attribute>
   </xs:extension>
  </xs:simpleContent>
 </xs:complexType>
</xs:element>
```

complexType **MessageCode**

diagram



used by — elements **MessageType** **RelatedReference/RelatedType**

attributes

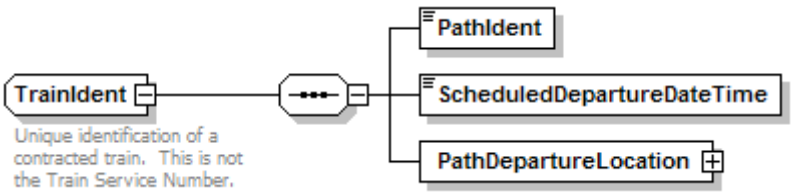
Name	Type	Use	Default	Fixed	Annotation
MessageTypeCode	IdentCode	required			

annotation — documentation: Identifies the type of message

source
```
<xs:complexType name="MessageCode">
 <xs:annotation>
  <xs:documentation>Identifies the type of message</xs:documentation>
 </xs:annotation>
 <xs:attribute name="MessageTypeCode" use="required">
  <xs:simpleType>
   <xs:restriction base="IdentCode">
    <xs:enumeration value="01"/>
    <xs:enumeration value="02"/>
   </xs:restriction>
  </xs:simpleType>
 </xs:attribute>
</xs:complexType>
```

complexType **TrainIdent**

diagram



children **PathIdent** **ScheduledDepartureDateTime** **PathDepartureLocation**

used by — elements **TripPlanSchedule/ScheduledTrain/Identification** **TrainIdent**

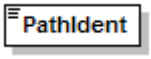
annotation — documentation: Unique identification of a contracted train. This is not the Train Service Number.

source
```
<xs:complexType name="TrainIdent">
 <xs:annotation>
  <xs:documentation>Unique identification of a contracted train. This is not the Train Service
Number.</xs:documentation>
```

```
  </xs:annotation>
  <xs:sequence>
   <xs:element name="PathIdent">
    <xs:simpleType>
     <xs:restriction base="PathIdent"/>
    </xs:simpleType>
   </xs:element>
   <xs:element name="ScheduledDepartureDateTime" type="DateTime"/>
   <xs:element name="PathDepartureLocation" type="LocationIdent"/>
  </xs:sequence>
 </xs:complexType>
```

element **TrainIdent/PathIdent**

diagram



type restriction of **PathIdent**

facets minLength 5
maxLength 6

source
```
<xs:element name="PathIdent">
 <xs:simpleType>
  <xs:restriction base="PathIdent"/>
 </xs:simpleType>
</xs:element>
```

element **TrainIdent/ScheduledDepartureDateTime**

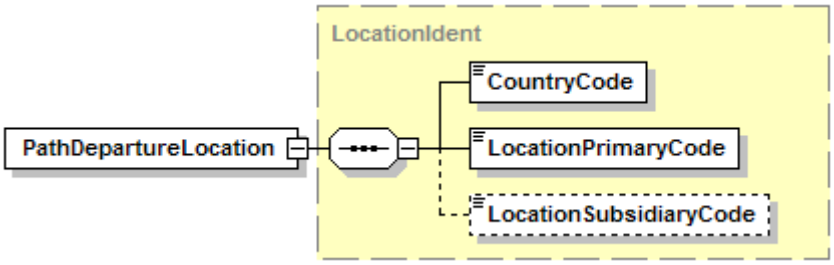
diagram

type **DateTime**

source
```
<xs:element name="ScheduledDepartureDateTime" type="DateTime"/>
```

element **TrainIdent/PathDepartureLocation**

diagram



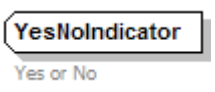
type **LocationIdent**

children **CountryCode** **LocationPrimaryCode** **LocationSubsidiaryCode**

source
```
<xs:element name="PathDepartureLocation" type="LocationIdent"/>
```

complexType **YesNoIndicator**

diagram



used by element **DangerousGoodsIndicator**

attributes

Name	Type	Use	Default	Fixed	Annotation
YesNo	IdentCode				

annotation documentation Yes or No

source
```
<xs:complexType name="YesNoIndicator">
 <xs:annotation>
  <xs:documentation>Yes or No</xs:documentation>
```

```
  </xs:annotation>
  <xs:attribute name="YesNo">
   <xs:simpleType>
    <xs:restriction base="IdentCode">
     <xs:enumeration value="Yes"/>
     <xs:enumeration value="No"/>
     <xs:enumeration value="Unknown"/>
    </xs:restriction>
   </xs:simpleType>
  </xs:attribute>
</xs:complexType>
```

simpleType **ActivityCode**

type restriction of **IdentCode**

used by element **ActivityType**

facets
enumeration 11
enumeration 12
enumeration 13
enumeration 14
enumeration 21
enumeration 22
enumeration 23
enumeration 24
enumeration 25
enumeration 26
enumeration 41
enumeration 42
enumeration 43
enumeration 44
enumeration 45
enumeration 46
enumeration 74
enumeration 76
enumeration 77

annotation documentation Indicate certain treatments or operations required for a train, a wagon or a load

source

```
<xs:simpleType name="ActivityCode">
  <xs:annotation>
    <xs:documentation>Indicate certain treatments or operations required for a train, a wagon or a
load</xs:documentation>
  </xs:annotation>
  <xs:restriction base="IdentCode">
    <xs:enumeration value="11"/>
    <xs:enumeration value="12"/>
    <xs:enumeration value="13"/>
    <xs:enumeration value="14"/>
    <xs:enumeration value="21"/>
    <xs:enumeration value="22"/>
    <xs:enumeration value="23"/>
    <xs:enumeration value="24"/>
    <xs:enumeration value="25"/>
    <xs:enumeration value="26"/>
    <xs:enumeration value="41"/>
    <xs:enumeration value="42"/>
    <xs:enumeration value="43"/>
    <xs:enumeration value="44"/>
    <xs:enumeration value="45"/>
    <xs:enumeration value="46"/>
    <xs:enumeration value="74"/>
    <xs:enumeration value="76"/>
    <xs:enumeration value="77"/>
  </xs:restriction>
</xs:simpleType>
```

simpleType **CapacityIndicator**

type restriction of **xs:string**

used by elements **UnitCapacityUsed** **WagonInformation/UnitCapacityUsed**

facets
enumeration 0
enumeration 1
enumeration 2

annotation documentation Capacity used of the transport unit

source
```
<xs:simpleType name="CapacityIndicator">
  <xs:annotation>
    <xs:documentation>Capacity used of the transport unit</xs:documentation>
  </xs:annotation>
  <xs:restriction base="xs:string">
    <xs:enumeration value="0"/>
    <xs:enumeration value="1"/>
    <xs:enumeration value="2"/>
  </xs:restriction>
</xs:simpleType>
```

simpleType **CommunicationRefID**

type restriction of **xs:string**

used by element **ControlContactIdent**

facets length 70

annotation documentation Identifier for communications contact reference (i.e. fax number, phone number, e-mail, URL)

source
```
<xs:simpleType name="CommunicationRefID">
  <xs:annotation>
    <xs:documentation>Identifier for communications contact reference (i.e. fax number, phone number, e-mail,
URL)</xs:documentation>
  </xs:annotation>
  <xs:restriction base="xs:string">
    <xs:length value="70"/>
  </xs:restriction>
</xs:simpleType>
```

simpleType **CompanyCode**

type restriction of **Numeric4-4**

used by elements **Company** **CompanyIdent** **LeadRU** **NextResponsibleIM** **NextResponsibleRU** **PreviousResponsibleRU** **Recipient** **ResponsibleRU** **RU_Partner** **Sender**

facets minInclusive 0001
maxInclusive 9999

annotation documentation Identifies the RU, IM or other company involved in the Rail Transport Chain

source
```
<xs:simpleType name="CompanyCode">
  <xs:annotation>
    <xs:documentation>Identifies the RU, IM or other company involved in the Rail Transport Chain</xs:documentation>
  </xs:annotation>
  <xs:restriction base="Numeric4-4">
    <xs:minInclusive value="0001"/>
    <xs:maxInclusive value="9999"/>
  </xs:restriction>
</xs:simpleType>
```

simpleType **ConsignmentTypeCode**

type restriction of **IdentCode**

facets enumeration CIM
enumeration Other

annotation documentation Identifies the type of a waybill

source
```
<xs:simpleType name="ConsignmentTypeCode">
  <xs:annotation>
    <xs:documentation>Identifies the type of a waybill</xs:documentation>
  </xs:annotation>
  <xs:restriction base="IdentCode">
    <xs:enumeration value="CIM"/>
    <xs:enumeration value="Other"/>
  </xs:restriction>
</xs:simpleType>
```

simpleType **ContactIdent**

type **xs:string**

annotation
documentation indicates a contact identity i.e. Phone Number

source
```
<xs:simpleType name="ContactIdent">
  <xs:annotation>
    <xs:documentation>indicates a contact identity i.e. Phone Number</xs:documentation>
  </xs:annotation>
  <xs:restriction base="xs:string"/>
</xs:simpleType>
```

simpleType **CountryIdent**

type restriction of **xs:string**

used by
elements **CountryCode** **CustomerCode/CountryCode** **LocationIdent/CountryCode**

facets
minLength 2
maxLength 2

annotation
documentation ISO 3166-1 alpha code (2 positions)

source
```
<xs:simpleType name="CountryIdent">
  <xs:annotation>
    <xs:documentation>ISO 3166-1 alpha code (2 positions)</xs:documentation>
  </xs:annotation>
  <xs:restriction base="xs:string">
    <xs:minLength value="2"/>
    <xs:maxLength value="2"/>
  </xs:restriction>
</xs:simpleType>
```

simpleType **DateTime**

type **xs:dateTime**

used by
elements **ActualEndDateTime** **ClosingTime** **DeliveryTimeAtInterchange** **DepartureTimeAtLocation** **IntermediateArrivalTime** **IntermediateDepartureTime** **MessageReference/MessageDateTime** **PickupTimeAtLocation** **RelatedReference/RelatedMessageDateTime** **RequestedTimeOfDelivery** **TrainIdent/ScheduledDepartureDateTime**

annotation
documentation All dates/times are in UTC, time diffeneces according the time zones must be handled in the individual systems

source
```
<xs:simpleType name="DateTime">
  <xs:annotation>
    <xs:documentation>All dates/times are in UTC, time diffeneces according the time zones must be handled in the individual systems</xs:documentation>
  </xs:annotation>
  <xs:restriction base="xs:dateTime"/>
</xs:simpleType>
```

simpleType **FreeText**

type restriction of **xs:string**

used by
elements **AdditionalInstruction** **ContractNumberCustomer** **ContractNumberMovement** **DeliveryInstruction** **TripPlanSchedule/Description** **WagonEvents/Description** **GoodsDescription** **HandlingInstruction** **InterruptionDescription** **Name** **RouteInformation** **TransportInstruction**
complexType **CargoCodeType**

facets
length 255

annotation
documentation Clear Text in ISO Unicode character set

source
```
<xs:simpleType name="FreeText">
  <xs:annotation>
    <xs:documentation>Clear Text in ISO Unicode character set</xs:documentation>
  </xs:annotation>
  <xs:restriction base="xs:string">
    <xs:length value="255"/>
  </xs:restriction>
</xs:simpleType>
```

simpleType **IdentCode**

type **xs:string**

used by
- elements: **BrakeType** **CutOffTime** **DayOfWeek** **LocationIdent/LocationSubsidiaryCode** **MessageStatus** **WagonEvents/ScheduledEvents** **TripPlanEventCode** **WagonType**
- complexTypes: **CargoCodeType** **MessageCode** **YesNoIndicator**
- simpleTypes: **ActivityCode** **ConsignmentTypeCode** **UnitType**

annotation
- documentation: Enumerated value

source

```
<xs:simpleType name="IdentCode">
  <xs:annotation>
    <xs:documentation>Enumerated value</xs:documentation>
  </xs:annotation>
  <xs:restriction base="xs:string"/>
</xs:simpleType>
```

simpleType **InfoIndex**

type restriction of **xs:string**

used by
- element: **ExceptionalGaugingInd**

facets
- enumeration: 10
- enumeration: 20
- enumeration: 30

annotation
- documentation: indicates additional information

source

```
<xs:simpleType name="InfoIndex">
  <xs:annotation>
    <xs:documentation>indicates additional information</xs:documentation>
  </xs:annotation>
  <xs:restriction base="xs:string">
    <xs:enumeration value="10"/>
    <xs:enumeration value="20"/>
    <xs:enumeration value="30"/>
  </xs:restriction>
</xs:simpleType>
```

simpleType **Name**

type restriction of **xs:string**

used by
- elements: **CustomerName** **VesselName**

facets
- length: 254

annotation
- documentation: Name in Free Text

source

```
<xs:simpleType name="Name">
  <xs:annotation>
    <xs:documentation>Name in Free Text</xs:documentation>
  </xs:annotation>
  <xs:restriction base="xs:string">
    <xs:length value="254"/>
  </xs:restriction>
</xs:simpleType>
```

simpleType **Numeric1-5**

type restriction of **xs:positiveInteger**

used by
- element: **LocationIdent/LocationPrimaryCode**

facets
- minInclusive: 1
- maxInclusive: 99999

source

```
<xs:simpleType name="Numeric1-5">
  <xs:restriction base="xs:positiveInteger">
    <xs:minInclusive value="1"/>
    <xs:maxInclusive value="99999"/>
  </xs:restriction>
</xs:simpleType>
```

simpleType **Numeric1-6**

type: restriction of **xs:int**

used by: elements **MessageIdent** **MessageReference/MessageNumber** **RelatedReference/RelatedNumber**

facets: minInclusive 1; maxInclusive 999999

source:
```
<xs:simpleType name="Numeric1-6">
 <xs:restriction base="xs:int">
  <xs:minInclusive value="1"/>
  <xs:maxInclusive value="999999"/>
 </xs:restriction>
</xs:simpleType>
```

simpleType **Numeric2-2**

type: restriction of **xs:integer**

facets: minInclusive 01; maxInclusive 99

source:
```
<xs:simpleType name="Numeric2-2">
 <xs:restriction base="xs:integer">
  <xs:minInclusive value="01"/>
  <xs:maxInclusive value="99"/>
 </xs:restriction>
</xs:simpleType>
```

simpleType **Numeric3-3**

type: restriction of **xs:integer**

used by: simpleType **Speed**

facets: minInclusive 001; maxInclusive 999

source:
```
<xs:simpleType name="Numeric3-3">
 <xs:restriction base="xs:integer">
  <xs:minInclusive value="001"/>
  <xs:maxInclusive value="999"/>
 </xs:restriction>
</xs:simpleType>
```

simpleType **Numeric4-4**

type: restriction of **xs:integer**

used by: simpleType **CompanyCode**

facets: minInclusive 0001; maxInclusive 9999

source:
```
<xs:simpleType name="Numeric4-4">
 <xs:restriction base="xs:integer">
  <xs:minInclusive value="0001"/>
  <xs:maxInclusive value="9999"/>
 </xs:restriction>
</xs:simpleType>
```

simpleType **PathIdent**

type: restriction of **String5-6**

used by: element **TrainIdent/PathIdent**

facets: minLength 5; maxLength 6

annotation: documentation For interoperable trains, this is the five character Train Number as defined in UIC Leaflet 419-2

source:
```
<xs:simpleType name="PathIdent">
 <xs:annotation>
  <xs:documentation>For interoperable trains, this is the five character Train Number as defined in UIC Leaflet 419-
```

```
2</xs:documentation>
  </xs:annotation>
  <xs:restriction base="String5-6">
    <xs:maxLength value="6"/>
  </xs:restriction>
</xs:simpleType>
```

simpleType **Speed**

type **Numeric3-3**

facets
- minInclusive 001
- maxInclusive 999

annotation
- documentation Shown in Km/h

source

```
<xs:simpleType name="Speed">
  <xs:annotation>
    <xs:documentation>Shown in Km/h</xs:documentation>
  </xs:annotation>
  <xs:restriction base="Numeric3-3"/>
</xs:simpleType>
```

simpleType **String1-14**

type restriction of **xs:string**

used by
- element **CustomerCode/PrimaryCode**

facets
- length 1
- minLength 14

source

```
<xs:simpleType name="String1-14">
  <xs:restriction base="xs:string">
    <xs:length value="1"/>
    <xs:minLength value="14"/>
  </xs:restriction>
</xs:simpleType>
```

simpleType **String1-5**

type restriction of **xs:string**

facets
- minLength 1
- maxLength 5

source

```
<xs:simpleType name="String1-5">
  <xs:restriction base="xs:string">
    <xs:minLength value="1"/>
    <xs:maxLength value="5"/>
  </xs:restriction>
</xs:simpleType>
```

simpleType **String1-7**

type restriction of **xs:string**

used by
- elements **CustomerCode/AdditionalCode** **LocationIdent/LocationSubsidiaryCode**

facets
- minLength 1
- maxLength 7

source

```
<xs:simpleType name="String1-7">
  <xs:restriction base="xs:string">
    <xs:minLength value="1"/>
    <xs:maxLength value="7"/>
  </xs:restriction>
</xs:simpleType>
```

simpleType **String5-5**

type restriction of **xs:string**

facets
- minLength 5
- maxLength 5

source
```
<xs:simpleType name="String5-5">
  <xs:restriction base="xs:string">
    <xs:minLength value="5"/>
    <xs:maxLength value="5"/>
  </xs:restriction>
</xs:simpleType>
```

simpleType **String5-6**

type restriction of **xs:string**

used by simpleType **PathIdent**

facets minLength 5
maxLength 6

source
```
<xs:simpleType name="String5-6">
  <xs:restriction base="xs:string">
    <xs:minLength value="5"/>
    <xs:maxLength value="6"/>
  </xs:restriction>
</xs:simpleType>
```

simpleType **String5-8**

type restriction of **xs:string**

facets minLength 5
maxLength 8

source
```
<xs:simpleType name="String5-8">
  <xs:restriction base="xs:string">
    <xs:minLength value="5"/>
    <xs:maxLength value="8"/>
  </xs:restriction>
</xs:simpleType>
```

simpleType **Time**

type **xs:time**

used by elements **TripPlanSchedule/ElapsedTime** **TripPlanSchedule/ScheduledTime**

annotation documentation Time expressed in HH:MM

source
```
<xs:simpleType name="Time">
  <xs:annotation>
    <xs:documentation>Time expressed in HH:MM</xs:documentation>
  </xs:annotation>
  <xs:restriction base="xs:time"/>
</xs:simpleType>
```

simpleType **UnitType**

type restriction of **IdentCode**

used by attribute **TransportUnit/@UnitTypeCode**

facets enumeration 10
enumeration 20
enumeration 25
enumeration 30
enumeration 40

annotation documentation Indicates the type of a Transportation unit

source
```
<xs:simpleType name="UnitType">
  <xs:annotation>
    <xs:documentation>Indicates the type of a Transportation unit</xs:documentation>
  </xs:annotation>
  <xs:restriction base="IdentCode">
    <xs:enumeration value="10"/>
    <xs:enumeration value="20"/>
    <xs:enumeration value="25"/>
    <xs:enumeration value="30"/>
    <xs:enumeration value="40"/>
```

```
  </xs:restriction>
</xs:simpleType>
```

simpleType **VolumeValue**

type **xs:float**

used by element **Volume**

annotation documentation Volume value of the load units by cbm

source

```
<xs:simpleType name="VolumeValue">
  <xs:annotation>
    <xs:documentation>Volume value of the load units by cbm</xs:documentation>
  </xs:annotation>
  <xs:restriction base="xs:float"/>
</xs:simpleType>
```

simpleType **WagonIdent**

type restriction of **xs:string**

used by elements **WagonNumberFreight** **WagonPreviousNumberFreight**

facets length 12

annotation documentation Identification code of a freight wagon based on the TSI OPE and CEN Recommendations

source

```
<xs:simpleType name="WagonIdent">
  <xs:annotation>
    <xs:documentation>Identification code of a freight wagon based on the TSI OPE and CEN
Recommendations</xs:documentation>
  </xs:annotation>
  <xs:restriction base="xs:string">
    <xs:length value="12"/>
  </xs:restriction>
</xs:simpleType>
```

simpleType **WeightValueKilo**

type restriction of **xs:integer**

used by elements **GrossWeight** **TotalLoadWeight** **WagonWeightEmpty**

facets minInclusive 1
maxInclusive 999999
whiteSpace collapse

annotation documentation In Kilograms

source

```
<xs:simpleType name="WeightValueKilo">
  <xs:annotation>
    <xs:documentation>In Kilograms</xs:documentation>
  </xs:annotation>
  <xs:restriction base="xs:integer">
    <xs:minInclusive value="1"/>
    <xs:maxInclusive value="999999"/>
    <xs:whiteSpace value="collapse"/>
  </xs:restriction>
</xs:simpleType>
```

simpleType **WeightValueTonne**

type restriction of **xs:int**

facets minInclusive 1
maxInclusive 9999

annotation documentation In Tonnes 4

source

```
<xs:simpleType name="WeightValueTonne">
  <xs:annotation>
    <xs:documentation>In Tonnes 4</xs:documentation>
  </xs:annotation>
  <xs:restriction base="xs:int">
    <xs:minInclusive value="1"/>
```

```
      <xs:maxInclusive value="9999"/>
    </xs:restriction>
  </xs:simpleType>
```

XML Schema documentation generated with **XMLSPY** Schema Editor **http://www.altova.com/xmlspy**