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1 Scope

This document defines the testing process performed to evaluate the compliance of the messages exchanged with the RSRD database developed by UIP-RSRD² against the TAF TSI data catalogue¹.

2 System Design

UIP-RSRD² provided ERA in Oct 2015 with a set of query-response messages enabling ERA to perform this evaluation. Therefore, RSRD² delivered to ERA two (2) message examples created via the RSRD² test system (using SoapUI). The XML request message was delivered via web service to the system and a response message was received. In addition, ERA checked the data via the internet portal (www.oebb.at/RSRD2TEST) with a user account in such a way that ERA was able to query the wagon data via the GUI (menu Wagon Data → Search) for some out of use Wagon numbers: 338527400000; 338079300000; 238043300000; 378478100000; 378478000000.

3 Objectives

The following results to be achieved are intended:

- To check the compliance of the RSRD² XML response with the TAF TSI schema version 2.1 validated by the TAF TSI CCM Board in February 2015.
- To check the compliance of the RSRD² XML request message against the TAF TSI catalogue and in particular, the query message used to retrieve data from the RSRD database.
- To check the compliance of the RSRD² XML response message against the RollingStockDataSet Message defined in the TAF TSI catalogue to provide technical and administrative information knowing the wagon number as key element.

4 Roles

The project officers of the European Railway Agency in charge of the regulation TAF TSI have performed the tests and they have documented the results of the test campaign.

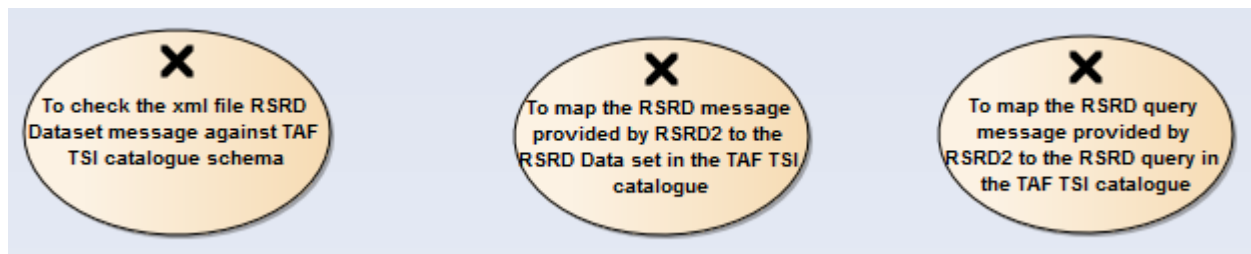
¹ See : http://www.era.europa.eu/Document-Register/Documents/taf_cat_complete.xml

5 Scenarios

This section defines the test scenarios identified for broad features of the application. For each of these features define the details of the process for testing it:

5.1.1 Test Cases

We have defined the following test cases modelled with and UML tool as Enterprise Architect:



5.1.1.1 To check the xml file RSRD Dataset message against TAF TSI catalogue schema

This Test case will allow proving that the ALTOVA XML Spy 2015 tool will validate the RSRD Dataset message against the TAF TSI catalogue schema. The expected test result is that the RSRD² Dataset message is valid (and well formed) vis-à-vis the TAF TSI data catalogue.

5.1.1.2 To map the RSRD² request message provided by RSRD² to the RSRD query in the TAF TSI catalogue

This Test case will allow proving that the elements of the RSRD² request message can be mapped with the RSRD query message of the TAF TSI catalogue with the ALTOVA MapForce 2015 tool. The expected test result is that all mandatory RSRD² message elements can be mapped vis-à-vis those of the TAF TSI data catalogue.

5.1.1.3 To map the RSRD² response message provided by RSRD² to the RSRD Data set in the TAF TSI catalogue

This Test case will allow proving that the elements of the RSRD² response message can be mapped with the RSRD dataset message of the TAF TSI catalogue with the ALTOVA MapForce 2015 tool. The expected test result is that all mandatory RSRD² message elements can be mapped vis-à-vis those of the TAF TSI data catalogue.

5.2 Deployment View for mapping test

The environment used to perform the first test scenario is the ALTOVA XML Spy 2015 and for the test scenarios where the mapping will be performed the MapForce 2015, Enterprise Edition version 2015 sp2 has been used.

For the second test scenarios using mapping a test execution environment has been set up for testing both messages, the message define to query the RSRD database and the response message allowing retrieving the technical and

administrative data for a particular message. More detailed information is provided in the following sections to better describe the test scenarios applied to check the mapping between the messages delivered by RSRD² and the TAF TSI catalogue query and Rolling Stock Dataset messages.

5.2.1 Mapping of RSRD² Response Message with the TAF TSI catalogue

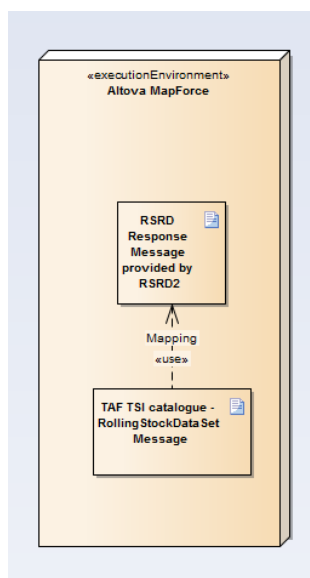
The test scenario applied to check the mapping between the response message delivered by RSRD² and the TAF TSI catalogue RSRD data set message is executed in the MapForce 2015 testing environment. This mapping tool allowed checking the compliance of the the RSRD Response Message delivered by RSRD² with the RSRD data set message existing in the TAF TSI catalogue. The messages to be mapped are considered as artifacts in the 'Altova MapForce' execution environment.

5.2.1.1 RSRD² Response Message provided by RSRD²

For this test scenario, the messages are defined as artifacts. Thereby for testing this scenario a first artifact owned by 'Altova MapForce' is the RSRD² Response Message provided by RSRD².

5.2.1.2 TAF TSI catalogue - RollingStockDataSet Message

For this test scenario, the messages are defined as artifacts. Thereby for testing this scenario a second artifact owned by 'Altova MapForce' is TAF TSI catalogue- RollingStockDataSetMessage.



5.2.2 Mapping of RSRD² Request Message with the TAF TSI catalogue

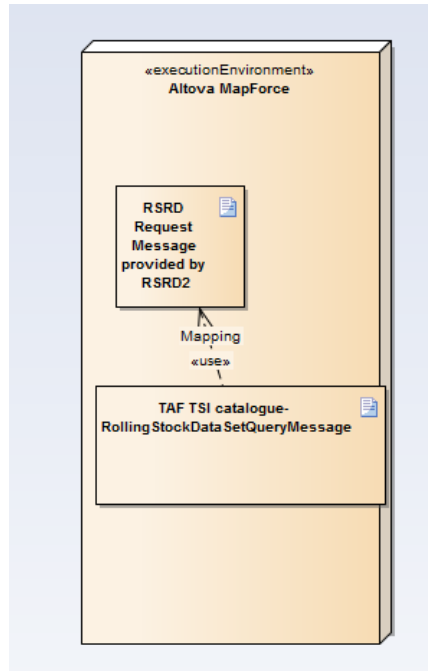
The test scenario applied to check the mapping between the request message delivered by RSRD² and the TAF TSI catalogue Rolling Stock Dataset query message is executed in the MapForce 2015 testing environment. This mapping tool allowed checking the compliance of the the RSRD Request Message delivered by RSRD² with the RSRD query message existing in the TAF TSI catalogue. The messages to be mapped are considered as artifacts in the 'Altova MapForce' execution environment.

5.2.2.1 RSRD² Request Message provided by RSRD²

For this test scenario, the messages are defined as artifacts. Thereby for testing this scenario a first artifact owned by 'Altova MapForce' is the RSRD² Request Message provided by RSRD².

5.2.2.2 TAF TSI catalogue- RollingStockDataSetQueryMessage

For this test scenario, the messages are defined as artifacts. Thereby for testing this scenario a second artifact owned by 'Altova MapForce' is TAF TSI catalogue- RollingStockDataSetQueryMessage.



6 Results of the Test Scenarios

6.1 Results of checking the xml file RSRD² Dataset message with the TAF TSI catalogue schema

The results are the expected ones, because it was validated the xml file RSRD² Dataset message against the TAF TSI catalogue schema and the results provided by the tool ALTOVA XML Spy are positive as it is drawn from the validation message provided by the testing tool Altova XML Spy 2015:

File C:\Users\gutiero\Desktop\Reporting\Test\RSRD²\RSRD2_Wagons_338079300000_against ERA TAF schema.xsd is valid.

```
<?xml version="1.0" encoding="UTF-8"?>
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema" xmlns="http://www.era.europa.eu/schemes/TAFTSI/2.1"
targetNamespace="http://www.era.europa.eu/schemes/TAFTSI/2.1" elementFormDefault="qualified" attributeFormDefault="unqualified"
version="2.1">
  <xs:element name="RollingStockDatasetMessage">
    <xs:complexType>
      <xs:sequence>
        <xs:element name="RollingStockDataset">
          <xs:complexType>
            <xs:sequence>
              <xs:element name="AdministrativeDataSet">
                <xs:complexType>
                  <xs:sequence>
                    <xs:element
name="WagonNumberFreight" type="xs:long"/>
                    <xs:element
name="RegistrationCountry" type="xs:string"/>
                    <xs:element
name="DatePutIntoService" type="xs:date"/>
                    <xs:element
name="SuspensionOfAuthorisation" type="xs:boolean"/>
                    <xs:element
name="ChannelTunnelPermitted" type="xs:boolean"/>
                    <xs:element
name="KeeperShortNameVKM" type="xs:string"/>
                    <xs:element name="ECM"
type="xs:string"/>
                    <xs:element
name="ECMCertificate">
                      <xs:complexType>
                        <xs:sequence>
                          <xs:element name="EINNumber">
                            <xs:complexType>
                              <xs:sequence>
                                <xs:element name="CountryCodeISO" type="xs:string"/>
                                <xs:element name="TypeDocumentEIN" type="xs:byte"/>
                                <xs:element name="CounterAcreditedRecognizedBody" type="xs:byte"/>
                                <xs:element name="EINYear" type="xs:byte"/>
                                <xs:element name="EINCounter" type="xs:byte"/>
                              </xs:sequence>
                            </xs:complexType>
                          </xs:element>
                          <xs:element name="ECMCertificateValidFrom" type="xs:date"/>
                        </xs:sequence>
                      </xs:complexType>
                    </xs:element>
                  </xs:sequence>
                </xs:complexType>
              </xs:element>
            </xs:sequence>
          </xs:complexType>
        </xs:element>
      </xs:sequence>
    </xs:complexType>
  </xs:element>
</xs:schema>
```



```
<xs:element name="ECMCertificateValidTo" type="xs:date"/>
<xs:element name="CoversTankWagonsForDangerousGoods" type="xs:boolean"/>
<xs:element name="CoversNonTankWagonsForDangerousGoods" type="xs:boolean"/>
<xs:element name="ECMCertificateSuspended" type="xs:boolean"/>
</xs:sequence>
</xs:complexType>
</xs:element>
<xs:element
  name="InteropCapability" type="xs:byte"/>
  type="xs:boolean"/>
  <xs:element name="GCUWagon"
    </xs:sequence>
    </xs:complexType>
  </xs:element>
  <xs:element name="DesignDataSet">
    <xs:complexType>
      <xs:sequence>
        <xs:element name="LetterMarking"
          </xs:element>
          <xs:element>
          <xs:element>
          <xs:element>
          <xs:element>
          <xs:element name="BogiePitch"
            </xs:element>
            <xs:element>
            <xs:element name="CouplingType"
              </xs:element name="BufferType"
                </xs:element>
                </xs:element>
                </xs:element>
                </xs:element>
                </xs:element name="LoadTable"
                  </xs:complexType>
                  </xs:sequence>
        </xs:choice>
      </xs:sequence>
    </xs:element name="SpeedCategory" type="xs:byte"/>
    <xs:element name="LoadTableStars" type="xs:byte"/>
  </xs:sequence>
</xs:sequence>
<xs:element name="LoadTableCountry" type="xs:string"/>
```




```
<xs:element name="SpeedCategory" type="xs:byte"/>
</xs:sequence>
</xs:choice>
<xs:element name="RouteClassPayloads" maxOccurs="unbounded">
<xs:complexType>
  <xs:sequence>
    <xs:element name="RouteClass" type="xs:string"/>
    <xs:element name="MaxPayload" type="xs:decimal"/>
  </xs:sequence>
</xs:complexType>
</xs:element>
</xs:sequence>
name="MaxSpeedEmpty" type="xs:byte"/>
</xs:complexType>
</xs:element>
<xs:element name="AirBrake">
  <xs:complexType>
    <xs:sequence>
      <xs:element name="NumberOfBrakes" type="xs:byte"/>
      <xs:element name="BrakeSystem" type="xs:string"/>
      <xs:element name="AirBrakeType" type="xs:byte"/>
      <xs:element name="BrakingPowerVariationDevice" type="xs:byte"/>
      <xs:element name="AirBrakedMass" type="xs:byte"/>
      <xs:element name="LoadChangeDevice">
        <xs:complexType>
          <xs:sequence>
            <xs:element name="ChangeOverWeight" type="xs:byte"/>
            <xs:element name="AirBrakedMassLoaded" type="xs:byte"/>
          </xs:sequence>
        </xs:complexType>
      </xs:element>
      <xs:element name="BrakeSpecialCharacteristics" type="xs:byte"/>
    </xs:sequence>
  </xs:complexType>
</xs:element name="HandBrake">
  <xs:complexType>
    <xs:sequence>
      <xs:element name="HandBrakeType" type="xs:byte"/>
      <xs:element name="HandBrakedWeight" type="xs:decimal"/>
      <xs:element name="MaxParkingBrakeGradient" type="xs:byte"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
</xs:sequence>
```

```
</xs:complexType>
</xs:element>
<xs:element name="BrakeBlock">
  <xs:complexType>
    <xs:sequence>

      <xs:element name="BrakeBlockName" type="xs:string"/>

    </xs:sequence>

    name="LoadingCapacity" type="xs:decimal"/>
    name="MaxGrossWeight" type="xs:int"/>
    name="MaxSpeedLoad" type="xs:byte"/>
    name="VapourReturnSystem" type="xs:boolean"/>
    name="FerryPermittedFlag" type="xs:boolean"/>
    name="TemperatureRange">

      <xs:element name="MaxTemp" type="xs:byte"/>
      <xs:element name="MinTemp" type="xs:byte"/>

    </xs:sequence>

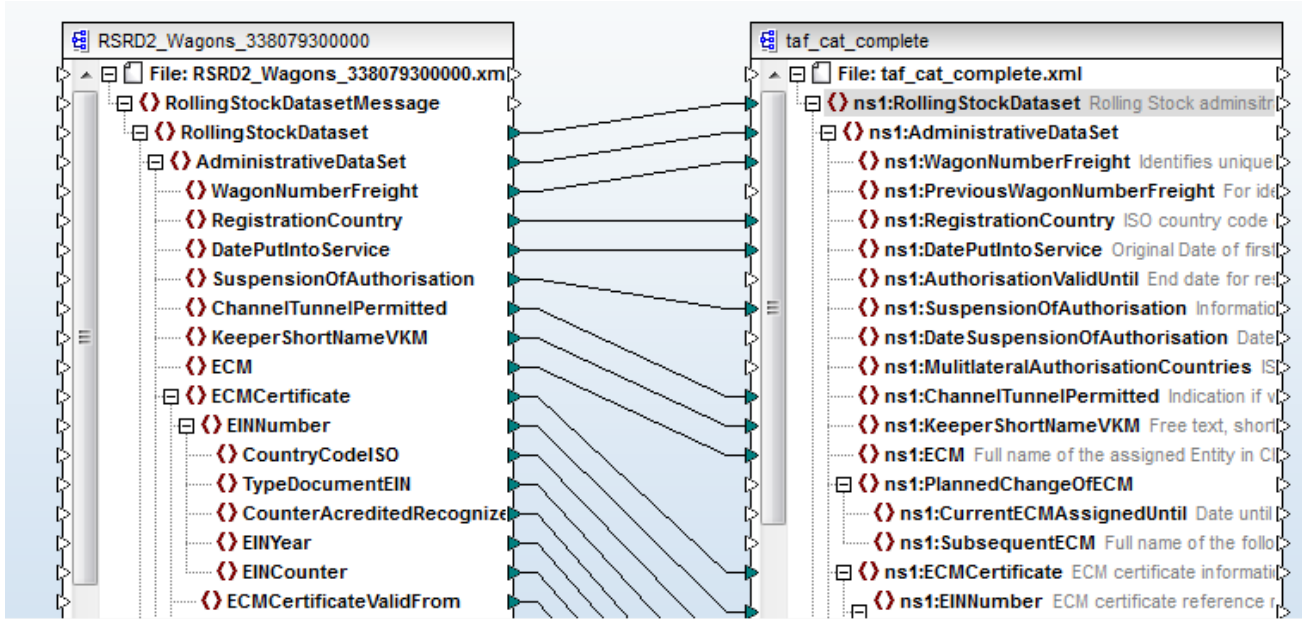
    name="DateLastOverhaul" type="xs:date"/>
    name="DateNextOverhaul" type="xs:date"/>
    name="PermittedTolerance" type="xs:byte"/>
    name="DateOfNextTankInspection" type="xs:date"/>

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

Test result summary	
Test run on :	02 Dec 2015
Test result :	passed
Test run by:	gutiero
Test validated:	vargami

6.2 To map the RSRD² response message provided by RSRD² with the RSRD Data set in the TAF TSI catalogue

The results are the expected ones. The mapping made between the message delivered by RSRD², RSRD2_Wagons_338079300000.xsd, and the Rolling Stock Dataset defined in the TAF TSI, shows that almost all the elements can be directly mapped.



Only some elements cannot be mapped, because they were missing in the scheme of the message RSRD2_Wagons_338079300000.xsd. Nevertheless, as we can observe on the following test resulting table, these elements highlighted on green corresponds to optional elements:

Mapping **RSRD²_Mapping_b_20151130_2.mfd**

(C:\Users\gutiero\Desktop\Reporting\Test\RSRD\RSRD²_Mapping_b_20151130_2.mfd)

Input **RSRD2_Wagons_338079300000** ([RSRD2_Wagons_338079300000.xsd](#))

Nodes	Connections	
File: RSRD2_Wagons_338079300000.xml Type: string		
RollingStockDatasetMessage Type: restriction of xs:anyType [0..1]		
RollingStockDatasetMessage/RollingStockDataset Type: restriction of xs:anyType	<i>direct</i>	ns1:RollingStockDataset Type: restriction of xs:anyType [0..1] Annotation: Rolling Stock administrative and Technical Dataset
RollingStockDatasetMessage/RollingStockDataset/AdministrativeDataSet Type: restriction of xs:anyType	<i>direct</i>	ns1:RollingStockDataset/ns1:AdministrativeDataSet Type: restriction of xs:anyType
.../RollingStockDataset/AdministrativeDataSet/WagonNumberFreight Type: xs:long	<i>direct</i>	ns1:RollingStockDataset/ns1:AdministrativeDataSet/ns1:WagonNumberFreight Type: ns1:WagonIdent Annotation: Identifies uniquely the freight wagon by its number
.../RollingStockDataset/AdministrativeDataSet/RegistrationCountry Type: xs:string	<i>direct</i>	ns1:RollingStockDataset/ns1:AdministrativeDataSet/ns1:RegistrationCountry Type: ns1:CountryIdentISO Annotation: ISO country code of registration country
.../RollingStockDataset/AdministrativeDataSet/DatePutIntoService Type: xs:date	<i>direct</i>	ns1:RollingStockDataset/ns1:AdministrativeDataSet/ns1:DatePutIntoService Type: xs:date



Nodes	Connections	
		Annotation: Original Date of first operation
.../RollingStockDataset/AdministrativeDataSet/SuspensionOfAuthorisation Type: xs:boolean	direct	ns1:RollingStockDataset/ns1:AdministrativeDataSet/ns1:SuspensionOfAuthorisation Type: xs:boolean Annotation: Information if authorisation has been suspended by the authority
.../RollingStockDataset/AdministrativeDataSet/ChannelTunnelPermitted Type: xs:boolean	direct	ns1:RollingStockDataset/ns1:AdministrativeDataSet/ns1:ChannelTunnelPermitted Type: xs:boolean [0..1] Annotation: Indication if wagon is allowed to pass the Channel Tunnel - if the transport is planned between UK and France and should use Eurotunnel infrastructure.
.../RollingStockDataset/AdministrativeDataSet/KeeperShortNameVKM Type: xs:string	direct	ns1:RollingStockDataset/ns1:AdministrativeDataSet/ns1:KeeperShortNameVKM Type: restriction of xs:string Annotation: Free text, short name/vehicle keeper marking of the wagon keeper
.../RollingStockDataset/AdministrativeDataSet/ECM Type: xs:string	direct	ns1:RollingStockDataset/ns1:AdministrativeDataSet/ns1:ECM Type: restriction of xs:string Annotation: Full name of the assigned Entity in Charge of Maintenance
.../RollingStockDataset/AdministrativeDataSet/ECMCertificate Type: restriction of xs:anyType	direct	ns1:RollingStockDataset/ns1:AdministrativeDataSet/ns1:ECMCertificate Type: restriction of xs:anyType Annotation: ECM certificate information
.../AdministrativeDataSet/ECMCertificate/EINNumber Type: restriction of xs:anyType	direct	.../ns1:AdministrativeDataSet/ns1:ECMCertificate/ns1:EINNumber Type: restriction of xs:anyType Annotation: ECM certificate reference number NOTE: this is a placeholder! CR 335 by ERA is containing this element and its full description and code lists.
.../ECMCertificate/EINNumber/CountryCodeISO Type: xs:string	direct	.../ns1:ECMCertificate/ns1:EINNumber/ns1:CountryCodeISO Type: extension of ns1:CountryIdentISO Annotation: Identifies a County or State by code (ISO 3166-1)
.../ECMCertificate/EINNumber/TypeDocumentEIN Type: xs:byte	direct	.../ns1:ECMCertificate/ns1:EINNumber/ns1:TypeDocumentEIN Type: ns1:Numeric2-2 Annotation: Code List Candidate: 31, 34
.../ECMCertificate/EINNumber/CounterAccreditedRecognizedBody Type: xs:byte	direct	.../ns1:ECMCertificate/ns1:EINNumber/ns1:CounterAccreditedRecognizedBody Type: ns1:Numeric2-2
.../ECMCertificate/EINNumber/EINYear Type: xs:byte	direct	.../ns1:ECMCertificate/ns1:EINNumber/ns1:EINYear Type: ns1:Numeric2-2
.../ECMCertificate/EINNumber/EINCounter Type: xs:byte	direct	.../ns1:ECMCertificate/ns1:EINNumber/ns1:EINCounter Type: restriction of xs:integer
.../AdministrativeDataSet/ECMCertificate/ECMCertificateValidFrom Type: xs:date	direct	.../ns1:AdministrativeDataSet/ns1:ECMCertificate/ns1:ECMCertificateValidFrom Type: xs:date Annotation: Certificate valid from date
.../AdministrativeDataSet/ECMCertificate/ECMCertificateValidTo Type: xs:date	direct	.../ns1:AdministrativeDataSet/ns1:ECMCertificate/ns1:ECMCertificateValidTo Type: xs:date Annotation: Certificate valid to date
.../AdministrativeDataSet/ECMCertificate/CoversTankWagonsForDangerousGoods Type: xs:boolean	direct	.../ns1:AdministrativeDataSet/ns1:ECMCertificate/ns1:CoversTankWagonsForDangerousGoods Type: xs:boolean Annotation: Certificate covers tank wagons for dangerous goods



Nodes	Connections	
<p>.../AdministrativeDataSet/ECMCertificate/CoversNonTankWagonsForDangerousGoods Type: xs:boolean</p>	<i>direct</i>	<p>../ns1:AdministrativeDataSet/ns1:ECMCertificate/ns1:CoversNonTankWagonsForDangerousGoods Type: xs:boolean Annotation: Certificate covers other wagons specialised in transport of dangerous goods</p>
<p>.../AdministrativeDataSet/ECMCertificate/ECMCertificateSuspended Type: xs:boolean</p>	<i>direct</i>	<p>../ns1:AdministrativeDataSet/ns1:ECMCertificate/ns1:ECMCertificateSuspended Type: xs:boolean Annotation: Identification if certificate has been suspended for any reason</p>
<p>.../RollingStockDataset/AdministrativeDataSet/InteropCapability Type: xs:byte</p>	<i>direct</i>	<p>ns1:RollingStockDataset/ns1:AdministrativeDataSet/ns1:InteropCapability Type: restriction of xs:integer Annotation: Identification of the general interoperability capability of the wagon The following values/codes are proposed for the usage: 01 = National 02 = Bi-/Multilateral (with agreement or authorisation grid) 03 = RIV 05 = TEN 06 = TEN-GE 07 = TEN-CW 08 = TEN RIV</p>
<p>.../RollingStockDataset/AdministrativeDataSet/GCUWagon Type: xs:boolean</p>	<i>direct</i>	<p>ns1:RollingStockDataset/ns1:AdministrativeDataSet/ns1:GCUWagon Type: xs:boolean Annotation: Indication if wagon is operated under the GCU contract</p>
<p>RollingStockDatasetMessage/RollingStockDataset/DesignDataSet Type: restriction of xs:anyType</p>	<i>direct</i>	<p>ns1:RollingStockDataset/ns1:DesignDataSet Type: restriction of xs:anyType</p>
<p>.../RollingStockDataset/DesignDataSet/LetterMarking Type: xs:string</p>	<i>direct</i>	<p>ns1:RollingStockDataset/ns1:DesignDataSet/ns1:LetterMarking Type: restriction of xs:string Annotation: Complete wagon category letter code. The Identification marking for freight rolling stock (wagon type) is defined in UIC Leaflet 438-2</p>
<p>.../RollingStockDataset/DesignDataSet/WagonNumberOfAxles Type: xs:byte</p>	<i>direct</i>	<p>ns1:RollingStockDataset/ns1:DesignDataSet/ns1:WagonNumberOfAxles Type: Annotation: Number of Axels for a wagon</p>
<p>.../RollingStockDataset/DesignDataSet/WheelSetType Type: xs:string</p>	<i>direct</i>	<p>ns1:RollingStockDataset/ns1:DesignDataSet/ns1:WheelSetType Type: restriction of xs:string [0..1] Annotation: Type name of the wheel sets, and the name of the type depends on the manufacturer.</p>
<p>.../RollingStockDataset/DesignDataSet/WheelDiameter Type: xs:short</p>	<i>direct</i>	<p>ns1:RollingStockDataset/ns1:DesignDataSet/ns1:WheelDiameter Type: [0..1] Annotation: Diameter of wheels measured in mm. Reference wheel diameter at maximum.</p>
<p>.../RollingStockDataset/DesignDataSet/WheelsetGauge Type: xs:short</p>	<i>direct</i>	<p>ns1:RollingStockDataset/ns1:DesignDataSet/ns1:WheelsetGauge Type: [0..∞] Annotation: Track Gauge measured in mm; multi-entry for wagons with changeable wheel set gauge</p>



Nodes	Connections	
.../RollingStockDataset/DesignDataSet/NumberOfBogies Type: xs:byte	<i>direct</i>	ns1:RollingStockDataset/ns1:DesignDataSet/ns1:NumberOfBogies Type: restriction of xs:int [0..1]
.../RollingStockDataset/DesignDataSet/BogiePitch Type: xs:short	<i>direct</i>	ns1:RollingStockDataset/ns1:DesignDataSet/ns1:BogiePitch Type: restriction of xs:integer [0..1] Annotation: Bogie Wheelbase measured in mm
.../RollingStockDataset/DesignDataSet/BogiePivotPitch Type: xs:short	<i>direct</i>	ns1:RollingStockDataset/ns1:DesignDataSet/ns1:BogiePivotPitch Type: ns1:Numeric1-5 [0..1] Annotation: Largest distance between two adjacent bogie pitches in mm
.../RollingStockDataset/DesignDataSet/InnerWheelbase Type: xs:short	<i>direct</i>	ns1:RollingStockDataset/ns1:DesignDataSet/ns1:InnerWheelbase Type: ns1:Numeric1-5 Annotation: Maximum distance between two adjacent axles in mm
.../RollingStockDataset/DesignDataSet/CouplingType Type: xs:byte	<i>direct</i>	ns1:RollingStockDataset/ns1:DesignDataSet/ns1:CouplingType Type: restriction of xs:token [0..1] Annotation: Classification of coupling: 0 = without coupler 1 = non-reinforced coupler less than 85t 2 = reinforced coupler equals to 85t 3 = ultra-reinforced coupler greater than 85t 4 = automatic coupling
.../RollingStockDataset/DesignDataSet/BufferType Type: xs:string	<i>direct</i>	ns1:RollingStockDataset/ns1:DesignDataSet/ns1:BufferType Type: restriction of xs:string [0..1] Annotation: Classification of buffer. The following values are mostly used in the sector.: A, AX, B, C, CX, L0 (130), L0 (150), L2 (130), L2 (150), L4 (130), L4 (150)
.../RollingStockDataset/DesignDataSet/NormalLoadingGauge Type: xs:string	<i>direct</i>	ns1:RollingStockDataset/ns1:DesignDataSet/ns1:NormalLoadingGauge Type: restriction of xs:token Annotation: Wagon or load gauge code used in UK, coded in UIC 505-1 and 503: All codes are defined in the UIC Leaflet 505-1 and 503, as well as in the EN 15273-2. For details please refer to EN 15273-2:2013 (Railway applications - Gauges - Part 2: Rolling stock gauge). For the existing gauges in the list, the Annex B.3 should be used. For the new ones, use the table below. Candidate: G1, G2, GA, GB, GC, CM, CE, M2, M3, M4, GB1, GB2, GB-M6, GHE16, W6-A. Lately added: G1 Annex A.3 G2 Annex E.1.2 GB2 Annex C.1.2 GB-M6 Annex N.4 (annex currently in preparation) GHE16 Annex P.3 W6-A W6a is designed for non-bogied wagons with axle spacings of 12.8m (42'), and 18.3m length (60')
.../RollingStockDataset/DesignDataSet/MinCurveRadius Type: xs:byte	<i>direct</i>	ns1:RollingStockDataset/ns1:DesignDataSet/ns1:MinCurveRadius Type: restriction of xs:integer Annotation: Measured in Metres
.../RollingStockDataset/DesignDataSet/MinVerticleRadiusYardHump Type: xs:short	<i>direct</i>	ns1:RollingStockDataset/ns1:DesignDataSet/ns1:MinVerticleRadiusYardHump



Nodes	Connections	
		Type: restriction of xs:integer [0..1] Annotation: Measured in mm
.../RollingStockDataset/DesignDataSet/WagonWeightEmpty Type: xs:short	direct	ns1:RollingStockDataset/ns1:DesignDataSet/ns1:WagonWeightEmpty Type: ns1:WeightValueKilo Annotation: The weight of an empty wagon according to the entry in the rolling stock database
.../RollingStockDataset/DesignDataSet/LengthOverBuffers Type: xs:short	direct	ns1:RollingStockDataset/ns1:DesignDataSet/ns1:LengthOverBuffers Type: restriction of xs:integer Annotation: Measured in dm
.../RollingStockDataset/DesignDataSet/MaxAxleWeight Type: xs:byte	direct	ns1:RollingStockDataset/ns1:DesignDataSet/ns1:MaxAxleWeight Type: restriction of xs:int Annotation: Maximum allowed axle weight for a wagon within a train. Unit in tonnes per axle
.../RollingStockDataset/DesignDataSet/LoadTable Type: restriction of xs:anyType [1..∞]	direct	ns1:RollingStockDataset/ns1:DesignDataSet/ns1:LoadTable Type: restriction of xs:anyType [1..∞] Annotation: Load table, can be used for international, product specific and additional (country-specific) load tables
.../DesignDataSet/LoadTable/SpeedCategory Type: xs:byte [0..1]	direct	../ns1:DesignDataSet/ns1:LoadTable/ns1:SpeedCategory Type: ns1:Numeric1-5 [1..∞] Annotation: Numeric speed in load table, without speed empty in km/h
.../DesignDataSet/LoadTable/LoadTableStars Type: xs:byte [0..1]	direct	../ns1:DesignDataSet/ns1:LoadTable/ns1:LoadTableStars Type: restriction of xs:integer [0..1] Annotation: Number of load table stars. Currently recognized values/codes: 1 = Authorised to run loaded in trains up to 100 km/h with a brake that does not meet all the requirements for 100 km/h conditions 2 = Authorised to run loaded in trains up to 120 km/h with a brake that does not meet all the requirements for 120 km/h conditions 3 = Authorised to run loaded in trains up to 120 km/h with a brake that does not meet all the requirements for 120 km/h conditions. Wagon is fitted with an automatic load-proportional braking system.
.../DesignDataSet/LoadTable/LoadTableCountry Type: xs:string [0..1]	direct	../ns1:DesignDataSet/ns1:LoadTable/ns1:LoadTableCountry Type: ns1:CountryIdentISO [0..∞] Annotation: ISO country code of countries for additional load tables
.../DesignDataSet/LoadTable/RouteClassPayloads Type: restriction of xs:anyType [1..∞]	direct	../ns1:DesignDataSet/ns1:LoadTable/ns1:RouteClassPayloads Type: restriction of xs:anyType [1..∞]
.../LoadTable/RouteClassPayloads/RouteClass Type: xs:string	direct	../ns1:LoadTable/ns1:RouteClassPayloads/ns1:RouteClass Type: Annotation: Indication of the route class (based on CEN EN 15528: line categories for managing the interface between load limits of vehicles on infrastructure). All the codes in this code list refer to CEN EN 15528: line categories for managing the interface between load limits of vehicles on infrastructure New codes added: C D E F G CM2 (M2 for those who accept 2 Alphanumeric) CM3 (M3 for those who accept 2 Alphanumeric) CM4 (M4 for those who accept 2 Alphanumeric)



Nodes	Connections	
		CM CE Note: some existing applications are not able to handle more than two characters for the value of this code. Therefore, the documentation of the codes should contain the hint given in the table above (e.g. "(M2 for those who accept 2 Alphanumeric)")
.../LoadTable/RouteClassPayloads/MaxPayload Type: xs:decimal	<i>direct</i>	.../ns1:LoadTable/ns1:RouteClassPayloads/ns1:MaxPayload Type: restriction of xs:decimal [1..∞] Annotation: Maximum payload in tonnes of line category; number of entries must fit to number of entries in SpeedCategory
.../RollingStockDataset/DesignDataSet/MaxSpeedEmpty Type: xs:byte	<i>direct</i>	ns1:RollingStockDataset/ns1:DesignDataSet/ns1:MaxSpeedEmpty Type: restriction of xs:integer Annotation: Maximum speed conditions empty arising from wagon construction characteristics (in km)
.../RollingStockDataset/DesignDataSet/AirBrake Type: restriction of xs:anyType	<i>direct</i>	ns1:RollingStockDataset/ns1:DesignDataSet/ns1:AirBrake Type: restriction of xs:anyType Annotation: Characteristics of Air Brakes
.../DesignDataSet/AirBrake/NumberOfBrakes Type: xs:byte	<i>direct</i>	.../ns1:DesignDataSet/ns1:AirBrake/ns1:NumberOfBrakes Type: ns1:Numeric2-2 Annotation: Number of air brakes
.../DesignDataSet/AirBrake/BrakeSystem Type: xs:string	<i>direct</i>	.../ns1:DesignDataSet/ns1:AirBrake/ns1:BrakeSystem Type: restriction of xs:string [0..1] Annotation: Abbreviation of air brake system. Following values are examples: Kk; Dr; Bo; Hik; Bd; Ch; O; KE; WE; DK; WU; WA; DM; MH, SW; KE 435; through brake pipe
.../DesignDataSet/AirBrake/AirBrakeType Type: xs:byte	<i>direct</i>	.../ns1:DesignDataSet/ns1:AirBrake/ns1:AirBrakeType Type: Annotation: Classification of air brake. additional code: 8 No air brake or brake pipe The code is defined in UIC Leaflet 920-13.
.../DesignDataSet/AirBrake/BrakingPowerVariationDevice Type: xs:byte	<i>direct</i>	.../ns1:DesignDataSet/ns1:AirBrake/ns1:BrakingPowerVariationDevice Type: Annotation: Coding in 404-2, chapter 1.8
.../DesignDataSet/AirBrake/AirBrakedMass Type: xs:byte	<i>direct</i>	.../ns1:DesignDataSet/ns1:AirBrake/ns1:AirBrakedMass Type: Annotation: According type of airbrake
.../DesignDataSet/AirBrake/LoadChangeDevice Type: restriction of xs:anyType	<i>direct</i>	.../ns1:DesignDataSet/ns1:AirBrake/ns1:LoadChangeDevice Type: restriction of xs:anyType [0..1] Annotation: Specific weights for change over air brake systems
.../AirBrake/LoadChangeDevice/ChangeOverWeight Type: xs:byte	<i>direct</i>	.../ns1:AirBrake/ns1:LoadChangeDevice/ns1:ChangeOverWeight Type: ns1:Numeric3-3 Annotation: Change over weight of braked weight in tonnes variation device
.../AirBrake/LoadChangeDevice/AirBrakedMassLoaded Type: xs:byte	<i>direct</i>	.../ns1:AirBrake/ns1:LoadChangeDevice/ns1:AirBrakedMassLoaded Type: ns1:Numeric3-3 Annotation: Braked weight in tonnes loaded for change over weight
.../DesignDataSet/AirBrake/BrakeSpecialCharacteristics	<i>direct</i>	.../ns1:DesignDataSet/ns1:AirBrake/ns1:BrakeSpecialCharacteristics



Nodes	Connections	
Type: xs:byte	<i>t</i>	ristics Type: Annotation: General brake characteristics: Should be made as the Code List. The values refer to UIC leaflet 920-13: 0 = No special characteristic (graduated release brake with cast iron blocks) "GG" 1 = Disc brake 2 = Composite brake blocks 3 = Single release brake 4 = Single release brake with composite brake blocks 5 = L-Brake 6 = LL-Brake 9 = Non-coded information
.../RollingStockDataset/DesignDataSet/HandBrake Type: restriction of xs:anyType	<i>direct</i>	ns1:RollingStockDataset/ns1:DesignDataSet/ns1:HandBrake Type: restriction of xs:anyType
.../DesignDataSet/HandBrake/HandBrakeType Type: xs:byte	<i>direct</i>	.../ns1:DesignDataSet/ns1:HandBrake/ns1:HandBrakeType Type: Annotation: Classification of hand brake: 0 No hand brake 1 Ground-operated hand brake 2 Platform-operated hand brake
.../DesignDataSet/HandBrake/HandBrakedWeight Type: xs:decimal	<i>direct</i>	.../ns1:DesignDataSet/ns1:HandBrake/ns1:HandBrakedWeight Type: restriction of xs:decimal [0..1] Annotation: Braked weight of the hand brake in tons
.../DesignDataSet/HandBrake/MaxParkingBrakeGradient Type: xs:byte	<i>direct</i>	.../ns1:DesignDataSet/ns1:HandBrake/ns1:MaxParkingBrakeGradient Type: restriction of xs:integer [0..1] Annotation: Maximum gradient for parking only with hand brake measured in °
.../RollingStockDataset/DesignDataSet/BrakeBlock Type: restriction of xs:anyType	<i>direct</i>	ns1:RollingStockDataset/ns1:DesignDataSet/ns1:BrakeBlock Type: restriction of xs:anyType [0..1] Annotation: Characteristics of brake blocks
.../DesignDataSet/BrakeBlock/BrakeBlockName Type: xs:string	<i>direct</i>	.../ns1:DesignDataSet/ns1:BrakeBlock/ns1:BrakeBlockName Type: restriction of xs:string [0..1] Annotation: Name of the brake block type, including the length in mm
.../RollingStockDataset/DesignDataSet/LoadingCapacity Type: xs:decimal	<i>direct</i>	ns1:RollingStockDataset/ns1:DesignDataSet/ns1:LoadingCapacity Type: restriction of xs:decimal [0..1] Annotation: Usable Cube - measured in M3
.../RollingStockDataset/DesignDataSet/MaxGrossWeight Type: xs:int	<i>direct</i>	ns1:RollingStockDataset/ns1:DesignDataSet/ns1:MaxGrossWeight Type: ns1:WeightValueKilo Annotation: Weight of max Gross Load Weight plus the tare weight of the equipment
.../RollingStockDataset/DesignDataSet/MaxSpeedLoad Type: xs:byte	<i>direct</i>	ns1:RollingStockDataset/ns1:DesignDataSet/ns1:MaxSpeedLoad Type: restriction of xs:integer Annotation: Maximum speed conditions according to load
.../RollingStockDataset/DesignDataSet/VapourReturnSystem Type: xs:boolean	<i>direct</i>	ns1:RollingStockDataset/ns1:DesignDataSet/ns1:VapourReturnSystem Type: xs:boolean [0..1] Annotation: Indication if tank wagon is equipped with a vapour return system
.../RollingStockDataset/DesignDataSet/FerryPermittedFlag Type: xs:boolean	<i>direct</i>	ns1:RollingStockDataset/ns1:DesignDataSet/ns1:FerryPermittedFlag Type: xs:boolean [0..1]



Nodes	Connections	
.../RollingStockDataset/DesignDataSet/TemperatureRange Type: restriction of xs:anyType	direct	ns1:RollingStockDataset/ns1:DesignDataSet/ns1:TemperatureRange Type: restriction of xs:anyType [0..1]
.../DesignDataSet/TemperatureRange/MaxTemp Type: xs:byte	direct	../ns1:DesignDataSet/ns1:TemperatureRange/ns1:MaxTemp Type: restriction of xs:int Annotation: Maximum Temperature in °Celsius
.../DesignDataSet/TemperatureRange/MinTemp Type: xs:byte	direct	../ns1:DesignDataSet/ns1:TemperatureRange/ns1:MinTemp Type: restriction of xs:int Annotation: Minimum temperature in ° Celsius
.../RollingStockDataset/DesignDataSet/DateLastOverhaul Type: xs:date	direct	ns1:RollingStockDataset/ns1:DesignDataSet/ns1:DateLastOverhaul Type: xs:date Annotation: Date of the last overhaul, if yet no overhaul date of putting into service
.../RollingStockDataset/DesignDataSet/DateNextOverhaul Type: xs:date	direct	ns1:RollingStockDataset/ns1:DesignDataSet/ns1:DateNextOverhaul Type: xs:date
.../RollingStockDataset/DesignDataSet/PermittedTolerance Type: xs:byte	direct	ns1:RollingStockDataset/ns1:DesignDataSet/ns1:PermittedTolerance Type: restriction of xs:integer Annotation: Permitted tolerance after date of overhaul (in months)
.../RollingStockDataset/DesignDataSet/DateOfNextTankInspection Type: xs:date	direct	ns1:RollingStockDataset/ns1:DesignDataSet/ns1:DateOfNextTankInspection Type: xs:date [0..1] Annotation: Date of the next tank inspection, applies only for tank wagons

Output [taf_cat_complete](#) ([taf_cat_complete.xsd](#))

Connections	Nodes
	File: taf_cat_complete.xml Type: string
RollingStockDatasetMessage/RollingStockDataset Type: restriction of xs:anyType	direct ns1:RollingStockDataset Type: restriction of xs:anyType [0..1] Annotation: Rolling Stock administrative and Technical Dataset
RollingStockDatasetMessage/RollingStockDataset/AdministrativeDataSet Type: restriction of xs:anyType	direct ns1:RollingStockDataset/ns1:AdministrativeDataSet Type: restriction of xs:anyType
.../RollingStockDataset/AdministrativeDataSet/WagonNumberFreight Type: xs:long	direct ns1:RollingStockDataset/ns1:AdministrativeDataSet/ns1:WagonNumberFreight Type: ns1:WagonIdent Annotation: Identifies uniquely the freight wagon by its number
	ns1:RollingStockDataset/ns1:AdministrativeDataSet/ns1:PreviousWagonNumberFreight Type: ns1:WagonIdent [0..1] Annotation: For identification of a wagon after renumbering
.../RollingStockDataset/AdministrativeDataSet/RegistrationCountry Type: xs:string	direct ns1:RollingStockDataset/ns1:AdministrativeDataSet/ns1:RegistrationCountry Type: ns1:CountryIdentISO Annotation: ISO country code of registration country
.../RollingStockDataset/AdministrativeDataSet/DatePutIntoService Type: xs:date	direct ns1:RollingStockDataset/ns1:AdministrativeDataSet/ns1:DatePutIntoService Type: xs:date Annotation: Original Date of first operation
	ns1:RollingStockDataset/ns1:AdministrativeDataSet/ns1:AuthorisationValidUntil Type: xs:date [0..1] Annotation: End date for restricted authorisation (special case)



Connections		Nodes
.../RollingStockDataset/AdministrativeDataSet/SuspensionOfAuthorisation Type: xs:boolean	<i>direct</i>	ns1:RollingStockDataset/ns1:AdministrativeDataSet/ns1:SuspensionOfAuthorisation Type: xs:boolean Annotation: Information if authorisation has been suspended by the authority
		ns1:RollingStockDataset/ns1:AdministrativeDataSet/ns1:DateSuspensionOfAuthorisation Type: xs:date [0..1] Annotation: Date of the suspension of authorisation; must be provided in case of suspension
		ns1:RollingStockDataset/ns1:AdministrativeDataSet/ns1:MultilateralAuthorisationCountries Type: ns1:CountryIdentISO [0..∞] Annotation: ISO country code of countries where the wagon is authorised (applies only in case of limited interoperability); first entry indicates the initial authorisation country
.../RollingStockDataset/AdministrativeDataSet/ChannelTunnelPermitted Type: xs:boolean	<i>direct</i>	ns1:RollingStockDataset/ns1:AdministrativeDataSet/ns1:ChannelTunnelPermitted Type: xs:boolean [0..1] Annotation: Indication if wagon is allowed to pass the Channel Tunnel - if the transport is planned between UK and France and should use Eurotunnel infrastructure.
.../RollingStockDataset/AdministrativeDataSet/KeeperShortNameVKM Type: xs:string	<i>direct</i>	ns1:RollingStockDataset/ns1:AdministrativeDataSet/ns1:KeeperShortNameVKM Type: restriction of xs:string Annotation: Free text, short name/vehicle keeper marking of the wagon keeper
.../RollingStockDataset/AdministrativeDataSet/ECM Type: xs:string	<i>direct</i>	ns1:RollingStockDataset/ns1:AdministrativeDataSet/ns1:ECM Type: restriction of xs:string Annotation: Full name of the assigned Entity in Charge of Maintenance
		ns1:RollingStockDataset/ns1:AdministrativeDataSet/ns1:PlannedChangeOfECM Type: restriction of xs:anyType [0..1]
		.../ns1:AdministrativeDataSet/ns1:PlannedChangeOfECM/ns1:CurrentECMAssignedUntil Type: xs:date Annotation: Date until the current Entity in Charge of Maintenance is assigned to the wagon
		.../ns1:AdministrativeDataSet/ns1:PlannedChangeOfECM/ns1:SubsequentECM Type: restriction of xs:string Annotation: Full name of the following Entity in Charge of Maintenance
.../RollingStockDataset/AdministrativeDataSet/ECMCertificate Type: restriction of xs:anyType	<i>direct</i>	ns1:RollingStockDataset/ns1:AdministrativeDataSet/ns1:ECMCertificate Type: restriction of xs:anyType Annotation: ECM certificate information
.../AdministrativeDataSet/ECMCertificate/EINNumber Type: restriction of xs:anyType	<i>direct</i>	.../ns1:AdministrativeDataSet/ns1:ECMCertificate/ns1:EINNumber Type: restriction of xs:anyType Annotation: ECM certificate reference number NOTE: this is a placeholder! CR 335 by ERA is containing this element and its full description and code lists.
.../ECMCertificate/EINNumber/CountryCodeISO Type: xs:string	<i>direct</i>	.../ns1:ECMCertificate/ns1:EINNumber/ns1:CountryCodeISO Type: extension of ns1:CountryIdentISO Annotation: Identifies a County or State by code (ISO 3166-1)
.../ECMCertificate/EINNumber/TypeDocumentEIN Type: xs:byte	<i>direct</i>	.../ns1:ECMCertificate/ns1:EINNumber/ns1:TypeDocumentEIN Type: ns1:Numeric2-2 Annotation: Code List Candidate: 31, 34
.../ECMCertificate/EINNumber/CounterAccreditedRecognizedBody Type: xs:byte	<i>direct</i>	.../ns1:ECMCertificate/ns1:EINNumber/ns1:CounterAccreditedRecognizedBody Type: ns1:Numeric2-2
.../ECMCertificate/EINNumber/EINYear Type: xs:byte	<i>direct</i>	.../ns1:ECMCertificate/ns1:EINNumber/ns1:EINYear Type: ns1:Numeric2-2



Connections		Nodes
.../ECMCertificate/EINNumber/EINCounter Type: xs:byte	<i>direct</i>	.../ns1:ECMCertificate/ns1:EINNumber/ns1:EINCounter Type: restriction of xs:integer
.../AdministrativeDataSet/ECMCertificate/ECMCertificateValidFrom Type: xs:date	<i>direct</i>	.../ns1:AdministrativeDataSet/ns1:ECMCertificate/ns1:ECMCertificateValidFrom Type: xs:date Annotation: Certificate valid from date
.../AdministrativeDataSet/ECMCertificate/ECMCertificateValidTo Type: xs:date	<i>direct</i>	.../ns1:AdministrativeDataSet/ns1:ECMCertificate/ns1:ECMCertificateValidTo Type: xs:date Annotation: Certificate valid to date
.../AdministrativeDataSet/ECMCertificate/CoversTankWagonsForDangerousGoods Type: xs:boolean	<i>direct</i>	.../ns1:AdministrativeDataSet/ns1:ECMCertificate/ns1:CoversTankWagonsForDangerousGoods Type: xs:boolean Annotation: Certificate covers tank wagons for dangerous goods
.../AdministrativeDataSet/ECMCertificate/CoversNonTankWagonsForDangerousGoods Type: xs:boolean	<i>direct</i>	.../ns1:AdministrativeDataSet/ns1:ECMCertificate/ns1:CoversNonTankWagonsForDangerousGoods Type: xs:boolean Annotation: Certificate covers other wagons specialised in transport of dangerous goods
.../AdministrativeDataSet/ECMCertificate/ECMCertificateSuspended Type: xs:boolean	<i>direct</i>	.../ns1:AdministrativeDataSet/ns1:ECMCertificate/ns1:ECMCertificateSuspended Type: xs:boolean Annotation: Identification if certificate has been suspended for any reason
		.../ns1:AdministrativeDataSet/ns1:ECMCertificate/ns1:DateECMCertificateSuspended Type: xs:date [0..1] Annotation: Date of the suspension of the ECM certificate; must be provided in case of suspension
.../RollingStockDataset/AdministrativeDataSet/Interoperability Type: xs:byte	<i>direct</i>	ns1:RollingStockDataset/ns1:AdministrativeDataSet/ns1:Interoperability Type: restriction of xs:integer Annotation: Identification of the general interoperability capability of the wagon The following values/codes are proposed for the usage: 01 = National 02 = Bi-/Multilateral (with agreement or authorisation grid) 03 = RIV 05 = TEN 06 = TEN-GE 07 = TEN-CW 08 = TEN RIV
.../RollingStockDataset/AdministrativeDataSet/GCUWagon Type: xs:boolean	<i>direct</i>	ns1:RollingStockDataset/ns1:AdministrativeDataSet/ns1:GCUWagon Type: xs:boolean Annotation: Indication if wagon is operated under the GCU contract
RollingStockDatasetMessage/RollingStockDataset/DesignDataSet Type: restriction of xs:anyType	<i>direct</i>	ns1:RollingStockDataset/ns1:DesignDataSet Type: restriction of xs:anyType
.../RollingStockDataset/DesignDataSet/LetterMarking Type: xs:string	<i>direct</i>	ns1:RollingStockDataset/ns1:DesignDataSet/ns1:LetterMarking Type: restriction of xs:string Annotation: Complete wagon category letter code. The Identification marking for freight rolling stock (wagon type) is defined in UIC Leaflet 438-2
		ns1:RollingStockDataset/ns1:DesignDataSet/ns1:TankCode Type: restriction of xs:string [0..1] Annotation: Tank code (applies only for tank wagons). The codes are defined in the RID regulation, chapter 4.3.3 and 4.3.4.1.1
.../RollingStockDataset/DesignDataSet/WagonNumberOfAxles Type: xs:byte	<i>direct</i>	ns1:RollingStockDataset/ns1:DesignDataSet/ns1:WagonNumberOfAxles Type:



Connections		Nodes
.../RollingStockDataset/DesignDataSet/WheelSetType Type: xs:string	direct	Annotation: Number of Axels for a wagon ns1:RollingStockDataset/ns1:DesignDataSet/ns1:WheelSetType Type: restriction of xs:string [0..1] Annotation: Type name of the wheel sets, and the name of the type depends on the manufacturer.
.../RollingStockDataset/DesignDataSet/WheelDiameter Type: xs:short	direct	ns1:RollingStockDataset/ns1:DesignDataSet/ns1:WheelDiameter Type: [0..1] Annotation: Diameter of wheels measured in mm. Reference wheel diameter at maximum.
.../RollingStockDataset/DesignDataSet/WheelsetGauge Type: xs:short	direct	ns1:RollingStockDataset/ns1:DesignDataSet/ns1:WheelsetGauge Type: [0..∞] Annotation: Track Gauge measured in mm; multi-entry for wagons with changeable wheel set gauge
		ns1:RollingStockDataset/ns1:DesignDataSet/ns1:WheelSetTransformationMethod Type: [0..1] Annotation: „Description of the wheel set transformation method for wagons with a changeable wheel set gauge. Code list: 1 = Automatic, 2 = Bogie/axle change
.../RollingStockDataset/DesignDataSet/NumberOfBogies Type: xs:byte	direct	ns1:RollingStockDataset/ns1:DesignDataSet/ns1:NumberOfBogies Type: restriction of xs:int [0..1]
.../RollingStockDataset/DesignDataSet/BogiePitch Type: xs:short	direct	ns1:RollingStockDataset/ns1:DesignDataSet/ns1:BogiePitch Type: restriction of xs:integer [0..1] Annotation: Bogie Wheelbase measured in mm
.../RollingStockDataset/DesignDataSet/BogiePivotPitch Type: xs:short	direct	ns1:RollingStockDataset/ns1:DesignDataSet/ns1:BogiePivotPitch Type: ns1:Numeric1-5 [0..1] Annotation: Largest distance between two adjacent bogie pitches in mm
.../RollingStockDataset/DesignDataSet/InnerWheelbase Type: xs:short	direct	ns1:RollingStockDataset/ns1:DesignDataSet/ns1:InnerWheelbase Type: ns1:Numeric1-5 Annotation: Maximum distance between two adjacent axles in mm
.../RollingStockDataset/DesignDataSet/CouplingType Type: xs:byte	direct	ns1:RollingStockDataset/ns1:DesignDataSet/ns1:CouplingType Type: restriction of xs:token [0..1] Annotation: Classification of coupling: 0 = without coupler 1 = non-reinforced coupler less than 85t 2 = reinforced coupler equals to 85t 3 = ultra-reinforced coupler greater than 85t 4 = automatic coupling
.../RollingStockDataset/DesignDataSet/BufferType Type: xs:string	direct	ns1:RollingStockDataset/ns1:DesignDataSet/ns1:BufferType Type: restriction of xs:string [0..1] Annotation: Classification of buffer. The following values are mostly used in the sector.: A, AX, B, C, CX, L0 (130), L0 (150), L2 (130), L2 (150), L4 (130), L4 (150)
.../RollingStockDataset/DesignDataSet/NormalLoadingGauge Type: xs:string	direct	ns1:RollingStockDataset/ns1:DesignDataSet/ns1:NormalLoadingGauge Type: restriction of xs:token Annotation: Wagon or load gauge code used in UK, coded in UIC 505-1 and 503: All codes are defined in the UIC Leaflet 505-1 and 503, as well as in the EN 15273-2. For details please refer to EN 15273-2:2013 (Railway applications - Gauges - Part 2: Rolling stock gauge). For the existing gauges in the list, the Annex B.3 should be used. For the new ones, use the table below.



Connections		Nodes												
		<p>Candidate: G1, G2, GA, GB, GC, CM, CE, M2, M3, M4, GB1, GB2, GB-M6, GHE16, W6-A.</p> <p>Lately added:</p> <table border="0"> <tr> <td>G1</td> <td>Annex A.3</td> </tr> <tr> <td>G2</td> <td>Annex E.1.2</td> </tr> <tr> <td>GB2</td> <td>Annex C.1.2</td> </tr> <tr> <td>GB-M6</td> <td>Annex N.4 (annex currently in preparation)</td> </tr> <tr> <td>GHE16</td> <td>Annex P.3</td> </tr> <tr> <td>W6-A</td> <td>W6a is designed for non- bogied wagons with axle spacings of 12.8m (42'), and 18.3m length (60')</td> </tr> </table>	G1	Annex A.3	G2	Annex E.1.2	GB2	Annex C.1.2	GB-M6	Annex N.4 (annex currently in preparation)	GHE16	Annex P.3	W6-A	W6a is designed for non- bogied wagons with axle spacings of 12.8m (42'), and 18.3m length (60')
G1	Annex A.3													
G2	Annex E.1.2													
GB2	Annex C.1.2													
GB-M6	Annex N.4 (annex currently in preparation)													
GHE16	Annex P.3													
W6-A	W6a is designed for non- bogied wagons with axle spacings of 12.8m (42'), and 18.3m length (60')													
.../RollingStockDataset/DesignDataSet/MinCurveRadius Type: xs:byte	direct	<p>ns1:RollingStockDataset/ns1:DesignDataSet/ns1:MinCurveRadius Type: restriction of xs:integer Annotation: Measured in Metres</p>												
.../RollingStockDataset/DesignDataSet/MinVerticleRadiusYardHump Type: xs:short	direct	<p>ns1:RollingStockDataset/ns1:DesignDataSet/ns1:MinVerticleRadiusYardHump Type: restriction of xs:integer [0..1] Annotation: Measured in mm</p>												
.../RollingStockDataset/DesignDataSet/WagonWeightEmpty Type: xs:short	direct	<p>ns1:RollingStockDataset/ns1:DesignDataSet/ns1:WagonWeightEmpty Type: ns1:WeightValueKilo Annotation: The weight of an empty wagon according to the entry in the rolling stock database</p>												
.../RollingStockDataset/DesignDataSet/LengthOverBuffers Type: xs:short	direct	<p>ns1:RollingStockDataset/ns1:DesignDataSet/ns1:LengthOverBuffers Type: restriction of xs:integer Annotation: Measured in dm</p>												
.../RollingStockDataset/DesignDataSet/MaxAxleWeight Type: xs:byte	direct	<p>ns1:RollingStockDataset/ns1:DesignDataSet/ns1:MaxAxleWeight Type: restriction of xs:int Annotation: Maximum allowed axle weight for a wagon within a train. Unit in tonnes per axle</p>												
.../RollingStockDataset/DesignDataSet/LoadTable Type: restriction of xs:anyType [1..∞]	direct	<p>ns1:RollingStockDataset/ns1:DesignDataSet/ns1:LoadTable Type: restriction of xs:anyType [1..∞] Annotation: Load table, can be used for international, product specific and additional (country-specific) load tables</p>												
		<p>.../ns1:DesignDataSet/ns1:LoadTable/ns1:LoadTableProduct Type: restriction of xs:anyType [0..1] Annotation: Product description, only applies for product-specific load tables</p>												
.../DesignDataSet/LoadTable/LoadTableCountry Type: xs:string [0..1]	direct	<p>.../ns1:DesignDataSet/ns1:LoadTable/ns1:LoadTableCountry Type: ns1:CountryIdentISO [0..∞] Annotation: ISO country code of countries for additional load tables</p>												
.../DesignDataSet/LoadTable/SpeedCategory Type: xs:byte [0..1]	direct	<p>.../ns1:DesignDataSet/ns1:LoadTable/ns1:SpeedCategory Type: ns1:Numeric1-5 [1..∞] Annotation: Numeric speed in load table, without speed empty in km/h</p>												
.../DesignDataSet/LoadTable/LoadTableStars Type: xs:byte [0..1]	direct	<p>.../ns1:DesignDataSet/ns1:LoadTable/ns1:LoadTableStars Type: restriction of xs:integer [0..1] Annotation: Number of load table stars. Currently recognized values/codes: 1 = Authorised to run loaded in trains up to 100 km/h with a brake that does not meet all the requirements for 100 km/h conditions 2 = Authorised to run loaded in trains up to 120 km/h with a brake that does not meet all the requirements for 120 km/h conditions 3 = Authorised to run loaded in trains up to 120 km/h with a brake that does not meet all the requirements for 120 km/h conditions. Wagon is fitted with an automatic load-proportional braking system.</p>												
.../DesignDataSet/LoadTable/RouteClassPayloads Type: restriction of xs:anyType [1..∞]	direct	<p>.../ns1:DesignDataSet/ns1:LoadTable/ns1:RouteClassPayloads Type: restriction of xs:anyType [1..∞]</p>												
.../LoadTable/RouteClassPayloads/RouteClass	direct	<p>.../ns1:LoadTable/ns1:RouteClassPayloads/ns1:RouteClass Type:</p>												



Connections		Nodes
Type: xs:string		<p>Annotation: Indication of the route class (based on CEN EN 15528: line categories for managing the interface between load limits of vehicles on infrastructure). All the codes in this code list refer to CEN EN 15528: line categories for managing the interface between load limits of vehicles on infrastructure New codes added: C D E F G CM2 (M2 for those who accept 2 Alphanumeric) CM3 (M3 for those who accept 2 Alphanumeric) CM4 (M4 for those who accept 2 Alphanumeric) CM CE Note: some existing applications are not able to handle more than two characters for the value of this code. Therefore, the documentation of the codes should contain the hint given in the table above (e.g. "(M2 for those who accept 2 Alphanumeric)")</p>
.../LoadTable/RouteClassPayloads/MaxPayload Type: xs:decimal	direct	<p>.../ns1:LoadTable/ns1:RouteClassPayloads/ns1:MaxPayload Type: restriction of xs:decimal [1..∞] Annotation: Maximum payload in tonns of line category; number of entries must fit to number of entries in SpeedCategory</p>
.../RollingStockDataset/DesignDataSet/MaxSpeedEmpty Type: xs:byte	direct	<p>ns1:RollingStockDataset/ns1:DesignDataSet/ns1:MaxSpeedEmpty Type: restriction of xs:integer Annotation: Maxumum speed conditions empty arising rom wagon construction characteristics (in km)</p>
.../RollingStockDataset/DesignDataSet/AirBrake Type: restriction of xs:anyType	direct	<p>ns1:RollingStockDataset/ns1:DesignDataSet/ns1:AirBrake Type: restriction of xs:anyType Annotation: Characteristics of Air Brakes</p>
.../DesignDataSet/AirBrake/NumberOfBrakes Type: xs:byte	direct	<p>.../ns1:DesignDataSet/ns1:AirBrake/ns1:NumberOfBrakes Type: ns1:Numeric2-2 Annotation: Number of air brakes</p>
.../DesignDataSet/AirBrake/BrakeSystem Type: xs:string	direct	<p>.../ns1:DesignDataSet/ns1:AirBrake/ns1:BrakeSystem Type: restriction of xs:string [0..1] Annotation: Abbreviation of air brake system. Following values are examples: Kk; Dr; Bo; Hik; Bd; Ch; O; KE; WE; DK; WU; WA; DM; MH, SW; KE 435; through brake pipe</p>
.../DesignDataSet/AirBrake/AirBrakeType Type: xs:byte	direct	<p>.../ns1:DesignDataSet/ns1:AirBrake/ns1:AirBrakeType Type: Annotation: Classification of air brake. additional code: 8 No air brake or brake pipe The code is defined in UIC Leaflet 920-13.</p>
.../DesignDataSet/AirBrake/BrakingPowerVariationDevice Type: xs:byte	direct	<p>.../ns1:DesignDataSet/ns1:AirBrake/ns1:BrakingPowerVariationDevice Type: Annotation: Coding in 404-2, chapter 1.8</p>
.../DesignDataSet/AirBrake/AirBrakedMass Type: xs:byte	direct	<p>.../ns1:DesignDataSet/ns1:AirBrake/ns1:AirBrakedMass Type: Annotation: According type of airbrake</p>
.../DesignDataSet/AirBrake/LoadChangeDevice Type: restriction of xs:anyType	direct	<p>.../ns1:DesignDataSet/ns1:AirBrake/ns1:LoadChangeDevice Type: restriction of xs:anyType [0..1] Annotation: Specific weights for change over air brake systems</p>
.../AirBrake/LoadChangeDevice/ChangeOverWeight Type: xs:byte	direct	<p>.../ns1:AirBrake/ns1:LoadChangeDevice/ns1:ChangeOverWeight Type: ns1:Numeric3-3 Annotation: Change over weight of braked weight in tonns variation device</p>
.../AirBrake/LoadChangeDevice/AirBrakedMassLoaded Type: xs:byte	direct	<p>.../ns1:AirBrake/ns1:LoadChangeDevice/ns1:AirBrakedMassLoaded Type: ns1:Numeric3-3</p>



Connections		Nodes
.../DesignDataSet/AirBrake/BrakeSpecialCharacteristics Type: xs:byte	direct	Annotation: Braked weight in tonns loaded for change over weight .../ns1:DesignDataSet/ns1:AirBrake/ns1:BrakeSpecialCharacteristics Type: Annotation: General brake characteristics: Should be made as the Code List. The values refer to UIC leaflet 920-13: 0 = No special characteristic (graduated release brake with cast iron blocks) "GG" 1 = Disc brake 2 = Composite brake blocks 3 = Single release brake 4 = Single release brake with composite brake blocks 5 = L-Brake 6 = LL-Brake 9 = Non-coded information
.../RollingStockDataset/DesignDataSet/HandBrake Type: restriction of xs:anyType	direct	ns1:RollingStockDataset/ns1:DesignDataSet/ns1:HandBrake Type: restriction of xs:anyType
.../DesignDataSet/HandBrake/HandBrakeType Type: xs:byte	direct	.../ns1:DesignDataSet/ns1:HandBrake/ns1:HandBrakeType Type: Annotation: Classification of hand brake: 0 No hand brake 1 Ground-operated hand brake 2 Platform-operated hand brake
.../DesignDataSet/HandBrake/HandBrakedWeight Type: xs:decimal	direct	.../ns1:DesignDataSet/ns1:HandBrake/ns1:HandBrakedWeight Type: restriction of xs:decimal [0..1] Annotation: Braked weight of the hand brake in tons
		.../ns1:DesignDataSet/ns1:HandBrake/ns1:ParkingBrakeForce Type: restriction of xs:decimal [0..1] Annotation: Parking force of the hand brake measured in kN, with one fraction digit (with comma!)
.../DesignDataSet/HandBrake/MaxParkingBrakeGradient Type: xs:byte	direct	.../ns1:DesignDataSet/ns1:HandBrake/ns1:MaxParkingBrakeGradient Type: restriction of xs:integer [0..1] Annotation: Maximum gradient for parking only with hand brake measured in °
.../RollingStockDataset/DesignDataSet/BrakeBlock Type: restriction of xs:anyType	direct	ns1:RollingStockDataset/ns1:DesignDataSet/ns1:BrakeBlock Type: restriction of xs:anyType [0..1] Annotation: Characteristics of brake blocks
.../DesignDataSet/BrakeBlock/BrakeBlockName Type: xs:string	direct	.../ns1:DesignDataSet/ns1:BrakeBlock/ns1:BrakeBlockName Type: restriction of xs:string [0..1] Annotation: Name of the brake block type, including the length in mm
		.../ns1:DesignDataSet/ns1:BrakeBlock/ns1:CompositeBrakeBlockRetrofitted Type: xs:boolean [0..1] Annotation: Indication if composite brake blocks are retrofitted or originally equipped
		.../ns1:DesignDataSet/ns1:BrakeBlock/ns1:CompositeBrakeBlockInstallationDate Type: xs:date [0..1] Annotation: Date of composite brake block installation, for originally equipped wagon = date put into service
		ns1:RollingStockDataset/ns1:DesignDataSet/ns1:MaxLengthOfLoad Type: restriction of xs:integer [0..1] Annotation: Measured in mm
		ns1:RollingStockDataset/ns1:DesignDataSet/ns1:LoadArea Type: restriction of xs:decimal [0..1] Annotation: Payload Area - measured in M2
		ns1:RollingStockDataset/ns1:DesignDataSet/ns1:HeightOfLoadingPlaneUnladen Type: ns1:Numeric1-5 [0..1] Annotation: Height of the loading plane when wagon is empty



Connections		Nodes
		measured in mm
		ns1:RollingStockDataset/ns1:DesignDataSet/ns1:RemovableAccessories Type: restriction of xs:anyType [0..∞]
.../RollingStockDataset/DesignDataSet/LoadingCapacity Type: xs:decimal	direct	ns1:RollingStockDataset/ns1:DesignDataSet/ns1:LoadingCapacity Type: restriction of xs:decimal [0..1] Annotation: Usable Cube - measured in M3
.../RollingStockDataset/DesignDataSet/MaxGrossWeight Type: xs:int	direct	ns1:RollingStockDataset/ns1:DesignDataSet/ns1:MaxGrossWeight Type: ns1:WeightValueKilo Annotation: Weight of max Gross Load Weight plus the tare weight of the equipment
.../RollingStockDataset/DesignDataSet/MaxSpeedLoad Type: xs:byte	direct	ns1:RollingStockDataset/ns1:DesignDataSet/ns1:MaxSpeedLoad Type: restriction of xs:integer Annotation: Maximum speed conditions according to load
.../RollingStockDataset/DesignDataSet/VapourReturnSystem Type: xs:boolean	direct	ns1:RollingStockDataset/ns1:DesignDataSet/ns1:VapourReturnSystem Type: xs:boolean [0..1] Annotation: Indication if tank wagon is equipped with a vapour return system
.../RollingStockDataset/DesignDataSet/FerryPermittedFlag Type: xs:boolean	direct	ns1:RollingStockDataset/ns1:DesignDataSet/ns1:FerryPermittedFlag Type: xs:boolean [0..1]
		ns1:RollingStockDataset/ns1:DesignDataSet/ns1:FerryRampAngle Type: restriction of xs:decimal [0..1] Annotation: Maximum allowed angle of the ferry ramp (in grades: °)
.../RollingStockDataset/DesignDataSet/TemperatureRange Type: restriction of xs:anyType	direct	ns1:RollingStockDataset/ns1:DesignDataSet/ns1:TemperatureRange Type: restriction of xs:anyType [0..1]
.../DesignDataSet/TemperatureRange/MaxTemp Type: xs:byte	direct	.../ns1:DesignDataSet/ns1:TemperatureRange/ns1:MaxTemp Type: restriction of xs:int Annotation: Maximum Temperature in °Celsius
.../DesignDataSet/TemperatureRange/MinTemp Type: xs:byte	direct	.../ns1:DesignDataSet/ns1:TemperatureRange/ns1:MinTemp Type: restriction of xs:int Annotation: Minimum temperature in ° Celsius
		ns1:RollingStockDataset/ns1:DesignDataSet/ns1:NoiseByPassLimit Type: restriction of xs:integer [0..1] Annotation: Noise limit on reference track
		ns1:RollingStockDataset/ns1:DesignDataSet/ns1:Noise Type: restriction of xs:integer [0..1] Annotation: Noise level at stand still in decibels
		ns1:RollingStockDataset/ns1:DesignDataSet/ns1:TechnicalForwardingRestrictions Type: ns1:RestrictionCodes [0..∞] Annotation: This element is designed to identify any special aspects or restrictions which might be relevant to wagon handling operations in train formation yards or in trains because of technical feature of the wagon or its load- All codes of Transport restrictions for Freight Traffic (cf. UIC 920-13) and Passengers Traffic are in the same list which is contained in the code list RestrictionCodes. In this element we use only those codes that have "T - Technical" characteristics and "F - Freight" as the type. The codes below are sorted out from the RestrictionCodes. Only these codes should be used in this element. F = Freight P = Passenger T = Technical D = Damage L = Load Code F or P Description

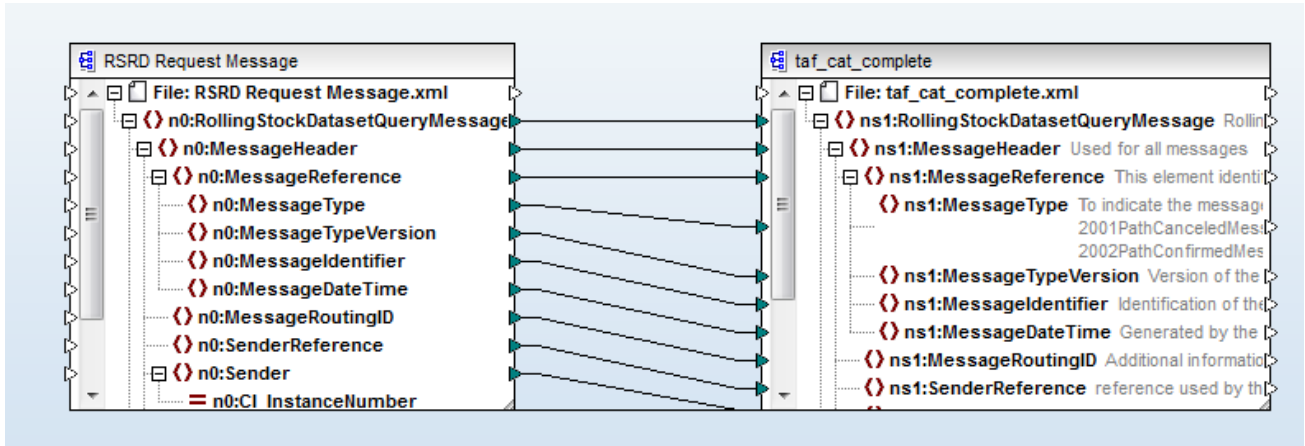
Connections		Nodes
		94 F Gas carrying wagon without orange side stripe <div style="text-align: right; margin-right: 100px;"> x x x </div> <div style="text-align: center; margin-top: 20px;"> x </div>
.../RollingStockDataset/DesignDataSet/DateLastOverhaul Type: xs:date	<i>direct</i>	ns1:RollingStockDataset/ns1:DesignDataSet/ns1:DateLastOverhaul Type: xs:date Annotation: Date of the last overhaul, if yet no overhaul date of putting into service
.../RollingStockDataset/DesignDataSet/DateNextOverhaul Type: xs:date	<i>direct</i>	ns1:RollingStockDataset/ns1:DesignDataSet/ns1:DateNextOverhaul Type: xs:date
.../RollingStockDataset/DesignDataSet/PermittedTolerance Type: xs:byte	<i>direct</i>	ns1:RollingStockDataset/ns1:DesignDataSet/ns1:PermittedTolerance Type: restriction of xs:integer Annotation: Permitted tolerance after date of overhaul (in months)
.../RollingStockDataset/DesignDataSet/DateOfNextTankInspection Type: xs:date	<i>direct</i>	ns1:RollingStockDataset/ns1:DesignDataSet/ns1:DateOfNextTankInspection Type: xs:date [0..1] Annotation: Date of the next tank inspection, applies only for tank wagons

Program code in JAVA used for mapping test of map the RSRD2 response message provided by RSRD² with the RSRD Data set in the TAF TSI catalogue can be found on Annex, item a).

Test run on :	02 Dec 2015
Test result :	passed
Test run by:	gutiero
Test validated:	vargami

6.3 To map the RSRD² Request message provided by RSRD² with the RSRD query in the TAF TSI catalogue

The results are the expected ones. The mapping made between the message delivered by RSRD², RSRD Request Message.xml, and the RollingStockDatasetQueryMessage defined in the TAF TSI catalogue, shows that all the elements can be directly mapped. In this test, no divergence has been observed in such a way that all the elements be mapped without having any connection missing.



The results of this test can be observed on the following table:

Mapping **RSRD² Request_Mapping.mfd** (C:\Users\gutiero\Desktop\Reporting\Test\RSRD\RSRD² Request_Mapping.mfd)

Input **RSRD Request Message** ([RSRD Request Message.xsd](#))

Nodes	Connections	
File: RSRD Request Message.xml Type: string		
n0:RollingStockDatasetQueryMessage Type: restriction of xs:anyType [0..1]	direct	ns1:RollingStockDatasetQueryMessage Type: restriction of xs:anyType [0..1] Annotation: Rolling Stock administrative and Technical Dataset
n0:RollingStockDatasetQueryMessage/n0:MessageHeader Type: restriction of xs:anyType	direct	ns1:RollingStockDatasetQueryMessage/ns1:MessageHeader Type: restriction of xs:anyType Annotation: Used for all messages
n0:RollingStockDatasetQueryMessage/n0:MessageHeader/n0:MessageReference Type: restriction of xs:anyType	direct	ns1:RollingStockDatasetQueryMessage/ns1:MessageHeader/ns1:MessageReference Type: restriction of xs:anyType Annotation: This element identifies the message
.../n0:MessageHeader/n0:MessageReference/n0:MessageType Type: xs:short	direct	.../ns1:MessageHeader/ns1:MessageReference/ns1:MessageType Type: restriction of xs:integer Annotation: To indicate the message type transmitted or referred to. The following list was agreed within the sector: 2001 PathCanceledMessage 2002 PathConfirmedMessage 2003 PathDetailsMessage 2004 PathDetailsRefusedMessage 2005 PathNotAvailableMessage 2006 PathRequestMessage 2007 ReceiptConfirmationMessage 3001 TrainAcceptedMessage 3002 TrainAtStartMessage 3003 TrainCompositionMessage 3004 TrainNotSuitableMessage 3005 TrainPositionMessage 3006 TrainReadyMessage 4001 TrainDelayCauseMessage 4002 TrainDelayPerformanceMessage 4003 TrainForecastAtReportingLocationMessage 4004 TrainRunningForecastMessage 4005 TrainRunningInformationMessage 4006 TrainRunningInterruptionMessage



		<p>5001 AlertMessage 5002 WagonArrivalNoticeMessage 5003 WagonDeliveryNoticeMessage 5004 WagonDepartureNoticeMessage 5005 WagonDeviationMessage 5006 WagonETI_ETA_Message 5007 WagonExceptionMessage 5008 WagonExceptionReasonMessage 5009 WagonInterchangeNoticeMessage 5010 WagonInterchangeSubNoticeMessage 5011 WagonOrderMessage 5012 WagonReceivedAtInterchangeMessage 5013 WagonRefusedAtInterchangeMessage 5014 WagonReleaseNoticeMessage 5015 WagonYardArrivalMessage 5016 WagonYardDepartureMessage 6001 IRN_DatasetMessage 6002 LocationFileDatasetMessage 6003 RollingStockDatasetMessage</p>
<p>.../n0:MessageHeader/n0:MessageReference/n0:Message TypeVersion Type: xs:string</p>	<p>direct</p>	<p>.../ns1:MessageHeader/ns1:MessageReference/ns1:Message TypeVersion Type: restriction of xs:string Annotation: Version of the Message Type</p>
<p>.../n0:MessageHeader/n0:MessageReference/n0:MessageI dentifier Type: xs:string</p>	<p>direct</p>	<p>.../ns1:MessageHeader/ns1:MessageReference/ns1:Message Identifier Type: ns1:FreeText Annotation: Identification of the Message</p>
<p>.../n0:MessageHeader/n0:MessageReference/n0:Message DateTime Type: xs:dateTime</p>	<p>direct</p>	<p>.../ns1:MessageHeader/ns1:MessageReference/ns1:Message DateTime Type: xs:dateTime Annotation: Generated by the common Interface</p>
<p>n0:RollingStockDatasetQueryMessage/n0:MessageHeader /n0:MessageRoutingID Type: xs:byte</p>	<p>direct</p>	<p>ns1:RollingStockDatasetQueryMessage/ns1:MessageHeader /ns1:MessageRoutingID Type: ns1:Numeric2-2 [0..1] Annotation: Additional information used to route the message to the correct receiving application (if needed)</p>
<p>n0:RollingStockDatasetQueryMessage/n0:MessageHeader /n0:SenderReference Type: xs:string</p>	<p>direct</p>	<p>ns1:RollingStockDatasetQueryMessage/ns1:MessageHeader /ns1:SenderReference Type: ns1:FreeText [0..1] Annotation: reference used by the sender (e.g. FTP file name)</p>
<p>n0:RollingStockDatasetQueryMessage/n0:MessageHeader /n0:Sender Type: extension of xs:short</p>	<p>direct</p>	<p>ns1:RollingStockDatasetQueryMessage/ns1:MessageHeader /ns1:Sender Type: extension of ns1:CompanyCode Annotation: The sender of the message</p>
<p>.../n0:MessageHeader/n0:Sender/@n0:CI_InstanceNum ber Type: xs:byte</p>	<p>direct</p>	<p>.../ns1:MessageHeader/ns1:Sender/@ns1:CI_InstanceNum ber Type: ns1:Numeric2-2 [0..1] Annotation: Number of a Common Interface Instance for the same Company</p>
<p>n0:RollingStockDatasetQueryMessage/n0:MessageHeader /n0:Recipient Type: extension of xs:short</p>	<p>direct</p>	<p>ns1:RollingStockDatasetQueryMessage/ns1:MessageHeader /ns1:Recipient Type: extension of ns1:CompanyCode Annotation: Receiver of the message</p>
<p>.../n0:MessageHeader/n0:Recipient/@n0:CI_InstanceNum ber Type: xs:byte</p>	<p>direct</p>	<p>.../ns1:MessageHeader/ns1:Recipient/@ns1:CI_InstanceNum ber Type: ns1:Numeric2-2 [0..1] Annotation: Number of a Common Interface Instance for the same Company</p>
<p>n0:RollingStockDatasetQueryMessage/n0:WagonNumberF reight Type: xs:long [1..∞]</p>	<p>direct</p>	<p>ns1:RollingStockDatasetQueryMessage/ns1:WagonNumber Freight Type: ns1:WagonIdent [1..∞]</p>



		Annotation: Identifies uniquely the freight wagon by its number
--	--	---

Output **taf_cat_complete** ([taf_cat_complete.xsd](#))

Connections		Nodes
		File: taf_cat_complete.xml Type: string
n0:RollingStockDatasetQueryMessage Type: restriction of xs:anyType [0..1]	<i>direct</i>	ns1:RollingStockDatasetQueryMessage Type: restriction of xs:anyType [0..1] Annotation: Rolling Stock administrative and Technical Dataset
n0:RollingStockDatasetQueryMessage/n0:MessageHeader Type: restriction of xs:anyType	<i>direct</i>	ns1:RollingStockDatasetQueryMessage/ns1:MessageHeader Type: restriction of xs:anyType Annotation: Used for all messages
n0:RollingStockDatasetQueryMessage/n0:MessageHeader/n0:MessageReference Type: restriction of xs:anyType	<i>direct</i>	ns1:RollingStockDatasetQueryMessage/ns1:MessageHeader/ns1:MessageReference Type: restriction of xs:anyType Annotation: This element identifies the message
.../n0:MessageHeader/n0:MessageReference/n0:MessageReferenceType Type: xs:short	<i>direct</i>	.../ns1:MessageHeader/ns1:MessageReference/ns1:MessageReferenceType Type: restriction of xs:integer Annotation: To indicate the message type transmitted or referred to. The following list was agreed within the sector: 2001 PathCanceledMessage 2002 PathConfirmedMessage 2003 PathDetailsMessage 2004 PathDetailsRefusedMessage 2005 PathNotAvailableMessage 2006 PathRequestMessage 2007 ReceiptConfirmationMessage 3001 TrainAcceptedMessage 3002 TrainAtStartMessage 3003 TrainCompositionMessage 3004 TrainNotSuitableMessage 3005 TrainPositionMessage 3006 TrainReadyMessage 4001 TrainDelayCauseMessage 4002 TrainDelayPerformanceMessage 4003 TrainForecastAtReportingLocationMessage 4004 TrainRunningForecastMessage 4005 TrainRunningInformationMessage 4006 TrainRunningInterruptionMessage 5001 AlertMessage 5002 WagonArrivalNoticeMessage 5003 WagonDeliveryNoticeMessage 5004 WagonDepartureNoticeMessage 5005 WagonDeviationMessage 5006 WagonETI_ETA_Message 5007 WagonExceptionMessage 5008 WagonExceptionReasonMessage 5009 WagonInterchangeNoticeMessage 5010 WagonInterchangeSubNoticeMessage 5011 WagonOrderMessage 5012 WagonReceivedAtInterchangeMessage 5013 WagonRefusedAtInterchangeMessage 5014 WagonReleaseNoticeMessage 5015 WagonYardArrivalMessage 5016 WagonYardDepartureMessage 6001 IRN_DatasetMessage 6002 LocationFileDatasetMessage 6003 RollingStockDatasetMessage
.../n0:MessageHeader/n0:MessageReference/n0:MessageReferenceTypeVersion Type: xs:string	<i>direct</i>	.../ns1:MessageHeader/ns1:MessageReference/ns1:MessageReferenceTypeVersion Type: restriction of xs:string



.../n0:MessageHeader/n0:MessageReference/n0:MessageIdentifier Type: xs:string	direct	Annotation: Version of the Message Type .../ns1:MessageHeader/ns1:MessageReference/ns1:MessageIdentifier Type: ns1:FreeText Annotation: Identification of the Message
.../n0:MessageHeader/n0:MessageReference/n0:MessageDateTime Type: xs:dateTime	direct	.../ns1:MessageHeader/ns1:MessageReference/ns1:MessageDateTime Type: xs:dateTime Annotation: Generated by the common Interface
n0:RollingStockDatasetQueryMessage/n0:MessageHeader/n0:MessageRoutingID Type: xs:byte	direct	ns1:RollingStockDatasetQueryMessage/ns1:MessageHeader/ns1:MessageRoutingID Type: ns1:Numeric2-2 [0..1] Annotation: Additional information used to route the message to the correct receiving application (if needed)
n0:RollingStockDatasetQueryMessage/n0:MessageHeader/n0:SenderReference Type: xs:string	direct	ns1:RollingStockDatasetQueryMessage/ns1:MessageHeader/ns1:SenderReference Type: ns1:FreeText [0..1] Annotation: reference used by the sender (e.g. FTP file name)
n0:RollingStockDatasetQueryMessage/n0:MessageHeader/n0:Sender Type: extension of xs:short	direct	ns1:RollingStockDatasetQueryMessage/ns1:MessageHeader/ns1:Sender Type: extension of ns1:CompanyCode Annotation: The sender of the message
.../n0:MessageHeader/n0:Sender/@n0:CI_InstanceNumber Type: xs:byte	direct	.../ns1:MessageHeader/ns1:Sender/@ns1:CI_InstanceNumber Type: ns1:Numeric2-2 [0..1] Annotation: Number of a Common Interface Instance for the same Company
n0:RollingStockDatasetQueryMessage/n0:MessageHeader/n0:Recipient Type: extension of xs:short	direct	ns1:RollingStockDatasetQueryMessage/ns1:MessageHeader/ns1:Recipient Type: extension of ns1:CompanyCode Annotation: Receiver of the message
.../n0:MessageHeader/n0:Recipient/@n0:CI_InstanceNumber Type: xs:byte	direct	.../ns1:MessageHeader/ns1:Recipient/@ns1:CI_InstanceNumber Type: ns1:Numeric2-2 [0..1] Annotation: Number of a Common Interface Instance for the same Company
n0:RollingStockDatasetQueryMessage/n0:WagonNumberFreight Type: xs:long [1..∞]	direct	ns1:RollingStockDatasetQueryMessage/ns1:WagonNumberFreight Type: ns1:WagonIdent [1..∞] Annotation: Identifies uniquely the freight wagon by its number

Program code in JAVA used for mapping test of map the RSRD² request message provided by RSRD2 with the RSRD Data set query in the TAF TSI catalogue can be found on Annex, item b).

Test run on :	02 Dec 2015
Test result :	passed
Test run by:	gutiero
Test validated:	vargami

7 Conclusions

The tests performed by ERA based on agreement with UIP-RSRD² to validate the compliance of the messages exchanged by this database are satisfactory (all three test cases “passed”). These messages are fully compliant with those described in the Commission Regulation (EU) No 1305/2014 of 11 December 2014, TAF TSI, and with the messages defined in the ERA-TD-105: TAF TSI - Annex D.2 : Appendix F - TAF TSI Data and Message Model, Version 2.1, so called TAF TSI catalogue.



Therefore, the organization UIP-RSRD² may use the results of the assessment performed by ERA as a proof of the compliance of the RSRD² tool.

Annex

a) Program code in JAVA used for mapping test of map the RSRD² response message provided by RSRD² with the RSRD Data set in the TAF TSI catalogue:

```
/**
 * MappingMapTotaf_cat_complete.java
 *
 * This file was generated by MapForce 2015sp2.
 *
 * YOU SHOULD NOT MODIFY THIS FILE, BECAUSE IT WILL BE
 * OVERWRITTEN WHEN YOU RE-RUN CODE GENERATION.
 *
 * Refer to the MapForce Documentation for further details.
 * http://www.altova.com/mapforce
 */
package com.mapforce;
import com.altova.mapforce.*;
import com.altova.types.*;
import com.altova.xml.*;
import java.util.*;

public class MappingMapTotaf_cat_complete extends com.altova.TraceProvider
{
    private boolean runDoesCloseAll = true;
    public void setCloseObjectsAfterRun(boolean c) {runDoesCloseAll = c;}
    public boolean getCloseObjectsAfterRun() {return runDoesCloseAll;}

    static class main implements IEnumerable
    {
        com.altova.mapforce.IMFNode
var1_instance_RSRD2_Wagons_338079300000;

        public main(com.altova.mapforce.IMFNode
var1_instance_RSRD2_Wagons_338079300000)
        {
            this.var1_instance_RSRD2_Wagons_338079300000 =
var1_instance_RSRD2_Wagons_338079300000;
        }

        public IEnumerable enumerator() {return new Enumerator(this);}

        public static class Enumerator implements IEnumerable
```

```
{
    int pos = 0;
    int state = 2;
    Object current;
    main closure;
    com.altova.mapforce.IEnumerable var2_RollingStockDatasetM;
    public Enumerator(main closure)
    {
        this.closure = closure;
    }

    public Object current() {return current;}

    public int position() {return pos;}

    public boolean moveNext() throws Exception
    {
        while (state != 0)
        {
            switch (state)
            {
                case 2:    if (moveNext_2()) return true; break;
            }
        }
        return false;
    }

    private boolean moveNext_2() throws Exception {
        state = 0;
        var2_RollingStockDatasetM = new
com.altova.functions.Core.SequenceCache(com.altova.functions.Core.filterElements(com.a
ltova.functions.Core.createQName("RollingStockDatasetMessage",
"http://www.rsd.com/xsd"), closure.var1_instance_RSRD2_Wagons_33807930000));
        current =
com.altova.functions.Core.createElement(com.altova.functions.Core.createQName("Rolling
StockDataset", "http://www.era.europa.eu/schemes/TAFTSI/2.1"), (new
seq1_join(var2_RollingStockDatasetM)));
        pos++;
        return true;
    }

    public void close()
    {
        try
        {
        }
        catch (Exception e)
        {

```

```
    }
  }
}

static class seq1_join implements IEnumerable
{
    com.altova.mapforce.IEnumerable var1_RollingStockDatasetM;

    public seq1_join(com.altova.mapforce.IEnumerable
var1_RollingStockDatasetM)
    {
        this.var1_RollingStockDatasetM = var1_RollingStockDatasetM;
    }

    public IEnumerator enumerator() {return new Enumerator(this);}

    public static class Enumerator implements IEnumerator
    {
        int pos = 0;
        int state = 1;
        Object current;
        seq1_join closure;
        public Enumerator(seq1_join closure)
        {
            this.closure = closure;
        }

        public Object current() {return current;}

        public int position() {return pos;}

        public boolean moveNext() throws Exception
        {
            while (state != 0)
            {
                switch (state)
                {
                    case 1:    if (moveNext_1()) return true; break;
                    case 2:    if (moveNext_2()) return true; break;
                    case 3:    if (moveNext_3()) return true; break;
                    case 5:    if (moveNext_5()) return true; break;
                }
            }
            return false;
        }

        private boolean moveNext_1() throws Exception {
            state = 2;
        }
    }
}
```

```
        current = com.altova.functions.Core.createNamespace("tap",
"http://www.era.europa.eu/schemes/TAPTSI/1.3");
        pos++;
        return true;
    }
    private boolean moveNext_2() throws Exception {
        state = 3;
        current =
com.altova.functions.Core.createAttribute(com.altova.functions.Core.createQName("xsi:sch
emaLocation", "http://www.w3.org/2001/XMLSchema-instance"),
com.altova.functions.Core.box("http://www.era.europa.eu/schemes/TAFTSI/2.1
C:/Users/gutiero/Desktop/Reporting/Test/RSRD\u00B2/taf_cat_complete.xsd"));
        pos++;
        return true;
    }
    private boolean moveNext_3() throws Exception {
        state = 5;
        if
(!com.altova.functions.Core.exists(closure.var1_RollingStockDatasetM)) {state = 0; return
false; }

        current =
com.altova.functions.Core.createElement(com.altova.functions.Core.createQName("Admini
strativeDataSet", "http://www.era.europa.eu/schemes/TAFTSI/2.1"), (new
seq2_seq_(closure.var1_RollingStockDatasetM));
        pos++;
        return true;
    }
    private boolean moveNext_5() throws Exception {
        state = 0;
        current =
com.altova.functions.Core.createElement(com.altova.functions.Core.createQName("Design
DataSet", "http://www.era.europa.eu/schemes/TAFTSI/2.1"), (new
seq5_join(closure.var1_RollingStockDatasetM));
        pos++;
        return true;
    }

    public void close()
    {
        try
        {
        }
        catch (Exception e)
        {
        }
    }
}
```

```
}
static class seq2_seq_ implements IEnumerable
{
    com.altova.mapforce.IEnumerable var1_RollingStockDatasetM;

    public seq2_seq_(com.altova.mapforce.IEnumerable
var1_RollingStockDatasetM)
    {
        this.var1_RollingStockDatasetM = var1_RollingStockDatasetM;
    }

    public IEnumerator enumerator() {return new Enumerator(this);}

    public static class Enumerator implements IEnumerator
    {
        int pos = 0;
        int state = 1;
        Object current;
        seq2_seq_ closure;
        public Enumerator(seq2_seq_ closure)
        {
            this.closure = closure;
        }

        public Object current() {return current;}

        public int position() {return pos;}

        public boolean moveNext() throws Exception
        {
            while (state != 0)
            {
                switch (state)
                {
                    case 1:    if (moveNext_1()) return true; break;
                    case 2:    if (moveNext_2()) return true; break;
                    case 3:    if (moveNext_3()) return true; break;
                    case 4:    if (moveNext_4()) return true; break;
                    case 5:    if (moveNext_5()) return true; break;
                    case 6:    if (moveNext_6()) return true; break;
                    case 7:    if (moveNext_7()) return true; break;
                    case 8:    if (moveNext_8()) return true; break;
                    case 9:    if (moveNext_9()) return true; break;
                    case 10:   if (moveNext_10()) return true; break;
                }
            }
            return false;
        }
    }
}
```

```
private boolean moveNext_1() throws Exception {
    state = 2;
    current =
com.altova.functions.Core.createElement(com.altova.functions.Core.createQName("Wagon
NumberFreight", "http://www.era.europa.eu/schemes/TAFTSI/2.1"),
com.altova.functions.Core.box(com.altova.CoreTypes.integerToString(com.altova.CoreTyp
es.longToInteger(com.altova.CoreTypes.integerToLong(com.altova.CoreTypes.decimalToI
nteger(com.altova.CoreTypes.parseDecimal(com.altova.CoreTypes.nodeTypeToString((com.alt
ova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.filterElem
ents(com.altova.functions.Core.createQName("WagonNumberFreight",
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.fi
lterElements(com.altova.functions.Core.createQName("AdministrativeDataSet",
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.fi
lterElements(com.altova.functions.Core.createQName("RollingStockDataset",
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(closure.var1_RollingStockD
atasetM)))))))))))));
    pos++;
    return true;
}
private boolean moveNext_2() throws Exception {
    state = 3;
    current =
com.altova.functions.Core.createElement(com.altova.functions.Core.createQName("Registr
ationCountry", "http://www.era.europa.eu/schemes/TAFTSI/2.1"),
com.altova.functions.Core.box(com.altova.CoreTypes.nodeTypeToString((com.altova.mapforce.I
MFNode)com.altova.functions.Core.first(com.altova.functions.Core.filterElements(com.altov
a.functions.Core.createQName("RegistrationCountry", "http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.fi
lterElements(com.altova.functions.Core.createQName("AdministrativeDataSet",
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.fi
lterElements(com.altova.functions.Core.createQName("RollingStockDataset",
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(closure.var1_RollingStockD
atasetM)))))))))))));
    pos++;
    return true;
}
private boolean moveNext_3() throws Exception {
    state = 4;
    current =
com.altova.functions.Core.createElement(com.altova.functions.Core.createQName("DateP
utIntoService", "http://www.era.europa.eu/schemes/TAFTSI/2.1"),
com.altova.functions.Core.box(com.altova.CoreTypes.dateToString(com.altova.CoreTypes.
parseDate(com.altova.CoreTypes.nodeTypeToString((com.altova.mapforce.IMFNode)com.altov
a.functions.Core.first(com.altova.functions.Core.filterElements(com.altova.functions.Core.cr
```



```
eateQName("DatePutIntoService", "http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.fi
lterElements(com.altova.functions.Core.createQName("AdministrativeDataSet",
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.fi
lterElements(com.altova.functions.Core.createQName("RollingStockDataset",
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(closure.var1_RollingStockD
atasetM))))))));
        pos++;
        return true;
    }
    private boolean moveNext_4() throws Exception {
        state = 5;
        current =
com.altova.functions.Core.createElement(com.altova.functions.Core.createQName("Suspe
nsionOfAuthorisation", "http://www.era.europa.eu/schemes/TAFTSI/2.1"),
com.altova.functions.Core.box(com.altova.CoreTypes.booleanToString(com.altova.CoreTy
pes.parseBoolean(com.altova.CoreTypes.nodeToString((com.altova.mapforce.IMFNode)co
m.altova.functions.Core.first(com.altova.functions.Core.filterElements(com.altova.functions.
Core.createQName("SuspensionOfAuthorisation", "http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.fi
lterElements(com.altova.functions.Core.createQName("AdministrativeDataSet",
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.fi
lterElements(com.altova.functions.Core.createQName("RollingStockDataset",
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(closure.var1_RollingStockD
atasetM))))))));
        pos++;
        return true;
    }
    private boolean moveNext_5() throws Exception {
        state = 6;
        current =
com.altova.functions.Core.createElement(com.altova.functions.Core.createQName("Chann
elTunnelPermitted", "http://www.era.europa.eu/schemes/TAFTSI/2.1"),
com.altova.functions.Core.box(com.altova.CoreTypes.booleanToString(com.altova.CoreTy
pes.parseBoolean(com.altova.CoreTypes.nodeToString((com.altova.mapforce.IMFNode)co
m.altova.functions.Core.first(com.altova.functions.Core.filterElements(com.altova.functions.
Core.createQName("ChannelTunnelPermitted", "http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.fi
lterElements(com.altova.functions.Core.createQName("AdministrativeDataSet",
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.fi
lterElements(com.altova.functions.Core.createQName("RollingStockDataset",
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(closure.var1_RollingStockD
atasetM))))))));
```

```
        pos++;
        return true;
    }
    private boolean moveNext_6() throws Exception {
        state = 7;
        current =
com.altova.functions.Core.createElement(com.altova.functions.Core.createQName("KeeperShortNameVKM", "http://www.era.europa.eu/schemes/TAFTSI/2.1"),
com.altova.functions.Core.box(com.altova.CoreTypes.nodeTypeToString((com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.filterElements(com.altova.functions.Core.createQName("KeeperShortNameVKM", "http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.filterElements(com.altova.functions.Core.createQName("AdministrativeDataSet",
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.filterElements(com.altova.functions.Core.createQName("RollingStockDataset",
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(closure.var1_RollingStockDatasetM))))))))));
        pos++;
        return true;
    }
    private boolean moveNext_7() throws Exception {
        state = 8;
        current =
com.altova.functions.Core.createElement(com.altova.functions.Core.createQName("ECM", "http://www.era.europa.eu/schemes/TAFTSI/2.1"),
com.altova.functions.Core.box(com.altova.CoreTypes.nodeTypeToString((com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.filterElements(com.altova.functions.Core.createQName("ECM", "http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.filterElements(com.altova.functions.Core.createQName("AdministrativeDataSet",
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.filterElements(com.altova.functions.Core.createQName("RollingStockDataset",
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(closure.var1_RollingStockDatasetM))))))))));
        pos++;
        return true;
    }
    private boolean moveNext_8() throws Exception {
        state = 9;
        current =
com.altova.functions.Core.createElement(com.altova.functions.Core.createQName("ECMCertificate", "http://www.era.europa.eu/schemes/TAFTSI/2.1"), (new
seq3_seq_(closure.var1_RollingStockDatasetM)));
        pos++;
        return true;
    }

```



```
    }
    private boolean moveNext_9() throws Exception {
        state = 10;
        current =
com.altova.functions.Core.createElement(com.altova.functions.Core.createQName("Interop
Capability", "http://www.era.europa.eu/schemes/TAFTSI/2.1"),
com.altova.functions.Core.box(com.altova.CoreTypes.integerToString(com.altova.CoreTyp
es.longToInteger(com.altova.CoreTypes.intToLong(com.altova.CoreTypes.longToInt(com.a
ltova.CoreTypes.integerToLong(com.altova.CoreTypes.decimalToInteger(com.altova.CoreT
ypes.parseDecimal(com.altova.CoreTypes.nodeToString((com.altova.mapforce.IMFNode)c
om.altova.functions.Core.first(com.altova.functions.Core.filterElements(com.altova.function
s.Core.createQName("InteropCapability", "http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.fi
lterElements(com.altova.functions.Core.createQName("AdministrativeDataSet",
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.fi
lterElements(com.altova.functions.Core.createQName("RollingStockDataset",
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(closure.var1_RollingStockD
atasetM)))))))))))))))));
        pos++;
        return true;
    }
    private boolean moveNext_10() throws Exception {
        state = 0;
        current =
com.altova.functions.Core.createElement(com.altova.functions.Core.createQName("GCUW
agon", "http://www.era.europa.eu/schemes/TAFTSI/2.1"),
com.altova.functions.Core.box(com.altova.CoreTypes.booleanToString(com.altova.CoreTy
pes.parseBoolean(com.altova.CoreTypes.nodeToString((com.altova.mapforce.IMFNode)co
m.altova.functions.Core.first(com.altova.functions.Core.filterElements(com.altova.functions.
Core.createQName("GCUWagon", "http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.fi
lterElements(com.altova.functions.Core.createQName("AdministrativeDataSet",
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.fi
lterElements(com.altova.functions.Core.createQName("RollingStockDataset",
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(closure.var1_RollingStockD
atasetM)))))))))))))))));
        pos++;
        return true;
    }

    public void close()
    {
        try
        {
```

```
        }
        catch (Exception e)
        {
        }
    }
}

static class seq3_seq_ implements IEnumerable
{
    com.altova.mapforce.IEnumerable var1_RollingStockDatasetM;

    public seq3_seq_(com.altova.mapforce.IEnumerable
var1_RollingStockDatasetM)
    {
        this.var1_RollingStockDatasetM = var1_RollingStockDatasetM;
    }

    public IEnumerator enumerator() {return new Enumerator(this);}

    public static class Enumerator implements IEnumerator
    {
        int pos = 0;
        int state = 1;
        Object current;
        seq3_seq_ closure;
        public Enumerator(seq3_seq_ closure)
        {
            this.closure = closure;
        }

        public Object current() {return current;}

        public int position() {return pos;}

        public boolean moveNext() throws Exception
        {
            while (state != 0)
            {
                switch (state)
                {
                    case 1:    if (moveNext_1()) return true; break;
                    case 2:    if (moveNext_2()) return true; break;
                    case 3:    if (moveNext_3()) return true; break;
                    case 4:    if (moveNext_4()) return true; break;
                    case 5:    if (moveNext_5()) return true; break;
                    case 6:    if (moveNext_6()) return true; break;
                }
            }
        }
    }
}
```

```
        return false;
    }

    private boolean moveNext_1() throws Exception {
        state = 2;
        current =
com.altova.functions.Core.createElement(com.altova.functions.Core.createQName("EINNu
mber", "http://www.era.europa.eu/schemes/TAFTSI/2.1"), (new
seq4_seq_(closure.var1_RollingStockDatasetM));
        pos++;
        return true;
    }

    private boolean moveNext_2() throws Exception {
        state = 3;
        current =
com.altova.functions.Core.createElement(com.altova.functions.Core.createQName("ECMC
ertificateValidFrom", "http://www.era.europa.eu/schemes/TAFTSI/2.1"),
com.altova.functions.Core.box(com.altova.CoreTypes.dateToString(com.altova.CoreTypes.
parseDate(com.altova.CoreTypes.nodeToString((com.altova.mapforce.IMFNode)com.altov
a.functions.Core.first(com.altova.functions.Core.filterElements(com.altova.functions.Core.cr
eateQName("ECMCertificateValidFrom", "http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.fi
lterElements(com.altova.functions.Core.createQName("ECMCertificate",
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.fi
lterElements(com.altova.functions.Core.createQName("AdministrativeDataSet",
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.fi
lterElements(com.altova.functions.Core.createQName("RollingStockDataset",
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(closure.var1_RollingStockD
atasetM))))))))))))));
        pos++;
        return true;
    }

    private boolean moveNext_3() throws Exception {
        state = 4;
        current =
com.altova.functions.Core.createElement(com.altova.functions.Core.createQName("ECMC
ertificateValidTo", "http://www.era.europa.eu/schemes/TAFTSI/2.1"),
com.altova.functions.Core.box(com.altova.CoreTypes.dateToString(com.altova.CoreTypes.
parseDate(com.altova.CoreTypes.nodeToString((com.altova.mapforce.IMFNode)com.altov
a.functions.Core.first(com.altova.functions.Core.filterElements(com.altova.functions.Core.cr
eateQName("ECMCertificateValidTo", "http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.fi
lterElements(com.altova.functions.Core.createQName("ECMCertificate",
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.fi
lterElements(com.altova.functions.Core.createQName("AdministrativeDataSet",
```



```
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.filterElements(com.altova.functions.Core.createQName("RollingStockDataset",
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(closure.var1_RollingStockDatasetM))))))))));
        pos++;
        return true;
    }
    private boolean moveNext_4() throws Exception {
        state = 5;
        current =
com.altova.functions.Core.createElement(com.altova.functions.Core.createQName("Covers TankWagonsForDangerousGoods", "http://www.era.europa.eu/schemes/TAFTSI/2.1"),
com.altova.functions.Core.box(com.altova.CoreTypes.booleanToString(com.altova.CoreTypes.parseBoolean(com.altova.CoreTypes.nodeTypeToString((com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.filterElements(com.altova.functions.Core.createQName("CoversTankWagonsForDangerousGoods",
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.filterElements(com.altova.functions.Core.createQName("ECMCertificate",
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.filterElements(com.altova.functions.Core.createQName("AdministrativeDataSet",
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.filterElements(com.altova.functions.Core.createQName("RollingStockDataset",
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(closure.var1_RollingStockDatasetM))))))))))))));
        pos++;
        return true;
    }
    private boolean moveNext_5() throws Exception {
        state = 6;
        current =
com.altova.functions.Core.createElement(com.altova.functions.Core.createQName("Covers NonTankWagonsForDangerousGoods", "http://www.era.europa.eu/schemes/TAFTSI/2.1"),
com.altova.functions.Core.box(com.altova.CoreTypes.booleanToString(com.altova.CoreTypes.parseBoolean(com.altova.CoreTypes.nodeTypeToString((com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.filterElements(com.altova.functions.Core.createQName("CoversNonTankWagonsForDangerousGoods",
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.filterElements(com.altova.functions.Core.createQName("ECMCertificate",
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.filterElements(com.altova.functions.Core.createQName("AdministrativeDataSet",
"http://www.rsd.com/xsd"),
```



```
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.filterElements(com.altova.functions.Core.createQName("RollingStockDataset", "http://www.rsd.com/xsd"), (com.altova.mapforce.IMFNode)com.altova.functions.Core.first(closure.var1_RollingStockDatasetM))))))))))));  
        pos++;  
        return true;  
    }  
    private boolean moveNext_6() throws Exception {  
        state = 0;  
        current =  
com.altova.functions.Core.createElement(com.altova.functions.Core.createQName("ECMCertificateSuspended", "http://www.era.europa.eu/schemes/TAFTSI/2.1"), com.altova.functions.Core.box(com.altova.CoreTypes.booleanToString(com.altova.CoreTypes.parseBoolean(com.altova.CoreTypes.nodeToString((com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.filterElements(com.altova.functions.Core.createQName("ECMCertificateSuspended", "http://www.rsd.com/xsd"), (com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.filterElements(com.altova.functions.Core.createQName("ECMCertificate", "http://www.rsd.com/xsd"), (com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.filterElements(com.altova.functions.Core.createQName("AdministrativeDataSet", "http://www.rsd.com/xsd"), (com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.filterElements(com.altova.functions.Core.createQName("RollingStockDataset", "http://www.rsd.com/xsd"), (com.altova.mapforce.IMFNode)com.altova.functions.Core.first(closure.var1_RollingStockDatasetM))))))))))));  
        pos++;  
        return true;  
    }  
  
    public void close()  
    {  
        try  
        {  
        }  
        catch (Exception e)  
        {  
        }  
    }  
}  
  
static class seq4_seq_ implements IEnumerable  
{  
    com.altova.mapforce.IEnumerable var1_RollingStockDatasetM;
```

```
public seq4_seq_(com.altova.mapforce.IEnumerable
var1_RollingStockDatasetM)
{
    this.var1_RollingStockDatasetM = var1_RollingStockDatasetM;
}

public IEnumerator enumerator() {return new Enumerator(this);}

public static class Enumerator implements IEnumerator
{
    int pos = 0;
    int state = 1;
    Object current;
    seq4_seq_ closure;
    public Enumerator(seq4_seq_ closure)
    {
        this.closure = closure;
    }

    public Object current() {return current;}

    public int position() {return pos;}

    public boolean moveNext() throws Exception
    {
        while (state != 0)
        {
            switch (state)
            {
                case 1:    if (moveNext_1()) return true; break;
                case 2:    if (moveNext_2()) return true; break;
                case 3:    if (moveNext_3()) return true; break;
                case 4:    if (moveNext_4()) return true; break;
                case 5:    if (moveNext_5()) return true; break;
            }
        }
        return false;
    }

    private boolean moveNext_1() throws Exception {
        state = 2;
        current =
com.altova.functions.Core.createElement(com.altova.functions.Core.createQName("CountryCodeISO", "http://www.era.europa.eu/schemes/TAFTSI/2.1"),
com.altova.functions.Core.box(com.altova.CoreTypes.nodeToString((com.altova.mapforce.I
MFNode)com.altova.functions.Core.first(com.altova.functions.Core.filterElements(com.altov
a.functions.Core.createQName("CountryCodeISO", "http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.fi
lterElements(com.altova.functions.Core.createQName("EINNumber",
```



```
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.fi
lterElements(com.altova.functions.Core.createQName("ECMCertificate",
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.fi
lterElements(com.altova.functions.Core.createQName("AdministrativeDataSet",
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.fi
lterElements(com.altova.functions.Core.createQName("RollingStockDataset",
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(closure.var1_RollingStockD
atasetM)))))))))))));
        pos++;
        return true;
    }
    private boolean moveNext_2() throws Exception {
        state = 3;
        current =
com.altova.functions.Core.createElement(com.altova.functions.Core.createQName("TypeD
ocumentEIN", "http://www.era.europa.eu/schemes/TAFTSI/2.1"),
com.altova.functions.Core.box(com.altova.CoreTypes.integerToString(com.altova.CoreTyp
es.longToInteger(com.altova.CoreTypes.intToLong(com.altova.CoreTypes.longToInt(com.a
ltova.CoreTypes.integerToLong(com.altova.CoreTypes.decimalToInteger(com.altova.CoreT
ypes.parseDecimal(com.altova.CoreTypes.nodeToString((com.altova.mapforce.IMFNode)c
om.altova.functions.Core.first(com.altova.functions.Core.filterElements(com.altova.functi
ons.Core.createQName("TypeDocumentEIN", "http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.fi
lterElements(com.altova.functions.Core.createQName("EINNumber",
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.fi
lterElements(com.altova.functions.Core.createQName("ECMCertificate",
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.fi
lterElements(com.altova.functions.Core.createQName("AdministrativeDataSet",
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.fi
lterElements(com.altova.functions.Core.createQName("RollingStockDataset",
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(closure.var1_RollingStockD
atasetM)))))))))))))))))))));
        pos++;
        return true;
    }
    private boolean moveNext_3() throws Exception {
        state = 4;
        current =
com.altova.functions.Core.createElement(com.altova.functions.Core.createQName("Count
erAcreditedRecognizedBody", "http://www.era.europa.eu/schemes/TAFTSI/2.1"),
com.altova.functions.Core.box(com.altova.CoreTypes.integerToString(com.altova.CoreTyp
```



```
es.longToInteger(com.altova.CoreTypes.intToLong(com.altova.CoreTypes.longToInt(com.a
ltova.CoreTypes.integerToLong(com.altova.CoreTypes.decimalToInteger(com.altova.CoreT
ypes.parseDecimal(com.altova.CoreTypes.nodeToString((com.altova.mapforce.IMFNode)c
om.altova.functions.Core.first(com.altova.functions.Core.filterElements(com.altova.function
s.Core.createQName("CounterAcreditedRecognizedBody", "http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.fi
lterElements(com.altova.functions.Core.createQName("EINNumber",
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.fi
lterElements(com.altova.functions.Core.createQName("ECMCertificate",
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.fi
lterElements(com.altova.functions.Core.createQName("AdministrativeDataSet",
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.fi
lterElements(com.altova.functions.Core.createQName("RollingStockDataset",
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(closure.var1_RollingStockD
atasetM)))))))))))))))))))));
        pos++;
        return true;
    }
    private boolean moveNext_4() throws Exception {
        state = 5;
        current =
com.altova.functions.Core.createElement(com.altova.functions.Core.createQName("EINYe
ar", "http://www.era.europa.eu/schemes/TAFTSI/2.1"),
com.altova.functions.Core.box(com.altova.CoreTypes.integerToString(com.altova.CoreTyp
es.longToInteger(com.altova.CoreTypes.intToLong(com.altova.CoreTypes.longToInt(com.a
ltova.CoreTypes.integerToLong(com.altova.CoreTypes.decimalToInteger(com.altova.CoreT
ypes.parseDecimal(com.altova.CoreTypes.nodeToString((com.altova.mapforce.IMFNode)c
om.altova.functions.Core.first(com.altova.functions.Core.filterElements(com.altova.function
s.Core.createQName("EINYear", "http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.fi
lterElements(com.altova.functions.Core.createQName("EINNumber",
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.fi
lterElements(com.altova.functions.Core.createQName("ECMCertificate",
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.fi
lterElements(com.altova.functions.Core.createQName("AdministrativeDataSet",
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.fi
lterElements(com.altova.functions.Core.createQName("RollingStockDataset",
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(closure.var1_RollingStockD
atasetM)))))))))))))))))))));
        pos++;
        return true;
    }
```



```
    }
    private boolean moveNext_5() throws Exception {
        state = 0;
        current =
com.altova.functions.Core.createElement(com.altova.functions.Core.createQName("EINCo
unter", "http://www.era.europa.eu/schemes/TAFTSI/2.1"),
com.altova.functions.Core.box(com.altova.CoreTypes.integerToString(com.altova.CoreTyp
es.longToInteger(com.altova.CoreTypes.intToLong(com.altova.CoreTypes.longToInt(com.a
ltova.CoreTypes.integerToLong(com.altova.CoreTypes.decimalToInteger(com.altova.CoreT
ypes.parseDecimal(com.altova.CoreTypes.nodeToString((com.altova.mapforce.IMFNode)c
om.altova.functions.Core.first(com.altova.functions.Core.filterElements(com.altova.function
s.Core.createQName("EINCounter", "http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.fi
lterElements(com.altova.functions.Core.createQName("EINNumber",
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.fi
lterElements(com.altova.functions.Core.createQName("ECMCertificate",
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.fi
lterElements(com.altova.functions.Core.createQName("AdministrativeDataSet",
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.fi
lterElements(com.altova.functions.Core.createQName("RollingStockDataset",
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(closure.var1_RollingStockD
atasetM)))))))))))))))))))));
        pos++;
        return true;
    }

    public void close()
    {
        try
        {
        }
        catch (Exception e)
        {
        }
    }
}

}

static class seq5_join implements IEnumerable
{
    com.altova.mapforce.IEnumerable var1_RollingStockDatasetM;

    public seq5_join(com.altova.mapforce.IEnumerable
var1_RollingStockDatasetM)
```

```
{
    this.var1_RollingStockDatasetM = var1_RollingStockDatasetM;
}

public IEnumerator enumerator() {return new Enumerator(this);}

public static class Enumerator implements IEnumerator
{
    int pos = 0;
    int state = 1;
    Object current;
    seq5_join closure;
    IEnumerator var2_LoadTable;
    public Enumerator(seq5_join closure)
    {
        this.closure = closure;
    }

    public Object current() {return current;}

    public int position() {return pos;}

    public boolean moveNext() throws Exception
    {
        while (state != 0)
        {
            switch (state)
            {
                case 1:    if (moveNext_1()) return true; break;
                case 2:    if (moveNext_2()) return true; break;
                case 3:    if (moveNext_3()) return true; break;
                case 4:    if (moveNext_4()) return true; break;
                case 5:    if (moveNext_5()) return true; break;
                case 6:    if (moveNext_6()) return true; break;
                case 7:    if (moveNext_7()) return true; break;
                case 8:    if (moveNext_8()) return true; break;
                case 9:    if (moveNext_9()) return true; break;
                case 10:   if (moveNext_10()) return true; break;
                case 11:   if (moveNext_11()) return true; break;
                case 12:   if (moveNext_12()) return true; break;
                case 13:   if (moveNext_13()) return true; break;
                case 14:   if (moveNext_14()) return true; break;
                case 15:   if (moveNext_15()) return true; break;
                case 16:   if (moveNext_16()) return true; break;
                case 17:   if (moveNext_17()) return true; break;
                case 18:   if (moveNext_18()) return true; break;
                case 19:   if (moveNext_19()) return true; break;
                case 20:   if (moveNext_20()) return true; break;
                case 22:   if (moveNext_22()) return true; break;
            }
        }
    }
}
```

```
        case 23:    if (moveNext_23()) return true; break;
        case 24:    if (moveNext_24()) return true; break;
        case 25:    if (moveNext_25()) return true; break;
        case 26:    if (moveNext_26()) return true; break;
        case 27:    if (moveNext_27()) return true; break;
        case 28:    if (moveNext_28()) return true; break;
        case 29:    if (moveNext_29()) return true; break;
        case 30:    if (moveNext_30()) return true; break;
        case 31:    if (moveNext_31()) return true; break;
        case 32:    if (moveNext_32()) return true; break;
        case 33:    if (moveNext_33()) return true; break;
        case 34:    if (moveNext_34()) return true; break;
    }
}
return false;
}

private boolean moveNext_1() throws Exception {
    state = 2;
    current =
com.altova.functions.Core.createElement(com.altova.functions.Core.createQName("Letter
Marking", "http://www.era.europa.eu/schemes/TAFTSI/2.1"),
com.altova.functions.Core.box(com.altova.CoreTypes.nodeToString((com.altova.mapforce.I
MFNode)com.altova.functions.Core.first(com.altova.functions.Core.filterElements(com.altov
a.functions.Core.createQName("LetterMarking", "http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.fi
lterElements(com.altova.functions.Core.createQName("DesignDataSet",
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.fi
lterElements(com.altova.functions.Core.createQName("RollingStockDataset",
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(closure.var1_RollingStockD
atasetM))))))))));
    pos++;
    return true;
}
private boolean moveNext_2() throws Exception {
    state = 3;
    current =
com.altova.functions.Core.createElement(com.altova.functions.Core.createQName("Wagon
NumberOfAxles", "http://www.era.europa.eu/schemes/TAFTSI/2.1"),
com.altova.functions.Core.box(com.altova.CoreTypes.integerToString(com.altova.CoreType
es.longToInteger(com.altova.CoreTypes.intToLong(com.altova.CoreTypes.longToInt(com.a
ltova.CoreTypes.integerToLong(com.altova.CoreTypes.decimalToInteger(com.altova.CoreT
ypes.parseDecimal(com.altova.CoreTypes.nodeToString((com.altova.mapforce.IMFNode)c
om.altova.functions.Core.first(com.altova.functions.Core.filterElements(com.altova.function
s.Core.createQName("WagonNumberOfAxles", "http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.fi
lterElements(com.altova.functions.Core.createQName("DesignDataSet",
```



```
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.filterElements(com.altova.functions.Core.createQName("RollingStockDataset",
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(closure.var1_RollingStockDatasetM)))))))))))));
        pos++;
        return true;
    }
    private boolean moveNext_3() throws Exception {
        state = 4;
        current =
com.altova.functions.Core.createElement(com.altova.functions.Core.createQName("WheelSetType", "http://www.era.europa.eu/schemes/TAFTSI/2.1"),
com.altova.functions.Core.box(com.altova.CoreTypes.nodeToString((com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.filterElements(com.altova.functions.Core.createQName("WheelSetType", "http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.filterElements(com.altova.functions.Core.createQName("DesignDataSet",
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.filterElements(com.altova.functions.Core.createQName("RollingStockDataset",
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(closure.var1_RollingStockDatasetM)))))))))))));
        pos++;
        return true;
    }
    private boolean moveNext_4() throws Exception {
        state = 5;
        current =
com.altova.functions.Core.createElement(com.altova.functions.Core.createQName("WheelDiameter", "http://www.era.europa.eu/schemes/TAFTSI/2.1"),
com.altova.functions.Core.box(com.altova.CoreTypes.integerToString(com.altova.CoreTypes.longToInteger(com.altova.CoreTypes.intToLong(com.altova.CoreTypes.longToInt(com.altova.CoreTypes.integerToLong(com.altova.CoreTypes.decimalToInteger(com.altova.CoreTypes.parseDecimal(com.altova.CoreTypes.nodeToString((com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.filterElements(com.altova.functions.Core.createQName("WheelDiameter", "http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.filterElements(com.altova.functions.Core.createQName("DesignDataSet",
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.filterElements(com.altova.functions.Core.createQName("RollingStockDataset",
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(closure.var1_RollingStockDatasetM)))))))))))))))));
        pos++;
        return true;
    }
```

```
    }
    private boolean moveNext_5() throws Exception {
        state = 6;
        current =
com.altova.functions.Core.createElement(com.altova.functions.Core.createQName("Wheel
setGauge", "http://www.era.europa.eu/schemes/TAFTSI/2.1"),
com.altova.functions.Core.box(com.altova.CoreTypes.integerToString(com.altova.CoreTyp
es.longToInteger(com.altova.CoreTypes.intToLong(com.altova.CoreTypes.longToInt(com.a
ltova.CoreTypes.integerToLong(com.altova.CoreTypes.decimalToInteger(com.altova.CoreT
ypes.parseDecimal(com.altova.CoreTypes.nodeToString((com.altova.mapforce.IMFNode)c
om.altova.functions.Core.first(com.altova.functions.Core.filterElements(com.altova.function
s.Core.createQName("WheelsetGauge", "http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.fi
lterElements(com.altova.functions.Core.createQName("DesignDataSet",
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.fi
lterElements(com.altova.functions.Core.createQName("RollingStockDataset",
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(closure.var1_RollingStockD
atasetM)))))))))))))))));
        pos++;
        return true;
    }
    private boolean moveNext_6() throws Exception {
        state = 7;
        current =
com.altova.functions.Core.createElement(com.altova.functions.Core.createQName("Numb
erOfBogies", "http://www.era.europa.eu/schemes/TAFTSI/2.1"),
com.altova.functions.Core.box(com.altova.CoreTypes.integerToString(com.altova.CoreTyp
es.longToInteger(com.altova.CoreTypes.intToLong(com.altova.CoreTypes.longToInt(com.a
ltova.CoreTypes.integerToLong(com.altova.CoreTypes.decimalToInteger(com.altova.CoreT
ypes.parseDecimal(com.altova.CoreTypes.nodeToString((com.altova.mapforce.IMFNode)c
om.altova.functions.Core.first(com.altova.functions.Core.filterElements(com.altova.function
s.Core.createQName("NumberOfBogies", "http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.fi
lterElements(com.altova.functions.Core.createQName("DesignDataSet",
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.fi
lterElements(com.altova.functions.Core.createQName("RollingStockDataset",
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(closure.var1_RollingStockD
atasetM)))))))))))))))));
        pos++;
        return true;
    }
    private boolean moveNext_7() throws Exception {
        state = 8;
        current =
com.altova.functions.Core.createElement(com.altova.functions.Core.createQName("Bogie
```



```
Pitch", "http://www.era.europa.eu/schemes/TAFTSI/2.1"),
com.altova.functions.Core.box(com.altova.CoreTypes.integerToString(com.altova.CoreTypes.longToInteger(com.altova.CoreTypes.intToLong(com.altova.CoreTypes.longToInt(com.altova.CoreTypes.integerToLong(com.altova.CoreTypes.decimalToInteger(com.altova.CoreTypes.parseDecimal(com.altova.CoreTypes.nodeToString((com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.filterElements(com.altova.functions.Core.createQName("BogiePitch", "http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.filterElements(com.altova.functions.Core.createQName("DesignDataSet",
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.filterElements(com.altova.functions.Core.createQName("RollingStockDataset",
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(closure.var1_RollingStockDatasetM)))))))))))))))));
        pos++;
        return true;
    }
    private boolean moveNext_8() throws Exception {
        state = 9;
        current =
com.altova.functions.Core.createElement(com.altova.functions.Core.createQName("BogiePivotPitch", "http://www.era.europa.eu/schemes/TAFTSI/2.1"),
com.altova.functions.Core.box(com.altova.CoreTypes.integerToString(com.altova.CoreTypes.longToInteger(com.altova.CoreTypes.intToLong(com.altova.CoreTypes.longToInt(com.altova.CoreTypes.integerToLong(com.altova.CoreTypes.decimalToInteger(com.altova.CoreTypes.parseDecimal(com.altova.CoreTypes.nodeToString((com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.filterElements(com.altova.functions.Core.createQName("BogiePivotPitch", "http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.filterElements(com.altova.functions.Core.createQName("DesignDataSet",
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.filterElements(com.altova.functions.Core.createQName("RollingStockDataset",
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(closure.var1_RollingStockDatasetM)))))))))))))))));
        pos++;
        return true;
    }
    private boolean moveNext_9() throws Exception {
        state = 10;
        current =
com.altova.functions.Core.createElement(com.altova.functions.Core.createQName("InnerWheelbase", "http://www.era.europa.eu/schemes/TAFTSI/2.1"),
com.altova.functions.Core.box(com.altova.CoreTypes.integerToString(com.altova.CoreTypes.longToInteger(com.altova.CoreTypes.intToLong(com.altova.CoreTypes.longToInt(com.altova.CoreTypes.integerToLong(com.altova.CoreTypes.decimalToInteger(com.altova.CoreTypes.parseDecimal(com.altova.CoreTypes.nodeToString((com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.filterElements(com.altova.functions.Core.createQName("InnerWheelbase", "http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.filterElements(com.altova.functions.Core.createQName("DesignDataSet",
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.filterElements(com.altova.functions.Core.createQName("RollingStockDataset",
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(closure.var1_RollingStockDatasetM)))))))))))))))));
        pos++;
        return true;
    }
    private boolean moveNext_10() throws Exception {
        state = 11;
        current =
```




```
om.altova.functions.Core.first(com.altova.functions.Core.filterElements(com.altova.function
s.Core.createQName("InnerWheelbase", "http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.fi
lterElements(com.altova.functions.Core.createQName("DesignDataSet",
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.fi
lterElements(com.altova.functions.Core.createQName("RollingStockDataset",
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(closure.var1_RollingStockD
atasetM))))))))))))));
        pos++;
        return true;
    }
    private boolean moveNext_10() throws Exception {
        state = 11;
        current =
com.altova.functions.Core.createElement(com.altova.functions.Core.createQName("Coupli
ngType", "http://www.era.europa.eu/schemes/TAFTSI/2.1"),
com.altova.functions.Core.box(com.altova.CoreTypes.integerToString(com.altova.CoreTyp
es.longToInteger(com.altova.CoreTypes.intToLong(com.altova.CoreTypes.longToInt(com.a
ltova.CoreTypes.integerToLong(com.altova.CoreTypes.decimalToInteger(com.altova.CoreT
ypes.parseDecimal(com.altova.CoreTypes.nodeToString((com.altova.mapforce.IMFNode)c
om.altova.functions.Core.first(com.altova.functions.Core.filterElements(com.altova.function
s.Core.createQName("CouplingType", "http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.fi
lterElements(com.altova.functions.Core.createQName("DesignDataSet",
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.fi
lterElements(com.altova.functions.Core.createQName("RollingStockDataset",
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(closure.var1_RollingStockD
atasetM))))))))))))))))));
        pos++;
        return true;
    }
    private boolean moveNext_11() throws Exception {
        state = 12;
        current =
com.altova.functions.Core.createElement(com.altova.functions.Core.createQName("Buffer
Type", "http://www.era.europa.eu/schemes/TAFTSI/2.1"),
com.altova.functions.Core.box(com.altova.CoreTypes.nodeToString((com.altova.mapforce.I
MFNode)com.altova.functions.Core.first(com.altova.functions.Core.filterElements(com.altov
a.functions.Core.createQName("BufferType", "http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.fi
lterElements(com.altova.functions.Core.createQName("DesignDataSet",
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.fi
lterElements(com.altova.functions.Core.createQName("RollingStockDataset",
"http://www.rsd.com/xsd"),
```



```
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(closure.var1_RollingStockD
atasetM))))))));
        pos++;
        return true;
    }
    private boolean moveNext_12() throws Exception {
        state = 13;
        current =
com.altova.functions.Core.createElement(com.altova.functions.Core.createQName("Norma
lLoadingGauge", "http://www.era.europa.eu/schemes/TAFTSI/2.1"),
com.altova.functions.Core.box(com.altova.CoreTypes.nodeToString((com.altova.mapforce.I
MFNode)com.altova.functions.Core.first(com.altova.functions.Core.filterElements(com.altov
a.functions.Core.createQName("NormalLoadingGauge", "http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.fi
lterElements(com.altova.functions.Core.createQName("DesignDataSet",
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.fi
lterElements(com.altova.functions.Core.createQName("RollingStockDataset",
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(closure.var1_RollingStockD
atasetM))))))));
        pos++;
        return true;
    }
    private boolean moveNext_13() throws Exception {
        state = 14;
        current =
com.altova.functions.Core.createElement(com.altova.functions.Core.createQName("MinCu
rveRadius", "http://www.era.europa.eu/schemes/TAFTSI/2.1"),
com.altova.functions.Core.box(com.altova.CoreTypes.integerToString(com.altova.CoreType
es.longToInteger(com.altova.CoreTypes.intToLong(com.altova.CoreTypes.longToInt(com.a
ltova.CoreTypes.integerToLong(com.altova.CoreTypes.decimalToInteger(com.altova.CoreT
ypes.parseDecimal(com.altova.CoreTypes.nodeToString((com.altova.mapforce.IMFNode)c
om.altova.functions.Core.first(com.altova.functions.Core.filterElements(com.altova.function
s.Core.createQName("MinCurveRadius", "http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.fi
lterElements(com.altova.functions.Core.createQName("DesignDataSet",
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.fi
lterElements(com.altova.functions.Core.createQName("RollingStockDataset",
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(closure.var1_RollingStockD
atasetM))))))));
        pos++;
        return true;
    }
    private boolean moveNext_14() throws Exception {
        state = 15;
```



```
        current =
com.altova.functions.Core.createElement(com.altova.functions.Core.createQName("MinVerticleRadiusYardHump", "http://www.era.europa.eu/schemes/TAFTSI/2.1"),
com.altova.functions.Core.box(com.altova.CoreTypes.integerToString(com.altova.CoreTypes.longToInteger(com.altova.CoreTypes.intToLong(com.altova.CoreTypes.longToInt(com.altova.CoreTypes.integerToLong(com.altova.CoreTypes.decimalToInteger(com.altova.CoreTypes.parseDecimal(com.altova.CoreTypes.nodeToString((com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.filterElements(com.altova.functions.Core.createQName("MinVerticleRadiusYardHump", "http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.filterElements(com.altova.functions.Core.createQName("DesignDataSet",
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.filterElements(com.altova.functions.Core.createQName("RollingStockDataset",
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(closure.var1_RollingStockDatasetM)))))))))))))))));
        pos++;
        return true;
    }
    private boolean moveNext_15() throws Exception {
        state = 16;
        current =
com.altova.functions.Core.createElement(com.altova.functions.Core.createQName("WagonWeightEmpty", "http://www.era.europa.eu/schemes/TAFTSI/2.1"),
com.altova.functions.Core.box(com.altova.CoreTypes.integerToString(com.altova.CoreTypes.longToInteger(com.altova.CoreTypes.intToLong(com.altova.CoreTypes.longToInt(com.altova.CoreTypes.integerToLong(com.altova.CoreTypes.decimalToInteger(com.altova.CoreTypes.parseDecimal(com.altova.CoreTypes.nodeToString((com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.filterElements(com.altova.functions.Core.createQName("WagonWeightEmpty", "http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.filterElements(com.altova.functions.Core.createQName("DesignDataSet",
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.filterElements(com.altova.functions.Core.createQName("RollingStockDataset",
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(closure.var1_RollingStockDatasetM)))))))))))))))));
        pos++;
        return true;
    }
    private boolean moveNext_16() throws Exception {
        state = 17;
        current =
com.altova.functions.Core.createElement(com.altova.functions.Core.createQName("LengthOverBuffers", "http://www.era.europa.eu/schemes/TAFTSI/2.1"),
com.altova.functions.Core.box(com.altova.CoreTypes.integerToString(com.altova.CoreTypes.longToInteger(com.altova.CoreTypes.intToLong(com.altova.CoreTypes.longToInt(com.a
```



```
ltova.CoreTypes.integerToLong(com.altova.CoreTypes.decimalToInteger(com.altova.CoreTypes.parseDecimal(com.altova.CoreTypes.nodeTypeToString((com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.filterElements(com.altova.functions.Core.createQName("LengthOverBuffers", "http://www.rsd.com/xsd"), (com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.filterElements(com.altova.functions.Core.createQName("DesignDataSet", "http://www.rsd.com/xsd"), (com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.filterElements(com.altova.functions.Core.createQName("RollingStockDataset", "http://www.rsd.com/xsd"), (com.altova.mapforce.IMFNode)com.altova.functions.Core.first(closure.var1_RollingStockDatasetM)))))))))))))))));
        pos++;
        return true;
    }
    private boolean moveNext_17() throws Exception {
        state = 18;
        current =
com.altova.functions.Core.createElement(com.altova.functions.Core.createQName("MaxAxleWeight", "http://www.era.europa.eu/schemes/TAFTSI/2.1"),
com.altova.functions.Core.box(com.altova.CoreTypes.integerToString(com.altova.CoreTypes.longToInteger(com.altova.CoreTypes.intToLong(com.altova.CoreTypes.longToInt(com.altova.CoreTypes.integerToLong(com.altova.CoreTypes.decimalToInteger(com.altova.CoreTypes.parseDecimal(com.altova.CoreTypes.nodeTypeToString((com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.filterElements(com.altova.functions.Core.createQName("MaxAxleWeight", "http://www.rsd.com/xsd"), (com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.filterElements(com.altova.functions.Core.createQName("DesignDataSet", "http://www.rsd.com/xsd"), (com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.filterElements(com.altova.functions.Core.createQName("RollingStockDataset", "http://www.rsd.com/xsd"), (com.altova.mapforce.IMFNode)com.altova.functions.Core.first(closure.var1_RollingStockDatasetM)))))))))))))))))))));
        pos++;
        return true;
    }
    private boolean moveNext_18() throws Exception {
        state = 19;
        var2_LoadTable =
com.altova.functions.Core.filterElements(com.altova.functions.Core.createQName("LoadTable", "http://www.rsd.com/xsd"),
com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.filterElements(com.altova.functions.Core.createQName("DesignDataSet", "http://www.rsd.com/xsd"),
com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.filterElements(com.altova.functions.Core.createQName("RollingStockDataset", "http://www.rsd.com/xsd"),
```



```
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(closure.var1_RollingStockD
atasetM)))))).enumerator();
        return false;
    }
    private boolean moveNext_19() throws Exception {
        state = 19;
        if (!var2_LoadTable.moveNext()) {state = 20; return false; }
        current =
com.altova.functions.Core.createElement(com.altova.functions.Core.createQName("LoadT
able", "http://www.era.europa.eu/schemes/TAFTSI/2.1"), (new
seq6_join(((com.altova.mapforce.IMFNode)(var2_LoadTable.current()))));
        pos++;
        return true;
    }
    private boolean moveNext_20() throws Exception {
        state = 22;
        var2_LoadTable.close(); var2_LoadTable = null;
        current =
com.altova.functions.Core.createElement(com.altova.functions.Core.createQName("MaxSp
eedEmpty", "http://www.era.europa.eu/schemes/TAFTSI/2.1"),
com.altova.functions.Core.box(com.altova.CoreTypes.integerToString(com.altova.CoreTyp
es.longToInteger(com.altova.CoreTypes.intToLong(com.altova.CoreTypes.longToInt(com.a
ltova.CoreTypes.integerToLong(com.altova.CoreTypes.decimalToInteger(com.altova.CoreT
ypes.parseDecimal(com.altova.CoreTypes.nodeToString((com.altova.mapforce.IMFNode)c
om.altova.functions.Core.first(com.altova.functions.Core.filterElements(com.altova.functio
s.Core.createQName("MaxSpeedEmpty", "http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.fi
lterElements(com.altova.functions.Core.createQName("DesignDataSet",
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.fi
lterElements(com.altova.functions.Core.createQName("RollingStockDataset",
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(closure.var1_RollingStockD
atasetM))))))))))))));
        pos++;
        return true;
    }
    private boolean moveNext_22() throws Exception {
        state = 23;
        current =
com.altova.functions.Core.createElement(com.altova.functions.Core.createQName("AirBra
ke", "http://www.era.europa.eu/schemes/TAFTSI/2.1"), (new
seq8_seq_(closure.var1_RollingStockDatasetM));
        pos++;
        return true;
    }
    private boolean moveNext_23() throws Exception {
        state = 24;
```

```
        current =
com.altova.functions.Core.createElement(com.altova.functions.Core.createQName("HandB
rake", "http://www.era.europa.eu/schemes/TAFTSI/2.1"), (new
seq10_seq_(closure.var1_RollingStockDatasetM));
        pos++;
        return true;
    }
    private boolean moveNext_24() throws Exception {
        state = 25;
        current =
com.altova.functions.Core.createElement(com.altova.functions.Core.createQName("Brake
Block", "http://www.era.europa.eu/schemes/TAFTSI/2.1"),
com.altova.functions.Core.box(com.altova.functions.Core.createElement(com.altova.functio
ns.Core.createQName("BrakeBlockName",
"http://www.era.europa.eu/schemes/TAFTSI/2.1"),
com.altova.functions.Core.box(com.altova.CoreTypes.nodeTypeToString((com.altova.mapforce.I
MFNode)com.altova.functions.Core.first(com.altova.functions.Core.filterElements(com.altov
a.functions.Core.createQName("BrakeBlockName", "http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.fi
lterElements(com.altova.functions.Core.createQName("BrakeBlock",
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.fi
lterElements(com.altova.functions.Core.createQName("DesignDataSet",
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.fi
lterElements(com.altova.functions.Core.createQName("RollingStockDataset",
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(closure.var1_RollingStockD
atasetM)))))))))))));
        pos++;
        return true;
    }
    private boolean moveNext_25() throws Exception {
        state = 26;
        current =
com.altova.functions.Core.createElement(com.altova.functions.Core.createQName("Loadin
gCapacity", "http://www.era.europa.eu/schemes/TAFTSI/2.1"),
com.altova.functions.Core.box(com.altova.CoreTypes.decimalToString(com.altova.CoreType
es.parseDecimal(com.altova.CoreTypes.nodeTypeToString((com.altova.mapforce.IMFNode)co
m.altova.functions.Core.first(com.altova.functions.Core.filterElements(com.altova.functio
ns.Core.createQName("LoadingCapacity", "http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.fi
lterElements(com.altova.functions.Core.createQName("DesignDataSet",
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.fi
lterElements(com.altova.functions.Core.createQName("RollingStockDataset",
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(closure.var1_RollingStockD
atasetM)))))))))))));
```

```
        pos++;
        return true;
    }
    private boolean moveNext_26() throws Exception {
        state = 27;
        current =
com.altova.functions.Core.createElement(com.altova.functions.Core.createQName("MaxGr
ossWeight", "http://www.era.europa.eu/schemes/TAFTSI/2.1"),
com.altova.functions.Core.box(com.altova.CoreTypes.integerToString(com.altova.CoreTyp
es.longToInteger(com.altova.CoreTypes.intToLong(com.altova.CoreTypes.longToInt(com.a
ltova.CoreTypes.integerToLong(com.altova.CoreTypes.decimalToInteger(com.altova.CoreT
ypes.parseDecimal(com.altova.CoreTypes.nodeToString((com.altova.mapforce.IMFNode)c
om.altova.functions.Core.first(com.altova.functions.Core.filterElements(com.altova.function
s.Core.createQName("MaxGrossWeight", "http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.fi
lterElements(com.altova.functions.Core.createQName("DesignDataSet",
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.fi
lterElements(com.altova.functions.Core.createQName("RollingStockDataset",
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(closure.var1_RollingStockD
atasetM)))))))))))))))));
        pos++;
        return true;
    }
    private boolean moveNext_27() throws Exception {
        state = 28;
        current =
com.altova.functions.Core.createElement(com.altova.functions.Core.createQName("MaxSp
eedLoad", "http://www.era.europa.eu/schemes/TAFTSI/2.1"),
com.altova.functions.Core.box(com.altova.CoreTypes.integerToString(com.altova.CoreTyp
es.longToInteger(com.altova.CoreTypes.intToLong(com.altova.CoreTypes.longToInt(com.a
ltova.CoreTypes.integerToLong(com.altova.CoreTypes.decimalToInteger(com.altova.CoreT
ypes.parseDecimal(com.altova.CoreTypes.nodeToString((com.altova.mapforce.IMFNode)c
om.altova.functions.Core.first(com.altova.functions.Core.filterElements(com.altova.function
s.Core.createQName("MaxSpeedLoad", "http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.fi
lterElements(com.altova.functions.Core.createQName("DesignDataSet",
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.fi
lterElements(com.altova.functions.Core.createQName("RollingStockDataset",
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(closure.var1_RollingStockD
atasetM)))))))))))))))));
        pos++;
        return true;
    }
    private boolean moveNext_28() throws Exception {
        state = 29;
```

```
        current =
com.altova.functions.Core.createElement(com.altova.functions.Core.createQName("VapourReturnSystem", "http://www.era.europa.eu/schemes/TAFTSI/2.1"),
com.altova.functions.Core.box(com.altova.CoreTypes.booleanToString(com.altova.CoreTypes.parseBoolean(com.altova.CoreTypes.nodeToString((com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.filterElements(com.altova.functions.Core.createQName("VapourReturnSystem", "http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.filterElements(com.altova.functions.Core.createQName("DesignDataSet", "http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.filterElements(com.altova.functions.Core.createQName("RollingStockDataset", "http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(closure.var1_RollingStockDatasetM))))))))));
        pos++;
        return true;
    }
    private boolean moveNext_29() throws Exception {
        state = 30;
        current =
com.altova.functions.Core.createElement(com.altova.functions.Core.createQName("FerryPermittedFlag", "http://www.era.europa.eu/schemes/TAFTSI/2.1"),
com.altova.functions.Core.box(com.altova.CoreTypes.booleanToString(com.altova.CoreTypes.parseBoolean(com.altova.CoreTypes.nodeToString((com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.filterElements(com.altova.functions.Core.createQName("FerryPermittedFlag", "http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.filterElements(com.altova.functions.Core.createQName("DesignDataSet", "http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.filterElements(com.altova.functions.Core.createQName("RollingStockDataset", "http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(closure.var1_RollingStockDatasetM))))))))));
        pos++;
        return true;
    }
    private boolean moveNext_30() throws Exception {
        state = 31;
        current =
com.altova.functions.Core.createElement(com.altova.functions.Core.createQName("TemperatureRange", "http://www.era.europa.eu/schemes/TAFTSI/2.1"), (new seq11_seq_(closure.var1_RollingStockDatasetM));
        pos++;
        return true;
    }
    private boolean moveNext_31() throws Exception {
        state = 32;
```



```
        current =
com.altova.functions.Core.createElement(com.altova.functions.Core.createQName("DateLastOverhaul", "http://www.era.europa.eu/schemes/TAFTSI/2.1"),
com.altova.functions.Core.box(com.altova.CoreTypes.dateToString(com.altova.CoreTypes.parseDate(com.altova.CoreTypes.nodeToString((com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.filterElements(com.altova.functions.Core.createQName("DateLastOverhaul", "http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.filterElements(com.altova.functions.Core.createQName("DesignDataSet",
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.filterElements(com.altova.functions.Core.createQName("RollingStockDataset",
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(closure.var1_RollingStockDatasetM))))))))));
        pos++;
        return true;
    }
    private boolean moveNext_32() throws Exception {
        state = 33;
        current =
com.altova.functions.Core.createElement(com.altova.functions.Core.createQName("DateNextOverhaul", "http://www.era.europa.eu/schemes/TAFTSI/2.1"),
com.altova.functions.Core.box(com.altova.CoreTypes.dateToString(com.altova.CoreTypes.parseDate(com.altova.CoreTypes.nodeToString((com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.filterElements(com.altova.functions.Core.createQName("DateNextOverhaul", "http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.filterElements(com.altova.functions.Core.createQName("DesignDataSet",
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.filterElements(com.altova.functions.Core.createQName("RollingStockDataset",
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(closure.var1_RollingStockDatasetM))))))))));
        pos++;
        return true;
    }
    private boolean moveNext_33() throws Exception {
        state = 34;
        current =
com.altova.functions.Core.createElement(com.altova.functions.Core.createQName("PermittedTolerance", "http://www.era.europa.eu/schemes/TAFTSI/2.1"),
com.altova.functions.Core.box(com.altova.CoreTypes.integerToString(com.altova.CoreTypes.longToInteger(com.altova.CoreTypes.intToLong(com.altova.CoreTypes.longToInt(com.altova.CoreTypes.integerToLong(com.altova.CoreTypes.decimalToInteger(com.altova.CoreTypes.parseDecimal(com.altova.CoreTypes.nodeToString((com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.filterElements(com.altova.functions.Core.createQName("PermittedTolerance", "http://www.rsd.com/xsd"),
```



```
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.filterElements(com.altova.functions.Core.createQName("DesignDataSet", "http://www.rsd.com/xsd"), (com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.filterElements(com.altova.functions.Core.createQName("RollingStockDataset", "http://www.rsd.com/xsd"), (com.altova.mapforce.IMFNode)com.altova.functions.Core.first(closure.var1_RollingStockDatasetM))))))))));
        pos++;
        return true;
    }
    private boolean moveNext_34() throws Exception {
        state = 0;
        current =
com.altova.functions.Core.createElement(com.altova.functions.Core.createQName("DateOfNextTankInspection", "http://www.era.europa.eu/schemes/TAFTSI/2.1"), com.altova.functions.Core.box(com.altova.CoreTypes.dateToString(com.altova.CoreTypes.parseDate(com.altova.CoreTypes.nodeToString((com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.filterElements(com.altova.functions.Core.createQName("DateOfNextTankInspection", "http://www.rsd.com/xsd"), (com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.filterElements(com.altova.functions.Core.createQName("DesignDataSet", "http://www.rsd.com/xsd"), (com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.filterElements(com.altova.functions.Core.createQName("RollingStockDataset", "http://www.rsd.com/xsd"), (com.altova.mapforce.IMFNode)com.altova.functions.Core.first(closure.var1_RollingStockDatasetM))))))))))))));
        pos++;
        return true;
    }

    public void close()
    {
        try
        {
            var2_LoadTable.close(); var2_LoadTable = null;
        }
        catch (Exception e)
        {
        }
    }
}

}
static class seq6_join implements IEnumerable
{
    com.altova.mapforce.IMFNode var1_current;
```



```
public seq6_join(com.altova.mapforce.IMFNode var1_current)
{
    this.var1_current = var1_current;
}

public IEnumerator enumerator() {return new Enumerator(this);}

public static class Enumerator implements IEnumerator
{
    int pos = 0;
    int state = 1;
    Object current;
    seq6_join closure;
    IEnumerator var2_RouteClassPayloads;
    public Enumerator(seq6_join closure)
    {
        this.closure = closure;
    }

    public Object current() {return current;}

    public int position() {return pos;}

    public boolean moveNext() throws Exception
    {
        while (state != 0)
        {
            switch (state)
            {
                case 1:    if (moveNext_1()) return true; break;
                case 4:    if (moveNext_4()) return true; break;
                case 7:    if (moveNext_7()) return true; break;
                case 10:   if (moveNext_10()) return true; break;
                case 11:   if (moveNext_11()) return true; break;
                case 12:   if (moveNext_12()) return true; break;
            }
        }
        return false;
    }

    private boolean moveNext_1() throws Exception {
        state = 4;
        if
(!com.altova.functions.Core.exists(com.altova.functions.Core.filterElements(com.altova.fun
ctions.Core.createQName("LoadTableCountry", "http://www.rsd.com/xsd"),
closure.var1_current)))) {state = 4; return false; }
        current =
com.altova.functions.Core.createElement(com.altova.functions.Core.createQName("LoadT
```



```
ableCountry", "http://www.era.europa.eu/schemes/TAFTSI/2.1"),
com.altova.functions.Core.box(com.altova.CoreTypes.nodeTypeToString((com.altova.mapforce.I
MFNode)com.altova.functions.Core.first(com.altova.functions.Core.filterElements(com.altov
a.functions.Core.createQName("LoadTableCountry", "http://www.rsd.com/xsd"),
closure.var1_current)))));
        pos++;
        return true;
    }
    private boolean moveNext_4() throws Exception {
        state = 7;
        if
(!com.altova.functions.Core.exists(com.altova.functions.Core.filterElements(com.altova.fun
ctions.Core.createQName("SpeedCategory", "http://www.rsd.com/xsd"),
closure.var1_current)))) {state = 7; return false; }
        current =
com.altova.functions.Core.createElement(com.altova.functions.Core.createQName("Speed
Category", "http://www.era.europa.eu/schemes/TAFTSI/2.1"),
com.altova.functions.Core.box(com.altova.CoreTypes.integerToString(com.altova.CoreTyp
es.longToInteger(com.altova.CoreTypes.intToLong(com.altova.CoreTypes.longToInt(com.a
ltova.CoreTypes.integerToLong(com.altova.CoreTypes.decimalToInteger(com.altova.CoreT
ypes.parseDecimal(com.altova.CoreTypes.nodeTypeToString((com.altova.mapforce.IMFNode)c
om.altova.functions.Core.first(com.altova.functions.Core.filterElements(com.altova.function
s.Core.createQName("SpeedCategory", "http://www.rsd.com/xsd"),
closure.var1_current))))))))));
        pos++;
        return true;
    }
    private boolean moveNext_7() throws Exception {
        state = 10;
        if
(!com.altova.functions.Core.exists(com.altova.functions.Core.filterElements(com.altova.fun
ctions.Core.createQName("LoadTableStars", "http://www.rsd.com/xsd"),
closure.var1_current)))) {state = 10; return false; }
        current =
com.altova.functions.Core.createElement(com.altova.functions.Core.createQName("LoadT
ableStars", "http://www.era.europa.eu/schemes/TAFTSI/2.1"),
com.altova.functions.Core.box(com.altova.CoreTypes.integerToString(com.altova.CoreTyp
es.longToInteger(com.altova.CoreTypes.intToLong(com.altova.CoreTypes.longToInt(com.a
ltova.CoreTypes.integerToLong(com.altova.CoreTypes.decimalToInteger(com.altova.CoreT
ypes.parseDecimal(com.altova.CoreTypes.nodeTypeToString((com.altova.mapforce.IMFNode)c
om.altova.functions.Core.first(com.altova.functions.Core.filterElements(com.altova.function
s.Core.createQName("LoadTableStars", "http://www.rsd.com/xsd"),
closure.var1_current))))))))));
        pos++;
        return true;
    }
    private boolean moveNext_10() throws Exception {
        state = 11;
```

```
        var2_RouteClassPayloads =
(com.altova.functions.Core.filterElements(com.altova.functions.Core.createQName("Route
ClassPayloads", "http://www.rsd.com/xsd"), closure.var1_current)).enumerator();
        return false;
    }
    private boolean moveNext_11() throws Exception {
        state = 11;
        if (!var2_RouteClassPayloads.moveNext()) {state = 12; return
false; }

        current =
com.altova.functions.Core.createElement(com.altova.functions.Core.createQName("Route
ClassPayloads", "http://www.era.europa.eu/schemes/TAFTSI/2.1"), (new
seq7_seq_(((com.altova.mapforce.IMFNode)(var2_RouteClassPayloads.current()))));
        pos++;
        return true;
    }
    private boolean moveNext_12() throws Exception {
        state = 0;
        var2_RouteClassPayloads.close(); var2_RouteClassPayloads =
null;

        return false;
    }

    public void close()
    {
        try
        {
            var2_RouteClassPayloads.close(); var2_RouteClassPayloads =
null;

        }
        catch (Exception e)
        {
        }
    }
}
static class seq7_seq_ implements IEnumerable
{
    com.altova.mapforce.IMFNode var1_current;

    public seq7_seq_(com.altova.mapforce.IMFNode var1_current)
    {
        this.var1_current = var1_current;
    }

    public IEnumerable enumerator() {return new Enumerator(this);}
}
```

```
public static class Enumerator implements IEnumerator
{
    int pos = 0;
    int state = 1;
    Object current;
    seq7_seq_ closure;
    public Enumerator(seq7_seq_ closure)
    {
        this.closure = closure;
    }

    public Object current() {return current;}

    public int position() {return pos;}

    public boolean moveNext() throws Exception
    {
        while (state != 0)
        {
            switch (state)
            {
                case 1:    if (moveNext_1()) return true; break;
                case 2:    if (moveNext_2()) return true; break;
            }
        }
        return false;
    }

    private boolean moveNext_1() throws Exception {
        state = 2;
        current =
com.altova.functions.Core.createElement(com.altova.functions.Core.createQName("Route
Class", "http://www.era.europa.eu/schemes/TAFTSI/2.1"),
com.altova.functions.Core.box(com.altova.CoreTypes.nodeToString((com.altova.mapforce.I
MFNode)com.altova.functions.Core.first(com.altova.functions.Core.filterElements(com.altov
a.functions.Core.createQName("RouteClass", "http://www.rsd.com/xsd"),
closure.var1_current))))));
        pos++;
        return true;
    }

    private boolean moveNext_2() throws Exception {
        state = 0;
        current =
com.altova.functions.Core.createElement(com.altova.functions.Core.createQName("MaxPa
yload", "http://www.era.europa.eu/schemes/TAFTSI/2.1"),
com.altova.functions.Core.box(com.altova.CoreTypes.decimalToString(com.altova.CoreTyp
es.parseDecimal(com.altova.CoreTypes.nodeToString((com.altova.mapforce.IMFNode)co
m.altova.functions.Core.first(com.altova.functions.Core.filterElements(com.altova.functions.
Core.createQName("MaxPayload", "http://www.rsd.com/xsd"), closure.var1_current))))));
    }
}
```

```
        pos++;
        return true;
    }

    public void close()
    {
        try
        {
        }
        catch (Exception e)
        {
        }
    }
}

static class seq8_seq_ implements IEnumerable
{
    com.altova.mapforce.IEnumerable var1_RollingStockDatasetM;

    public seq8_seq_(com.altova.mapforce.IEnumerable
var1_RollingStockDatasetM)
    {
        this.var1_RollingStockDatasetM = var1_RollingStockDatasetM;
    }

    public IEnumerator enumerator() {return new Enumerator(this);}

    public static class Enumerator implements IEnumerator
    {
        int pos = 0;
        int state = 1;
        Object current;
        seq8_seq_ closure;
        public Enumerator(seq8_seq_ closure)
        {
            this.closure = closure;
        }

        public Object current() {return current;}

        public int position() {return pos;}

        public boolean moveNext() throws Exception
        {
            while (state != 0)
            {
                switch (state)
```

```
        {
            case 1:    if (moveNext_1()) return true; break;
            case 2:    if (moveNext_2()) return true; break;
            case 3:    if (moveNext_3()) return true; break;
            case 4:    if (moveNext_4()) return true; break;
            case 5:    if (moveNext_5()) return true; break;
            case 6:    if (moveNext_6()) return true; break;
            case 7:    if (moveNext_7()) return true; break;
        }
    }
    return false;
}

private boolean moveNext_1() throws Exception {
    state = 2;
    current =
com.altova.functions.Core.createElement(com.altova.functions.Core.createQName("Number
ofBrakes", "http://www.era.europa.eu/schemes/TAFTSI/2.1"),
com.altova.functions.Core.box(com.altova.CoreTypes.integerToString(com.altova.CoreTyp
es.longToInteger(com.altova.CoreTypes.intToLong(com.altova.CoreTypes.longToInt(com.a
ltova.CoreTypes.integerToLong(com.altova.CoreTypes.decimalToInteger(com.altova.CoreT
ypes.parseDecimal(com.altova.CoreTypes.nodeToString((com.altova.mapforce.IMFNode)c
om.altova.functions.Core.first(com.altova.functions.Core.filterElements(com.altova.functi
s.Core.createQName("NumberOfBrakes", "http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.fi
lterElements(com.altova.functions.Core.createQName("AirBrake",
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.fi
lterElements(com.altova.functions.Core.createQName("DesignDataSet",
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.fi
lterElements(com.altova.functions.Core.createQName("RollingStockDataset",
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(closure.var1_RollingStockD
atasetM)))))))))))))))));
        pos++;
        return true;
    }
private boolean moveNext_2() throws Exception {
    state = 3;
    current =
com.altova.functions.Core.createElement(com.altova.functions.Core.createQName("Brake
System", "http://www.era.europa.eu/schemes/TAFTSI/2.1"),
com.altova.functions.Core.box(com.altova.CoreTypes.nodeToString((com.altova.mapforce.I
MFNode)com.altova.functions.Core.first(com.altova.functions.Core.filterElements(com.altov
a.functions.Core.createQName("BrakeSystem", "http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.fi
lterElements(com.altova.functions.Core.createQName("AirBrake",
"http://www.rsd.com/xsd"),
```



```
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.filterElements(com.altova.functions.Core.createQName("DesignDataSet", "http://www.rsd.com/xsd"), (com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.filterElements(com.altova.functions.Core.createQName("RollingStockDataset", "http://www.rsd.com/xsd"), (com.altova.mapforce.IMFNode)com.altova.functions.Core.first(closure.var1_RollingStockDatasetM)))))))));  
        pos++;  
        return true;  
    }  
    private boolean moveNext_3() throws Exception {  
        state = 4;  
        current =  
com.altova.functions.Core.createElement(com.altova.functions.Core.createQName("AirBrakeType", "http://www.era.europa.eu/schemes/TAFTSI/2.1"),  
com.altova.functions.Core.box(com.altova.CoreTypes.integerToString(com.altova.CoreTypes.longToInteger(com.altova.CoreTypes.intToLong(com.altova.CoreTypes.longToInt(com.altova.CoreTypes.integerToLong(com.altova.CoreTypes.decimalToInteger(com.altova.CoreTypes.parseDecimal(com.altova.CoreTypes.nodeToString((com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.filterElements(com.altova.functions.Core.createQName("AirBrakeType", "http://www.rsd.com/xsd"), (com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.filterElements(com.altova.functions.Core.createQName("AirBrake", "http://www.rsd.com/xsd"), (com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.filterElements(com.altova.functions.Core.createQName("DesignDataSet", "http://www.rsd.com/xsd"), (com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.filterElements(com.altova.functions.Core.createQName("RollingStockDataset", "http://www.rsd.com/xsd"), (com.altova.mapforce.IMFNode)com.altova.functions.Core.first(closure.var1_RollingStockDatasetM)))))))))))))))));  
        pos++;  
        return true;  
    }  
    private boolean moveNext_4() throws Exception {  
        state = 5;  
        current =  
com.altova.functions.Core.createElement(com.altova.functions.Core.createQName("BrakingPowerVariationDevice", "http://www.era.europa.eu/schemes/TAFTSI/2.1"),  
com.altova.functions.Core.box(com.altova.CoreTypes.integerToString(com.altova.CoreTypes.longToInteger(com.altova.CoreTypes.intToLong(com.altova.CoreTypes.longToInt(com.altova.CoreTypes.integerToLong(com.altova.CoreTypes.decimalToInteger(com.altova.CoreTypes.parseDecimal(com.altova.CoreTypes.nodeToString((com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.filterElements(com.altova.functions.Core.createQName("BrakingPowerVariationDevice", "http://www.rsd.com/xsd"), (com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.filterElements(com.altova.functions.Core.createQName("AirBrake",
```



```
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.fi
lterElements(com.altova.functions.Core.createQName("DesignDataSet",
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.fi
lterElements(com.altova.functions.Core.createQName("RollingStockDataset",
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(closure.var1_RollingStockD
atasetM)))))))))))))))));
    pos++;
    return true;
}
private boolean moveNext_5() throws Exception {
    state = 6;
    current =
com.altova.functions.Core.createElement(com.altova.functions.Core.createQName("AirBra
kedMass", "http://www.era.europa.eu/schemes/TAFTSI/2.1"),
com.altova.functions.Core.box(com.altova.CoreTypes.integerToString(com.altova.CoreTyp
es.longToInteger(com.altova.CoreTypes.intToLong(com.altova.CoreTypes.longToInt(com.a
ltova.CoreTypes.integerToLong(com.altova.CoreTypes.decimalToInteger(com.altova.CoreT
ypes.parseDecimal(com.altova.CoreTypes.nodeToString((com.altova.mapforce.IMFNode)c
om.altova.functions.Core.first(com.altova.functions.Core.filterElements(com.altova.functio
s.Core.createQName("AirBrakedMass", "http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.fi
lterElements(com.altova.functions.Core.createQName("AirBrake",
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.fi
lterElements(com.altova.functions.Core.createQName("DesignDataSet",
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.fi
lterElements(com.altova.functions.Core.createQName("RollingStockDataset",
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(closure.var1_RollingStockD
atasetM)))))))))))))))))))));
    pos++;
    return true;
}
private boolean moveNext_6() throws Exception {
    state = 7;
    current =
com.altova.functions.Core.createElement(com.altova.functions.Core.createQName("LoadC
hangeDevice", "http://www.era.europa.eu/schemes/TAFTSI/2.1"), (new
seq9_seq_(closure.var1_RollingStockDatasetM)));
    pos++;
    return true;
}
private boolean moveNext_7() throws Exception {
    state = 0;
```



```
        current =
com.altova.functions.Core.createElement(com.altova.functions.Core.createQName("Brake
SpecialCharacteristics", "http://www.era.europa.eu/schemes/TAFTSI/2.1"),
com.altova.functions.Core.box(com.altova.CoreTypes.integerToString(com.altova.CoreTyp
es.longToInteger(com.altova.CoreTypes.intToLong(com.altova.CoreTypes.longToInt(com.a
ltova.CoreTypes.integerToLong(com.altova.CoreTypes.decimalToInteger(com.altova.CoreT
ypes.parseDecimal(com.altova.CoreTypes.nodeToString((com.altova.mapforce.IMFNode)c
om.altova.functions.Core.first(com.altova.functions.Core.filterElements(com.altova.functi
ons.Core.createQName("BrakeSpecialCharacteristics", "http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.fi
lterElements(com.altova.functions.Core.createQName("AirBrake",
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.fi
lterElements(com.altova.functions.Core.createQName("DesignDataSet",
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.fi
lterElements(com.altova.functions.Core.createQName("RollingStockDataset",
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(closure.var1_RollingStockD
atasetM)))))))))))))))))))));
        pos++;
        return true;
    }

    public void close()
    {
        try
        {
        }
        catch (Exception e)
        {
        }
    }
}

static class seq9_seq_ implements IEnumerable
{
    com.altova.mapforce.IEnumerable var1_RollingStockDatasetM;

    public seq9_seq_(com.altova.mapforce.IEnumerable
var1_RollingStockDatasetM)
    {
        this.var1_RollingStockDatasetM = var1_RollingStockDatasetM;
    }

    public IEnumerator enumerator() {return new Enumerator(this);}
}
```

```
public static class Enumerator implements IEnumerator
{
    int pos = 0;
    int state = 1;
    Object current;
    seq9_seq_ closure;
    public Enumerator(seq9_seq_ closure)
    {
        this.closure = closure;
    }

    public Object current() {return current;}

    public int position() {return pos;}

    public boolean moveNext() throws Exception
    {
        while (state != 0)
        {
            switch (state)
            {
                case 1:    if (moveNext_1()) return true; break;
                case 2:    if (moveNext_2()) return true; break;
            }
        }
        return false;
    }

    private boolean moveNext_1() throws Exception {
        state = 2;
        current =
com.altova.functions.Core.createElement(com.altova.functions.Core.createQName("ChangeOverWeight", "http://www.era.europa.eu/schemes/TAFTSI/2.1"),
com.altova.functions.Core.box(com.altova.CoreTypes.integerToString(com.altova.CoreTypes.longToInteger(com.altova.CoreTypes.intToLong(com.altova.CoreTypes.longToInt(com.altova.CoreTypes.integerToLong(com.altova.CoreTypes.decimalToInteger(com.altova.CoreTypes.parseDecimal(com.altova.CoreTypes.nodeToString((com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.filterElements(com.altova.functions.Core.createQName("ChangeOverWeight", "http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.filterElements(com.altova.functions.Core.createQName("LoadChangeDevice",
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.filterElements(com.altova.functions.Core.createQName("AirBrake",
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.filterElements(com.altova.functions.Core.createQName("DesignDataSet",
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.fi
```



```
IterElements(com.altova.functions.Core.createQName("RollingStockDataset",
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(closure.var1_RollingStockD
atasetM)))))))))))))))));
        pos++;
        return true;
    }
    private boolean moveNext_2() throws Exception {
        state = 0;
        current =
com.altova.functions.Core.createElement(com.altova.functions.Core.createQName("AirBra
kedMassLoaded", "http://www.era.europa.eu/schemes/TAFTSI/2.1"),
com.altova.functions.Core.box(com.altova.CoreTypes.integerToString(com.altova.CoreTyp
es.longToInteger(com.altova.CoreTypes.intToLong(com.altova.CoreTypes.longToInt(com.a
ltova.CoreTypes.integerToLong(com.altova.CoreTypes.decimalToInteger(com.altova.CoreT
ypes.parseDecimal(com.altova.CoreTypes.nodeTypeToString((com.altova.mapforce.IMFNode)c
om.altova.functions.Core.first(com.altova.functions.Core.filterElements(com.altova.fun
ctions.Core.createQName("AirBrakedMassLoaded", "http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.f
ilterElements(com.altova.functions.Core.createQName("LoadChangeDevice",
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.f
ilterElements(com.altova.functions.Core.createQName("AirBrake",
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.f
ilterElements(com.altova.functions.Core.createQName("DesignDataSet",
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.f
ilterElements(com.altova.functions.Core.createQName("RollingStockDataset",
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(closure.var1_RollingStockD
atasetM)))))))))))))))))))));
        pos++;
        return true;
    }

    public void close()
    {
        try
        {
        }
        catch (Exception e)
        {
        }
    }
}
}
```

```
static class seq10_seq_ implements IEnumerable
{
    com.altova.mapforce.IEnumerable var1_RollingStockDatasetM;

    public seq10_seq_(com.altova.mapforce.IEnumerable
var1_RollingStockDatasetM)
    {
        this.var1_RollingStockDatasetM = var1_RollingStockDatasetM;
    }

    public IEnumerator enumerator() {return new Enumerator(this);}

    public static class Enumerator implements IEnumerator
    {
        int pos = 0;
        int state = 1;
        Object current;
        seq10_seq_ closure;
        public Enumerator(seq10_seq_ closure)
        {
            this.closure = closure;
        }

        public Object current() {return current;}

        public int position() {return pos;}

        public boolean moveNext() throws Exception
        {
            while (state != 0)
            {
                switch (state)
                {
                    case 1:    if (moveNext_1()) return true; break;
                    case 2:    if (moveNext_2()) return true; break;
                    case 3:    if (moveNext_3()) return true; break;
                }
            }
            return false;
        }

        private boolean moveNext_1() throws Exception {
            state = 2;
            current =
com.altova.functions.Core.createElement(com.altova.functions.Core.createQName("HandB
rakeType", "http://www.era.europa.eu/schemes/TAFTSI/2.1"),
com.altova.functions.Core.box(com.altova.CoreTypes.integerToString(com.altova.CoreTyp
es.longToInteger(com.altova.CoreTypes.intToLong(com.altova.CoreTypes.longToInt(com.a
ltova.CoreTypes.integerToLong(com.altova.CoreTypes.decimalToInteger(com.altova.CoreT
```

```
ypes.parseDecimal(com.altova.CoreTypes.nodeTypeToString((com.altova.mapforce.IMFNode)c
om.altova.functions.Core.first(com.altova.functions.Core.filterElements(com.altova.function
s.Core.createQName("HandBrakeType", "http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.fi
lterElements(com.altova.functions.Core.createQName("HandBrake",
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.fi
lterElements(com.altova.functions.Core.createQName("DesignDataSet",
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.fi
lterElements(com.altova.functions.Core.createQName("RollingStockDataset",
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(closure.var1_RollingStockD
atasetM)))))))))))))))));
        pos++;
        return true;
    }
    private boolean moveNext_2() throws Exception {
        state = 3;
        current =
com.altova.functions.Core.createElement(com.altova.functions.Core.createQName("HandB
rakedWeight", "http://www.era.europa.eu/schemes/TAFTSI/2.1"),
com.altova.functions.Core.box(com.altova.CoreTypes.decimalToString(com.altova.CoreTyp
es.parseDecimal(com.altova.CoreTypes.nodeTypeToString((com.altova.mapforce.IMFNode)c
om.altova.functions.Core.first(com.altova.functions.Core.filterElements(com.altova.functions.
Core.createQName("HandBrakedWeight", "http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.fi
lterElements(com.altova.functions.Core.createQName("HandBrake",
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.fi
lterElements(com.altova.functions.Core.createQName("DesignDataSet",
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.fi
lterElements(com.altova.functions.Core.createQName("RollingStockDataset",
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(closure.var1_RollingStockD
atasetM)))))))))))))))));
        pos++;
        return true;
    }
    private boolean moveNext_3() throws Exception {
        state = 0;
        current =
com.altova.functions.Core.createElement(com.altova.functions.Core.createQName("MaxPa
rkingBrakeGradient", "http://www.era.europa.eu/schemes/TAFTSI/2.1"),
com.altova.functions.Core.box(com.altova.CoreTypes.integerToString(com.altova.CoreTyp
es.longToInteger(com.altova.CoreTypes.intToLong(com.altova.CoreTypes.longToInt(com.a
ltova.CoreTypes.integerToLong(com.altova.CoreTypes.decimalToInteger(com.altova.CoreT
ypes.parseDecimal(com.altova.CoreTypes.nodeTypeToString((com.altova.mapforce.IMFNode)c
```



```
om.altova.functions.Core.first(com.altova.functions.Core.filterElements(com.altova.function
s.Core.createQName("MaxParkingBrakeGradient", "http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.fi
lterElements(com.altova.functions.Core.createQName("HandBrake",
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.fi
lterElements(com.altova.functions.Core.createQName("DesignDataSet",
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.fi
lterElements(com.altova.functions.Core.createQName("RollingStockDataset",
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(closure.var1_RollingStockD
atasetM)))))))))))))))));
```

```
        pos++;
        return true;
```

```
    }
```

```
    public void close()
```

```
    {
```

```
        try
```

```
        {
```

```
        }
```

```
        catch (Exception e)
```

```
        {
```

```
        }
```

```
    }
```

```
}
```

```
}
```

```
static class seq11_seq_ implements IEnumerable
```

```
{
```

```
    com.altova.mapforce.IEnumerable var1_RollingStockDatasetM;
```

```
    public seq11_seq_(com.altova.mapforce.IEnumerable
```

```
var1_RollingStockDatasetM)
```

```
    {
```

```
        this.var1_RollingStockDatasetM = var1_RollingStockDatasetM;
```

```
    }
```

```
    public IEnumerator enumerator() {return new Enumerator(this);};
```

```
    public static class Enumerator implements IEnumerator
```

```
    {
```

```
        int pos = 0;
```

```
        int state = 1;
```

```
        Object current;
```

```
        seq11_seq_ closure;
```

```
        public Enumerator(seq11_seq_ closure)
```

```
{
    this.closure = closure;
}

public Object current() {return current;}

public int position() {return pos;}

public boolean moveNext() throws Exception
{
    while (state != 0)
    {
        switch (state)
        {
            case 1:    if (moveNext_1()) return true; break;
            case 2:    if (moveNext_2()) return true; break;
        }
    }
    return false;
}

private boolean moveNext_1() throws Exception {
    state = 2;
    current =
com.altova.functions.Core.createElement(com.altova.functions.Core.createQName("MaxTemp", "http://www.era.europa.eu/schemes/TAFTSI/2.1"),
com.altova.functions.Core.box(com.altova.CoreTypes.integerToString(com.altova.CoreTypes.longToInteger(com.altova.CoreTypes.intToLong(com.altova.CoreTypes.longToInt(com.altova.CoreTypes.integerToLong(com.altova.CoreTypes.decimalToInteger(com.altova.CoreTypes.parseDecimal(com.altova.CoreTypes.nodeToString((com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.filterElements(com.altova.functions.Core.createQName("MaxTemp", "http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.filterElements(com.altova.functions.Core.createQName("TemperatureRange",
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.filterElements(com.altova.functions.Core.createQName("DesignDataSet",
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.filterElements(com.altova.functions.Core.createQName("RollingStockDataset",
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(closure.var1_RollingStockDatasetM)))))))))))))))))))));
    pos++;
    return true;
}
private boolean moveNext_2() throws Exception {
    state = 0;
```



```
        current =
com.altova.functions.Core.createElement(com.altova.functions.Core.createQName("MinTemp", "http://www.era.europa.eu/schemes/TAFTSI/2.1"),
com.altova.functions.Core.box(com.altova.CoreTypes.integerToString(com.altova.CoreTypes.longToInteger(com.altova.CoreTypes.intToLong(com.altova.CoreTypes.longToInt(com.altova.CoreTypes.integerToLong(com.altova.CoreTypes.decimalToInteger(com.altova.CoreTypes.parseDecimal(com.altova.CoreTypes.nodeToString((com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.filterElements(com.altova.functions.Core.createQName("MinTemp", "http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.filterElements(com.altova.functions.Core.createQName("TemperatureRange",
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.filterElements(com.altova.functions.Core.createQName("DesignDataSet",
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.filterElements(com.altova.functions.Core.createQName("RollingStockDataset",
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(closure.var1_RollingStockDatasetM)))))))))))))))));
        pos++;
        return true;
    }

    public void close()
    {
        try
        {
        }
        catch (Exception e)
        {
        }
    }
}

static class Outer implements IEnumerable
{
    com.altova.mapforce.IMFNode
var1_instance_RSRD2_Wagons_338079300000;

    public Outer(com.altova.mapforce.IMFNode
var1_instance_RSRD2_Wagons_338079300000)
    {
        this.var1_instance_RSRD2_Wagons_338079300000 =
var1_instance_RSRD2_Wagons_338079300000;
    }
}
```

```
public IEnumerator enumerator() {return new Enumerator(this);}

public static class Enumerator implements IEnumerator
{
    int pos = 0;
    int state = 1;
    Object current;
    Outer closure;
    IEnumerator var2_box;
    public Enumerator(Outer closure)
    {
        this.closure = closure;
    }

    public Object current() {return current;}

    public int position() {return pos;}

    public boolean moveNext() throws Exception
    {
        while (state != 0)
        {
            switch (state)
            {
                case 1:    if (moveNext_1()) return true; break;
                case 2:    if (moveNext_2()) return true; break;
                case 3:    if (moveNext_3()) return true; break;
            }
        }
        return false;
    }

    private boolean moveNext_1() throws Exception {
        state = 2;
        var2_box = ((new
main(closure.var1_instance_RSRD2_Wagons_338079300000))).enumerator();
        return false;
    }

    private boolean moveNext_2() throws Exception {
        state = 2;
        if (!var2_box.moveNext()) {state = 3; return false; }
        current = var2_box.current();
        pos++;
        return true;
    }

    private boolean moveNext_3() throws Exception {
        state = 0;
        var2_box.close(); var2_box = null;
        return false;
    }
}
```

```
    }

    public void close()
    {
        try
        {
            var2_box.close(); var2_box = null;
        }
        catch (Exception e)
        {
        }
    }
}

// instances
protected org.w3c.dom.Node varRSRD2_Wagons_3380793000002Instance;

public void run(String RSRD2_Wagons_3380793000002SourceFilename, String
taf_cat_complete2TargetFilename) throws Exception {
    // open source streams
    writeTrace("Loading " + RSRD2_Wagons_3380793000002SourceFilename +
"...\\n");
    com.altova.io.FileInput RSRD2_Wagons_3380793000002Source = new
com.altova.io.FileInput(RSRD2_Wagons_3380793000002SourceFilename);
    // open target stream
    com.altova.io.FileOutput taf_cat_complete2Target = new
com.altova.io.FileOutput(taf_cat_complete2TargetFilename);

    // run
    run(RSRD2_Wagons_3380793000002Source, taf_cat_complete2Target);

    // close source streams
    RSRD2_Wagons_3380793000002Source.close();
    // close target stream
    writeTrace("Saving " + taf_cat_complete2TargetFilename + "...\\n");
    taf_cat_complete2Target.close();
}

// main entry point

public void run(com.altova.io.Input RSRD2_Wagons_3380793000002Source,
com.altova.io.Output taf_cat_complete2Target) throws Exception {
    // Open the source(s)
```

```
        org.w3c.dom.Document doc_RSRD2_Wagons_3380793000002 =
XmlTreeOperations.loadDocument(RSRD2_Wagons_3380793000002Source);
        varRSRD2_Wagons_3380793000002Instance =
doc_RSRD2_Wagons_3380793000002;
        if (runDoesCloseAll)
            RSRD2_Wagons_3380793000002Source.close();

        // Create the target
        org.w3c.dom.Document taf_cat_complete2Doc =
(taf_cat_complete2Target.getType() == com.altova.io.Output.IO_DOM) ?
taf_cat_complete2Target.getDocument() : XmlTreeOperations.createDocument();

        // Execute mapping

        main mapping = new main(new
com.altova.xml.DOMDocumentAsMFNodeAdapter(varRSRD2_Wagons_3380793000002In
stance, RSRD2_Wagons_3380793000002Source.getFilename()));

        com.altova.xml.MFDOMWriter.write(mapping, taf_cat_complete2Doc);
        // Close the target
        XmlTreeOperations.saveDocument(taf_cat_complete2Doc,
taf_cat_complete2Target, "UTF-8", false, false, true);

        if (runDoesCloseAll)
        {
            RSRD2_Wagons_3380793000002Source.close();
            taf_cat_complete2Target.close();
        }
    }
}
```

b) Program code in JAVA used for mapping test of map the RSRD² request message provided by RSRD² with the RSRD Data set query in the TAF TSI catalogue:

```
/**
 * MappingMapTotaf_cat_complete.java
 *
 * This file was generated by MapForce 2015sp2.
 *
 * YOU SHOULD NOT MODIFY THIS FILE, BECAUSE IT WILL BE
```



* OVERWRITTEN WHEN YOU RE-RUN CODE GENERATION.

*

* Refer to the MapForce Documentation for further details.

* <http://www.altova.com/mapforce>

*/

```
package com.mapforce;
import com.altova.mapforce.*;
import com.altova.types.*;
import com.altova.xml.*;
import java.util.*;

public class MappingMapTotaf_cat_complete extends com.altova.TraceProvider
{
    private boolean runDoesCloseAll = true;
    public void setCloseObjectsAfterRun(boolean c) {runDoesCloseAll = c;}
    public boolean getCloseObjectsAfterRun() {return runDoesCloseAll;}

    static class main implements IEnumerable
    {
        com.altova.mapforce.IMFNode var1_instance_RSRD_Request_Message;

        public main(com.altova.mapforce.IMFNode
var1_instance_RSRD_Request_Message)
        {
            this.var1_instance_RSRD_Request_Message =
var1_instance_RSRD_Request_Message;
        }

        public IEnumerator enumerator() {return new Enumerator(this);}

        public static class Enumerator implements IEnumerator
        {
            int pos = 0;
            int state = 2;
            Object current;
            main closure;
            com.altova.mapforce.IEnumerable var2_RollingStockDatasetQ;
            public Enumerator(main closure)
            {
                this.closure = closure;
            }

            public Object current() {return current;}

            public int position() {return pos;}

            public boolean moveNext() throws Exception
            {
```

```
        while (state != 0)
        {
            switch (state)
            {
                case 2:    if (moveNext_2()) return true; break;
            }
        }
        return false;
    }

    private boolean moveNext_2() throws Exception {
        state = 0;
        var2_RollingStockDatasetQ = new
com.altova.functions.Core.SequenceCache(com.altova.functions.Core.filterElements(com.a
ltova.functions.Core.createQName("RollingStockDatasetQueryMessage",
"http://www.rsd.com/xsd"), closure.var1_instance_RSRD_Request_Message));
        current =
com.altova.functions.Core.createElement(com.altova.functions.Core.createQName("Rolling
StockDatasetQueryMessage", "http://www.era.europa.eu/schemes/TAFTSI/2.1"), (new
seq1_join(var2_RollingStockDatasetQ));
        pos++;
        return true;
    }

    public void close()
    {
        try
        {
        }
        catch (Exception e)
        {
        }
    }
}

}

static class seq1_join implements IEnumerable
{
    com.altova.mapforce.IEnumerable var1_RollingStockDatasetQ;

    public seq1_join(com.altova.mapforce.IEnumerable
var1_RollingStockDatasetQ)
    {
        this.var1_RollingStockDatasetQ = var1_RollingStockDatasetQ;
    }

    public IEnumerator enumerator() {return new Enumerator(this);}
}
```

```
public static class Enumerator implements IEnumerator
{
    int pos = 0;
    int state = 1;
    Object current;
    seq1_join closure;
    IEnumerator var2_WagonNumberFreight;
    public Enumerator(seq1_join closure)
    {
        this.closure = closure;
    }

    public Object current() {return current;}

    public int position() {return pos;}

    public boolean moveNext() throws Exception
    {
        while (state != 0)
        {
            switch (state)
            {
                case 1:    if (moveNext_1()) return true; break;
                case 2:    if (moveNext_2()) return true; break;
                case 3:    if (moveNext_3()) return true; break;
                case 5:    if (moveNext_5()) return true; break;
                case 6:    if (moveNext_6()) return true; break;
                case 7:    if (moveNext_7()) return true; break;
            }
        }
        return false;
    }

    private boolean moveNext_1() throws Exception {
        state = 2;
        current = com.altova.functions.Core.createNamespace("tap",
"http://www.era.europa.eu/schemes/TAPTSI/1.3");
        pos++;
        return true;
    }

    private boolean moveNext_2() throws Exception {
        state = 3;
        current =
com.altova.functions.Core.createAttribute(com.altova.functions.Core.createQName("xsi:sch
emaLocation", "http://www.w3.org/2001/XMLSchema-instance"),
com.altova.functions.Core.box("http://www.era.europa.eu/schemes/TAFTSI/2.1
C:/Users/gutiero/Desktop/Reporting/Test/RSRD\u00B2/taf_cat_complete.xsd"));
        pos++;
        return true;
    }
}
```



```
    }
    private boolean moveNext_3() throws Exception {
        state = 5;
        if
(!com.altova.functions.Core.exists(closure.var1_RollingStockDatasetQ)) {state = 0; return
false; }

        current =
com.altova.functions.Core.createElement(com.altova.functions.Core.createQName("Messa
geHeader", "http://www.era.europa.eu/schemes/TAFTSI/2.1"), (new
seq2_seq_(closure.var1_RollingStockDatasetQ));
        pos++;
        return true;
    }
    private boolean moveNext_5() throws Exception {
        state = 6;
        var2_WagonNumberFreight =
(com.altova.functions.Core.filterElements(com.altova.functions.Core.createQName("Wagon
NumberFreight", "http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(closure.var1_RollingStockD
atasetQ))).enumerator();
        return false;
    }
    private boolean moveNext_6() throws Exception {
        state = 6;
        if (!var2_WagonNumberFreight.moveNext()) {state = 7; return
false; }

        current =
com.altova.functions.Core.createElement(com.altova.functions.Core.createQName("Wagon
NumberFreight", "http://www.era.europa.eu/schemes/TAFTSI/2.1"),
com.altova.functions.Core.box(com.altova.CoreTypes.integerToString(com.altova.CoreTyp
es.longToInteger(com.altova.CoreTypes.integerToLong(com.altova.CoreTypes.decimalToI
nteger(com.altova.CoreTypes.parseDecimal(com.altova.CoreTypes.nodeToString(((com.alt
ova.mapforce.IMFNode)(var2_WagonNumberFreight.current()))))))));
        pos++;
        return true;
    }
    private boolean moveNext_7() throws Exception {
        state = 0;
        var2_WagonNumberFreight.close(); var2_WagonNumberFreight
= null;

        return false;
    }

    public void close()
    {
        try
        {
```

```
var2_WagonNumberFreight.close(); var2_WagonNumberFreight
= null;
    }
    catch (Exception e)
    {
    }
}
}
}
static class seq2_seq_ implements IEnumerable
{
    com.altova.mapforce.IEnumerable var1_RollingStockDatasetQ;

    public seq2_seq_(com.altova.mapforce.IEnumerable
var1_RollingStockDatasetQ)
    {
        this.var1_RollingStockDatasetQ = var1_RollingStockDatasetQ;
    }

    public IEnumerator enumerator() {return new Enumerator(this);}

    public static class Enumerator implements IEnumerator
    {
        int pos = 0;
        int state = 1;
        Object current;
        seq2_seq_ closure;
        public Enumerator(seq2_seq_ closure)
        {
            this.closure = closure;
        }

        public Object current() {return current;}

        public int position() {return pos;}

        public boolean moveNext() throws Exception
        {
            while (state != 0)
            {
                switch (state)
                {
                    case 1:    if (moveNext_1()) return true; break;
                    case 2:    if (moveNext_2()) return true; break;
                    case 3:    if (moveNext_3()) return true; break;
                    case 4:    if (moveNext_4()) return true; break;
                    case 5:    if (moveNext_5()) return true; break;
                }
            }
        }
    }
}
```



```
    }
    return false;
}

private boolean moveNext_1() throws Exception {
    state = 2;
    current =
com.altova.functions.Core.createElement(com.altova.functions.Core.createQName("MessageReference", "http://www.era.europa.eu/schemes/TAFTSI/2.1"), (new
seq3_seq_(closure.var1_RollingStockDatasetQ));
    pos++;
    return true;
}

private boolean moveNext_2() throws Exception {
    state = 3;
    current =
com.altova.functions.Core.createElement(com.altova.functions.Core.createQName("MessageRoutingID", "http://www.era.europa.eu/schemes/TAFTSI/2.1"),
com.altova.functions.Core.box(com.altova.CoreTypes.integerToString(com.altova.CoreTypes.longToInteger(com.altova.CoreTypes.intToLong(com.altova.CoreTypes.longToInt(com.altova.CoreTypes.integerToLong(com.altova.CoreTypes.decimalToInteger(com.altova.CoreTypes.parseDecimal(com.altova.CoreTypes.nodeToString((com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.filterElements(com.altova.functions.Core.createQName("MessageRoutingID", "http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.filterElements(com.altova.functions.Core.createQName("MessageHeader",
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(closure.var1_RollingStockDatasetQ)))))))))))));
    pos++;
    return true;
}

private boolean moveNext_3() throws Exception {
    state = 4;
    current =
com.altova.functions.Core.createElement(com.altova.functions.Core.createQName("SenderReference", "http://www.era.europa.eu/schemes/TAFTSI/2.1"),
com.altova.functions.Core.box(com.altova.CoreTypes.nodeToString((com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.filterElements(com.altova.functions.Core.createQName("SenderReference", "http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.filterElements(com.altova.functions.Core.createQName("MessageHeader",
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(closure.var1_RollingStockDatasetQ)))))))));
    pos++;
    return true;
}

private boolean moveNext_4() throws Exception {
```

```
        state = 5;
        current =
com.altova.functions.Core.createElement(com.altova.functions.Core.createQName("Sender", "http://www.era.europa.eu/schemes/TAFTSI/2.1"), (new
seq4_seq_(closure.var1_RollingStockDatasetQ)));
        pos++;
        return true;
    }
    private boolean moveNext_5() throws Exception {
        state = 0;
        current =
com.altova.functions.Core.createElement(com.altova.functions.Core.createQName("Recipient", "http://www.era.europa.eu/schemes/TAFTSI/2.1"), (new
seq5_seq_(closure.var1_RollingStockDatasetQ)));
        pos++;
        return true;
    }

    public void close()
    {
        try
        {
        }
        catch (Exception e)
        {
        }
    }
}

static class seq3_seq_ implements IEnumerable
{
    com.altova.mapforce.IEnumerable var1_RollingStockDatasetQ;

    public seq3_seq_(com.altova.mapforce.IEnumerable
var1_RollingStockDatasetQ)
    {
        this.var1_RollingStockDatasetQ = var1_RollingStockDatasetQ;
    }

    public IEnumerator enumerator() {return new Enumerator(this);}

    public static class Enumerator implements IEnumerable
    {
        int pos = 0;
        int state = 1;
        Object current;
        seq3_seq_ closure;
    }
}
```

```
public Enumerator(seq3_seq_closure)
{
    this.closure = closure;
}

public Object current() {return current;}

public int position() {return pos;}

public boolean moveNext() throws Exception
{
    while (state != 0)
    {
        switch (state)
        {
            case 1:    if (moveNext_1()) return true; break;
            case 2:    if (moveNext_2()) return true; break;
            case 3:    if (moveNext_3()) return true; break;
            case 4:    if (moveNext_4()) return true; break;
        }
    }
    return false;
}

private boolean moveNext_1() throws Exception {
    state = 2;
    current =
com.altova.functions.Core.createElement(com.altova.functions.Core.createQName("Message
Type", "http://www.era.europa.eu/schemes/TAFTSI/2.1"),
com.altova.functions.Core.box(com.altova.CoreTypes.integerToString(com.altova.CoreTypes
es.longToInteger(com.altova.CoreTypes.intToLong(com.altova.CoreTypes.longToInt(com.a
ltova.CoreTypes.integerToLong(com.altova.CoreTypes.decimalToInteger(com.altova.CoreT
ypes.parseDecimal(com.altova.CoreTypes.nodeToString((com.altova.mapforce.IMFNode)c
om.altova.functions.Core.first(com.altova.functions.Core.filterElements(com.altova.function
s.Core.createQName("MessageType", "http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.fi
lterElements(com.altova.functions.Core.createQName("MessageReference",
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.fi
lterElements(com.altova.functions.Core.createQName("MessageHeader",
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(closure.var1_RollingStockD
atasetQ)))))))))))))))));
    pos++;
    return true;
}

private boolean moveNext_2() throws Exception {
    state = 3;
```

```
        current =
com.altova.functions.Core.createElement(com.altova.functions.Core.createQName("MessageVersion", "http://www.era.europa.eu/schemes/TAFTSI/2.1"),
com.altova.functions.Core.box(com.altova.CoreTypes.nodeToString((com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.filterElements(com.altova.functions.Core.createQName("MessageVersion", "http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.filterElements(com.altova.functions.Core.createQName("MessageReference",
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.filterElements(com.altova.functions.Core.createQName("MessageHeader",
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(closure.var1_RollingStockDatasetQ))))))))));
        pos++;
        return true;
    }
    private boolean moveNext_3() throws Exception {
        state = 4;
        current =
com.altova.functions.Core.createElement(com.altova.functions.Core.createQName("MessageIdentifier", "http://www.era.europa.eu/schemes/TAFTSI/2.1"),
com.altova.functions.Core.box(com.altova.CoreTypes.nodeToString((com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.filterElements(com.altova.functions.Core.createQName("MessageIdentifier", "http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.filterElements(com.altova.functions.Core.createQName("MessageReference",
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.filterElements(com.altova.functions.Core.createQName("MessageHeader",
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(closure.var1_RollingStockDatasetQ))))))))));
        pos++;
        return true;
    }
    private boolean moveNext_4() throws Exception {
        state = 0;
        current =
com.altova.functions.Core.createElement(com.altova.functions.Core.createQName("MessageDateTime", "http://www.era.europa.eu/schemes/TAFTSI/2.1"),
com.altova.functions.Core.box(com.altova.CoreTypes.DateTimeToString(com.altova.CoreTypes.parseDateTime(com.altova.CoreTypes.nodeToString((com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.filterElements(com.altova.functions.Core.createQName("MessageDateTime", "http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.filterElements(com.altova.functions.Core.createQName("MessageReference",
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.filterElements(com.altova.functions.Core.createQName("MessageHeader",
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(closure.var1_RollingStockDatasetQ))))))))));
        pos++;
        return true;
    }
    private boolean moveNext_5() throws Exception {
        state = 0;
        current =
com.altova.functions.Core.createElement(com.altova.functions.Core.createQName("MessageDate", "http://www.era.europa.eu/schemes/TAFTSI/2.1"),
com.altova.functions.Core.box(com.altova.CoreTypes.DateTimeToString(com.altova.CoreTypes.parseDateTime(com.altova.CoreTypes.nodeToString((com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.filterElements(com.altova.functions.Core.createQName("MessageDate", "http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.filterElements(com.altova.functions.Core.createQName("MessageReference",
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.filterElements(com.altova.functions.Core.createQName("MessageHeader",
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(closure.var1_RollingStockDatasetQ))))))))));
        pos++;
        return true;
    }
}
```

```
IterElements(com.altova.functions.Core.createQName("MessageHeader",
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(closure.var1_RollingStockD
atasetQ))))))));
        pos++;
        return true;
    }

    public void close()
    {
        try
        {
        }
        catch (Exception e)
        {
        }
    }
}

static class seq4_seq_ implements IEnumerable
{
    com.altova.mapforce.IEnumerable var1_RollingStockDatasetQ;

    public seq4_seq_(com.altova.mapforce.IEnumerable
var1_RollingStockDatasetQ)
    {
        this.var1_RollingStockDatasetQ = var1_RollingStockDatasetQ;
    }

    public IEnumerator enumerator() {return new Enumerator(this);}

    public static class Enumerator implements IEnumerator
    {
        int pos = 0;
        int state = 1;
        Object current;
        seq4_seq_ closure;
        public Enumerator(seq4_seq_ closure)
        {
            this.closure = closure;
        }

        public Object current() {return current;}

        public int position() {return pos;}

        public boolean moveNext() throws Exception
```



```
    {
        while (state != 0)
        {
            switch (state)
            {
                case 1:    if (moveNext_1()) return true; break;
                case 2:    if (moveNext_2()) return true; break;
            }
        }
        return false;
    }

    private boolean moveNext_1() throws Exception {
        state = 2;
        current =
com.altova.functions.Core.createAttribute(com.altova.functions.Core.createQName("CI_InstanceNumber", "http://www.era.europa.eu/schemes/TAFTSI/2.1"),
com.altova.functions.Core.box(com.altova.CoreTypes.integerToString(com.altova.CoreTypes.longToInteger(com.altova.CoreTypes.intToLong(com.altova.CoreTypes.longToInt(com.altova.CoreTypes.integerToLong(com.altova.CoreTypes.decimalToInteger(com.altova.CoreTypes.parseDecimal(com.altova.CoreTypes.nodeToString((com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.filterAttributes(com.altova.functions.Core.createQName("CI_InstanceNumber", "http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.filterElements(com.altova.functions.Core.createQName("Sender",
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.filterElements(com.altova.functions.Core.createQName("MessageHeader",
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(closure.var1_RollingStockDatasetQ)))))))))))))))));
        pos++;
        return true;
    }

    private boolean moveNext_2() throws Exception {
        state = 0;
        current =
com.altova.CoreTypes.integerToString(com.altova.CoreTypes.longToInteger(com.altova.CoreTypes.intToLong(com.altova.CoreTypes.longToInt(com.altova.CoreTypes.integerToLong(com.altova.CoreTypes.decimalToInteger(com.altova.CoreTypes.parseDecimal(com.altova.CoreTypes.nodeToString((com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.filterElements(com.altova.functions.Core.createQName("Sender",
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.filterElements(com.altova.functions.Core.createQName("MessageHeader",
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(closure.var1_RollingStockDatasetQ)))))))))))))))));
        pos++;
    }
}
```

```
        return true;
    }

    public void close()
    {
        try
        {
        }
        catch (Exception e)
        {
        }
    }
}

static class seq5_seq_ implements IEnumerable
{
    com.altova.mapforce.IEnumerable var1_RollingStockDatasetQ;

    public seq5_seq_(com.altova.mapforce.IEnumerable
var1_RollingStockDatasetQ)
    {
        this.var1_RollingStockDatasetQ = var1_RollingStockDatasetQ;
    }

    public IEnumerator enumerator() {return new Enumerator(this);}

    public static class Enumerator implements IEnumerator
    {
        int pos = 0;
        int state = 1;
        Object current;
        seq5_seq_ closure;
        public Enumerator(seq5_seq_ closure)
        {
            this.closure = closure;
        }

        public Object current() {return current;}

        public int position() {return pos;}

        public boolean moveNext() throws Exception
        {
            while (state != 0)
            {
                switch (state)
                {
```



```
                case 1:      if (moveNext_1()) return true; break;
                case 2:      if (moveNext_2()) return true; break;
                }
            }
        return false;
    }

    private boolean moveNext_1() throws Exception {
        state = 2;
        current =
com.altova.functions.Core.createAttribute(com.altova.functions.Core.createQName("CI_InstanceNumber", "http://www.era.europa.eu/schemes/TAFTSI/2.1"),
com.altova.functions.Core.box(com.altova.CoreTypes.integerToString(com.altova.CoreTypes.longToInteger(com.altova.CoreTypes.intToLong(com.altova.CoreTypes.longToInt(com.altova.CoreTypes.integerToLong(com.altova.CoreTypes.decimalToInteger(com.altova.CoreTypes.parseDecimal(com.altova.CoreTypes.nodeToString((com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.filterAttributes(com.altova.functions.Core.createQName("CI_InstanceNumber", "http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.filterElements(com.altova.functions.Core.createQName("Recipient",
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.filterElements(com.altova.functions.Core.createQName("MessageHeader",
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(closure.var1_RollingStockDatasetQ)))))))))))))))));
        pos++;
        return true;
    }
    private boolean moveNext_2() throws Exception {
        state = 0;
        current =
com.altova.CoreTypes.integerToString(com.altova.CoreTypes.longToInteger(com.altova.CoreTypes.intToLong(com.altova.CoreTypes.longToInt(com.altova.CoreTypes.integerToLong(com.altova.CoreTypes.decimalToInteger(com.altova.CoreTypes.parseDecimal(com.altova.CoreTypes.nodeToString((com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.filterElements(com.altova.functions.Core.createQName("Recipient", "http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(com.altova.functions.Core.filterElements(com.altova.functions.Core.createQName("MessageHeader",
"http://www.rsd.com/xsd"),
(com.altova.mapforce.IMFNode)com.altova.functions.Core.first(closure.var1_RollingStockDatasetQ)))))))))))))))));
        pos++;
        return true;
    }

    public void close()
```

```
        {
            try
            {
            }
            catch (Exception e)
            {
            }
        }
    }
}
static class Outer implements IEnumerable
{
    com.altova.mapforce.IMFNode var1_instance_RSRD_Request_Message;

    public Outer(com.altova.mapforce.IMFNode
var1_instance_RSRD_Request_Message)
    {
        this.var1_instance_RSRD_Request_Message =
var1_instance_RSRD_Request_Message;
    }

    public IEnumerator enumerator() {return new Enumerator(this);}

    public static class Enumerator implements IEnumerator
    {
        int pos = 0;
        int state = 1;
        Object current;
        Outer closure;
        IEnumerator var2_box;
        public Enumerator(Outer closure)
        {
            this.closure = closure;
        }

        public Object current() {return current;}

        public int position() {return pos;}

        public boolean moveNext() throws Exception
        {
            while (state != 0)
            {
                switch (state)
                {
                    case 1:    if (moveNext_1()) return true; break;
                    case 2:    if (moveNext_2()) return true; break;
                    case 3:    if (moveNext_3()) return true; break;
                }
            }
        }
    }
}
```

```
        }
    }
    return false;
}

private boolean moveNext_1() throws Exception {
    state = 2;
    var2_box = ((new
main(closure.var1_instance_RSRD_Request_Message))).enumerator();
    return false;
}
private boolean moveNext_2() throws Exception {
    state = 2;
    if (!var2_box.moveNext()) {state = 3; return false; }
    current = var2_box.current();
    pos++;
    return true;
}
private boolean moveNext_3() throws Exception {
    state = 0;
    var2_box.close(); var2_box = null;
    return false;
}

public void close()
{
    try
    {
        var2_box.close(); var2_box = null;
    }
    catch (Exception e)
    {
    }
}

}

// instances
protected org.w3c.dom.Node varRSRD_Request_Message2Instance;

public void run(String RSRD_Request_Message2SourceFilename, String
taf_cat_complete2TargetFilename) throws Exception {
    // open source streams
    writeTrace("Loading " + RSRD_Request_Message2SourceFilename + "...\\n");
}
```



```
        com.altova.io.FileInput RSRD_Request_Message2Source = new
com.altova.io.FileInput(RSRD_Request_Message2SourceFilename);
        // open target stream
        com.altova.io.FileOutput taf_cat_complete2Target = new
com.altova.io.FileOutput(taf_cat_complete2TargetFilename);

        // run
        run(RSRD_Request_Message2Source, taf_cat_complete2Target);

        // close source streams
        RSRD_Request_Message2Source.close();
        // close target stream
        writeTrace("Saving " + taf_cat_complete2TargetFilename + "...\\n");
        taf_cat_complete2Target.close();
    }

    // main entry point

    public void run(com.altova.io.Input RSRD_Request_Message2Source,
com.altova.io.Output taf_cat_complete2Target) throws Exception {
        // Open the source(s)
        org.w3c.dom.Document doc_RSRD_Request_Message2 =
XmlTreeOperations.loadDocument(RSRD_Request_Message2Source);
        varRSRD_Request_Message2Instance = doc_RSRD_Request_Message2;
        if (runDoesCloseAll)
            RSRD_Request_Message2Source.close();

        // Create the target
        org.w3c.dom.Document taf_cat_complete2Doc =
(taf_cat_complete2Target.getType() == com.altova.io.Output.IO_DOM) ?
taf_cat_complete2Target.getDocument() : XmlTreeOperations.createDocument();

        // Execute mapping

        main mapping = new main(new
com.altova.xml.DOMDocumentAsMFNodeAdapter(varRSRD_Request_Message2Instance,
RSRD_Request_Message2Source.getFilename()));

        com.altova.xml.MFDOMWriter.write(mapping, taf_cat_complete2Doc);
        // Close the target
        XmlTreeOperations.saveDocument(taf_cat_complete2Doc,
taf_cat_complete2Target, "UTF-8", false, false, true);

        if (runDoesCloseAll)
        {
            RSRD_Request_Message2Source.close();
            taf_cat_complete2Target.close();
        }
    }
}
```



}
}

}