
Subject: Connections to external trains

Posted by [Joachim.Rubröder](#) on Wed, 03 Feb 2016 10:57:27 GMT

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Conclusion of the discussion during the timetable-developer meeting on 22.01.2016 in Berlin:

Dear railML users.

We were looking for a way to reference a connection to an external train (bus, ship, etc.) that is not listed as train within the same railML file.

The idea is to have a sub element <externalReferences> with a choice of different elements to reference an external train via:

- * unique tafTapTsiTrainID
- * trainNumber (and maybe the related IM)
- * lineNumber, e.g. a connection to the trains of the line 'S6'
- * information, e.g. 'Connection to Berlin via Wolfsburg'

Do you have any remarks on this approach?

Kind regards,
Joachim Rubröder

The XSD would look like this:

```
<xs:complexType name="eConnectionTT">
  <xs:complexContent>
    <xs:extension base="rail:tConnectionTT">
      <xs:sequence>
        <xs:element name="externalReferences" minOccurs="0">
          <xs:complexType>
            <xs:choice maxOccurs="4">
              <xs:element name="tafTapTsiTrainID"
type="rail:eTapTsiTransportOperationalIdentifier"/>
              <xs:element name="trainNumber">
                <xs:complexType>
                  <xs:sequence>
                    <xs:element name="organizationalUnitBinding"
type="rail:eOrganizationalUnitBinding" minOccurs="0">
                      <xs:annotation>
                        <xs:documentation
source="http://wiki.railml.org/index.php?title=TT:organizationalUnitBinding"/>
                      </xs:annotation>
                    </xs:element>
                  </xs:sequence>
                    <xs:attribute name="trainNumber" type="xs:string"/>
                  </xs:complexType>
                </xs:element>
              <xs:element name="lineNumber">
                <xs:complexType>
```

```

        <xs:attribute name="lineNumber" type="xs:string"/>
    </xs:complexType>
</xs:element>
<xs:element name="information">
    <xs:complexType>
        <xs:attribute name="description" type="xs:string">
            <xs:annotation>
                <xs:documentation>Enter the description of the connection - e.g. 'Connection to
Berlin via Wolfsburg'</xs:documentation>
            </xs:annotation>
        </xs:attribute>
    </xs:complexType>
</xs:element>
</xs:choice>
</xs:complexType>
</xs:element>
<xs:element name="annotationRef" type="rail:tAnnotationRef" minOccurs="0"
maxOccurs="unbounded">
    <xs:annotation>
        <xs:documentation>refers to the id attribute of an annotation
element</xs:documentation>
        <xs:documentation
source="http://wiki.railml.org/index.php?title=TT:annotationRef_connection"/>
    </xs:annotation>
</xs:element>
</xs:sequence>
</xs:extension>
</xs:complexContent>
</xs:complexType>

```

Subject: Re: Connections to external trains
 Posted by [Philip Wobst](#) on Fri, 12 Feb 2016 09:26:23 GMT
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Hello Joachim,

I would like to suggest to change the choice to a normal sequence and then making the individual reference elements optional. That way each externalReferences sub-element can be supplied only once. The approach with the choice element would allow for up to four tafTapTsiTrainIDs.

```

<xs:element name="externalReferences" minOccurs="0">
  <xs:complexType>
    <xs:sequence>
      <xs:element name="tafTapTsiTrainID" type="rail:eTapTsiTransportOperationalIdentifier"
minOccurs="0" />
      <xs:element name="trainNumber" minOccurs="0">
        <xs:complexType>
          <xs:sequence>
            <xs:element name="organizationalUnitBinding"
type="rail:eOrganizationalUnitBinding" minOccurs="0">
              <xs:annotation>
                <xs:documentation
source="http://wiki.railml.org/index.php?title=TT:organizationalUnitBinding"/>
                </xs:annotation>
              </xs:element>
            </xs:sequence>
            <xs:attribute name="trainNumber" type="xs:string"/>
          </xs:complexType>
        </xs:element>
      <xs:element name="lineNumber" minOccurs="0">
        <xs:complexType>
          <xs:attribute name="lineNumber" type="xs:string"/>
        </xs:complexType>
      </xs:element>
      <xs:element name="information" minOccurs="0">
        <xs:complexType>
          <xs:attribute name="description" type="xs:string">
            <xs:annotation>
              <xs:documentation>Enter the description of the connection - e.g. 'Connection to
Berlin via Wolfsburg'</xs:documentation>
            </xs:annotation>
          </xs:attribute>
        </xs:complexType>
      </xs:element>
    </xs:sequence>
  </xs:complexType>
</xs:element>

```

BR, Philip

Screenshot showing the choice element on the left (post by Joachim) and the suggested change on the right (image is attached to the TRAC ticket #244):

Subject: Re: Connections to external trains
Posted by [Philip Wobst](#) on Fri, 12 Feb 2016 09:29:44 GMT

Hello all,

please note, that the inline image display is not shown in my newsreader client. To view the message with the image please see here:

http://www.railml.org/forum/index.php?t=msg&goto=1344#msg_1344

BR, Philip

Subject: Re: Connections to external trains [CLOSED]
Posted by [Philip Wobst](#) on Tue, 16 Feb 2016 15:40:40 GMT
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Dear TT developers,

the discussion regarding the external connection reference has been finalized. The following final changes have been made and implemented in revision #651 (see <http://trac.railml.org/ticket/244>):

1. References are provided in the new Element externalReference
2. References for one connection can be made as one or more of the following
externalReference/tafTapTsiTrainID externalReference/trainNumber
externalReference/lineNumber externalReference/information
3. Type added for externalReference for the connection (eExternalReference)

BR, Philip Wobst
