
Subject: [railML2] trackContinueCourse attribute of the switch
Posted by [Larissa Zhuchyi](#) on Mon, 25 Sep 2023 15:13:37 GMT
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Dear all

So far switch/@trackContinueCourse missed explicit documentation at XSD and IS:switch pages of Wiki2. Currently, it can be only somehow inferred from "Dev:Connection between tracks" as something different from connection/@course. In this forum post, railML.org would like to ask you to provide your thoughts on the following points to publish an explicit unified definition:

- (1) What should be an approach to model switch/@trackContinueCourse of an ordinary switch?
- (2) What should be an approach to model switch/@trackContinueCourse of a curved switch?
- (3) What should be an approach to model switch/@trackContinueCourse and connection/@course of a symmetrical (Y) switch, e.g. "straight" for both of do not define at all?
- (4) What can be a definition of the attribute switch/@trackContinueCourse applicable to all cases?

Currently, missing documentation leads to different interpretations according to national regulations. So far learnt are as follows:

track with radius > radius of diverting track ;

- according to the Norwegian documentation this is a track of a switch whose number (name) is the same as the number of a track to which this switch belongs;

These are two contradicting definitions which can be illustrated by the switch 70W02 (ordinary switch) of an advanced example.

According to the German definition @trackContinueCourse="straight".

According to the Norwegian definition @trackContinueCourse="right".

As railML is a regulation-independent language whose purpose is to increase interoperability there is a need for a common definition. Thanks in advance.

Sincerely,

Subject: Re: [railML2] trackContinueCourse attribute of the switch
Posted by [Thomas Nygreen](#) on Fri, 29 Sep 2023 18:06:01 GMT
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Dear all,

First, I want to add some pointers to previous discussions here on the same topic:
Request for feedback by coordinator Christian Rahmig and some feedback from pre-coordinator myself: Switch: usage of attribute @course from 2017-2018
Similar, but railML 3-related discussion, with a post by Christian Rahmig in [railML3.1]

applicationDirection and placing of elements on 24 July 2020

@trackContinueCourse always refers to the continuation of the <track> that the switch is placed on. If the switch is placed at that end of a <track>, this is the <connection> in the corresponding <trackBegin> or <trackEnd>. Conversely, the connection/@course, gives the course(s) of the other leg(s). The attribute @trackContinueCourse is bound to the continuation of the track, and you cannot change which leg it refers to without also swapping the connections. So you should not really be asking which leg @trackContinueCourse should refer to, but which leg that belongs in trackBegin/connection (or trackEnd/connection) and which leg that belongs in switch/connection. In my view and experience, it is perfectly fine to allow different business logics in this question.

What is important, to be able to determine the topology, is that the courses given on the same switch are different. In the case of a symmetrical switch, it is maybe most intuitive that one is "left" and the other is "right". If one is considered "straight" then the other should be "left" or "right". If we make a rule that depends on radius, what will we do when the radius is unknown?

To return to the example of the switch 70W02 in the advanced example, here is a simplified code example with some placeholders in CAPITAL letters:

```
<track id="tr1" type="mainTrack">
  <trackTopology>
    <trackBegin id="tb1" pos="0.0" absPos="6505.0">
      <connection id="ctb1" ref="REF1"/>
    </trackBegin>
    <!-- ... -->
    <connections>
      <switch id="sw1" name="70W02" pos="0.0" absPos="6505.0"
trackContinueCourse="TRACK_COURSE">
        <connection id="csw1" orientation="incoming" course="SW_COURSE" ref="REF_SW"/>
      </switch>
    </connections>
    <!-- ... -->
  </trackTopology>
  <!-- ... -->
</track>

<track id="tr2" name="1" type="mainTrack">
  <trackTopology>
    <!-- ... -->
    <trackEnd id="te2" pos="1180.0" absPos="6505.0">
      <connection id="cte2" ref="REF2"/>
    </trackEnd>
    <!-- ... -->
  </trackTopology>
  <!-- ... -->
</track>

<track id="tr3" name="2" type="secondaryTrack">
```

```
<trackTopology>
  <!-- ... -->
  <trackEnd id="te3" pos="1180.0" absPos="6505.0">
    <connection id="cte3" ref="REF3"/>
  </trackEnd>
  <!-- ... -->
</trackTopology>
<!-- ... -->
</track>
```

With the "German definition" we would have

```
REF1: cte3
TRACK_COURSE: straight
REF_SW: cte2
SW_COURSE: right
REF2: csw1
REF3: ctb1
```

With the "Norwegian definition" we get

```
REF1: cte2
TRACK_COURSE: right
REF_SW: cte3
SW_COURSE: straight
REF2: ctb1
REF3: csw1
```

So, we are only swapping the two connections. The topology is unchanged, and in both cases the connection from tr1 to tr2 is "right" and the connection from tr1 to tr3 is "straight". I do not see any ambiguity in this.

Best regards,
Thomas
