Subject: [railML3] Modelling of bridges
Posted by Thomas Langkamm on Thu, 09 Jun 2022 09:56:53 GMT
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Dear all,

I'm rather confused how rail bridges (2 tracks crossing each other via a bridge, like here: https://www.google.de/maps/@52.4875682,13.4580887,673m/data= !3m1!1e3) are modelled. (I apologize if I missed something obvious, but after browsing through the forum and wiki for half an hour I gave up and thought I'll ask here.)

overCrossing/underCrossing appear to be designed for something other than a rail that crosses/is crossed, however, it allows the type "railway" for is:crossesElement (https://wiki3.railml.org/wiki/IS:crossesElement#3.2). Since we don't have a "bridge" element anymore, it seems that we should use one of these two?

If this is incorrect, what is the correct modelling?

If this is correct, then this leads to some questions:

Say tracks A crosses over B. Would we have 2 elements, one overCrossing for B and one underCrossing for A? If so, would either have 2 elements "networkLocation" to reference the netElements? In this case we can't seem to distinguish which one is at the top and which one is at the bottom.

Or do we have just one element? If so, which one? IS:crossing appears to be out, as I read "A crossing is a place where two railway tracks intersect[...]" as that there is a physical connection between the tracks.

How would the netElement structure be? If we choose to separate netElements at the crossing point, we would have netElements A1/A2 with a netRelation A1_A2 and B1/B2 with netRelation B1_B2. But would we have a netRelation between A1_B1, A1_B2, A2_B1 and A2_B2 (navigability=none)?

Best, Thomas

Subject: Re: [railML3] Modelling of bridges
Posted by christian.rahmig on Mon, 13 Jun 2022 21:07:04 GMT
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Dear Thomas,

in railML 3 a railway track crossing another railway track via a bridge can be modelled using the elements <overCrossing> and <underCrossing>. Assume that in the following example Track A

passes over Track B (whereas A and B shall be the IDs of NetElements).

```
<overCrossing id="ocr1" constructionType="bridge">
  <spotLocation netElementRef="B" ... />
  <crossesElement type="railway" ref="A" ... />
</overCrossing>
...
<underCrossing id="ucr1" constructionType="bridge">
  <spotLocation netElementRef="A" ... />
  <crossesElement type="railway" ref="B" ... />
</underCrossing>
```

So, in summary: the bridge of a railway track over another railway track is modelled via two elements (one overCrossing and one underCrossing). What should be investigated in detail, is the question how both elements can be linked with each other. Let's put this topic on the agenda of a next Schematic Track Plan (SCTP) use case working group...

Best regards
Christian