Subject: Re: [railML2] adding an attribute for clearance on switches and crossings.
Posted by christian.rahmig on Fri, 09 Apr 2021 14:20:49 GMT
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Dear Torben,

thank you for bringing up this topic into the forum discussion as the clearance point is important for various use cases dealing with railway operations.

Basically, I see two options for implementation:
1) explicit modelling of clearance point as own element, e.g. <clearancePoint>
2) modelling of distance between begin of switch and clearance point

Option 1 may be suitable for railML 3.x where we are refactoring the whole infrastructure model. For railML 2.x I prefer option 2 to stay as close as possible to the current implementation focusing only on small adaptations.

Therefore, your idea to introduce a new attribute @clearance (tLengthM) for <switch> and <crossing> sounds reasonable. Two things need to be considered:

a) It must be clarified that @pos always defines the same reference point of the <switch> and the <crossing>. For a <crossing> the reference point shall be its center point. The two clearance points can be derived by calculating @pos+@clearance and @pos-@clearance. For a <switch> the reference point can be the (topological) begin of the switch or the (virtual) center point. It is obvious that depending on the choice of the reference point, the value for @clearance will be different. Therefore, it is essential to fix the exact location of @pos relative to the switch. What are the best practices from the past?

b) Usually, the clearance point is marked by a small infrastructure element: the clearance post. This post marks the point, where the distance between two track center lines reaches 3.5 meters. Therefore, the clearance point is linked with the regular clearance gauge profile. If different clearance gauge profiles shall be considered (resulting in different clearance points), the attribute @clearance need to be repeatable and therefore transformed into a repeatable child element. Do you need to model different clearance points at once?

Any comments and ideas from the community are highly appreciated...

Best regards
Christian