Subject: Re: NetElements vs. Tracks vs. TrainDetectionElements vs. TvdSections
Posted by christian.rahmig on Fri, 02 Nov 2018 15:31:38 GMT
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Dear Fabiana,

Am 25.10.2018 um 17:08 schrieb Fabiana Diotallevi:
> Hello everybody,
> since I'm new to RailML community I'll briefly introduce
> myself: I'm Fabiana Diotallevi from NEAT (www.neat.it), an
> Italian design and development company, with solid
> experience in creating HW&SW solutions for mission and
> safety critical applications.
> At the moment we are developing a tool for drawing and
> visualizing fully equipped railway track plans, and for
> easily editing, checking and importing and/or exporting the
> relative objects properties in different formats (among
> which, of course, railML).

Welcome to the railML forum! I am looking forward to learn more about your visualization application, because it relates to one of our first railML 3 use cases: Schematic Track Plan (see [1]). So, if you are going to attend the upcoming railML conference (14.11.2018) [2] and railML 3.1 Dissemination workshop (13.11.2018) [3] in Praha, we may discuss in detail.

> I have read the documentation regarding the Infrastructure
> and the Interlocking Scheme, and I have some doubts on how
> to link the trackCircuit xml representation between the
> Infrastructure and Interlocking Scheme.
> Consider for example the situation depicted in the attached
> figure: my goal is to find the correct representation of the
> netElements, the tracks, the trainDetectionElements
> (Infrastructure Scheme) and the TvDSection (Interlocking
> Scheme) of this very unrealistic case study.
>
> In the figure there are 6 trackcircuits, delimited by 5
> joints. The trackcircuits (in the real world) are composed
> by the the following segments:
>
> • TC01 = a
> • TC02 = b+c+e
> • TC03 = d
> • TC04= f+h+i
> • TC05 = g
> • TC06 = l
>
> According to what I understood reading the railML
> documentation, the 6 trackcircuits correspond the 6

> TvdSections in the Interlocking Scheme, is this correct?

That is correct.

> Another point I would like you to confirm me, is that, if I
> have only one operational point, in the Infrastructure
> scheme the netElement representation corresponds to the
> Track representation.

NetElements are topology elements and thus independent from "railway typical" tracks and lines. The <line> as well as the <track> is located as NetEntity on the underlaying topology (NetElement).

> In particular, I would say that the netElements and tracks
> representation of this case study should be the following:
>
> • trc01 = ne_01 = a+b
> • trc02 = ne_02 = c+d
> • trc03 = ne_03 = e+f
> • trc04 = ne_04 = g+h
> • trc05 = ne_05 = i+l

Yes, this approach is possible. In this specific microscopic model, the location of the <track> corresponds with the <netElement>.

> For what concerns the limiting joints , they should be
> represented in the following way as trainDetectionElements:
>
> • J1 = tde01 => netElementRef="ne_a01"
> • J2 = tde02 => netElementRef="ne_a02"
> • J3 = tde03 => netElementRef="ne_a03"
> • J4 = tde04 => netElementRef="ne_a04"
> • J5 = tde05 => netElementRef="ne_a05"

You mean "ne_01" instead of "ne_a01", don't you?

> Finally, for the TvdSection we should have:
>
> • Tvd01 = TC01 -> DemarcatingTraindetector ="j1"
> • Tvd02 = TC02-> DemarcatingTraindetector ="j1", "j2",
> "j3"
> • Tvd03 = TC03-> DemarcatingTraindetector ="j2"
> • Tvd04= TC04-> DemarcatingTraindetector ="j3","j4","j5"
> • Tvd05 = TC05-> DemarcatingTraindetector ="j4"
> • Tvd06 = TC06-> DemarcatingTraindetector ="j5"
>
> Is all of this correct?

Yes, this is correct :-)
I am not sure whether the buffer points have to be added as demarcating
points of TvdSections, too, but I am sure the interlocking coordinator
can answer this remaining question quite fast...

[1] https://wiki.railml.org/index.php?title=UC:IS:Schematic_Trac k_Plan
[2] https://www.railml.org/en/event-reader/34th-railml-conferenc e.html
[3]
https://www.railml.org/en/event-reader/3rd-railml-3-beta-fee dback-workshop.html

Best regards
Christian

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