Subject: [railML3]: operationalPoint of operationalType="block"
Posted by Dominik Looser on Thu, 08 Apr 2021 12:51:22 GMT
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Dear all,

After internal discussion with our customer (BaneNor and Jernbanedirektoratet in Norway) we would like to ask a question here:

In RailML3.1 (and later 3.2) we are not sure how to export operationalPoints of @operationalType="block". These are often 0 meters long and limited by two signals (<signalIL> with @function="block") that are located on the same position.
Other operationalPoints, e.g. those with @type="station" have a subelement with @netElementRef pointing to the mesoscopic netElement of that station.
For block posts, we do not have a mesoscopic netElement, as they are only considered to exist in the microscopic world.

Our suggestion is to reference the microscopic netElement that corresponds to the line between the stations that the block post lies between.

```
<operationalPoint id="opp1014">
  <name language="NO" name="Kalvsjø bp."/>
  <areaLocation id="al1014">
    <associatedNetElement keepsOrientation="true" netElementRef="ne_588" posBegin="2202.0"
posEnd="2202.0"/>
  </areaLocation>
  <opEquipment>
    <ownsSignal ref="sig826"/>
    <ownsSignal ref="sig827"/>
  </opEquipment>
  <opOperations>
    <opOperation operationalType="block"/>
  </opOperations>
</operationalPoint>
```

(Kalvsjø is the block post and lies between the stations of Roa and Grindvoll. The netElement id="ne_588" is the microscopic netElement between those two stations.)

The key question is, if it a good idea to reference a microscopic netElement from an operationalPoint.
Are there any other suggestions or best practices on how to model a block post operational point?

Thank you in advance
Best regards,

Dominik Looser

Subject: Re: [railML3]: operationalPoint of operationalType="block"
Posted by christian.rahmig on Fri, 09 Apr 2021 11:54:30 GMT
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Dear Dominik,

in general, your approach of locating the <operationalPoint> on a microscopic <netElement> is fine.
However, I don't understand why you want to locate an operational point with a length of zero meters using an <areaLocation>? I think, a <spotLocation> would suit better.

By the way: locating <operationalPoint> elements on microscopic topology is quite common. In particular, it is best practice to model the operational point center point (in railML2 language also known as "cross section") using a <spotLocation> on a microscopic <netElement>.

Are there any other best practice ideas from the community?

Best regards
Christian

Subject: Re: [railML3]: operationalPoint of operationalType="block"
Posted by Dominik Looser on Tue, 13 Apr 2021 08:42:04 GMT
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Dear Christian,

Thank you for your answer.

For "ordinary" stations, we are using <areaLocation> in <operationalPoint> to locate the station's extent (as defined by its signals), and a <spotLocation> to define the center point (if existing).
I think it is best to keep those usages consistent within the same file:

<areaLocation> for the station's extent,
<spotLocation> for the station's center

For block posts, there are no center points in our models, which means, that only an <areaLocation> of 0 meters is created.

Best regards,
Dominik

Subject: Re: [railML3]: operationalPoint of operationalType="block"
Posted by christian.rahmig on Fri, 21 May 2021 16:19:42 GMT
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Dear Dominik,

thank you for your explanations, which I can follow well. This may be a good piece of best practice documentation. Therefore, I am looking forward to hear from the rest of the community about their understanding / default way of modelling locations of block posts. Any comments are highly appreciated...

Best regards
Christian