
Subject: Re: [railML3] How to assign a mileage change to a netElement

Posted by [Heidrun Jost](#) on Fri, 01 Oct 2021 10:28:34 GMT

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Dear all,

we propose to consider the mileageChange as a new infrastructure element.

The goal is to create a relation to a netElement and have one unique mileageChange element which is topology related.

PRO:

- mileageChanges can be explicitly placed in the infrastructure.
- There is one common way to engineer the mileageChange instead of two (anchor, mileage post definition) as proposed in the mileageChange document from RailML3.2.

CONTRA:

- mileageChanges cannot be engineered outside netElement related information. However, as the netElements are the topology elements that build the relation
 - between the graph and measure (km, m, mileage) information and all other elements have relations to these net elements it should be ok.

Please find a code snippet of our proposal with two variants:

```
<infrastructure id="is_01">
  <functionalInfrastructure>
    <mileageChanges>
      <!-- Mileage Gap: Changes the measure value from 500 to 1500. -->
      <!-- First proposal with mileage change engineered by two
spotLocations (from:500/to:1500) -->
      <mileageChange id="mc_01">
        <change type="gap" (optional) from="mc_01_spl_01"
to="mc_01_spl_02"/>
        <spotLocation id="mc_01_spl_01" netElementRef="ne_01"
applicationDirection="normal" pos="500" intrinsicCoord="0.1">
          <linearCoordinate positioningSystemRef="lps01" measure="500"/>
        </spotLocation>
        <spotLocation id="mc_01_spl_02" netElementRef="ne_01"
applicationDirection="normal" pos="500" intrinsicCoord="0.1">
          <linearCoordinate positioningSystemRef="lps01" measure="1500"/>
        </spotLocation>
      </mileageChange>
      <!-- Alternative approach with only ONE spotLocation information
per mileage change and measureChange value-->
      <mileageChange>
        <change type="gap" refLocation="mc_01_spl_01" measureChange="1500"/>
      </mileageChange>
    </mileageChanges>
  </functionalInfrastructure>
</infrastructure>
```

```
<spotLocation id="mc_01_spl_01" netElementRef="ne_01"
applicationDirection="normal" pos="500" intrinsicCoord="0.1">
  <linearCoordinate positioningSystemRef="Ips01" measure="500"/>
</spotLocation>
</mileageChange>
</mileageChanges>
</functionalInfrastructure>
</infrastructure>
```

Best regards,

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