
Subject: New extension element "nor:visualisationElement".
Posted by [Torben Brand](#) on Wed, 28 Feb 2018 14:34:05 GMT
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To be able to fulfill the use case capacity planning we need to be able to visualise schematic track plans. Currently we use the deprecated visualisation scheme in railML2.3nor. The scheme can allocate screen coordinates on existing elements. But this is missing an independent visualisation element for elements that are not able to be touched "in real life". For instance to draw a "kink" aka. "picture element" to bend the schematic track. This usually after a track branches out from a switch and then is bent to follow the mother track in parallel. The new element <nor:visualisationElements> with sub-element <nor:visualisationElement> will have no function but to place a screen coordinate on a defined pos on a defined track. The element is optional. If the element is used, the attribute pos is mandatory, code, name and description is optional. We suggest to place the new element under <track>.

<infrastructure>

<track>

<nor:visualisationElements>

<nor:visualisationElement pos="integer" code="string" name="string" description="string" >

The purpose of such an element is to provide coordinates to layout the infrastructure at a given position (via absPos/relPos attributes). In some models only a few "main" elements like switches or crossings deliver usable layout coordinates. If you want to model a side track, you will have a problem to obtain a satisfying infrastructure layout. There are several discussions regarding the infrastructure visualization. Since 2.1 the <infrastructureVisualization>-container is marked as deprecated in the wiki, but is still usable according to the schema and is indeed used in the railML2.3nor extension. Therefore we would like to use the <infrastructureVisualization>-container to refer to a <trackElementVis>-Element which assigns layout coordinates to a <nor:visualisationElement>.

Subject: Re: New extension element "nor:visualisationElement".
Posted by [christian.rahmig](#) on Tue, 20 Mar 2018 14:35:34 GMT
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Dear Torben,

the subject of screen coordinates is essential to the use case
"Schematic Track Plan" and thus will be solved with railML 3.1 for sure.

I read your proposed solution for railML 2.3 NOR several and I came to
the conclusion that for railML 2.x there could be a simpler solution:

Instead of "re-animating" the visualization scheme, I suggest to
introduce a new element <screenCoord> at the same level like <geoCoord>.
<screenCoord> shall have attributes @x, @y (mandatory) and @z (optional)
defining a pixel position. A small example may look like this:

```
<levelCrossing id="lcr01" pos="123.45">
  <geoCoord coord="52.26125 10.58776" epsgCode="4326"/>
  <screenCoord x="250" y="550"/>
</levelCrossing>
```

What do you think about that proposal? Any feedback is appreciated...

Best regards
Christian

--

Christian Rahmig - Infrastructure scheme coordinator
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Am 28.02.2018 um 15:34 schrieb Torben Brand:

- > To be able to fullfill the use case capacity planning we
- > need to be able to visualise schematic track plans.
- > Currently we use the deprecated visualisation scheme in
- > railML2.3nor. The scheme can allocate screen coordinates on
- > existing elements. But this is missing a independent
- > visualisation element for elements that are not able to be
- > touched "in real life". For instance to draw a "kink" aka.
- > "picture element" to bend the schematic track. This usually
- > after a track branches out from switch and then is bent to
- > follow the mother track in parallel. The new element
- > <nor:visualisationElements> with sub-element <nor:visualisationElement>
- > will have no function but to
- > place a screen coordinate on a defined pos on a defined
- > track. The element is optional. If the element is used, the
- > attribute pos is mandatory, code, name and description is
- > optional. We suggest to place the new element under <track>.
- >
- >
- > <infrastructure>
- > <track>
- > <nor:visualisationElements>
- > <nor:visualisationElement pos="integer" code="string"
- > name="string" description="string" >
- > The purpose of such an element is to provide coordinates to
- > layout the infrastructure at a given position (via
- > absPos/relPos attributes). In some models only a few "main"
- > elements like switches or crossings deliver usable layout
- > coordinates. If you want to model a side track, you will
- > have a problem to obtain a satisfying infrastructure layout.
- > There are several discussions regarding the infrastructure

> visualization. Since 2.1 the
> <infrastructureVisualization>-container is marked as
> deprecated in the wiki, but is still usable according to the
> schema and is indeed used in the railML2.3nor extension.
> Therefor we would like to use the
> <infrastructureVisualization>-container to refer to a
> <trackElementVis>-Element which assigns layout coordinates
> to a <nor:visualisationElement>.
>

Subject: Re: New extention element "nor:visualisationElement".
Posted by [Jonathan Hecht](#) on Wed, 21 Mar 2018 13:18:26 GMT
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Dear Christian,

if I may join the discussion.

"Instead of "re-animating" the visualization scheme, I suggest to introduce a new element <screenCoord> at the same level like <geoCoord>. " Would be nice to have such an element, so we do not have to use the deprecated visualization scheme in railML 2.x.

But on top we need a separate element for this use case, which also can have absolute and relative positions and is independent from another element. It is also not able to be touched "in real life". So combined:

```
<nor:visualisationElements>  
  <nor:visualisationElement pos="integer" code="string" name="string" description="string" >  
    <screenCoord x="250" y="550"/>  
  </nor:visualisationElement>  
</nor:visualisationElements>
```

Best regards
Jonathan

Subject: Re: New extention element "nor:visualisationElement".
Posted by [christian.rahmig](#) on Wed, 21 Mar 2018 14:20:22 GMT
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Dear Jonathan,

of course, you are very much welcome to join the discussion! :)

Sorry, but I do not fully understand your request. If you want to give screen coordinates to an element that cannot be touched in real life, just use the <geoMapping> track element: it can be placed with absolute and relative coordinates, and it is independent from any physical infrastructure component. By using the attributes @name and @description you may place further information.

So, just adapting my previous example, it would look like this:

```
<geoMapping id="geo01" pos="123.45" absPos="4567.89" name="string"
description="string">
  <geoCoord coord="52.26125 10.58776" epsgCode="4326"/>
  <screenCoord x="250" y="550"/>
</geoMapping>
```

What are you missing?

Best regards
Christian

Am 21.03.2018 um 14:18 schrieb Jonathan Hecht:

```
> Dear Christian,
>
> if I may join the discussion. :)
> "Instead of "re-animating" the visualization scheme, I
> suggest to
> introduce a new element <screenCoord> at the same level like
> <geoCoord>. "
> Would be nice to have such an element, so we do not have to
> use the deprecated visualization scheme in railML 2.x.
> But on top we need a separate element for this use case,
> which also can have absolute and relative positions and is
> independent from another element. So combined it would be
> something like:
>
> <nor:visualisationElements>
>   <nor:visualisationElement pos="integer" code="string"
>   name="string" description="string" >
>     <screenCoord x="250" y="550"/>
>   </nor:visualisationElement>
> </nor:visualisationElements>
>
>
> Best regards
> Jonathan
```

--

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Subject: Re: New extention element "nor:visualisationElement".
Posted by [Jonathan Hecht](#) on Wed, 21 Mar 2018 15:00:06 GMT
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Sorry, I've forgotten about this element or to make use of it in this case. So you are right. We could use it in combination with the new "screenCoord"-element then. Although we would not have any "geographic coordinates" for it.

Is the <geoCoord>-child required for a <geoMapping>-element? Thanks.

Subject: Re: New extention element "nor:visualisationElement".
Posted by [christian.rahmig](#) on Wed, 21 Mar 2018 15:15:58 GMT
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Am 21.03.2018 um 16:00 schrieb Jonathan Hecht:

> [...]

> Is the <geoCoord>-child required for a <geoMapping>-element?

No, the <geoCoord> child element is always optional and does not have to be provided.

--

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Subject: Re: New extention element "nor:visualisationElement".
Posted by [christian.rahmig](#) on Wed, 21 Mar 2018 15:18:13 GMT
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Dear all,

I updated the Trac ticket #104 [1] about the railML infrastructure visualization model according to the discussion taking place here.

[1] <https://trac.railml.org/ticket/104>

Best regards

Christian

Am 20.03.2018 um 15:35 schrieb Christian Rahmig:

> Dear Torben,
>
> the subject of screen coordinates is essential to the use case
> "Schematic Track Plan" and thus will be solved with railML 3.1 for sure.
>
> I read your proposed solution for railML 2.3 NOR several and I came to
> the conclusion that for railML 2.x there could be a simpler solution:
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> <screenCoord x="250" y="550"/>
> </levelCrossing>
>
> What do you think about that proposal? Any feedback is appreciated...
>
> Best regards
> Christian
>

Subject: Re: New extention element "nor:visualisationElement".
Posted by [christian.rahmig](#) on Mon, 30 Apr 2018 15:06:49 GMT
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Dear all,

based on the feedback from the 33rd railML Conference in Berlin two weeks ago, I suggest to implement the proposed solution from Trac ticket #104 [1] with railML 2.4, ok?

Best regards
Christian

Am 21.03.2018 um 16:18 schrieb Christian Rahmig:

> Dear all,
>
> I updated the Trac ticket #104 [1] about the railML infrastructure
> visualization model according to the discussion taking place here.
>
> [1] <https://trac.railml.org/ticket/104>

>
> Best regards
> Christian
>
> Am 20.03.2018 um 15:35 schrieb Christian Rahmig:
>> Dear Torben,
>>
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--

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Subject: Additional questions for screen visualisation (Re: New extention element "nor:visualisationElement".)

Posted by [Tobias Bregulla](#) on Wed, 02 May 2018 23:22:14 GMT

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Dear Christian, dear railML community!

We intend to support screen coordinates in our software in future version too. Therefore we would like to have a possibility to store them too. From our side it is not finally decided if we will use it on short term (means: railML 2.3 with own extensions or railML 2.4) or mid term (means: railML 3.x). Therefore we'll be more neutral in the current

decision of railML.org.

Regarding the proposed solution of railML's ticket #104 (see below) we see some more additional questions to be answered before a new modelling:

- What about a percentage value for screen coordinates? This would give opportunities to fit to very different screen resolutions from mobile phones (portrait) up to Retina displays (landscape) like we are supporting in our VIA infrastructure database viewer project.
- What about the addressing of more than one screen and the cross-screen addressing?
- What about the addressing of linear and areal elements (maybe with out of right angles)?

Maybe a "re-animating" the visualization scheme for railML 2.4 and more complete solution with longer development time for railML 2.5 and/or railML 3.1 could be a more hassle free idea.

Best regards,

Tobias Bregulla and the whole Bahnkonzept team

Am 30.04.2018 um 17:06 schrieb Christian Rahmig:

```
> Dear all,
>
> based on the feedback from the 33rd railML Conference in Berlin two
> weeks ago, I suggest to implement the proposed solution from Trac ticket
> #104 [1] with railML 2.4, ok?
>
> Best regards
> Christian
>
>> Am 20.03.2018 um 15:35 schrieb Christian Rahmig:
>>> Dear Torben,
>>>
>>> the subject of screen coordinates is essential to the use case
>>> "Schematic Track Plan" and thus will be solved with railML 3.1 for sure.
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>>>   <screenCoord x="250" y="550"/>
```


>>> </levelCrossing>
>>>
>>> What do you think about that proposal? Any feedback is appreciated...
>>>
>>> Best regards
>>> Christian

Subject: Re: Additional questions for screen visualisation (Re: New extention element "nor:visualisationElement".)

Posted by [Thomas Nygreen JBD](#) on Tue, 29 May 2018 16:32:13 GMT

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I support Christian Rahmig's suggestion to use the geoMapping element rather than create a new one.

Regarding the proposed screenCoord element, I am a bit ambivalent. If implemented, it should be possible to have more than one screenCoord element, with a @positioningSystemRef, as proposed for railML3.

I disagree with Tobias Bregulla regarding the need for percentage or multi-screen coordinates. Placement and scaling should be handled by the rendering software. The point is simply to place the elements on a two-dimensional grid.

Subject: Re: Additional questions for screen visualisation (Re: New extention element "nor:visualisationElement".)

Posted by [christian.rahmig](#) on Mon, 04 Jun 2018 11:43:16 GMT

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Dear all,

following the proposal from Tobias...

Am 03.05.2018 um 01:22 schrieb Tobias Bregulla:

- > [...]
- > Maybe a "re-animating" the visualization scheme for railML 2.4 and more
- > complete solution with longer development time for railML 2.5 and/or
- > railML 3.1 could be a more hassle free idea.

.... and discussions e.g. in the railML use case working group "Schematic Track PPlan", we came to the conclusion to withdraw the "DEPRECATED" flag from the infrastructure visualizeation scheme. This shall be done with railML 2.4 and it shall remain valid until a final solution has been found for railML 3.x. Do you agree with this strategy?

More details on the whole issue can be found in Trac ticket #104 [1].

[1] <https://trac.railml.org/ticket/104>

Best regards
Christian

--

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