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Subject: infrastructure "state"

Posted by [christian.rahmig](#) on Thu, 28 Jun 2018 06:46:49 GMT

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Dear all,

the state of infrastructure becomes more and more important for several use cases and therefore requires an appropriate model implementation in railML, too.

I would like to ask for your feedback on the following ideas related with the infrastructure state:

1) operational view:

Infrastructure can be "available" or "not available" for operation.

Instead of "available" one could also use the term "valid". In any case, the time reference (when is the infrastructure not available?) important.

2) asset life-cycle view

An infrastructure component is being "planned", then "manufactured" or "constructed", then being put "in operation", after some years "disabled", in between maybe several times "under construction", and finally some day "removed" or "dismantled".

Despite the time, also the place is relevant here, because an infrastructure component (e.g. switch) can be installed at different locations in a track network during its lifetime.

3) functional view

In railML 3.1 we define "functional infrastructure". Based on what I wrote in 1) and 2) I consider the operational view to be identical with the functional view. Do you agree?

Are there further views that I forgot to introduce?

Are there further states in these views that I forgot to mention?

Any comments are highly appreciated with regards to bringing them into railML 3.1 beta2.

Thank you very much and best regards  
Christian

--

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Subject: Re: infrastructure "state"

Posted by [christian.rahmig](#) on Thu, 30 Aug 2018 06:50:33 GMT

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Dear all,

in a first step of re-newing the data structure for modelling the infrastructure state, the existing solution from OCP and from infrastructure element shall be harmonized with upcoming railML 2.4.

OCP status is modelled:

```
<ocp ...>
  <propOther @status="planned">
</ocp>
```

Further enumeration values are:

- \* operational
- \* disabled
- \* closed

The railML infrastructure element (e.g. levelCrossing) has a different way of modelling states:

```
<levelCrossing ...>
  <states>
    <state disabled="true" operatingPeriodRef="..." />
  </states>
</levelCrossing>
```

Bringing both concepts together would strengthen the state modelling in infrastructure. I therefore filed a ticket [1] for this issue that can be realized quite quickly.

Any comments are appreciated...

[1] <https://trac.railml.org/ticket/339>

Best regards  
Christian

--

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Subject: Re: infrastructure "state"

Posted by [Tobias Bregulla](#) on Thu, 30 Aug 2018 14:49:20 GMT

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Dear all!

Am 30.08.2018 um 08:50 schrieb Christian Rahmig:

> OCP status is modelled:

>

> <ocp ...>

> <propOther @status="planned">

> </ocp>

>

> Further enumeration values are:

> \* operational

> \* disabled

> \* closed

We would suggest to add a fifth status for infrastructure, which is intended to build but not in a real planning status. This would help to exchange also future plannings e.g. for timetable simulation of long term planning or for conceptual sketches/drawings.

In this context we suggest to add the following definitions to the descriptions at <https://wiki.railml.org/index.php?title=IS:propOther>:

**\*Completed status value\***: The construction or commissioning of the element is planned for the medium or long term. However, there are still no concrete (planning) activities for the construction of the element beyond the preliminary planning and cost estimation.

**PLANNED**: The construction or commissioning of the element is planned concretely and at short notice or concrete planning activities for the construction take place, e.g. design, approval or implementation planning, cost calculation, award of contracts. It is not normally possible to use the element.

**OPERATIONAL**: The element is operational and can be used regularly.

**DISABLED**: The element is currently not usable, switched off or deactivated and therefore cannot be used regularly. However, it can be put back into operation at short notice without further construction, acceptance or approval activities.

**CLOSED**: The element is no longer available, removed, dismantled, or no longer exists. Planning, construction or commissioning activities are absolutely necessary for recommissioning.

A German description with reference to the HOAI planning stages commonly

used in Germany can be provided.  
For railML 3 we suggest a more intuitive naming of the enumeration values.

What does the community think about it?

Best regards,

Tobias and the Bahnkonzept team

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Subject: Re: infrastructure "state"  
Posted by [christian.rahmig](#) on Tue, 02 Oct 2018 10:55:41 GMT  
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Dear all,

Am 30.08.2018 um 08:50 schrieb Christian Rahmig:

> [...]

>

> [1] <https://trac.railml.org/ticket/339>

The concept described in Trac ticket [1] has been implemented (and documented) with railML 2.4.

Best regards  
Christian

--

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Subject: Re: infrastructure "state"  
Posted by \_\_\_\_\_ on Thu, 08 Nov 2018 08:19:02 GMT  
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Dear all,

Unfortunately I have only now noticed during the review of the wiki pages for the <state> element that there is a new "state" attribute in railML2.4 that de facto replaces or extends the previous "disabled" attribute. The question for me is how to deal with the old "disabled" attribute. It's certainly too late to declare it "deprecated with version 2.4" now. Therefore, I would suggest at least to document in the wiki that "disabled" and "state" must not have any contradictions. If

possible, only one of the two attributes should be used at a time.

Kind regards  
Christian Rößiger

--

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Subject: Re: infrastructure "state"

Posted by on Thu, 08 Nov 2018 10:50:54 GMT

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Dear all,

As I read in <https://trac.railml.org/ticket/339>, the attribute "disabled" could not be set to deprecated because it is mandatory. Therefore it must be kept in railML 2.4 and always be set. To keep the consistency between both attributes, I would only add the following dependencies to the wiki instead of my previous suggestion:

status = conceptual|planned|disabled|closed -> disabled=true  
status = operational -> disabled=false

Are there any objections / improvements?

Kind regards  
Christian Rößiger

Am 08.11.2018 um 09:19 schrieb Christian Rößiger:

> Dear all,  
>  
> Unfortunately I have only now noticed during the review of the wiki  
> pages for the <state> element that there is a new "state" attribute in  
> railML2.4 that de facto replaces or extends the previous "disabled"  
> attribute. The question for me is how to deal with the old "disabled"  
> attribute. It's certainly too late to declare it "deprecated with  
> version 2.4" now. Therefore, I would suggest at least to document in the  
> wiki that "disabled" and "state" must not have any contradictions. If  
> possible, only one of the two attributes should be used at a time.  
>  
> Kind regards  
> Christian Rößiger  
>

--

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Subject: Re: infrastructure "state"

Posted by [christian.rahmig](#) on Mon, 26 Nov 2018 15:28:26 GMT

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Hello Christian,

Am 08.11.2018 um 11:50 schrieb Christian Rößiger:

- > [...] To keep the
- > consistency between both attributes, I would only add the following
- > dependencies to the wiki instead of my previous suggestion:
- >
- > status = conceptual|planned|disabled|closed -> disabled=true
- > status = operational -> disabled=false
- >
- > Are there any objections / improvements?

since there have been no objections, I recommend to go ahead. Do you want to add this semantic constraint on the wiki page [1] or do you want me to do it?

[1] <https://wiki.railml.org/index.php?title=IS:state>

Best regards  
Christian

--

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Subject: Re: infrastructure "state"

Posted by [Thomas Nygreen JBD](#) on Mon, 03 Dec 2018 15:36:22 GMT

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Dear all,

I strongly disagree with constraining @status=conceptual|planned to @disabled=true. That would

conflict with the use case of simulating planned infrastructure, and break backwards compatibility. Any railML2.3 parser would interpret all planned elements as unusable.

It seems to me that there are different use cases requiring different values for @disabled when @status=conceptual|planned, depending on the relevant time frame.

For @status=operational|disabled|closed it seems more feasible to restrict the value for @disabled.

Best regards,  
Thomas

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Subject: Re: infrastructure "state"  
Posted by [christian.rahmig](#) on Wed, 19 Dec 2018 14:33:53 GMT  
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Dear Thomas,

Am 03.12.2018 um 16:36 schrieb Thomas Nygreen:

> [...]  
> I strongly disagree with constraining  
> @status=conceptual|planned to @disabled=true. [...]  
>  
> It seems to me that there are different use cases requiring  
> different values for @disabled when  
> @status=conceptual|planned, depending on the relevant time  
> frame.  
>  
> For @status=operational|disabled|closed it seems more  
> feasible to restrict the value for @disabled.

let me briefly summarize your proposal:

```
@status="conceptual" --> @disabled="true/false"  
@status="planned"    --> @disabled="true/false"  
@status="operational" --> @disabled="false"  
@status="disabled"   --> @disabled="true"  
@status="closed"     --> @disabled="true"
```

In case that there won't be any conflicting reactions on this proposal until the end of year, I am going to bring it into the forum as semantic rule for state.

Best regards  
Christian

--

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