Subject: Re: SpeedChange : Protection system reference
Posted by Susanne Wunsch railML on Thu, 01 Nov 2012 14:47:42 GMT
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Dear Christian and others,

Christian Rahmig <coord@infrastructure.railml.org> writes:

>>> I added the request for an (optional) reference from a <signal> to a
>>> <trainProtectionElement> as a comment to trac ticket [1].
>>>
>>> [1] https://trac.assembla.com/railML/ticket/173
>>
>> That's only one part of the idea.
>>
>> There are also speed changes that are ensured by train protection
>> elements, such as PZB-magnets. [1]

> How about turning the direction of reference resulting in the
> following scenario: The basis is provided by the <speedChange>. This
> speed change is an oriented point on the track. Signals (including
> panels) refer to the speed change and the same is done by train
> protection elements like magnets. And of course, several magnets as
> well as several signals can refer to the same speed change.
>
> The disadvantage of this approach is the fact, that "child elements"
> refer to "parent elements" and it's difficult to collect all
> dependancies of a speed change.
>
> If we want to avoid this turning of the reference direction, we will
> end up with the request for a more complex modellation of a
> <speedChange>. First, a speed change needs to refer to signals,
> announcing, executing or reminding the connected speed
> information. And second, a speed change needs to refer to train
> protection elements assuring the speed restriction. Plus the already
> implemented reference from a <speedChange> to a <speedProfile>, the
> speed change becomes more an "operational element" instead of a
> "physical infrastructure object".

A "speed change" is anyway _no_ "physical infrastructure object".

There are some objections pro and con your reversed reference direction.
It depends on the current task of handling the data.

 * Referring all from the <speedChange> helps in all cases, where the
   speed change itself changes. Then you find all needed train
   protection elements and signals to change them the same way.

* Referring from the trainProtectionElement and from the signal to the
  <speedChange> helps in all situations where you meet such a facility
  on a track and need to know which speed aspect is valid there.

I see no problem in a too complex speed change element because this
models the real world in a good way. A speed change requires all these
dependencies.

How would you describe it in a semantic model? I think we would add both
relations: from the speedChange to the facilities (1:n) and back (1:1).

Why not to define both references like already done with the
<connection> elements? That can be easily assured by special
constraints. Both sights meet their requirements.

Any comments welcome...

Kind regards...
Susanne

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Susanne Wunsch
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