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Subject: trainProtection and equipmentUsage

Posted by [Andreas Tanner](#) on Thu, 15 Mar 2012 12:22:20 GMT

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Hello friends of RailML,

the trainProtection element offers a somewhat rough classification of train protection equipment for tracks. On the other hand, in the timetabling scheme we have the <equipmentUsage> of a trainPart where a predefined list is offered. I think this should be harmonized.

Best regards

Andreas Tanner.

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Subject: Re: trainProtection and equipmentUsage

Posted by [Christian Rahmig](#) on Sun, 18 Mar 2012 16:17:31 GMT

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Hello Andreas,

> the trainProtection element offers a somewhat rough classification of  
> train protection equipment for tracks. On the other hand, in the  
> timetabling scheme we have the <equipmentUsage> of a trainPart where a  
> predefined list is offered. I think this should be harmonized.

You are right, the trainProtection element within the infrastructure scheme is still quite abstract and needs revision. Your idea is to add the enumeration attribute

tNationalSystemsType

(ALSEN, ALSN, ASFA, ATB, ATBEG, ATBEN, ATC, ATSP, ATSS, AWS, BACC, CIR-ELKE, CIR-ELKE2, Crocodile, CSS, DATC, EBICAB, EVM120, EVM160, Fahrsp, GWATP, Indusi54, Indusi60, Indusi60R, Integra-Signum, KHP, KLUBU, KVB, LS, LS90, LZB, Memor, Memor2, Mirel, PZ80, PZB90, RS4c, SAUTC, SAUTCM, SAUTU, SCMT, SELCAB, SHP, SSC, TBL, TPWS, TVM300, TVM430, ZSI127, ZSI90, ZSL90, ZST90, ZUB121, ZUB122, ZUB123, ZUB262)

that is being used within the timetable schema in the trainProtectionElement object? Thus, the string attributes "system" and "model" may become redundant. What do other users of the trainProtectionElement think about this idea? Would you like to see the strings substituted by the enumeration list?

Another idea of how to bring more structure inside the train detection and protection topic was proposed in a ticket by Susanne [1]. Maybe it's possible to combine these two ideas.

[1] <http://trac.assembla.com/railML/ticket/23>

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Christian Rahmig  
railML.infrastructure coordinator

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Subject: Re: trainProtection and equipmentUsage  
Posted by [Christian Rahmig](#) on Sat, 27 Oct 2012 17:12:18 GMT  
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Dear Andreas and other railML users,

>> the trainProtection element offers a somewhat rough classification of  
>> train protection equipment for tracks. On the other hand, in the  
>> timetabling scheme we have the <equipmentUsage> of a trainPart where a  
>> predefined list is offered. I think this should be harmonized.

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> You are right, the trainProtection element within the infrastructure  
> scheme is still quite abstract and needs revision. Your idea is to add  
> the enumeration attribute

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> tNationalSystemsType  
> (ALSEN, ALSN, ASFA, ATB, ATBEG, ATBEN, ATC, ATSP, ATSS, AWS, BACC,  
> CIR-ELKE, CIR-ELKE2, Crocodile, CSS, DATC, EBICAB, EVM120, EVM160,  
> Fahrsp, GWATP, Indusi54, Indusi60, Indusi60R, Integra-Signum, KHP,  
> KLUBU, KVB, LS, LS90, LZB, Memor, Memor2, Mirel, PZ80, PZB90, RS4c,  
> SAUTC, SAUTCM, SAUTU, SCMT, SELCAB, SHP, SSC, TBL, TPWS, TVM300, TVM430,  
> ZSI127, ZSI90, ZSL90, ZST90, ZUB121, ZUB122, ZUB123, ZUB262)

>  
> that is being used within the timetable schema in the  
> trainProtectionElement object? Thus, the string attributes "system" and  
> "model" may become redundant.

for the implementation of this open task I created a new trac ticket  
with the following content [1]:

For railML 2.2 the infrastructure element trainProtectionElement should  
be enhanced with a new parameter "trainProtectionSystem" with the values  
of type tNationalSystemsType. The string parameter "system" is then no  
longer needed and should be marked as DEPRECATED.

[1] <https://trac.assembla.com/railML/ticket/175>

Regards

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Subject: trainProtectionElement, ETCS and balises (was: trainProtection and equipmentUsage)

Posted by [Susanne Wunsch railML](#) on Tue, 27 Nov 2012 13:44:54 GMT

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Dear Christian, Andreas and others,

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

- > For railML 2.2 the infrastructure element trainProtectionElement
- > should be enhanced with a new parameter "trainProtectionSystem" with
- > the values of type tNationalSystemsType. The string parameter "system"
- > is then no longer needed and should be marked as DEPRECATED.

In the meantime the type 'tNationalSystemsType' was enhanced by the value 'ETCS'. As stated by Thomas Kauer at the railML-conference in Zurich the element 'trainProtectionElement' should be somehow harmonized with respect to ETCS.

That may be a goal for the next major release (3.0), but nevertheless we should clarify the current semantics.

```
<trainProtectionElement id="tp1" pos="10.0" trainProtectionSystem="PZB90" model="500Hz"/>
<trainProtectionElement id="tp2" pos="460.0" trainProtectionSystem="PZ80" model="2000Hz"/>
<trainProtectionElement id="tp3" post="455.0" trainProtectionSystem="ETCS"/>
```

- \* PZB90, PZ80 and INDUSI60 are different hardware/software releases at the vehicle providing different functionality. The magnets next to the rail are the same. de:[1]

Another type for the infrastructure view at the train protection elements is needed.

- \* What to do, if the value 'ETCS' is used? What does it mean?

If it's a balise, the appropriate element 'balise' or 'baliseGroup' should be used.

If it's a GSM-R zone, the new element 'trainRadio' should be used (attention: currently not implemented).

If it's a border of an ETCS-equipped zone the 'trainProtectionChange' element should be used.

What else?

Any comments appreciated.

Kind regards...

Susanne

[1] [http://de.wikipedia.org/wiki/Punktfc3%B6rmige\\_Zugbeeinflussung](http://de.wikipedia.org/wiki/Punktfc3%B6rmige_Zugbeeinflussung)

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Susanne Wunsch

Schema Coordinator: railML.common

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Subject: Re: trainProtectionElement, ETCS and balises  
Posted by [Christian Rahmig](#) on Sun, 02 Dec 2012 09:22:20 GMT  
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Dear Susanne and other railML users,

```
> <trainProtectionElement id="tp1" pos="10.0" trainProtectionSystem="PZB90" model="500Hz"/>
> <trainProtectionElement id="tp2" pos="460.0" trainProtectionSystem="PZ80"
model="2000Hz"/>
> <trainProtectionElement id="tp3" post="455.0" trainProtectionSystem="ETCS"/>
>
> * PZB90, PZ80 and INDUSI60 are different hardware/software releases at
> the vehicle providing different functionality. The magnets next to the
> rail are the same. de:[1]
>
> Another type for the infrastructure view at the train protection
> elements is needed.
```

I agree with you and consequently we should throw out all enumeration values that further define the train protection system. Alternatively, I suggest to define two separate lists for listing train protection systems. The first one focuses on the train protection system device installed to the train and contains the enumeration values as currently available in "tNationalSystemsType". Maybe we should rename it "tNationalSystemsTypeForVehicle"? The second list "tNationalSystemsTypeOnRail" might be shorter because of discarding values such as 'IndusiXY' and summarizing them to 'PZB'.

```
> * What to do, if the value 'ETCS' is used? What does it mean?
>
> If it's a balise, the appropriate element 'balise' or 'baliseGroup'
> should be used.
>
> If it's a GSM-R zone, the new element 'trainRadio' should be used
```

- > (attention: currently not implemented).
- >
- > If it's a border of an ETCS-equipped zone the 'trainProtectionChange'
- > element should be used.

In my opinion, the value 'ETCS' should only be used in case I need to define the position of an ETCS train protection element without knowing the certain train protection element type (balise, loop, ...).

- > [1] <http://de.wikipedia.org/wiki/Punkt%20beeinflussung>

Regards

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Christian Rahmig  
railML.infrastructure coordinator

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Subject: Re: trainProtectionElement, ETCS and balises  
Posted by \_\_\_\_\_ on Mon, 03 Dec 2012 08:57:28 GMT  
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- > Alternatively, I suggest to define two separate lists for listing train
- > protection systems. The first one focuses on the train protection system
- > device installed to the train...

+1

- > Maybe we should rename it "tNationalSystemsTypeForVehicle"?

+1

- > The second list "tNationalSystemsTypeOnRail" might be shorter because of
- > discarding values such as 'IndusiXY' and summarizing them to 'PZB'.

+1 but please name it "tNationalSystemsTypeAtTrack" or "...Lineside" (the first might be regarded exactly but the second one is usual in UK).

- > "tNationalSystemsTypeOnRail" might be shorter because of discarding
- > values such as 'IndusiXY' and summarizing them to 'PZB'.

For the sake of completeness: You leave the knowledge which tNationalSystemsTypeAtTrack works with which tNationalSystemsTypeOnRail up to the programmes. From my side, this is ok so far. For completeness, we could include into to <interlocking> scheme or possibly in a separate scheme the linkage and function of the train protection systems.

Best regards,

Dirk.

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Subject: Re: trainProtectionElement, ETCS and balises  
Posted by [Torben Brand](#) on Sat, 14 Jul 2018 15:28:20 GMT  
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trainProtectionChange@nor:type

There is currently no attribute "type" under trainProtectionChange. There is clearly a need as the dormant development page for train protection systems value list shows (<https://wiki.railml.org/index.php?title=Dev:TrainProtectionSystems>).

I strongly disagree to use code. As this is used for national internal systems and for our national UID's. Thus we will add a Norwegian extension with the optional attribute @type with string values.

The same value list is used by trainProtectionElement@trainProtectionSystem. We will not use <trainProtectionElement> in Norway as the physical train protection elements are all part of the balises used in ATC or ERTMS. They are already mapped under <balises>. But as we need to map the transition between the different systems at concrete borders we use <trainProtectionChange> to map those borders.

We will use the values: "none", "norD-ATC", "norF-ATC", "ETCS-L2"

I suggest to add this attribute to railML2.4 also. Alternative as an enumeration value from the value list in Dev:TrainProtectionSystems. We ask the infrastructure coordinator to add the value "none" and our national values into the list.

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Subject: Adding of trainProtectionSystems for IS:trainProtectionChange and IS:trainProtection  
Posted by [Tobias Bregulla](#) on Fri, 17 Aug 2018 07:42:27 GMT  
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Dear all!

Am 15.03.2012 um 13:22 schrieb Andreas Tanner:

- > the trainProtection element offers a somewhat rough classification of
- > train protection equipment for tracks. On the other hand, in the
- > timetabling scheme we have the <equipmentUsage> of a trainPart where a
- > predefined list is offered. I think this should be harmonized.

Even if this post is rather old, I want support the proposal of IVU and the timetable group also from Infrastructure side for railML 2.4.

So the predefined list from

<https://wiki.railml.org/index.php?title=Dev:TrainProtectionSystems> shall be usable also from

1) IS:trainProtectionChange

- (general elements)
- medium
- monitoring

N trainProtectionSystems

see <https://wiki.railml.org/index.php?title=IS:trainProtectionChange>

2) IS:trainProtection in IS:infraAttributes

- (general elements)
- medium
- monitoring

N trainProtectionSystems

see <https://wiki.railml.org/index.php?title=IS:trainProtection>

As there is only a linking needed and no additional development seems to be needed I would be happy if this could be done on short notice to be useable in railML 2 projects too.

A complete remodelling (e.g. definition of "medium" and "monitoring" in the TrainProtectionSystems.xml) shall be done with railML 3.

Best regards,

Tobias Bregulla and the whole Bahnkonzept team

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Subject: Re: Adding of trainProtectionSystems for IS:trainProtectionChange and IS:trainProtection

Posted by [christian.rahmig](#) on Fri, 03 May 2019 11:29:02 GMT

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Dear all,

Am 17.08.2018 um 09:42 schrieb Tobias Bregulla:

> [...]

>

> 1) IS:trainProtectionChange

> - (general elements)

> - medium

> - monitoring

> N trainProtectionSystems

> see <https://wiki.railml.org/index.php?title=IS:trainProtectionChange>

>

> 2) IS:trainProtection in IS:infraAttributes

> - (general elements)

- > - medium
- > - monitoring
- > N trainProtectionSystems
- > see <https://wiki.railml.org/index.php?title=IS:trainProtection>

I created a Trac ticket [1] for this issue.  
Any comments are highly appreciated...

[1] <https://trac.railml.org/ticket/356>

Best regards  
Christian

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Christian Rahmig - Infrastructure scheme coordinator  
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