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Subject: Multiple train protection systems

Posted by [Susanne Wunsch railML](#) on Mon, 19 Apr 2010 13:43:34 GMT

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There are some lines equipped with PZB and additional systems like LZB or even ETCS.

How do you define multiple active train protection systems on a track?

```
<!-- PZB -->
<rail:trainProtectionChange id="tpc0" pos="0"
  monitoring="intermittent" medium="inductive"/>
<!-- LZB -->
<rail:trainProtectionChange id="tpc1" pos="500"
  monitoring="continuous" medium="cable"/>
```

Normally, the new \*Change entry stops the previous similar entry. That means, from pos=500 upwards there is `_only_ LZB`, no PZB.

How do you define this issue?

Any comments would be appreciated.

Kind regards,  
Susanne

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Susanne Wunsch  
Schema Coordinator: railML.common

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Subject: Re: Multiple train protection systems

Posted by [christian.rahmig](#) on Mon, 14 Jan 2019 15:23:57 GMT

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Dear all,

more than eight years ago we took notice of the problem that we cannot model overlapping / multiple train protection systems along a track:

Am 19.04.2010 um 15:43 schrieb Susanne Wunsch:

```
> [...]
> How do you define multiple active train protection systems on a track?
>
> <!-- PZB -->
> <rail:trainProtectionChange id="tpc0" pos="0"
>   monitoring="intermittent" medium="inductive"/>
> <!-- LZB -->
```

> <rail:trainProtectionChange id="tpc1" pos="500"  
> monitoring="continuous" medium="cable"/>  
>  
> Normally, the new \*Change entry stops the previous similar entry.  
> That means, from pos=500 upwards there is \_only\_ LZB, no PZB.  
>  
> How do you define this issue?

With upcoming railML 3.x, we finally can solve this problem: Each <trainProtectionElement> instance has its own (linear) location and these locations may overlap. So, if you want to define a track being equipped with PZB and LZB (see example above), just define two <trainProtectionElement> instances with overlapping locations.

Consequently, Trac ticket #80 [1] can finally be closed.

[1] <https://trac.railml.org/ticket/80>

Best regards  
Christian

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