Subject: [railML3.4] References between RBC and Balises
Posted by Jörg von Lingen on Tue, 01 Sep 2026 02:51:46 GMT
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Dear all,

at the moment we have the RBC in IL domain with element <containsTrackAsset> to refer to the elements known to the RBC. However, this reference would be only to track assets in IL domain like signals, tracks or switches.
On the other side we have the balises only in IS domain as there is normally no direct/physical connection to an interlocking or RBC. For switchable balises the connection is via LEU.

The RBC shall also know all related balises. Thus there have to be a reference element in RBC. I see two possible ways to realise this.

1. We introduce a balise element in IL domain as track asset. Then we can refer from RBC using <containsTrackAsset>. However, this would arise the question what functional data we currently have in IS:balise shall be transferred to IL:balise.

2. We introduce an additional element <containsBalise> with reference to any IS:balise.

Please give me your opinion which solution you would prefer.

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Best regards,
Joerg v. Lingen - Interlocking Coordinator

Subject: Re: [railML3.4] References between RBC and Balises
Posted by Mathias Vanden Auweele on Tue, 01 Sep 2026 07:44:27 GMT
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Hello Jörg, I would prefer the second option with <containsBalise>

Subject: Re: [railML3.4] References between RBC and Balises
Posted by Silvan Gruber on Mon, 21 Sep 2026 11:07:21 GMT
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Dear all,

from SBB's point of view, we do not see the need to introduce a new dedicated element for referencing balises or balise groups, such as <containsBalise> or <containsBaliseGroup>.

We already use the element IL:containedTrackAssets for this purpose, listing all elements that are known to the RBC. In our opinion, this reference list should not be restricted to elements from the interlocking subschema.

An RBC does not only need to know classical interlocking objects such as signals, switches or track sections. It also needs information from the infrastructure subschema, for example:
baliseGroups
gradientCurves
speedSections
etcsLevelTransitions
restrictionAreas
and other ETCS- or line-related infrastructure information.

These elements are relevant for the RBC, for example for calculating and supervising Movement Authorities, speed profiles, level transitions or restriction areas. Therefore, they should also be referenceable via containedTrackAssets.

We do not understand why containedTrackAssets should be restricted to elements from the IL subschema. The relevant criterion should not be whether the referenced object is defined in the interlocking or infrastructure subschema, but whether this object has to be known by the RBC.

If the term containedTrackAssets is considered too narrow, we would rather suggest broadening/generalising the allowed reference targets instead of introducing new dedicated reference elements for individual object types such as balises or balise groups.

In short:
No new specific element for balises/balise groups is needed. Instead, containedTrackAssets should be open to all RBC-relevant objects, including objects from the infrastructure subschema.

Best regards

Silvan

Subject: Re: [railML3.4] References between RBC and Balises
Posted by Jörg von Lingen on Sun, 25 Oct 2026 04:45:32 GMT
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Dear all,

after discussion in ETCS working group we decided to have neither of the proposed options at least in railML3.4. It means everything from IL and IS domain related to RBC shall be referred using "containedTrackAssets". This is because there much more from IS domain than balises which needs referred from RBC. See post from Silvan above.

However, in the sense of better distinguishing the reference targets, i.e. reference checker in railVivid, we are still seeking for a solution to have separate elements referring to IL elements and

to IS elements. This may be included in a later version. Until then any ideas are welcome.