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Subject: [railml3] Signal types and functions

Posted by [Thomas Nygreen JBD](#) on Fri, 08 Feb 2019 19:41:28 GMT

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Subject: Re: [railml3] Signal types and functions

Posted by [Jörg von Lingen](#) on Sat, 09 Feb 2019 08:32:27 GMT

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Dear all,

we (IS/IL coordinators) have discussed the differences of <signalIS>@type and <signalIL>@signalFunction (may be renamed to <signalIL>@function):

<signalIS>@type is about the physical types of objects one will call "signal"

<signalIL>@signalFunction is about the function of the signal as seen from the interlocking "main" could be seen as a duplication but its meaning is more anything else but the specific uses - "The main signal is a normal signal for train traffic protection which is neither used as block, entry, exit nor intermediate signal."

<signalIL>@isVirtual is especially considering ETCS systems where the interlocking in its data still has signals which are switched to particular aspects. But on the outside there are only marker boards to identify the position of these interlocking only signals. In that sense they are physical outside but virtual for the interlocking. Whereas <signalIS>/<signalConstruction>@type="virtual" really means no physical object outside.

<signalIS>@switchable is a real addition to <signalConstruction>@type because there are signals of type "semaphore" which may be switchable or not, e.g. electrification signals like "main switch off". Of course, with "light" signals one can assume they are always switchable.

Regards,  
Jörg von Lingen - Interlocking Coordinator

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Subject: Re: [railml3] Signal types and functions

Posted by [Thomas Nygreen JBD](#) on Mon, 11 Feb 2019 17:17:01 GMT

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Dear Jörg,

Jörg von Lingen wrote on Sat, 09 February 2019 09:32

<signalIL>@signalFunction is about the function of the signal as seen from the interlocking "main" could be seen as a duplication but its meaning is more anything else but the specific uses - "The main signal is a normal signal for train traffic protection which is neither used as block, entry, exit nor intermediate signal." Even with this kind of definition, "main" or "distant" still describes another type of property than "exit" or "entry". Hence, there should be two different attributes.

Quote:

<signalIL>@isVirtual is especially considering ETCS systems where the interlocking in its data still has signals which are switched to particular aspects. But on the outside there are only marker boards to identify the position of these interlocking only signals. In that sense they are physical outside but virtual for the interlocking. Whereas <signalIS>/<signalConstruction>@type="virtual" really means no physical object outside.

OK. I assume that there may also be other cases where the signal model in the IL differs from the actual (or non-existing) signal outside, in which case it would also then be considered virtual?

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Subject: Re: [railml3] Signal types and functions  
Posted by [Torben Brand](#) on Fri, 23 Feb 2024 09:57:08 GMT  
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I allow myself to revive this old post as it is relevant to the topic. The latest relevant discussions and implementations and suggestions can be found in the infrastructure forum in the postings [1] and [2]

The current modelling is good, but we need a more unambiguous definition of what is a «main» signal in IL terms and which signal@functions are considered to be «main».

Suggestion:

Definition «main» in IL terms: signal that forms a route start or end with handlesRouteType@ref to hasRouteType@genericRouteType="normal".

Alternative definition: a main signal is located at the railway vehicles movement end of authority.

signal@functions that are considered to be «main»: entry, exit, intermediate (in station) and block (on open line).

This based upon existing listing in deprecated «main» enumeration.

If this is correct please revise XSD documentation (and subsequent wiki) with (bold=new, italics=remove):

- block: The block signal is a main signal used on the open line at the start of a block route.
- entry: The entry signal is a the main signal protecting the entrance of a station from the open line.

- exit: The exit signal is a main signal at the start of a route from within a station onto the open line.
- intermediate: The intermediate signal is a main signal within a station neither used for entry nor exit routes.

[1] [https://www.railml.org/forum/index.php?t=msg&goto=3070&amp;&srch=signal+main#msg\\_3070](https://www.railml.org/forum/index.php?t=msg&goto=3070&amp;&srch=signal+main#msg_3070)

[2] <https://www.railml.org/forum/index.php?t=msg&th=648>

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Subject: Re: [railml3] Signal types and functions

Posted by [Torben Brand](#) on Wed, 28 Feb 2024 10:56:38 GMT

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Jernbanedirektoratet and Bane NOR need a definition.

Which is the correct enumeration value to use in `signalIL@function` for an "end" markerboard (ETCS) or "end of route board" (conventional optical system)? This is always a (marker)board that is placed at a buffer stop.

See example in the advanced example:

<https://railoscope.com/tickets/Fyh1WAZliOQbgVmY?modelId=64d2293fb1421a4b8096c580&selectId=123-4>

Or should a new "other:end" value be introduced?

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Subject: Re: [railml3] Signal types and functions

Posted by [Jörg von Lingen](#) on Sun, 03 Mar 2024 07:42:37 GMT

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This is a good remark. Until now the `signalIL@function` did not consider such a signal/marker board placed at a buffer stop. Thus we shall add "trackEnd" for such function. The proposed "end" might be ambiguous.

Best regards,

Joerg v. Lingen - Interlocking Coordinator

On 28.02.2024 11:56, Torben Brand wrote:

> Jernbanedirektoratet and Bane NOR need a definition.

>

> Which is the correct enumeration value to use in

> `signalIL@function` for an "end" markerboard (ETCS) or "end of

> route board" (conventional optical system)? This is always a

> (marker)board that is placed at a buffer stop. See example in the advanced

> example:  
> <https://railoscope.com/tickets/Fyh1WAZliOQbgVmY?modelId=64d2293fb1421a4b8096c580&selectId=123-4>  
>  
> Or should a new "other:end" value be introduced?  
>

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Subject: Re: [railml3] Signal types and functions  
Posted by [Jörg von Lingen](#) on Tue, 05 Mar 2024 05:25:59 GMT  
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Dear all,

the differentiation of values for <signalS>@type and for <signalIL>@signalFunction are still not clear to everyone.

<signalS>@type shall define the basic types of signals like main, distant and shunting signal. This basic classification might be enough for some user. If more details are needed than <signalIL>@signalFunction is to be used in addition covering the interlocking related functions of the signal.

In case of type="main" the possible functions can be <https://wiki3.railml.org/wiki/IL:signalIL>:

- block
- entry
- exit
- group
- intermediate
- intermediateStop
- junction
- trackEnd (with v3.3)

The values 'blockInterface' and 'lineInterface' are like a main signal but a supporting virtual construction used to transfer information over the border between two interlockings or between station and open line. As they are virtual and for interlocking use only they will never appear as signalS.

The types 'shunting' and 'distant' are related to similar functions, i.e. type="shunting" + function="shunting" or type="distant" + function="distant".

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Best regards,  
Joerg v. Lingen - Interlocking Coordinator

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