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Subject: [railML2] @dir

Posted by [christian.rahmig](#) on Mon, 27 May 2019 09:57:13 GMT

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Dear active railML community,

the new Common scheme coordinator Thomas (together with Janne from JBD) initiated a discussion about the meaning and usage of the attribute @dir. While the starting point of the discussion was at the element <levelCrossing> (cp. [1]) the attribute is available for almost all instances of <trackElements> and <ocsElements> and therefore deserves an own thread here in the forum.

I want to propose three rules:

1) The @dir attribute represents an "application direction" describing a direction of travel, for which the element has to be considered. There are elements with a clear application direction (e.g. <signal>), where the @dir attribute shall be used, but there are also other elements without a specific application direction (e.g. <levelCrossing>), where the @dir attribute shall not be used.

2) In railML 2, even linear elements (e.g. tunnel or bridge) are located with a single coordinate (and an additional @length attribute). This coordinate shall always refer to the center of this element and the value of the @length attribute shall be equally distributed before and after this location. The @dir attribute shall not be used.

3) For very long linear elements (e.g. Gotthard Base Tunnel), it is useful to model the element's "portals" instead of its center point. In that case, elements need to be placed at the begin and the end of the element oriented towards the center point. The @dir attribute shall be used to describe the orientation of the "portal", e.g. to define what is in the tunnel and what is outside the tunnel.

What do you think about this approach? Do you agree or do you prefer erasing the third point? Any comment is highly appreciated...

[1] [https://www.railml.org/forum/index.php?t=msg&th=655&goto=2179&#msg\\_2179](https://www.railml.org/forum/index.php?t=msg&th=655&goto=2179&#msg_2179)

Best regards

Christian

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Christian Rahmig - Infrastructure scheme coordinator

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Subject: Re: [railML2] @dir

Posted by [christian.rahmig](#) on Mon, 07 Oct 2019 19:51:56 GMT

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Dear all,

considering the relevance for semantic rules in modelling railML 2.x,  
any feedback (pro, con, mod, ...) on the topic below is highly appreciated.

Thank you very much and best regards  
Christian

Am 27.05.2019 um 11:57 schrieb Christian Rahmig:

> Dear active railML community,

>

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> initiated a discussion about the meaning and usage of the attribute

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>  
> Best regards  
> Christian  
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Subject: Re: [railML2] @dir  
Posted by [Janne Möller](#) on Wed, 16 Oct 2019 13:22:59 GMT  
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Dear Christian

I would like to comment on your post by sharing the common practice on the three listed points in the Norwegian railway sector.

regarding 1)

Agreed. For elements that have an application direction the attribute @dir is used.

regarding 2)

This is handled a bit differently here. For elements that have a length, but their position is a concrete coordinate, we are using the beginning of the element, not the middle. Which of these approaches is easier and more universally applicable seems to be worth a discussion. We deviate from the mentioned rule concerning the element levelCrossing.

regarding 3)

We think this point is definitely a possibility on how to handle long linear elements. It could be useful when such an element has several entries or exits that lie on different tracks. Currently we handle this case by defining another element of the same type on the beginning of the diverging track.

Best regards,

Janne Möller  
Kapasitetsrådgiver  
Jernbanedirektoratet

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Subject: Re: [railML2] @dir  
Posted by [Morten Johansen](#) on Wed, 11 Dec 2019 08:07:07 GMT  
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Dear Christian

Based on our experiences on transforming data from the Norwegian asset management system to railML I have some comments to your propositions on the usage of the @dir attribute.

1) I fully support the proposition to use @dir only for "application direction"

2) In Norway we are quite happy with the way elements, other than levelCrossing, have been handled up to now regarding position and length. In our asset management system linear elements are positioned at their lowest border and given a length in increasing mileage direction. As a consequence there will be a huge challenge to find the correct track element to place a linear element if the position is given at the element's center. In particular this will be the case if e.g. there will be an ocp or administrative border inside a tunnel. In addition to the more technical or practical problems the proposed solution will bring we do not see a great added value compared to today's solution to have linear elements positioned at their center position.

3) As for proposition 2) we don't see the great added value to alter the way we are doing this today. Sticking to the way linear elements are modeled up to now the basic reason for this proposition will disappear. If there is a driver for the proposed solution to be able to give additional attributes for a portal object than the rest of the linear element, this could be done by introducing a portal sub-element to the original linear element.

Kind regards  
Morten Johansen  
railML coordinator Bane NOR

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Subject: Re: [railML2] @dir  
Posted by [Thomas Nygreen](#) on Tue, 17 Dec 2019 14:09:30 GMT  
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christian.rahmig wrote on Mon, 27 May 2019 11:57  
the new Common scheme coordinator Thomas (together with Janne from JBD) initiated a discussion about the meaning and usage of the attribute @dir. While the starting point of the discussion was at the element <levelCrossing> (cp. [1]) the attribute is available for almost all instances of <trackElements> and <ocsElements> and therefore deserves an own thread here in the forum.

In order not to forget the real starting point and history of this discussion, please remember that there was already a thread on this topic (without any conclusion): the use of @dir in railML

Best regards,  
Thomas Nygreen - Common coordinator, railML.org