
Subject: [railML3|alpha] Linear coordinates

Posted by [Martin Karlsson](#) on Fri, 07 Oct 2016 11:56:26 GMT

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I understand that the main intention of the linear coordinate concept is to model kilometer positions, as traditionally used in railways. This is also how the example file uses it - the example layout runs from 0 to 5 km on a line, and this is modeled by lineCoordinates relating to positioning system lps_01.

The problem is that a single attribute, "measure", is used to catch the kilometer value. In my opinion, this will not always work.

When a track is rebuilt, the length of a signposted kilometer may deviate from its original 1000 meters. If the track is straightened, the length will be shorter - that can be handled by putting two coordinates in the same place, creating a "jump" in the counting. But if a curve radius is increased, the track will be longer, hence the kilometer will be longer than 1000 m. How do you handle the case where you have passed the 22 km sign by 1003 meters, but not yet reached the 23 km sign?

In Sweden, this is solved by not using km with decimals, but km plus m. So a valid position can be e.g. 22+1003.4. This needs two numbers to be properly represented.

Martin Karlsson

Bombardier Transportation
Rail Control Solutions
EAPD/ECC
S-405 02 Göteborg, Swede

Subject: Re: [railML3] Linear coordinates

Posted by on Tue, 11 Oct 2016 08:38:12 GMT

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Dear Martin,

the difference between theoretical and "practical" (historically developed) mileage / kilometrage of a line is well-known also in other countries and is, on my experience, typical for railways in general.

We've already had this distinction in railML 1.x and 2.x and therefore, it will of course be available and necessary in 3.x.

So far, the theoretical mileage / kilometrage was named "relative mileage" (relative = strongly distances to a origin; the origin can be virtual and outside the line, the relative mileage needs not to be shown anywhere in reality) and "absolute mileage" (historically developed, shown in reality at mileposts and stations, not always strong

distances). Sometimes only one mileage / kilometrage is used containing "fault locations", whereas a "fault location" can be either an increasing or decreasing jump.

Anyway, there will be a common solution in railML 3.x and I hope Christian will soon tell us how...

With best regards,
Dirk Bräuer
iRFP Dresden.

Am 07.10.2016 um 18:29 schrieb Martin Karlsson:

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- > coordinate concept is to model kilometer positions, as
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- > Martin Karlsson
- > -----
- > Bombardier Transportation
- > Rail Control Solutions
- > EAPD/ECC
- > S-405 02 Göteborg, Swede

Subject: Re: [railML3] Linear coordinates

Posted by [Martin Karlsson](#) on Tue, 11 Oct 2016 08:45:39 GMT

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Thank you Dirk,

That sounds reassuring! I will wait and see...

Martin Karlsson

Bombardier Transportation

Rail Control Solutions

EAPD/ECC

S-405 02 Göteborg

Sweden
