
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
