Subject: Re: odometry, pos and absPos
Posted by on Mon, 08 Dec 2014 23:44:10 GMT
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Dear Bob Janssen,

for pos and absPos, we use the following definitions so far:

> Due to historical reasons, the mileage (or "metering") of the tracks of a line often is not continuous. It can have any points of discontinuity ("jump" and/or change of counting direction between raising and falling) for instance by geographical corrections / repositioning of a line. In railML, the practical, historical mileage (written e.g. at mileposts) is named "absolute mileage". On the contrary, there is the "relative mileage" (attribute pos) which always has to be continuously raising (but not necessarily starting with zero). The relative mileage normally is virtual, i.e. not visible at stations or mileposts. To calculate distances, the relative mileage is used.

(Translated extract from:)
http://www.wiki.railml.org/index.php?title=IS:mileageChange# Notes

So far: No objections against your definitions.
From the requirements of <timetable> there is probably no such 'exactness' necessary as for precise odometry. One could think that this is not a problem.

However, we have to be careful. You write "measured along the track's centreline". This would lead to different /pos/ values for both <track>s of a double-track line. Most timetabling applications probably assume the same distances for both tracks of a double-track line. From my opinion, this distance is measured along the centre of a _line_ which is the centre between both tracks in case of a double-track line.

So, if you really need a distance measured in the centre of each track independently from its line, we possibly need three position values:
- one for the absolute (traditional, discontinuous) mileage = absPos,
- one for the relative distances along the centre of a track,
- one for the relative distances along the centre of a line or group of tracks.

I would welcome if this would not be necessary but instead we could use the same definitions (and existing attributes) for all purposes.

Best regards,
Dirk Bräuer.