
Subject: Re: How to model 3 topology levels in rail.ML
Posted by [christian.rahmig](#) on Fri, 03 May 2019 10:00:12 GMT
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Dear Thomas,

welcome to the railML forum!

Am 26.04.2019 um 12:19 schrieb Thomas Langkamm:

> [...] How could we model 3
> or more topology levels?

railML 3.x topology model is based on RailTopoModel and very generic in application. This means that you can model as many topology levels as you want. However, in discussion we came to the conclusion that three levels are enough: micro, meso and macro.

>
> We create track plans with all details (microscopic rail.ML
> model), but we usually import our timetables from planning
> programs and need to match the data from the planning
> programs to our track plans. Many planning programs use a
> 2-tier topology: One that is based on stations, and one that
> is more detailed (but not as detailed as the microscopic
> topology), usually on basis of station tracks and possibly
> parking tracks. [...]

Micro topology level is used to model the track network in detail. The timetable view on stations and lines can be modelled as macroscopic topology. In between, you can define the mesoscopic topology, in which you aggregate the line tracks to lines, but remain the station track network. This way of aggregating is different to the approach used in the Simple Example where the station tracks have been aggregated and the line track remains. However, both approaches are possible from schema point of view, because so far there is no exact definition of the terms "micro", "meso" and "macro".

Nevertheless, there is an important rule to follow:

The aggregation of a more detailed topology level towards the more aggregated topology level must be unambiguous in order to ensure bi-directional level conversion. This is ensured with the <elementCollection*> elements, which list the (detailed) elements belonging to the (aggregated) element.

Does this answer help you for the moment?

@community: what do you think about the definition of the topology levels "micro", "meso" and "macro"?

Best regards
Christian

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Christian Rahmig - Infrastructure scheme coordinator
railML.org (Registry of Associations: VR 5750)
Phone Coordinator: +49 173 2714509; railML.org: +49 351 47582911
Altplauen 19h; 01187 Dresden; Germany www.railml.org
