
Subject: Re: speedProfile and rolling stock
Posted by [Torben Brand](#) on Mon, 02 Jul 2018 10:26:51 GMT
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Thank you, Dirk, for valuable input and good questions.

It did not occur to me to consider the timetable schema. As I was just thinking of the capability of the rolling stock. So, thank you for pointing that out to me. As I wrote the extension is meant to describe the speedProfile(s) that the formation or vehicle can run on. Which speedProfile it will run on raises a few more questions. I have grouped these questions in four chapters:

A Hirachy between redundant information in different schemas (this issue)
B Hirachy of the speedprofiles. See reply to issue #368 and ref to issue #1643
C National vs. Generic speed profiles. See also reply to isuse #368 (
https://www.railml.org/forum/index.php?t=msg&goto=526&&srch=speedProfile#msg_526)
D Use of @etcsTrainCategory. See issue #1655 (
https://www.railml.org/forum/index.php?t=msg&goto=1698&&srch=etcsTrainCategory#msg_1698) and extention suggestion bellow.

A- Hirachy between redundant information in different schemas

I suggest to be the hirachy:

1. If a timetable schema is present/used and the speedProfileRef(s) are defined there: use one of the defined SpeedProfile(s) in the TT. If there are more than one speedProfile defined, see see discussion in chapter B about which one to choose (is defined in infrastructure). The speedProfileRef(s) in the TT should be consistent with part of or all of the same speedProfileRef(s) being present for the same formation or vehicle in the rolling stock schema if written there. If TT refers to a speedProfile that is not refered in in the RS for the same formation the dataset is considered to be in different planning stages and is thus NOT considered invalid.
2. If a timetable schema is NOT present/used or it is present, but the speedProfileRef is NOT defined there and a speedProfileRef is available in rolling stock schema: use one of the defined SpeedProfile(s) in the RS. If there are more than one speedProfile defined, see see discussion in chapter B about which one to choose (is defined in infrastructure).
3. If no TT or RS schema is present/used or none of them contain a speedProfileRef, the correct speedProfile is today not defined/it is unclear which one to be used. This as a default in the infrastructure schema defined SpeedProfiles is not definable today. See discussion in chapter B about which one to choose (is defined in infrastructure).

In general TT taking presedence/detailing further the use of parameters set in RS, seems to be the case for a lot of parameters. Like under <formationTT> you can change the weight, length and speed of a formation. In <equipment> you can turn on or off equipment defined in rolling stock and in <passengerUsage> you can define which places and service are in use. So there seems to be a general rule in railML that timetable can be a more detailed specification of the rolling stock than is defined in the rolling stock schema/railML file. There should be a general definition about this in both the rollingstock wiki and the timetable wiki. I see both descriptions (RS/TT) as optional and if present in both schemas, TT takes precedence. So railML files with timetable/trains/train/trainPartSequence/speedProfileRef is always valid railML independent if rollingStock/formation/speedProfileRef or rollingStock/vehicle/speedProfileRef is set.

As vehicles are approved for one or more specific national speedProfile(s) I suggest to map to

those. But in addition to the national mapping we need to do an international mapping as the @etcsTrainCategory has been introduced (as defined in <speedChange> under <infrastructure> , Should be moved to <speedProfile>). This to know which other speedProfile(s), not specified explicitly, a train could potentially run under (in another nation for instance). As the @etcsTrainCategory contains all potential categories in its value, the attribute cannot be placed under the specific speedprofiles, but be placed higher in the hierarchy as it is valid for all speedprofiles (it defines).

So I extend my extension request to be:

```
<rollingStock>
<vehicle @etcsTrainCategory="value(s) as defined in issue #1655">
<speedProfileRef @ref="corresponding id in <infrastructure/speedProfile>in the same file" of type
id and optional
@name="corresponding name in <infrastructure/speedProfile>in another file" of type string and
optional>
```

```
<rollingStock>
<formation @etcsTrainCategory="value(s) as defined in issue #1655">
<speedProfileRef @ref="corresponding id in <infrastructure/speedProfile>in the same file" of type
id and optional
@name="corresponding name in <infrastructure/speedProfile>in another file" of type string and
optional>
```

If a train can drive on more than one speedProfile map all capable speedprofiles by using multiple <speedProfileRef> elements. See discussion in chapter B about which one to choose (is defined in infrastructure).

See issue #1655 for example based on my suggestion.