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Subject: Re: etcsTrainCategory

Posted by [Torben Brand](#) on Mon, 02 Jul 2018 10:28:40 GMT

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D - Use of @etcsTrainCategory.

I suggest to write out the full human readable matrix of @etcsTrainCategory both in the IS:speedProfile and suggested extension in RS:formation (Issue #1826).

With "full" I mean the speed profile confirms all international train category numbers that the speed profile can serve. This as the speedProfile does not know all trains/formations that can run on it.

So the basis speedProfile will have all categories checked (see example bellow).

Likewise a formation/vehicle should map all international train categories it can run under as it might need to run on a lower category as a line might not serve the high (cant deficiency) category.

With "human readable" I mean writing the matrix out binary.

As infrastructure and formation do not know about each other the @etcsTraincategory needs to be written in both and matched in the system. One match per category is sufficient for a RS to run on an given speedProfile.

So the short answer to Thomas:

I think we should write: etcsTrainCategory="011 1000 1111 1110" in your example. Do you write out the 3 spaces in the value?

But to be quite certain I suggest we should involve ERA in this issue.

So as a result of my suggestion the following example for most common national Speed profiles available in Norwegian infrastructure (IN):

```
<speedProfile id="sp1" name="basis" etcsTrainCategory="0111111111111111"/>
<speedProfile id="sp2" name="nor:pluss" influence="increasing"
etcsTrainCategory="011000111100000"/>
<speedProfile id="sp3" name="nor:krenge[tilting]" influence="increasing"
etcsTrainCategory="001000100000001"/>
<speedProfile id="sp4" name="temporary" influence="reducing"
etcsTrainCategory="0111111111111111"/>
```

SpeedProfileRef available for a tilting passenger train Norwegian type 73 (certified for max cant deficiency of 245) in rolling stock (RS):

```
<vehicle etcsTrainCategory="0111000111111110">
<formation etcsTrainCategory="0111000111111110">
<speedProfileRef id="sp1" name="basis"/>
<speedProfileRef id="sp2" name="nor:pluss"/>
<speedProfileRef id="sp3" name="nor:krenge"/>
<speedProfileRef id="sp4" name="temporary"/>
```

SpeedProfileRef available for a pluss passenger train Norwegian type 72 (certified for max cant deficiency of 165) in rolling stock (RS):

```
<vehicle etcsTrainCategory="0001000001111110">
<formation etcsTrainCategory="0001000001111110">
```

```
<speedProfileRef id="sp1" name="basis"/>
<speedProfileRef id="sp2" name="nor:pluss"/>
<speedProfileRef id="sp4" name="temporary"/>
```

SpeedProfileRef available for a passenger train with undefined max cant deficiency in rolling stock (RS):

```
<vehicle etcsTrainCategory="000100000000000">
<formation etcsTrainCategory="000100000000000">
<speedProfileRef id="sp1" name="basis"/>
<speedProfileRef id="sp4" name="temporary"/>
```

SpeedProfileRef available for a freight train running in P braking position in rolling stock (RS):

```
<vehicle etcsTrainCategory="000011000000000">
<formation etcsTrainCategory="000011000000000">
<speedProfileRef id="sp1" name="basis"/>
<speedProfileRef id="sp4" name="temporary"/>
```

Mapping for the matrix:

Infrastructure:

profile N/A 210 245 P F in G F in P 300 225 180 165 150 130 100 80 275

Basis (all) 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1

nor:pluss (P165) 0 1 1 0 0 0 1 1 1 1 0 0 0 0 0

nor:krenge (P245) 0 0 1 0 0 0 1 0 0 0 0 0 0 0 1

Requirement or higher

Trains:

profile N/A 210 245 P F in G F in P 300 225 180 165 150 130 100 80 275

Freight train in P 0 0 0 0 1 1 0 0 0 0 0 0 0 0 0

Freight train in G 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0

Passenger train\* 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0

Tilting train with cdMax=245 0 1 1 1 0 0 0 1 1 1 1 1 1 0

Passenger train with CdMax=165 0 0 0 1 0 0 0 0 0 1 1 1 1 0

Ability towards requirement or lower, \*allowable cant deficiency not defined