Subject: How do you model ETCS signals?
Posted by Torben Brand on Wed, 09 Aug 2017 07:39:46 GMT
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With ETCS signal, I mean here the combination of the ETCS movement authority and the relating marker board. I could not find a conclusion in the wiki or forum.
Conventional signals also have two elements to be modelled: The physical signal forming the function of the movement authority in the aspect and the information panel underneath the signal on the same post. See also: https://trv.jbv.no/wiki/Signal/Prosjektering/Lyssignal#Systemdefinisjon
With ETCS level 2 (in Norway) the signal forming the function of the movement authority is not physical. But the marker board is physically present. In Norway the marker board consisting of a stop marker/panel (E35 "Stopskilt") and an identification panel.
(https://trv.jbv.no/wiki/Signal/Prosjektering/ETCS#Signaler only showing the stop marker)
(https://goo.gl/images/abLVCw showing a live etcs marker board with stop marker and identification panel in Norway).
This as to handle fall back scenarios where the DMI/OBU/CAB is not functioning.
So how do we model the combination of the ETCS MA and the markerboard correctly:
<signal
@type:"main"
@name "[part 1/2 value of the information panel: signal letter and signal number. For instance "O 334"]"
@ocpRef (not ocpStationRef as signal can ref to other ocp types) "[part 2/2 value of the information panel: station code. For instance "OSL"]"
@virtual "yes"
subelement <etcs @level_2 "yes">>

This models the movement authority (which is virtual). But does this also implicit model the markerboard? In case it does, there is a discrepancy with the marker board as it's not virtual. Also some lines or national implementations might choose not to implement marker boards (I'm uncertain of this). Should the marker board be modelled as a seperate signal with a new @type:"markerboard"? Or can you use the attribute under <etcs @switchable: "yes/no"> the wiki says to this attribute: "defining the signal to be switchable or fixed (panel)"? I do not understand this. Is not an ETCS signal (=MA) always switchable? Either you receive an MA or you don't. I see that in simple example the value is set to: <etcs switchable="false" level_2="true"/>. Can someone please explain in the forum and update the wiki?

So to summarize the question:
1. By default a physical markerboard is present (although the signal is virtual) when using sub signal element <etcs>?
   a. For railML2.4/3.1 I then suggest to add a new optional attribute under <etcs @markerboard: "yes/no"> in case there are cases where there are no markerboard present. Does this exist?
2. Create a new @type:"markerboard"?

I suggest to go for option 1, and wait with 1a until somebody flags a need for this. Wiki documentation as to be amended with a clarification for this.