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Subject: [railML3] Refactoring of states (e.g. infrastructure states)  
Posted by [Vasco Paul Kolmorgen](#) on Thu, 17 Oct 2024 15:12:55 GMT  
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Dear all,

In response to requests of the community to also allow modelling of status information regarding interlocking we decided to refactor how of how states, such as infrastructure states information, are encoded is encoded in railML. In order to provide a solution that is more general and also allows for example rolling stock information to carry status information we came up with a more general approach. As of version 3.3 what is known in railML 3.2 as infrastructure states will be defined in common. We introduced a new top-level element for this names <states>.

With it, it is possible to specify states that apply to the whole railML document, similar to what before could be done with <infrastructureStates> although not limited to just infrastructure. Elements in infrastructure, interlocking and rollingstock have been extended each by an optional repeatable element called <elementState>. This element state allows specifying an overriding status for the enclosing element. The states in common as well as the element state each provide child elements to specify their validities.

The general idea is to define the general status in the common section, while making sure that the states defined there do no overlap in time. Wherever an element, such as an overcrossing deviates from the state defined for the document under common, an element state can be defined to express that. These element states by nature can and should overlap in time with the states defined under common, however they should not overlap with each other (within the same element).

With this extension it will be possible from railML 3.3 onward to also encode the planning for interlocking and rollingstock between applications.

We just published this for review with the beta2 of railML 3.3 this week. All the railML v3.3 betas can be downloaded free of charge from our website after login:  
<https://www.railml.org/app.php/en/download/schemas.html>

We invite you to download the beta version and give us your feedback until October 28th via the railML forum, by e-mail or in the working group meetings.

The ticket for this change is available at  
<https://development.railml.org/railml/version3/-/issues/552>.

Best regards,

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