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Subject: [railML2] adding an attribute for clearance on switches and crossings.

Posted by [Torben Brand](#) on Tue, 09 Mar 2021 13:12:17 GMT

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The Norwegian railway sector has the need to transfer information on the clearance of a switch or crossing. The clearance is the position where two train profiles can meet without just touching each other. UC is for signal planning.

Bane NOR and Jernbanedirektoratet currently use the extension attribute @nor:clearance of type xs:double on the <switch> and <crossing> elements.

The attribute is defined as "Distance in meters between the position of a switch/crossing (see @pos) and to the position of its clearance point behind the switch/crossing. The value is always positive."

PS. For a switch with @orientation="incoming" you need to calculate backwards for the position of the clearance.

Note that information on the formula used for the calculation of the clearance and the input values used, like choice of train profile, must be obtained from other external data sources.

Jernbanedirektoratet and Bane NOR are suggesting adding the extension into railML2.5 as

<switch>@clearance and <crossing>@clearance

Code example:

```
<switch absPos="200.0" code="KO-SPV-803680" id="sw41" name="1" clearance="50.0"
normalPosition="straight" pos="0.0" trackContinueCourse="straight"/> <connection course="right"
id="c41-43" maxSpeed="40.0" orientation="outgoing" ref="c43"/> </switch>
```