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Subject: [railML3] Semantic constraints for linking the topology with the positioning systems

Posted by [Larissa Zhuchyi](#) on Mon, 27 Jan 2025 14:57:07 GMT

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In railML 3.2 and railML 3.3 schema allows to link the topology to the positioning systems: linearPositioningSystem and geometricPositioningSystem.

This is done via the tag associatedPositioningSystem which specifies a reference to one of these positioning systems (@positioningSystemRef) In a substructure of associatedPositioningSystem linearCoordinates or geometricCoordinates can be specified. These of course only make sense if the positioning system specified on the level of the associatedPositioningSystem matches the specified type of coordinate.

In order to emphasize this we are considering semantic constraints to be introduced.

Please let know railML.org in case you do not agree with them until end of February 2025 otherwise if the working groups agree then it will be accepted and affect future certifications.

Thanks in advance!

railML 3.2

if associatedPositioningSystem/@positioningSystemRef refers to geometricPositioningSystem (reference is mandatory according to the positioning approach) then children netElement/associatedPositioningSystem/intrinsicCoordinate/l inearCoordinate are not allowed

if associatedPositioningSystem/@positioningSystemRef refers to linearPositioningSystem (reference is mandatory according to the positioning approach) then children netElement/associatedPositioningSystem/intrinsicCoordinate/g eometricCoordinate are not allowed

railML 3.3

if associatedPositioningSystem/@positioningSystemRef refers to geometricPositioningSystem then children netElement/associatedPositioningSystem/intrinsicCoordinate/l inearCoordinate are not allowed

if associatedPositioningSystem/@positioningSystemRef refers to linearPositioningSystem then children netElement/associatedPositioningSystem/intrinsicCoordinate/g eometricCoordinate are not allowed

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