

RailML Updates

Proposed updates for electrification data
in the areas of Rollingstock and Infrastructure

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RailML Updates



List of required data for railway infrastructure (RAILML4RINF)

- Energy Subsystem taken as sample for proposed updates
- Analysis of situation for data exchange with RINF

Energy subsystem contains data for

- overhead contact lines
- pantograph



European Railway Agency

- OCL separation sections

Guide on the application of the common specification of the RINF

- Requirements for rolling stock

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RINF list with description of data presentation

Selection of potential extensions

Line characteristics in relation to rolling stock characteristics

Description of line characteristics shall be similar to equivalent information about rolling stock

Use of same or similar data types in infrastructure and rollingstock

European Railway Agency

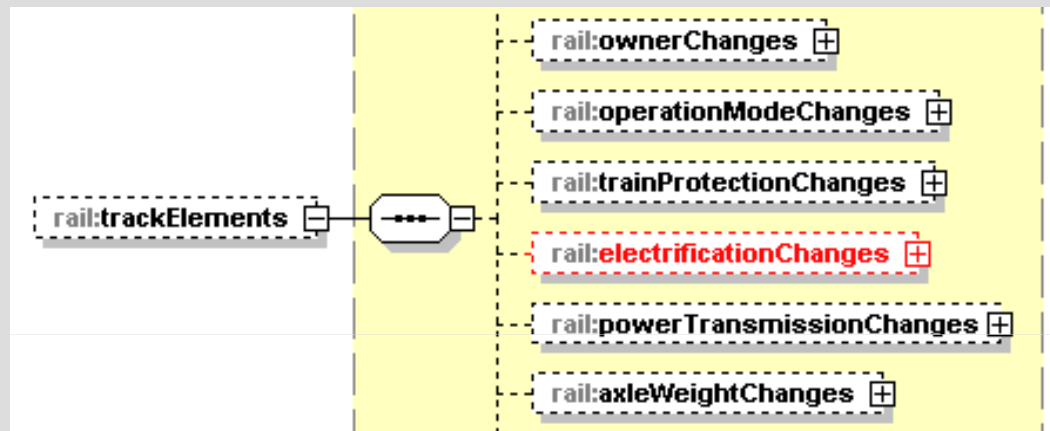


Guide on the application of the common specification of the RINF

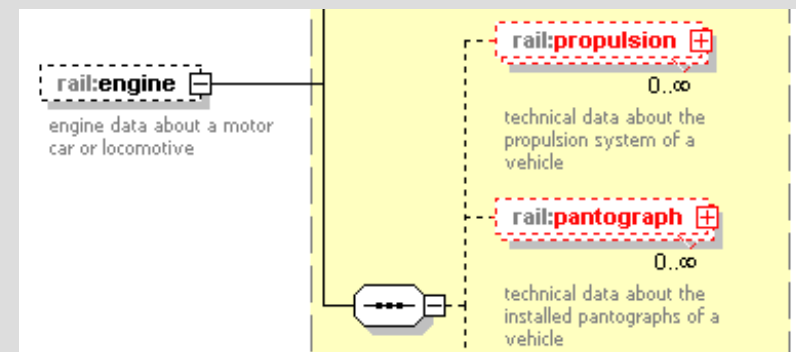


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Proposal for integration point into infrastructure:



and into rollingstock:



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Overhead Contact Line (OCL)

Infrastructure:

- **voltage** (tVoltageVolt)
- **frequency** (tFrequencyHertz)
- **maxTrainCurrentDriving**
(tCurrentAmpere)
- **maxPantoCurrentStandstill**
(tCurrentAmpere)
- **regenerativeBrakingAllowed** (boolean)

Rollingstock:

- **voltage** (tVoltageVolt)
- **frequency** (tFrequencyHertz)
- **tractiveCurrent**
(tCurrentCurve – table of values)
- **maxCurrentStandstill** (tCurrentAmpere)
auxiliarySupply/.../maxPower
(tPowerWatt)
- **brakeCurrent**
(tCurrentCurve – table of values)

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Overhead Contact Line (OCL) / Pantograph

Infrastructure:

- maximumContactWireHeight (tLengthM)
- minimumContactWireHeight (tLengthM)
- maximumContactWireDisplacement (tLengthM)
- compliantTSITypes (tTSIPantoHeadType)
- nationalPanHeadType (tPantoHeadType)
- contactStripMaterial (tContactStripMaterialType)

Rollingstock:

- maximumWorkingHeight (tLengthM)
- minimumWorkingHeight (tLengthM)
- maximumWorkingWidth (tLengthM)
- compliantTSIHeadProfile (tTSIPantoHeadType)
- nationalPanHeadProfile (tPantoHeadType)
- contactStripMaterial (tContactStripMaterialType)

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Pantograph / Requirements to Rolling Stock

Infrastructure:

- permittedStaticContactForce
(tForceNewton)
- permittedMaximumContactForce
(tForceNewton)
- automaticDroppingDeviceRequired
(boolean)
- pantographSpacing
(tPantographSpacingType)
 - numberPantographsRaised
 - spacingPantographsRaised
 - speed4PantographSpacing

Rollingstock:

- t.b.d. (tForceNewton)
- t.b.d. (tForceNewton)
- t.b.d. (t.b.d)
- t.b.d. (t.b.d)

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Overhead Contact Line (OCL) Separations

Infrastructure:

- **phaseSeparationSection** (tPhaseSeparationSectionType)
 - lengthPhaseSeparation
 - switchOffBreaker
 - lowerPantograph
- **systemSeparationSection** (tSystemSeparationSectionType)
 - lengthPhaseSeparation
 - switchOffBreaker
 - lowerPantograph
 - changeSupplySystem