Subject: New attribute in RollingstockTypes

Posted by Joerg von Lingen on Wed, 05 Mar 2008 16:02:59 GMT

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Hello,

I received the request to incorporate a new attribute <maxRecoveryVoltage> to the element <propulsion>. This optional attribute of type tVoltageVolt is used as maximum net voltage during regenerative braking.

I have the revised files attached.

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Mit freundlichen Grüßen/Best regards,

Jörg von Lingen

ChangeLog of railML-rollingstock

changes commited by: coordinator (Jörg von Lingen)
    SW (Susanne Wunsch)

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schemas: rollingstock.xsd
  rollingstockTypes.xsd

summary:

 V0.91 First release
 V0.93 Formations/Train compositions added,
  complete revision scheme design with change to user defined types instead of element references
 V0.93-1 list of train formations moved to become a subelement of 'rollingstock' to comply to general rules
  element 'vehicles' introduced as root to list of vehicle data (similar top structure as on 'formations'
 V0.94 Renaming of elements and attributes from 'rs....' to 'vehicle...' in order to avoid abbreviations in structure names,
  more details on installed monitoring and control systems possible
 V1.00 consolidated release
  adding 'kinematicEnvelope' in 'wagonType' element
 V1.01 adding 'auxPowerConsumption' in 'wagonType' element
  changing element 'propulsion' to occur 0 upto unbounded
  changing element 'valueLine' element to occur 1 upto unbounded
  change of enumeration of 'supply' attribute in 'propulsion' to have consistently DC values in Volts and AC values in Kilovolts
  declaring the following elements globally, which are referred to afterwards:

- 'engine'
- 'propulsion'
- 'wagon'
- 'efficiency'
- 'mechanicalLosses'
- 'tractiveEffort'
- 'brakeEffort'
- 'mechBrakeEffort'
- 'formation'
- 'trainResistance'

V1.02 adding child element 'eddyCurrentBreak' to 'brakesType'
 adding child element 'pulsPatterns' to 'tractionInverterType'
 adding enumeration values to attribute 'supply' from 'propulsionType'
 adding attribute 'maxBrakePower' to 'propulsionType'
 adding attribute 'nomRevolutions' to 'tractionMotorType'
 adding default value "1" for attribute 'formationCount'
 change 'valueTableType', adding information about x-axis, y-axis and z-axis units and names
using the new 'unitType' as enumeration
 renaming 'parameter' in 'columnHeader' to 'zValue' and adding 'zValueName' and 'zValueUnit'
for information
 change 'columnHeader' to optional occurance
 renaming 'compositionType' to 'formationType' in order to avoid confusion with 'compositionType'
in timetable scheme

V1.03 adding 'currentType' for net current curve in traction or braking
 adding 'currentLimitationType' for max. net current curve vs. net voltage in traction and braking
 adding elements 'tractiveCurrent', 'brakeCurrent', 'tractiveCurrentLimitation',
'brakeCurrentLimitation', 'tractiveVehicleEfficiency' and 'brakeVehicleEfficiency' as part of the
'propulsion' element
 adding unitTypes V, kV, W, kW, MW, VA, kVA, MVA
 adding attribute 'meanEfficiency' type 'fourQuadrantChopperType', 'tractionInverterType',
'gearType', 'tractionMotorType' and 'trafoType'
 adding attribute 'auxCosphi' to element 'auxSupply'
 adding attributes 'totalTractEfficiency' and 'totalBrakeEfficiency' to 'propulsion' element
 adding element 'cosphi' to 'fourQuadrantChopper' as kurve and renaming attribute 'cosphi' to
'meanCosphi'
 adding attriute 'tractionOffUndervoltageThreshold' to 'propulsionType'

V1.04 removal of none SI units except km/h in 'unitType'

V1.05 rename of "forbidden" names or duplicates used for elements and attributes
   element 'class' -> 'classification'
   attribute 'name' in 'manufacturer' -> 'manufacturerName'
   attribute 'type' in 'manufacturer' -> 'manufacturerType'
   attribute 'name' in 'operator' -> 'operatorName'
   attribute 'class' in 'operator' -> 'operatorClass'
   attribute 'engine' in 'propulsion' -> 'powerType'
   attribute 'type' in 'winding' -> 'typeStr'
   adding attribute 'count' to element 'fourQuadrantChopper'

V1.06 change of most attribute types to make them more stringent
 general change of percentage values to be in the range from 0 to 1 (instead of 0 to 100)

V1.1 complete and general refactoring of the scheme resulting in strict using of 'tTypes', 'aAttributeGroups' and 'eElements'
  renaming several attributes from 'Reactance' to 'Inductance' in their name for physical correctness
  further change of attribute types to make them more stringent
  attribute 'axles' in 'vehicle' -> 'axleSequence'
  adding attributes 'numDrivenAxles', 'numNonDrivenAxles' and 'trackGauge' in 'vehicle'
  adding attributes 'length', 'speed' and 'weight' in 'formation' to allow replacement of that attributes in 'formation' of timetable scheme;
  SW: Changing namespace to "http://www.railml.org/schemas/2007";
  SW: Application of schema intern "version=1.1"
  SW: stronger typing: change of untyped element "service" to type "tElementDescription"
  SW: Import of MathML2 with Prefix "mml", referenced element "mml:math" in type "tCurve"
 V1.1.1 adding attribute 'maxRecoveryVoltage' in 'aPropulsion'

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elements in detail:

 <vehicles>
  History: V0.93-1 added

 <formations>
  History: V0.93 Formations/Train compositions added

 <vehicle>
  History: V0.91 First release
    V0.93-1 renamed from 'rs' to 'vehicle'

 <classification>
  History: V0.91 First release
    V0.93 change to optional use

 <engine>
  History: V0.91 First release
    V1.01 changed to a global element in order to allow building of XML file

 <wagon>
  History: V0.91 First release
    V0.93 change to user defined type
    V1.01 changed to a global element in order to allow building of XML file

 <brakes>
  History: V0.91 First release
    V0.92 added
    V0.93 change to user defined type

<manufacturer>
History: V0.91 First release

<operator>
History: V0.92 added with 'class' element

<propulsion>
History: V0.91 First release
   V0.92 extensive revision, adding all subsystems of propulsion
   V0.93 change to user defined type
   V1.01 changed to refer to the global element and can occur "unbounded" each for one power supply system
     adding value "AC 11kV 16 2/3Hz" to the enumeration
   V1.1 splitting the enumeration into physical values of frequency and voltage

<monitoring>
History: V0.92 added
   V0.93 change to user defined type

<transformer>
History: V0.92 added
   V0.93 change to user defined type

<fourQuadrantChopper>
History: V0.92 added
   V0.93 renamed from 'fourqs' to 'fourQuadrantChopper', change to user defined type
<link>
History: V0.92 added

<tractionInverter>
History: V0.92 added
   V0.93 change to user defined type

<tractionMotor>
History: V0.92 added
   V0.93 change to user defined type

<diesel>
History: V0.92 added
   V0.93 change to user defined type

<gear>
History: V0.93 change to user defined type

<auxSupply>
History: V0.92 added

<tractiveEffort>

History: V0.92 added
   V0.93 changed to user defined type including both: MathML and value table
   V1.01 changed to refer to the global element

<brakeEffort>
History: V0.92 added
   V0.93 changed to user defined type including both: MathML and value table
   V1.01 changed to refer to the global element

<tractiveCurrent>
History: V1.03 added

<brakeCurrent>
History: V1.03 added

<tractiveCurrentLimitation>
History: V1.03 added

<brakeCurrentLimitation>
History: V1.03 added

<tractiveVehicleEfficiency>
History: V1.03 added

<brakeVehicleEfficiency>
History: V1.03 added

<efficiency>(<transformer>)
History: V0.92 added
   V1.01 changed to refer to the global element

<efficiency>(<fourQuadrantChopper>)
History: V0.92 added
   V1.01 changed to refer to the global element

<cosphi>
History: V1.03 added

<efficiency>(<tractionInverter>)
History: V0.92 added
   V1.01 changed to refer to the global element

<pulsPattern>
History: V1.02 added

<valueTable>
History: V0.93 added as alternative to MathML branch

<efficiency>(<tractionMotor>)
 History: V0.92 added
   V1.01 changed to refer to the global element

<mechanicalLoss>
 History: V0.92 added
   V0.93 change to user defined type
   V1.01 changed to refer to the global element

<efficiency>(<gear>)
 History: V0.92 added
   V1.01 changed to refer to the global element

<etcs>
 History: V0.94 added

<nationalSystem>
 History: V0.94 added

<passenger>
 History: V0.91 First release
   V0.93 change from attribute of 'passenger' to sub-element with unlimited occurance

<goods>
 History: V0.91 First release
   V0.93 change to user defined type

<mechBrakeEffort>
 History: V0.92 added for description of effort curve
   V1.01 change to refer to the global element

<eddyCurrentBrake>
 History: V1.02 added

<formation>
 History: V0.93 added with Formations/Train compositions
   V1.01 changed to refer to global element

<trainOrder>
 History: V0.93 added with Formations/Train compositions

<trainType>
 History: V0.93 added with Formations/Train compositions

<sysEngine>
 History: V0.93 added with Formations/Train compositions

<sysBrakes>

History: V0.93 added with Formations/Train compositions

<trainResistance>
 History: V0.92 added
   V0.93 moved to Formation as train related data
   V1.01 changed to a global element in order to allow building of XML file

<vehicleType>
 History: V0.93 added with Formations/Train compositions
   V0.94 renamed from 'rsType' to 'vehicleType'

<losses>
 History: V0.93 change to user defined type

<effortCurve>
 History: V0.93 change to user defined type

<vehicleCurrentCurve>
 History: V1.03 added as user defined type

<currentLimitation>
 History: V1.03 added as user defined type

<efficiencyCurve>
 History: V0.93 change to user defined type

<curve>
 History: V0.93 added for change to user defined type

<math>(<curve>)
 History: V0.92 added for flexible detailed description of characteristical curves in mathematical manner
   V1.1 SW: changed to MathML2-namespace (as referenced element)

<valueTable>(<curve>)
 History: V0.93 added as alternative to MathML branch

<columnHeader>(<valueTable>)
 History: V0.93 added
   V1.02 changed to optional occurance

<valueLine>(<valueTable>)
 History: V0.93 added
   V1.01 changed maxOccurs to "unbounded" to allow one line per x-value

<service>(<passenger>)
 History: V1.1 SW: changed to type "tElementDescription"

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attributes in detail:

 <version>(<rollingstock>)
  History: V0.91 First release

 <rollingstockID>(<rollingstock>)
  History: V0.93 added

 <timetableID>(<rollingstock>)
  History: V1.1 added

 <infrastructureID>(<rollingstock>)
  History: V1.1 added

 <vehicleID>(<vehicle>)
  History: V0.92 moved and renamed to 'ID' from 'class' element
    V0.93 renamed from 'ID' to 'rsID'
    V0.94 renamed from 'rsID' to 'vehicleID' according to element name

 <vehicleFamilyID>(<vehicle>)
  History: V0.93 added to reference to vehicle family with all common data when specifying
indivdual vehicles
    V0.94 renamed from 'base_rsID' to 'vehicleFamilyID' to express its function

 <axleSequence>(<vehicle>)
  History: V0.91 First release
    V1.1 renamed from 'axles' to 'axleSequence' for better distinction to new attributes of axle
counts

 <numDrivenAxles>(<vehicle>)
  History: V1.1 added

 <numNonDrivenAxles>(<vehicle>)
  History: V1.1 added

 <trackGauge>(<vehicle>)
  History: V1.1 added

 <length>(<vehicle>)
  History: V0.91 First release
    V1.06 changed attribute type

 <speed>(<vehicle>)
  History: V0.91 First release
    V0.93 changed type from 'int' to 'decimal'

V1.06 changed attribute type

<bruttoWeight>(<vehicle>)
 History: V0.91 First release
    V1.06 changed attribute type

<nettoWeight>(<vehicle>)
 History: V0.91 First release
    V1.06 changed attribute type

<bruttoadhWeight>(<vehicle>)
 History: V0.92 added
    V1.06 changed attribute type

<nettoadhWeight>(<vehicle>)
 History: V0.92 added
    V1.06 changed attribute type

<resistFactor(<vehicle>)
 History: V0.92 added
    V0.93 change type from 'float' to 'decimal' and moved to 'vehicle' element to have it at same
location independent of vehicle type

<manufacturerName>(<manufacturer>)
 History: V0.91 First release
    V1.05 rename to 'manufacturerName' in order to avoid "forbidden" words

<manufacturerType>(<manufacturer>)
 History: V0.91 First release
    V1.05 rename to 'manufacturerType' in order to avoid "forbidden" words

<serialNumber>(<manufacturer>)
 History: V0.94 added

<operatorName>(<operator>)
 History: V0.92 added with 'class' element
    V1.05 rename to 'operatorName' in order to avoid "forbidden" words

<operatorClass>(<operator>)
 History: V0.92 added with 'class' element
    V1.05 rename to 'operatorClass' in order to avoid "forbidden" words

<power>(<propulsion>)
 History: V0.91 First release
    V0.92 change type from 'string' to 'float'
    V0.93 change type from 'float' to 'decimal'
    V1.06 changed attribute type, base unit changed to Watt (before kW)

<powerType>(<propulsion>)
 History: V0.91 First release
    V0.92 change type from 'string' to 'enumeration'
    V1.05 rename to 'powerType' to avoid confusion with 'engine' element

<transmission>(<propulsion>)
 History: V0.91 First release
    V0.92 change type from 'string' to 'enumeration'

<maxTractEffort>(<propulsion>)
 History: V0.92 added
    V0.93 change type from 'int' to 'decimal'
    V1.06 changed attribute type, base unit changed to Newton (before kN)

<rotMassFactor>(<propulsion>)
 History: V0.92 added
    V0.93 change type from 'float' to 'decimal'

<rackTraction>(<propulsion>)
 History: V0.92 added

<remoteControl>(<propulsion>)
 History: V0.92 added

<numNotches>(<propulsion>)
 History: V0.92 added
    V1.06 changed attribute type

<wheelDiameter>(<propulsion>)
 History: V0.92 added
    V1.06 changed attribute type

<maxBrakeEffort>(<propulsion>)
 History: V0.92 added
 V1.06 changed attribute type, base unit changed to Newton (before kN)

<maxBrakePower>(<propulsion>)
 History: V1.02 added
    V1.06 changed attribute type, base unit changed to Watt (before kW)

<totalTractEfficiency(<propulsion>)
 History: V1.03 added
    V1.06 changed attribute type

<totalBrakeEfficiency>(<propulsion>)
 History: V1.03 added
    V1.06 changed attribute type

<tractionOffUndervoltageThreshold>(<propulsion>)
History: V1.03 added
V1.06 changed attribute type

<maxRecoveryVoltage>(<propulsion>)
History: V1.1.1 added

<linear>(<monitoring>)
History: V0.92 added

<punctual>(<monitoring>)
History: V0.92 added

<baliseTransp>(<monitoring>)
History: V0.92 added

<radio>(<monitoring>)
History: V0.92 added

<version>(<etcs>)
History: V0.94 added

<level_0>(<etcs>)
History: V0.94 added

<level_1>(<etcs>)
History: V0.94 added

<level_2>(<etcs>)
History: V0.94 added

<level_3>(<etcs>)
History: V0.94 added

<level_STM>(<etcs>)
History: V0.94 added

<feResistance>(<tranformer>)
History: V0.93 added
   V1.1 changed attribute type

<addResistance>(<transformer>)
History: V0.93 added
   V1.1 changed attribute type

<mainInductance>(<transformer>)
History: V0.93 added
   V1.1 renamed to 'mainInductance' for physical correctness, changed attribute type

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<meanEfficiency(<transformer>)
 History: V1.03 added
   V1.06 changed attribute type

<typeStr>(<winding>)
 History: V0.92 added
   V1.05 rename to 'typeStr' in order to avoid "forbidden" words

<nomVoltage>(<winding>)
 History: V0.92 added
   V1.06 changed attribute type

<nomCurrent>(<winding>)
 History: V0.92 added
   V1.06 changed attribute type

<transformationRatio>(<winding>)
 History: V0.93 added

<primaryResistance>(<winding>)
 History: V0.93 added

<secondaryRestistance>(<winding>)
 History: V0.93 added

<primaryLeakageInductance>(<winding>)
 History: V0.93 added
   V1.1 renamed to 'primaryLeakageInductance' for physical correctness

<secondaryLeakageInductance>(<winding>)
 History: V0.93 added
   V1.1 renamed to 'secondaryLeakageInductance' for physical correctness

<meanCosphi>(<fourQuadrantChopper>)
 History: V0.92 added
   V1.03 renamed from 'cosphi' to 'meanCosphi' to avoid mixup with new element 'cosphi'
   V1.06 changed attribute type

<meanEfficiency>(<fourQuadrantChopper>)
 History: V1.03 added
   V1.06 changed attribute type

<nomVoltage>(<link>)
 History: V0.92 added
   V1.06 changed attribute type

<nomCurrent>(<link>)

History: V0.92 added
   V1.06 changed attribute type

<meanEfficiency>(<tractionInverter>)
History: V1.03 added
   V1.06 changed attribute type

<nomPower>(<tractionMotor>)
History: V0.92 added
   V1.06 changed attribute type, base unit changed to Watt (before kW)

<nomVoltage>(<tractionMotor>)
History: V0.92 added
   V1.06 changed attribute type

<nomCurrent>(<tractionMotor>)
History: V0.92 added
   V1.06 changed attribute type

<nomFrequency>(<tractionMotor>)
History: V0.92 added
   V1.1 changed attribute type

<nomFlux>(<tractionMotor>)
History: V0.92 added

<cosphi>(<tractionMotor>)
History: V0.92 added
   V1.06 changed attribute type

<numPairPoles>(<tractionMotor>)
History: V0.92 added
   V1.06 changed attribute type

<statorResistance>(<tractionMotor>)
History: V0.92 added
   V1.1 changed attribute type

<rotorResistance>(<tractionMotor>)
History: V0.92 added
   V1.1 changed attribute type

<feResistance>(<tractionMotor>)
History: V0.92 added
   V1.1 changed attribute type

<addResistance>(<tractionMotor>)
History: V0.92 added

V1.1 changed attribute type

\<mainInductance\>(\<tractionMotor\>)
 History: V0.92 added
   V1.1 renamed to 'mainInductance' for physical correctness, changed attribute type

\<statorLeakageInductance\>(\<tractionMotor\>)
 History: V0.92 added
   V1.1 renamed to 'statorLeakageInductance' for physical correctness, changed attribute type

\<rotorLeakageInductance\>(\<tractionMotor\>)
 History: V0.92 added
   V1.1 renamed to 'rotorLeakageInductance' for physical correctness, changed attribute type

\<numRevolutions\>(\<tractionMotor\>)
 History: V1.02 added
   V1.06 changed attribute type

\<meanEfficiency\>(\<tractionMotor\>)
 History: V1.03 added
   V1.06 changed attribute type

\<nomPower\>(\<diesel\>)
 History: V1.1 added

\<fuelCapacity\>(\<diesel\>)
 History: V1.1 added

\<meanEfficiency\>(\<diesel\>)
 History: V1.1 added

\<ratio\>(\<gear\>)
 History: V0.92 added

\<meanEfficiency\>(\<gear\>)
 History: V1.03 added
   V1.06 changed attribute type

\<nomPower\>(\<auxSupply\>)
 History: V0.92 added
   V1.06 changed attribute type, base unit changed to Watt (before kW)

\<auxCosphi\>(\<auxSupply\>)
 History: V1.03 added
   V1.06 changed attribute type

\<name\>(\<nationalSystem\>)
 History: V0.94 added

<rotMassFactor>(<wagon>)
 History: V0.93 added

<kinematicEnvelope>(<wagon>)
 History: V1.0 added

<auxPowerConsumption>(<wagon>)
 History: V1.01 added
   V1.06 changed attribute type, base unit changed to Watt (before kW)

<class1>(<passenger>)
 History: V0.91 First release
   V1.06 changed attribute type

<class2>(<passenger>)
 History: V0.91 First release
   V1.06 changed attribute type

<lowFloorPortion>(<passenger>)
 History: V0.91 First release
   V0.92 renamed from 'niederfluranteil' to 'lowboardShare'
   V0.93 renamed from 'lowboardShare' to 'lowFloorPortion'
   V1.06 changed attribute type

<catering>(<passenger>)
 History: V0.91 First release

<baggage>(<passenger>)
 History: V0.91 First release
   V0.93 renamed from 'package' to 'baggage'

<deck>(<passenger>)
 History: V0.91 First release
   V0.92 changed from 'string' to 'enumeration' type
   V1.06 just named the type of enumeration 'tVerbalCounter'

<controlTrailer>(<passenger>)
 History: V0.91 First release

<tilting>(<passenger>)
 History: V0.92 added

<load>(<goods>)
 History: V0.91 First release
   V0.92 rename from 'weight' to 'load'
   V1.06 changed attribute type

<volume>(<goods>)
History: V0.91 First release
  V1.1 change of attribute type

<G>(<brakes>)
History: V0.91 First release
  V1.1 change of attribute type

<P>(<brakes>)
History: V0.91 First release
  V1.1 change of attribute type

<R>(<brakes>)
History: V0.91 First release
  V1.1 change of attribute type

<RMg>(<brakes>)
History: V0.91 First release
  V1.1 change of attribute type

<decelerationRate>(<brakes>)
History: V0.92 added
  V1.1 change of attribute type

<maxPower>(<eddyCurrentBrake>)
History: V1.02 added
  V1.06 changed attribute type, base unit changed to Watt (before kW)

<maxEffort>(<eddyCurrentBrake>)
History: V1.02 added
  V1.06 changed attribute type, base unit changed to Newton (before kN)

<minSpeed>(<eddyCurrentBrake>)
History: V1.02 added

<formationID>(<formation>)
History: V0.93 added with Formations/Train compositions

<formationCount>(<formation>)
History: V0.93 added with Formations/Train compositions
  V1.02 default value="1" added
  V1.06 changed attribute type

<formationType>(<formation>)
History: V0.93 added with Formations/Train compositions
  V1.1 change of attribute type

<length>(<formation>)

History: V1.1 added

<speed>(<formation>)
 History: V1.1 added

<weight>(<formation>)
 History: V1.1 added

<orderNumber>(<vehicle>)
 History: V0.93 added with Formations/Train compositions
    V1.06 changed attribute type

<vehicleID>(<vehicle>)
 History: V0.93 added with Formations/Train compositions
    V0.94 renamed from 'rsID' to 'vehicleID'

<vehicleCount>(<vehicle>)
 History: V0.93 added with Formations/Train compositions
    V0.94 renamed from 'rsCount' to 'vehicleCount'
    V1.06 changed attribute type

<acceleration>(<sysEngine>)
 History: V0.93 added with Formations/Train compositions

<regDeceleration>(<sysBrakes>)
 History: V0.93 added with Formations/Train compositions

<emerDeceleration>(<sysBrakes>)
 History: V0.93 added with Formations/Train compositions

<tunnelFactor>(<trainResistance>)
 History: V0.93 added

<count>(general assembly)
 History: V0.92 added
    V1.06 changed attribute type

<typeStr>(general assembly)
 History: V0.92 added
    V1.1 change of attribute type

<zValue>(<columnHeader>)
 History: V0.93 added
    V1.02 renamed from 'parameter' to 'zValue'

<yValue>(<values>)
 History: V1.02 added

\<xValue>(\<valueLine>)
 History: V1.02 renamed from 'speedValue' to 'xValue'

\<xValueName>(\<valueTable>)
 History: V1.02 added

\<xValueUnit>(\<valueTable>)
 History: V1.02 added

\<yValueName>(\<valueTable>)
 History: V1.02 added

\<yValueUnit>(\<valueTable>)
 Histoty: V1.02 added

\<zValueName>(\<valueTable>)
 History: V0.93 added
    V1.02 renamed from 'columnName' to 'zValueName' in order to have similar names for X, Y and Z

\<zValueUnit>(\<valueTable>)
 History: V1.02 added

File Attachments
1) changelog_rollingstock, downloaded 392 times
2) RollingstockTypes.xsd, downloaded 410 times