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Subject: Harmonization with infrastructure aspects

Posted by [Susanne Wunsch railML](#) on Thu, 05 Jan 2012 12:25:28 GMT

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Dear Jörg and all interested in this thread,

wish you all a Happy new year and all the best for your business and family. :-)

Carsten provided a very comprehensive suggestion for more detailed definition of speed changes in the "Infrastructure" subschema. There are some topics that are also met in the "Rollingstock" subschema. That's the reason I ask here for any comments.

Susanne Wunsch <coord@common.railml.org> writes:

> "Carsten Weber" <weber@irfp.de> writes:

>> <xs:element name="axleLoad" minOccurs="0" maxOccurs="1">

>> <xs:annotation>

>> <xs:documentation>If any vehicle at the trains has a load at an axle

>> higher than this value this speed limit has to be used.</xs:documentation>

>> </xs:annotation>

>> </xs:element>

>

> Good idea. I would propose it as an attribute and bind it to the railML

> type "tWeightTons".

>

> What is Jörg von Lingens opinion (as Rollingstock coordinator) about the

> terminus? Rollingstock already uses "axleLoad" and "axleWeight" for some

> related information.

Should we name the axle weight/load restriction for a speed profile

"axleWeight" or "axleLoad"?

>> <xs:element name="tiltingAngle" minOccurs="0" maxOccurs="1">

>> <xs:annotation>

>> <xs:documentation>Tilting parameters for which this speed profile is

>> calculated.</xs:documentation>

>> </xs:annotation>

>> </xs:element>

>

> Good idea. I would spend a child element <tilting> for this and the

> following kind of information. The attribute "angle" could be bound to

> the railML type "tAngleDegQuadrant" for allowing 0° to 90°.

>

> Does a speedProfile covers only one tilting angle value or a range of

> values or some single values?

>

>> <xs:element name="tiltingSpeed" minOccurs="0" maxOccurs="1">

```

>> <xs:annotation>
>> <xs:documentation>Tilting parameters for which this speed profile is
>> calculated.</xs:documentation>
>> </xs:annotation>
>> </xs:element>
>
> The terminus "speed" may be a bit misleading. I suppose, that is not
> related to the "train speed" but to the "rate/speed of tilting", that
> means the value of tilting degrees per second. I would call this
> attribute "rate". Are there any other ideas?
>
> This attribute may be bound to the railML type "tSpeedDegreesPerSecond".
>
> There is another kind of information related to the tilting that comes
> to my mind: the method of tilting. It could go into an attribute
> "method" that is bound to an enumeration of "active", "passive",
> "rollCompensation", "unknown", "other:anything".
>
> There is already a type "tTilting" in the rollingstock subschema. We
> should coordinate these tilting issues with Jörg von Lingen (as
> rollingstock coordinator).

```

Maybe we could reuse the "tTilting" type from rollingstock providing the attributes "maxTiltingAngle", "actuation" and "tiltingSpeed" for the speed profiles.

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>> <xs:element name="monitoringSystems" type="rail:eMonitoringSystems"
>> minOccurs="0">
>> <xs:annotation>
>> <xs:documentation>One of the listed monitoring systems has to be used
>> by the trainPartSequence to use this speed profile.</xs:documentation>
>> </xs:annotation>
>> </xs:element>
>> </xs:sequence>
>> </xs:complexType>
>> <xs:complexType name="eMonitoringSystems">
>> <xs:sequence>
>> <xs:element name="MonitoringSystem" type="rail:tNationalSystemsType"
>> minOccurs="1" maxOccurs="unbounded">
>> <xs:annotation>
>> <xs:documentation>type = tNationalSystemsType; Maybe it should be
>> changed to a reference to a new base element monitoring system which would
>> be referenced by vehicles, trainPartSequences, speedProfiles and
>> trackElements. But also the defined types can be used as a
>> key.</xs:documentation>
>> </xs:annotation>
>> </xs:element>
>> </xs:sequence>

```

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>> </xs:complexType>
>
> That is an interesting idea. It touches Trac Ticket #111 [1].
>
> railML currently requires heavy repetition of obviously equal data
> applying the <trainProtectionElement> in <ocsElements>. Thomas Albrecht
> already pointed it out in 2009. [2] But a change of this structure
> requires a non-downward-compatible change, that we may do with next
> major release according to our release policy. See also Trac ticket #23
> [3].
>
> If it would be a blocking issue, we may mark the current element as
> "deprecated" and allow for a "definition list"/"library"/"catalog" of
> train protection elements inside the <infrastructure> element.
>
> <trainProtectionSystem id="tpsLZB" name="LZB"
>   description="Linienförmige Zugbeeinflussung" xml:lang="de"
>   type="LZB" medium="inductive" monitoring="continuous"/>
>
> Along the <track> we could define the <trainProtectionElement>
> referring to one of the "definition list elements".
>
> The same way we could refer to various train protection systems from
> within a <speedProfile>.
>
> Does this approach also work for different ETCS levels?
>
> This issues should be harmonized with the rollingstock implementation
> (tNationalSystemsType). Contact: Jörg von Lingen.

```

There is a parallel unequal implementation of command-control-system elements in railML.

\* The Infrastructure subschema defines <trainProtectionElement>s, <balise>s, <trainDetector>s and <trackCircuitBorder>s.

\* The Rollingstock subschema defines <etcs> with <specificTransmissionModule> and <nationalSystem> with the same intentions partly using the same basic railML types.

I'm sure, we should harmonize this aspect regardless of the annoying repetition effect in the Infrastructure subschema!

```

> [1] http://trac.assembla.com/railML/ticket/111
> [2]
> http://www.railml.org/web/index.php/previous-events.html?file=tl\_files/railML.org/documents/events/slides/2009-10-06\_tud\_resden\_albrecht-interlocking.pdf
> [3] http://trac.assembla.com/railML/ticket/23

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Thanks for any help and kind regards...  
Susanne

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Susanne Wunsch  
Schema Coordinator: railML.common

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