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Subject: Re: Time Relations of Infrastructure and External References via <any> Attribute

Posted by [christian.rahmig](#) on Mon, 20 Nov 2017 13:04:50 GMT

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Dear all,

I created a related Trac ticket in [1]. Please feel free to write me your feedback that may be very valuable for finalizing the first version of new railML baseline 3: railML 3.1.

[1] <https://trac.railml.org/ticket/315>

Thank you very much and best regards  
Christian

Am 20.06.2017 um 10:27 schrieb Tobias Bregulla:

> Dear railML infrastructure community,  
>  
> our software GPSinfradat is an integrated hard- and software solution  
> for GNSS- and video based infrastructure survey of railways. This  
> hardware is combined by a tailor-made software suite from an in-house  
> development with a certified railML 2.2 and 2.3 export interface.  
>  
> For our application we are currently missing a central aspect in the  
> model: the time. In particular, we want to specify for each  
> infrastructure element the time when it has been recorded by our system  
> and the relation to the corresponding video picture. Although this seems  
> to be a very specific problem, it relates to a more generic topic to be  
> discussed: the introduction of a more complex time dimension model  
> within railML.  
>  
> Therefore, we propose having a generic solution, which can be adopted by  
> other applications / use cases, too. We currently can formulate the  
> following requirements for our application:  
>     - Recording of time with millisecond accuracy  
>     - Absolute time stamps following the UTC time  
>     - Relative time in form of seconds since start of recording  
>  
> The following reduced example of a signal shows how we imagine to see it  
> implemented in railML:  
>  
> <signal id="si01" >  
>   <times>  
>     <time id="si01\_t01" date="2017-05-24" utcTime="09:30:10.320Z"  
>   relTime="32.812" type="survey"  
>   gpsinfradat:SurveyRefID="c134f4a0-6085-48f4-a3e4-79daa2305 e78" >  
>   </times>

> </signal>

>

> The type shall be used to define different kinds of timestamps, e.g.

> "validFrom", "validTo", "updated", "modified" etc. The time values

> itself can be of type xs:date (date), xs:time (utcTime) and

> xs:nonNegativeInteger (relTime).

>

> @railML community:

> - Do you have similar requirements?

> - Do you have any special constraints how to model time aspects?

> - Do you know about other types of modelling(OpenStreetMap or others)?

>

> Further, we would like to reference an external data source with our

> recordings. In particular, it should be possible to reference a video

> file with the <track> element. Though we think that this is a very

> specific request to be most probably realized in a schema extension, we

> want to share our proposal with you:

>

> <track id="tr01" ... >

>   <trackTopology>

>   ...

>   </trackTopology>

>   <gpsinfradat:survey id=c134f4a0-6085-48f4-a3e4-79daa2305e78

>   startTime="2017-05-30T09:30:10.320Z">

>    <gpsinfradat:video id=ad0c3743-281d-44ee-97ec-24778981967b

>    type="front" fileRef="\customer\project\video01.mp4"/>

>    <gpsinfradat:gnss id=bd0c3743-281d-44ee-97ec-24778981967b

>    type="rawSatellite" fileRef="\customer\project\video01.gnssraw"/>

>    <gpsinfradat:video id=42b739b7-1176-4681-b940-994bb9a77038

>    type="front" fileRef="\customer\project\video01.mp4"/>

>    <gpsinfradat:gnss id=4916e3bd-5568-40a0-9cb6-5a2926c1eb30

>    type="matched" fileRef="\customer\project\video01.gnsscrypt"/>

>   </gpsinfradat:survey>

> </track>

>

> @railML community:

> • Does anyone have similar requirements?

> • Are there other members in the railML community who used the terms

> above in another meaning?

> • Whats your opinion about shortening of tags ("videoRef" instead

> "videoReference") in the railML syntax?

>

> Best regards,

>

> Tobias Bregulla

> Bahnkonzept Dresden/Germany

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