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Subject: Re: How to represent open circulations in railML?  
Posted by on Thu, 23 Nov 2017 11:55:46 GMT  
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Dear Leopold,

> Is it sufficient to refer the final block and operatingPeriod in an nextBlockRef and nextOperatingPeriodRef attribute, or do I have to add an additional circulation element at the end with a blockRef and operatingPeriodRef pointing to the last block and operatingPeriod?

Currently, as far as I know, there is only one usage of railML rostering for open circulations: The last block has a (redundant) <circulation> element without /nextBlockRef/ and without /nextOperatingPeriodRef/ attributes.

> But in my point of view this last circulation element is redundant and may be left out...

Yes, I agree, but this is apparently a bit too "indirect", implicit. However, as far as I am concerned, it was not the intention when the current structures were designed.

A closed circulation was regarded as the "normal" case - hence the word "circulation". The "open circulation" (which may be regarded as no circulation at all) was seen as a special case which is derived from the normal case. In a closed circulation, every block needs a <circulation> element. Therefore, to ease usage of structures and uniqueness, also in an "open circulation" every block should have a <circulation> element.

One could discuss whether a closed circulation is really the "normal" case; actually there are arguments against it. The question may be whether the alternative usage you describe is shall be valid railML or not. Currently, for the sake of compatibility, I would vote for "not valid", in spite of the obvious redundancy.

With best regards,  
Dirk.

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Am 17.11.2017 um 16:20 schrieb Leopold KÜhschelm:

> Dear railML Timetable Community!

>  
> When defining an rostering with an open (non-cyclic) circulation of blocks, there are two different possibilities to model them in railML.

>  
> Either with an final open circulation Element at the end:

>  
> <circulations>  
> <circulation blockRef="b00380" operatingPeriodRef="op0103"  
nextBlockRef="b00381" nextOperatingPeriodRef="op0104"/>  
> <circulation blockRef="b00381" operatingPeriodRef="op0104"  
nextBlockRef="b00382" nextOperatingPeriodRef="op0105"/>

```
> <circulation blockRef="b00382" operatingPeriodRef="op0105"
nextBlockRef="b00383" nextOperatingPeriodRef="op0106"/>
> <circulation blockRef="b00383" operatingPeriodRef="op0106"
nextBlockRef="b00384" nextOperatingPeriodRef="op0107"/>
> <circulation blockRef="b00384" operatingPeriodRef="op0107"/>
> </circulations>
>
> So you can see in the example there is a final circulation with no nextBlockRef and
nextOperatingPeriodRef attributes. But in my point of view this last circulation element is
redundant and may be left out - like the following example depicts:
```

```
>
> <circulations>
> <circulation blockRef="b00380" operatingPeriodRef="op0103"
nextBlockRef="b00381" nextOperatingPeriodRef="op0104"/>
> <circulation blockRef="b00381" operatingPeriodRef="op0104"
nextBlockRef="b00382" nextOperatingPeriodRef="op0105"/>
> <circulation blockRef="b00382" operatingPeriodRef="op0105"
nextBlockRef="b00383" nextOperatingPeriodRef="op0106"/>
> <circulation blockRef="b00383" operatingPeriodRef="op0106"
nextBlockRef="b00384" nextOperatingPeriodRef="op0107"/>
> </circulations>
```

```
>
>
> As well I have read the railML-Wiki entry on circulations
(http://wiki.railml.org/index.php?title=TT:circulation). Ther I found following section on this
question:
```

```
>
> "There exists a <circulation> element for every block on every operational day. Via the
attributes nextBlockRef and nextOperatingperiodRef the blocks are connected to a chain and form
a rostering.
> ..."
```

```
>
> I am not quit sure how to interpret this phrase. Is it sufficient to refer the final block and
operatingPeriod in an nextBlockRef and nextOperatingPeriodRef attribute, or do I have to add an
additional circulation element at the end with a blockRef and operatingPeriodRef pointing to the
last block and operatingPeriod?
>
> Best regards,
> Leopold Kühschelm
>
```