

Dear Joachim and all others,

concerning the suggestion of line blockings in RailML (previous mentioned at <infrastructure> by Renato Kluser), here comes my suggestion for a RailML structure:

First, the easy things:

```
<trackBlockings>
  <trackBlocking id=... name=... description=... remarks=... />
  - further properties see below -
</trackBlocking>
</trackBlockings>
```

Now to the real properties. These could be simple attributes of <trackBlocking> from my side but could also be sub-elements. Sub-elements may be preferred to declare constraints but from my side, the constraints are not too much difficult so Wiki should be enough for them.

```
<trackRefs>, trackRef=...
  - reference to one or more <track>.id
  - at least one must be given
  - more than one is typical for a blocking of all tracks of a
multiple-track line ("line blocking" was original intended)
```

```
fromOcpRef=..., toOcpRef=...
  - compulsory attributes
  - references to <ocp>.id
```

validity Period: should be a "choice" of exactly one of the following two options:

a) <repeating operatingPeriodRef=... startTime|startAfterTrainRef =... endTime|untilBeforeTrainRef=... />
- operatingPeriodRef is compulsory
- startTime/startAfterTrainRef and endTime/ untilBeforeTrainRef are to be used "disjunctive"
- startAfterTrainRef/untilBeforeTrainRef are references to <train>.id
- The blocking is to be repeated at each of the days of the <operatingPeriod> from start time to end time or trains. The trains must operate at the given days.

b) <non-stop startDate= endDate= startTime|startAfterTrainRef =... endTime|untilBeforeTrainRef=... />

- startDate and endDate are compulsory
- startTime/startAfterTrainRef and endTime/ untilBeforeTrainRef are to be used "disjunctive"
- startAfterTrainRef/untilBeforeTrainRef are references to <train>.id
- The blocking happens one time non-stop throughout from startDate+startTime/train until endDate+endTime/train. The trains must operate at the given days.

Example for a repeating one: Regular bridge opening times of a swing bridge

```
<trackBlockings>
  <trackBlocking id=... name='Afternoon-opening' description='Summer-only
afternoon opening for sailing ships with high masts' remarks='Added by
Dirk as an example' fromOcpRef='ocp_WSRR' toOcpRef='ocp_WAF' />
    <trackRef ref='track_80.6311.1' />
    <repeating operatingPeriodRef='opp_Summer' startTime='16:30'
endTime='17:15' />
  </trackBlocking>
</trackBlockings>
```

Example for a non-stop one: Maintenance works

```
<trackBlockings>
  <trackBlocking id=... name='Maintenance works' description='Ballasting
with Plasser & Theurer' remarks='Please provide a replacement bus'
fromOcpRef='ocp_Br' toOcpRef='ocp_Vi' />
    <trackRef ref='track_85.140.1' />
    <trackRef ref='track_85.140.2' />
    <non-stop startDate='2012-07-15' endDate='2012-07-29'
startAfterTrainRef='tr_R567' endTime='04:00' />
  </trackBlocking>
</trackBlockings>
```

Best regards,
Dirk.

Am 03.12.2012, 17:25 Uhr, schrieb Kluser Renato <renato.kluser@mgbahn.ch>:

- > ENGLISH SUMMARY: The MGB railway uses railML 2.0
- > for data exchange from our timetabling system to
- > our disposition system. Currently we need an
- > extension of the standard to transfer line
- > blockings from one system to another.

>
> Hallo railML-Partner,
>
> wir, die Matterhorn Gotthard Bahn (MGB),
> betreiben ein 144 km langes Meterspurnetz im
> SÄ¼den der Schweiz. Zum Datenaustausch zwischen
> unserem Fahrplansystem FBS und dem
> Kundeninformations- und Dispositionssystem KIS nutzen wir railML 2.0.
>
> Nun mÄ¶chten wir auch noch die in FBS verwalteten
> StreckenunterbrÄ¶che an das Dispositionssystem
> Ä¶bergeben und schlagen daher eine Erweiterung des
> railML-Standards vor. Die Abbildung folgende
> Arten von UnterbrÄ¶chen wÄ¶re fÄ¶r uns unerlÄ¶sslich:
>
> - Strecke von Betriebsstelle BRMG (Brig) bis Visp
> (VISP) gesperrt vom 15. Juli 2012 22.00 Uhr bis
> 29. Juli 2012 4.00 Uhr; Grund: Bauarbeiten am Gleis
> - Strecke von Oberwald (OBW) bis Realp (REAL)
> gesperrt im Zeitraum vom 3. Oktober 2012 bis 16.
> Oktober 2012; jeweils zwischen 22.45 Uhr bis 3.45
> Uhr am Folgetag; Grund: Fahrleitungsrevision
> - Strecke 140 von km 22,790 bis 26,186 gesperrt
> bis 3. Dezember 2012; 16.00 Uhr
>
> Eine Erweiterung der Eigenschaften eines
> Unterbruchs (z.B. 'nur fÄ¶r elektrische
> Fahrzeuge', 'nur fÄ¶r Fahrzeuge des Typs ...'
> usw.) und zusÄ¶tzliche Informationen wie Busersatz
> usw. wÄ¶re denkbar, ist aber fÄ¶r uns nicht dringlich.
>
> Beste GrÄ¶sse,
>
> Renato Kluser
> Betrieb
> Verkehrsplanung und Sicherheit
>
> Matterhorn Gotthard Bahn
> Bahnhofplatz 7
> CH-3900 Brig
> <http://www.mgbahn.ch>
>
