
Subject: [railML3] transfer times for connections

Posted by [Milan Wölke](#) on Mon, 09 Mar 2020 14:22:25 GMT

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Hello from the timetable developer group,

we have been discussing the modelling of train connections for railML 3.2 TT recently. For that we have been reviewing the modelling of connections in railML 2.x.

We discovered the attribute @minConnectionTime which currently (railML 2.x) is located at the connection element in timetable. It encodes the transfer time between the feeder and the connector, so the time that a connecting train will have to wait after the feeding train has arrived. Since in 2.x this time is encoded at the connection we redundantly need to specify the transfer time between the same platforms over and over again.

One of the goals we have set ourselves for railML 3.2 was to avoid redundancies if possible. Thus we came to the question, I'd like to share here with a broader audience, if it were possible to specify the time necessary for a passenger to change from one platform to another in the context of infrastructure.

What do you think?

Best regards, Milan

Subject: Re: [railML3] transfer times for connections

Posted by [christian.rahmig](#) on Mon, 09 Mar 2020 15:13:52 GMT

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Dear Milan,

interesting idea indeed...

From what I understand, the transfer time is a (static) information that describes the time needed to get from one platform to another one. This means, that the information should be connected to a <platform> element? And for each platform the information occurs several times (#platforms-1). Or is there another / better element that should be used for this information?

But before we dive into modelling, let's ask the most important question: Who needs this information and for which purpose / application? I am interested in your feedback...

Best regards
Christian

Subject: Re: [railML3] transfer times for connections

Posted by _____ on Mon, 09 Mar 2020 20:44:58 GMT

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Dear coordinators,

- > But before we dive into modelling, let's ask the most
- > important question: Who needs this information and for which
- > purpose / application?

The minConnectionTime is needed

- as an input to the construction phase of a timetable to define the minimum time difference between arrival and departure to secure a connection,
- for a given timetable in the reverse sense, to calculate which connections can be reached / are offered and which not,
- in the operational phase to calculate prognoses due to late running while maintaining connections.

It is neither an infrastructure nor a strict timetable value; we rather regards it as a traffic-preset value. But for instance, calender data (timetable and operating periods) are the same character of information and in railML are assigned to <timetable>, so I also would assign them to timetable.

- > From what I understand, the transfer time is a (static)
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- > platform to another one. This means, that the information
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- > platform the information occurs several times
- > (#platforms-1).

The information is not strictly static; it may change from time to time. It is typically static for a timetable period, which again is an argument to assign it at or somewhere near timetable periods.

Yes, it can be assumed to a matrix (#platforms x #platforms-1), but typically it can be eased with only 2-3 actually different values per station: 1) same platform, 2) near platform, 3) far platform (often no difference between 2-3).

So, a complete description could be something like:

```
<minConnTimes default="5" [mins]>
  <minConnTime fromPlatformRef="pltf_1" time="3" [mins]>
    <toPlatform ref="pltf_2a">
    <toPlatform ref="pltf_2b">
    <toPlatform ref="pltf_4">
  <\minConnTime>
<\minConnTimes>
```

The attribute <minConnTimes>@default would apply for all combinations which are not mentioned.

Since <platform>@id's are unique in all the railML file, the <minConnTimes> list would not need to be placed at a certain <ocp> nor <platform> and can be placed at <timetable>. This allows giving <minConnTime>s which for connection between two <ocps>, as it would be necessary between two <ocp>s belonging to the same station (e. g. Berlin Hbf unten / oben / S-Bahn) or which are very close (Nordhausen <-> Nordhausen Nord).

Dirk.

Subject: Re: [railML3] transfer times for connections
Posted by on Mon, 09 Mar 2020 20:46:12 GMT
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Dirk.

Subject: Re: [railML3] transfer times for connections
Posted by [Stefan Wegele](#) on Thu, 09 Sep 2021 18:12:02 GMT
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Dear all,

I think it is a shared opinion, that we need some kind of matrix with transfer times. The question is, in which schema to put it: Infrastructure or Timetable.

I would vote for the infrastructure due to the following reasons:

- The matrix uses only elements from the infrastructure, so from the architectural point of view it would not create additional dependencies between schemata.
- The times for passengers-movement are quite similar to the times for train-movements - both are defined by the infrastructure (to a large extent).
- It is possible, that the transfer-times are not constant - if in a station an escalator is defect, the transfer times should be increased similar to the train-runtimes due to TSR. The workflow for management of TSRs and transfer-times could be similar, and both use only the infrastructure-schema.

Stefan
