Subject: Re: Possession Mgmt Use-Case
Posted by Joerg von Lingen on Tue, 02 Nov 2021 01:24:03 GMT
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Dear all,

we have already some kind of "local transferred responsibility" for a particular area in IL. These are the RestrictedAreas with the types <WorkZone>, <LocalOperationArea> and <ShuntingZone>.

There is the option to introduce a new element <PossessionZone> similar to the ones above for defining the extent of the possession and additional functions.

The other option would be to add required functions/features to the existing element <WorkZone>, which is basically a possession in the traditional interlocking world.

So beside the extent of the possession we would need:
- status and validity dates (start/end) of possession in life cycle
- related speed restrictions
- additional rules for related timetable

Best regards,
Joerg v. Lingen - Rollingstock Coordinator

On 29.10.2021 17:14, Stefan Wegele wrote:
> Dear all,
>
> in IS-workgroup we collect use-cases for
> TrafficManagementSystems. One of them is "management of
> possessions" with the description below. Here we are interested in feedback on
> how to organize this
> in context of RailML: ignore, IS, or a dedicated domain.
>
> Best regards
> Stefan
>
> Use-Case description
> Possession is a takeover of responsibility for a part of
> railway network from the "train operator" to the PICOP
> (Person In Charge Of Possession).
> The objective of a possession is to ensure safe
> construction/maintenance works on the railway
> infrastructure. The safety is ensured by a set of safety
> measures:
> - Temporal speed restrictions around the construction work
> (including neighbour tracks if needed)
> - Closed tracks for most of the trains except the specific

> once.
> - Specific position of the switches (similar to flank
> protection)
> Possession management is safety relevant as any failure
> could result e. g. in a collision of passenger train with a
> construction train with > 1000 involved people.
>
> Possession undergoes a specific life cycle (here the default
> "path"):
> - It is planned by the maintenance system, defining elements
> to be worked on and additional definitions (e. g. used
> machines) which could influence the required safety
> measures.
> - The safety measures are planned by a signalling
> specialist.
> - Timetable planning department defines time intervals for
> activation, as well as rules for disturbed case (e. g. let
> Train 1002 pass if delayed less than 5 minutes).
> - Train operator modifies planned time intervals according
> to the expected traffic situation, e. g. by postponing start
> of possession.
> - When the PICOP and his team arrive at possession area
> o He safely identifies his location, to prevent
> activation of wrong possession
> o Requests the activation of Possession
> o The train operator verifies,
> * That timetable requirements for disturbed case are
> implemented (train 1002 has passed)
> * No unexpected trains are inside of the possession
> area
> o Train operator activates the speed restrictions defined
> in Possession.SafetyMeasures
> o Train operator puts switches in positions defined in
> Possession.SafetyMeasures
> o Train operator verifies all the safety requirements
> defined in Possession are fulfilled
> o Train operator notifies the PICOP about the possession
> activation
> o PICOP and his team start working
> - After PICOP finished the work o He ensures, that his team has left the
> possession area
> and it is ready for operations
> o He requests the train operator to finish possession
> o Train operator * releases blocked switches
> * removes temporal speed restrictions
> * closes the possession
>
> To make the life more complicated, the lifecycle of

> possessions can vary:
> - possession can be stopped and reinstated later
> - two possessions can be assigned to one PICOP
> - one big possession could be split into two small once,
> without deactivation/reactivation phase
> - PICOP could require to move possessed switches to check
> their proper function.
>
