
Subject: Re: Possession Mgmt Use-Case

Posted by [Joerg von Lingen](#) on Tue, 02 Nov 2021 01:24:03 GMT

[View Forum Message](#) <> [Reply to Message](#)

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.
 - >
-