



Documentation for Schedule At TrackMark rule

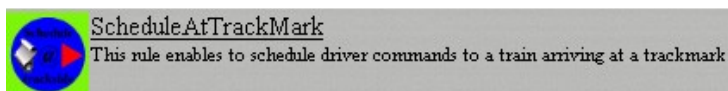
The « Schedule At TrackMark » is a rule that enables to define multiple driver commands schedule associated to trackmarks or triggers. These schedule will be fired when a train meeting the rule parameters will go through the associated trackmark or trigger.

1. Required components

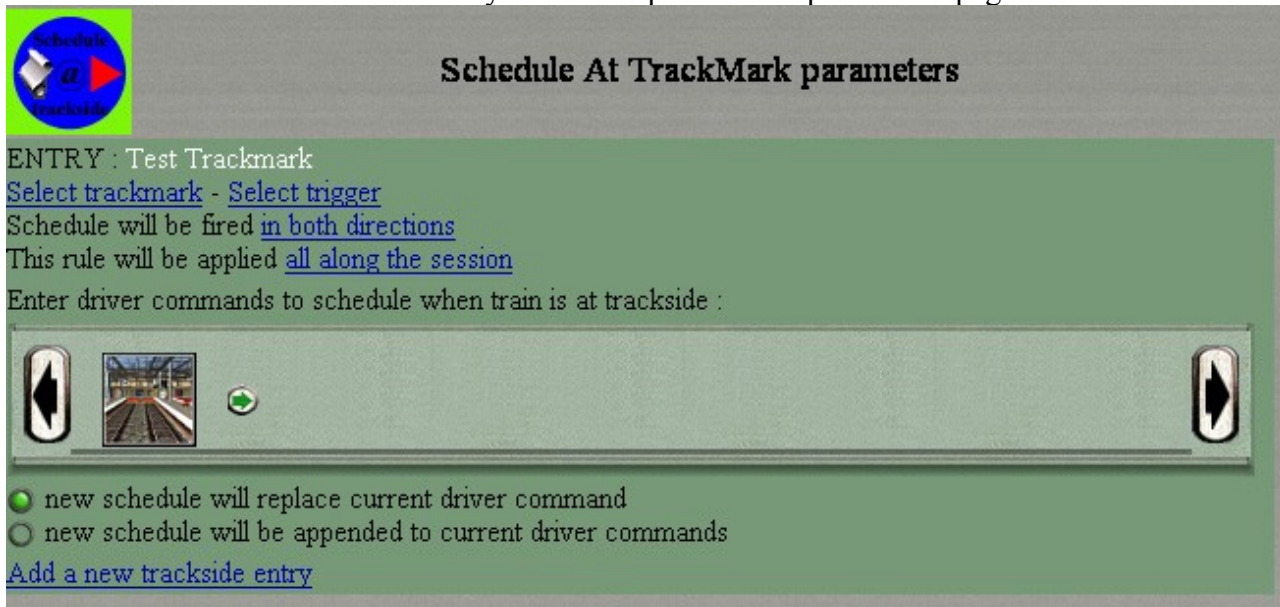
No required component is requested for this rule.

2. Rule definition

The ScheduleAtTrackMark rule shows this interface :



Select the rule and click on the modify button to open the rule parameters page.



As you can see, the ScheduleAtTrackMark parameters page display an entry for each trackmark – schedule set.

The title for the entry is the trackmark or trigger name or #notrackside# if no trackmark or trigger have been already set.

The « select trackmark » or « select trigger » link enables to associate the entry to a trackmark or trigger available in the route map. A selection list will be proposed to the user.

When a trackmark is selected, the next line offers to choose the train direction for firing the rule. It can be « in both directions » or « in trackside forward direction » or « in trackside backward direction ». Only trains meeting correct direction will fire the rule.

For trigger, there is no choice : it is always « in both directions » and no link is proposed for direction.

The next line is about repetition when the rule has been fired. « All along the session » is for a rule which repeats all along the session. « only once and will be disabled » is for a rule that will fire only one time. And if you select any number between 2 and 256, then the rule will fire « n times and then will be disabled ». So you have full control of how many times a rule will fire on each entry.

The entry order bar is similar to any driver order bar and you can put any driver command in it, edit them, add new ones or suppress some.

« New schedule will replace current driver command » is an option to insert the schedule driver commands between the current driver command and other commands already set in the schedule. With this option the new schedule driver commands are executed before the older ones.

With « New schedule will be appended to current driver commands », the new schedule commands will be executed after the older ones.

You should notice that in either case all the initial commands will be executed. The only difference is to decide if the new commands should be executed before or after the initial commands.

The last line include two links to manage the entries. First one is « Add a new trackside entry » to add a new entry to the rule. The second link available only if you have more than one entry in the rule is « Delete current entry » to suppress the current entry.

3. How it works

The ScheduleAtTrackMark rule works in this manner :

- first it starts a new script thread to monitor every trackmark or trigger defined in the rule

- when the monitor process detects that a train is entering the trackmark or trigger area, it checks if the train is going in the correct direction, if the repetition count authorises the rule to fire, ...
- if all the criteria are met, then if the option is schedule commands before older ones, it makes a copy of all the old commands, clears the command bar, and then insert first all the new commands then all the old commands saved. If the option is schedule commands after older ones, it only add the new commands at the end of the schedule.
- Then it decrements the repetition count and waits again for a train entering a monitored trackmark or trigger area.

There is also a programming trick to avoid firing several times the same entry for the same train. When a train fires an entry, the entry is flagged and no new firing is allowed on this entry until the train has left the trackmark or trigger area.