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Subject: railML 2.3 infrastructure extension proposal signal types and functions

Posted by [Torben Brand](#) on Tue, 20 Dec 2016 17:34:22 GMT

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Dear railML infrastructure forum,

This posting contains the discussion to an extension towards the signal

We need to model all relevant signals to the use case according to Norwegian law ([https://lovdata.no/dokument/SF/forskrift/2008-02-29-240/KAPI\\_TTEL\\_9#KAPITTEL\\_9](https://lovdata.no/dokument/SF/forskrift/2008-02-29-240/KAPI_TTEL_9#KAPITTEL_9)).

This is done through extending the type (5 new values) and function (2 new values) attributes. The defined combination of type and function form the specific signals in Norway, but are considered universal. So the terms are in English.

There are two Norwegian specific signals that are part of a type main signal and are thus defined in new sub elements under signal in Norwegian.

The new values for the attribute @type under element <signal> are:

- "danger"

Used in Norway for signals that indicate that an avalanche fence has been broken. We chose a more generic description for warning signs in general. Other examples that fit the specification could be: cross wind signals. If there is a need to further distinguish a type of danger signal I suggest using a later added sub element or extended value range of function.

- "derailer"

Indicates if the derailer has blocked the track.

- "switch"

Indicates the position of the switch.

- "trackIndicator"

Repeats (only) to the conductor the state of the main-exit signal. This is a different signal than a type repeater signal (that is valid for the train driver).

- "road"

Road side signals not valid for the train driver. But contained in schematic drawings.

The new values for the attribute @function under element <signal> are:

- "area"

Signals that are valid for a (undisclosed) area and not a signal route.

- "levelCrossing"

Defines either a type main/distant/road. Further attributes to be found in existing sub element <levelCrossing>

The new sub elements under element <signal> are:

- <NO:forsiktigKjøring>

Sub signal under type main and function home or intermediate. Used for shortened signal routes or dead end tracks.

- <NO:middelkontrolllampe>

Sub signal under type main and function exit or intermediate to indicate that the train is within the clearance point.

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