Subject: [railML 3] Defining passing points for ATO data
Posted by Thomas Langkamm on Tue, 06 Jul 2021 13:03:24 GMT
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I have a modelling issue where I'm not sure if I have the correct solution, so I'll post the problem here.

We are trying to establish railML 3 as file format for an ATO project. We're currently focused on the base data/infrastructure data, not the timetables. One requirement is to define "passing points". These are points where the train control system calculates (intermediate) times for a train journey. Would you define a set of operational points (IS:operationalPoint) as passing points?

For example, say a train travels from station A to station B we may have several "passing points" in between: The departure from station A (train passes the exit signal or an axle counter/insulation close to the platform A), arrival at station B (train passes a signal or an axle counter/insulation close to platform B) and possibly several intermediate points, for example insulations/boundaries of tvd sections (where the interlocking software detects a new track occupation) or main signals (which change their state if the train passes them). We need to identify a subset of these points where the train control system calculates an expected time for a train, which allows both the TCS and the ATO system to calculate delays when they pass such a point.

My first approach would be to define a set of operational points (IS:OperationalPoint) to identify these points. However, we need some reference to the infrastructure. I figure that operational points has equipment (opEquipment), which can reference a signal (ownsSignal) but also an arbitrary infrastructure element (ownsInfrastructureElement). Is this the correct implementation?

How would you define times for the intermediate "passing points" in the timetable schema? (I guess this would have to be railML 2.5 for the timetable.)