railML in Switzerland

railML-Meeting
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Paris

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Agenda

- railML-Schema / railML-Usage
- Swiss Users and Developers
- A typical User: Swiss Railways (SBB)
- Swiss Railways (SBB) Projects: Stabilo and OpenTrackHub (OTHub)
- IA2OT: A Swiss IT-Project for the Netherlands
railML-Schema
railML-Usage

Import / Export

Interprocess Communication (e.g. RailML via DIME/SOAP)

RailML-Files, XML-Files, Text-Files

RailML-Files
railML: Swiss Developers and Users - from the Beginning

- Developers:
  - ETH
  - SMA
  - OPEN\-TRACK
  - Traf\-IT\-SOLUTIONS
  - ergon
  - Onamtic

- Users:
  - SBB CFF FFS
  - bls
  - Rhätische Bahn
  - matterhorn gotthard bahn
Swiss Railways: Project Stabilo

railML in the Data Workflow between different Tools

Planning

Analysis/Quality Control

Simulation

Prognosis (Future)
SBB Project Stabilo: Multiple Simulation Runs to predict the Future

- Simulation uses planning data via railML

- Given statistical data (e.g. OpenTimeTable) of initial delays or station delays are used for the simulation of the future timetable

- Simulation results are exported as railML data and are reused in other tools (e.g. planning)
Swiss Railways: Project OTHub

- Joint project between Swiss Railways, trafIT solutions and OpenTrack

- Objective: automatic setting of used itineraries out of the timetable data (from NeTS via railML)

- Automatic creation of missing itineraries in OpenTrack

- Detected connections are automatically imported into OpenTrack
SBB Project OpenTrackHub (OTHub)

- railML wherever possible
IA2OT: A Swiss IT Project for the Netherlands

- Joint project between ProRail (NL), DHV (NL), trafIT solutions (CH) and OpenTrack (CH)

- Objective: Automatic transfer of infrastructure data from the InfraAtlas database into the simulation tool OpenTrack (incl. signal aspects and block sections)

- railML as intermediate format (IA2railML, railML2OT)

- Additional format for signal aspects and block sections.
IA2OT Process

- **railML** wherever possible
- Additional format (XML-based) for signal aspects and block sections (ProRailML+)
• Step 1: InfraAtlas OBE-Blad (e.g. Geldermalsen)
Step 2: IA2OT / IA2railML (e.g. Geldermalsen)
Step 3: OpenTrack (e.g. Geldermalsen) including signal aspects and block sections
Performance: The Netherlands, the whole country

- 885 maps (OBE-Blads)
- 11'799 signals
- 27'011 block sections (routes)

- Size of all InfraAtlas files: 68 MB
- Size of entire railML file: 7 MB
- Size of 1 OBE-Blad railML file: 0 - 278 kB