

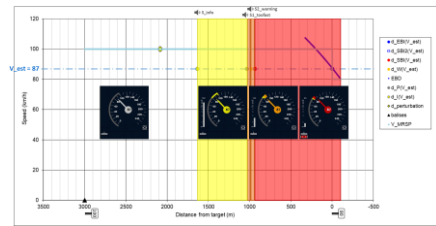
ERTMS 2024 Conference Workshop (WS) #10b:

„How can ETCS braking curves be adapted to a more realistic behaviour of the rolling stock?“

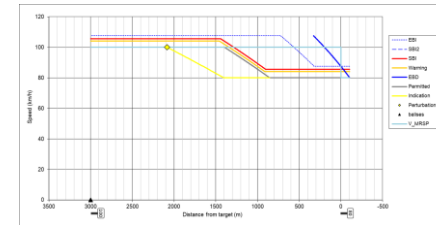
WS Leads:



Jakub Marek (AŽD, UNISIG) &



Maarten Bartholomeus (ProRail, EUG)



WS description/aim:

The aim of this workshop is to inform about **generic changes** on the adaptation of **ETCS Braking curves (BC)** to better reflect **real train behaviour**. We will look at the **changes** already **performed** and finalised for **Baseline 4 Release 1 (SV 3.0)** in the **CCS TSI 2023** as well as the ones already **identified and logged** into the ERTMS Change Requests' database, with the aim to **possibly** further **improve** the **performance** of the overall system (including the possibility to remove/minimise the need for usage of Release Speed when approaching the End of Movement Authority) **or** the **ergonomics** of the associated display towards the driver.

High-level description of such changes, including **videos/simulations** of possible solutions, **will be provided, followed by** a short **discussion**. However, experience is also demonstrating that some of the **issues** are **related to the configuration of vehicles** in order to meet the model parameters. Therefore, the discussion part will also focus on sharing experience about the setting-up of vehicles. It will be an excellent opportunity for participants to share further concerns or verified less known issues.

- **Introduction** of the WS & to the BC

- Why is **ETCS** a **very useful ATP** to supervise the train's movement?

- 15:15-15:30

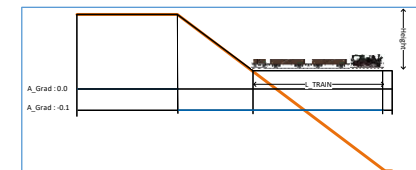
- What has been **done/optimised** in **B4R1** (SV 3.0)?

- reduction of the eq. brake build-up time (t_e), corresponding to the ΔV (CR1344)

- What **can** still **be done to improve** the performance **in the future** releases?

- How can the **actual deceleration** be **taken into account** during braking? (CR1385)
- How can the **worst-case gradient** under the train be **avoided**? (CR874, CR1435)
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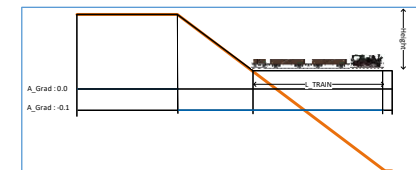
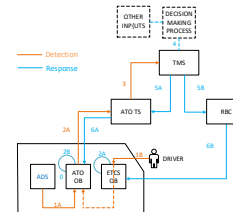
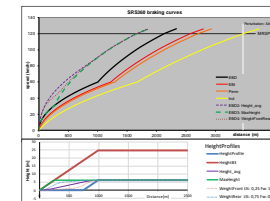
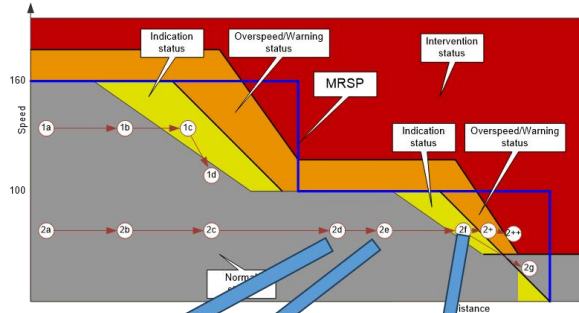
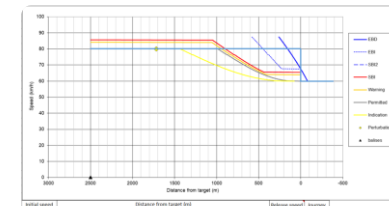
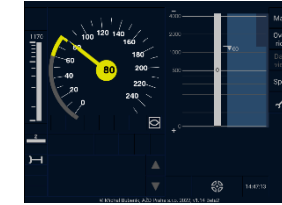
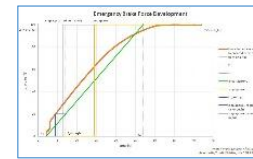
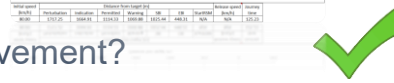
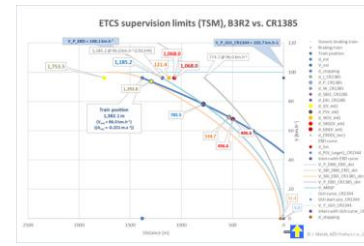
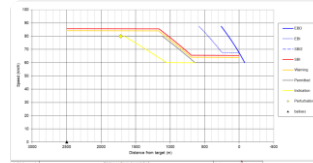
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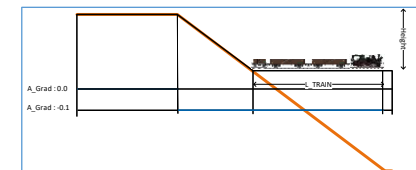
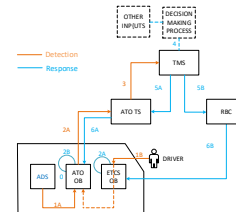
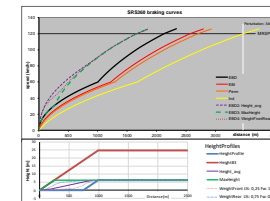
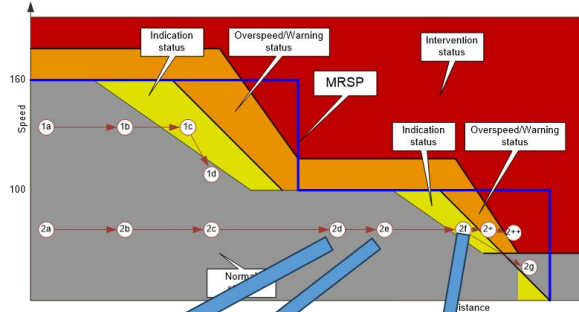
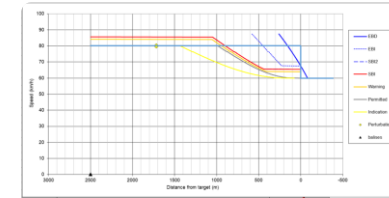
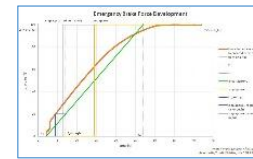
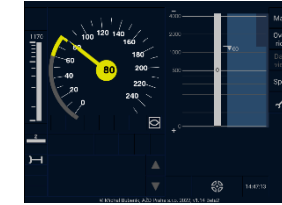
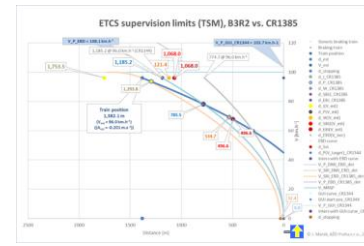
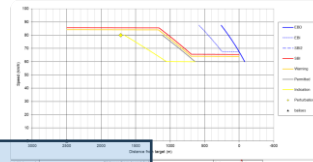
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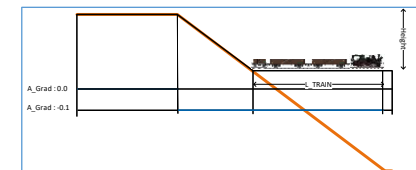
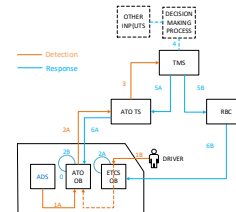
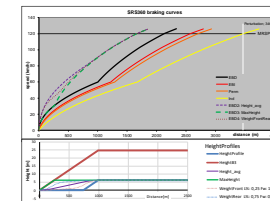
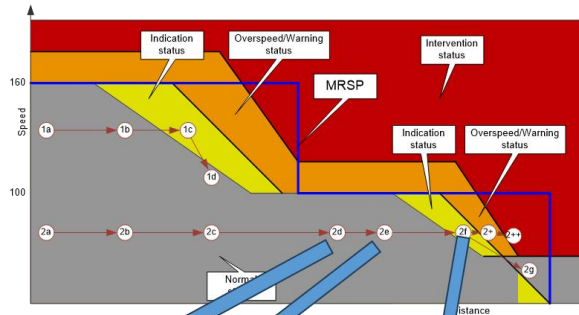
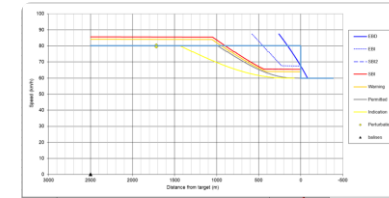
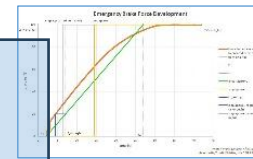
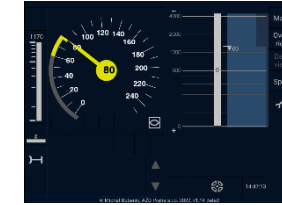
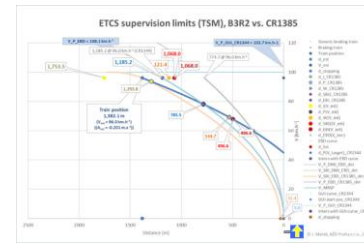
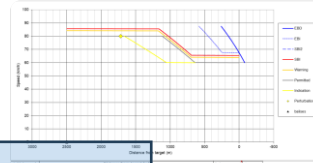
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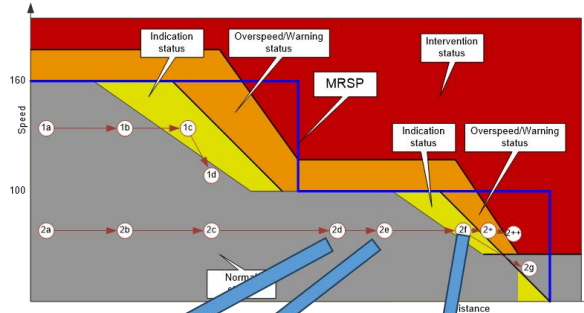
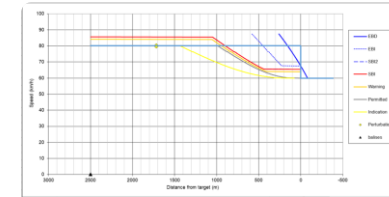
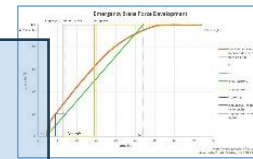
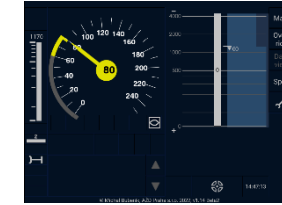
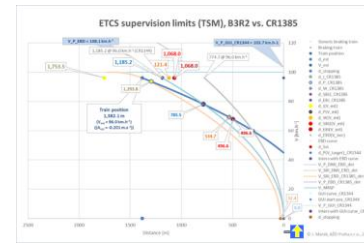
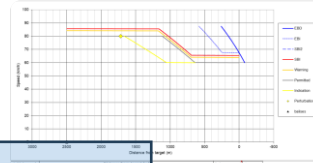
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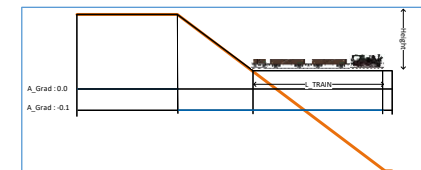
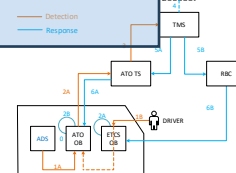
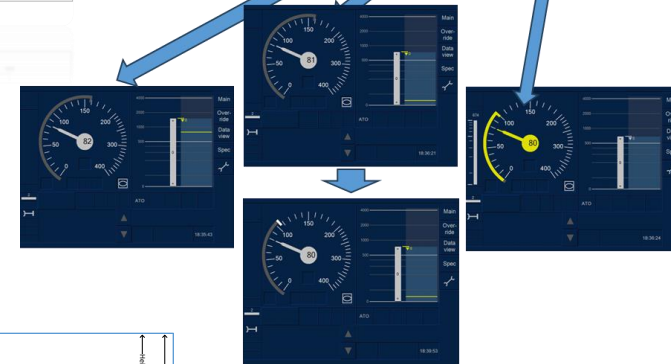
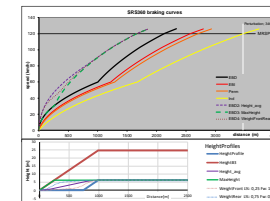
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[S+D (112) 3 a 6/2020]



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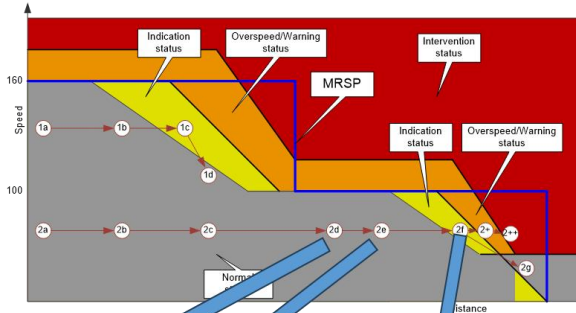
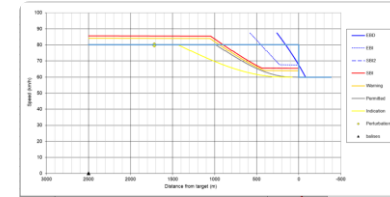
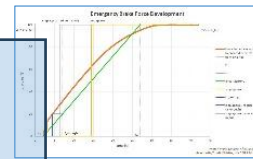
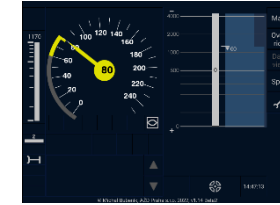
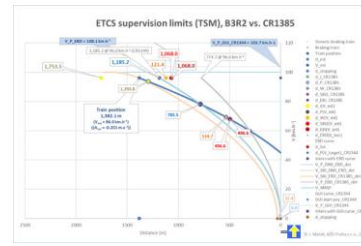
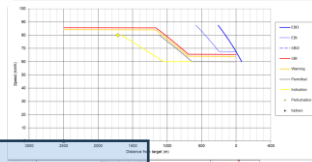
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