



Performance description commissioning PIS

20.12.2022

Commissioning

Commissioning includes the following work steps:

- Preparation of the commissioning of the FELA systems on the vehicle
- Configuration POIScentral
- Commissioning at the customer
- Static test single traction at the customer
- Dynamic test of single traction at the customer
- Static and dynamic test of multiple traction vehicles 1 and 2 at the customer's site¹
- Customer acceptance
- Creation of the commissioning documentation



Preparation commissioning

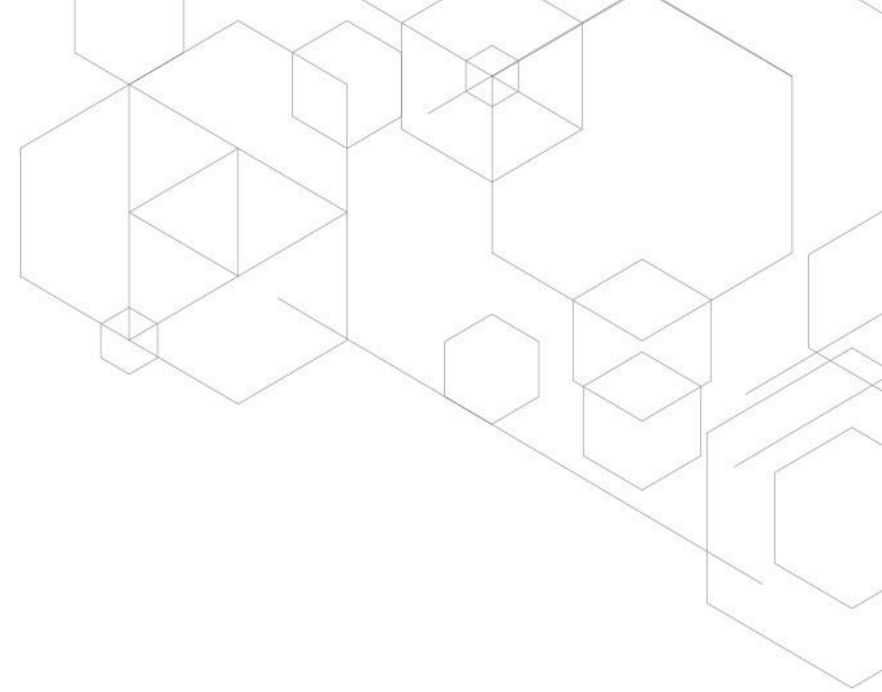
This work is upstream and the basis for all further work steps:

- General preparation
- Provide HW and SW
- Coordination with customers
- Check test script
- Verify test system configuration (PIS / PAN / ZUKO)
- Configuration export for the vehicle
- Functional test

Commissioning-documentation

Creation of the documentation

- Commissioning instructions for PAN/Protocol (POIS)
- Commissioning instructions for POIS/PIS
- Commissioning instructions for ZUKO/NetModule



Configuration POIScentral

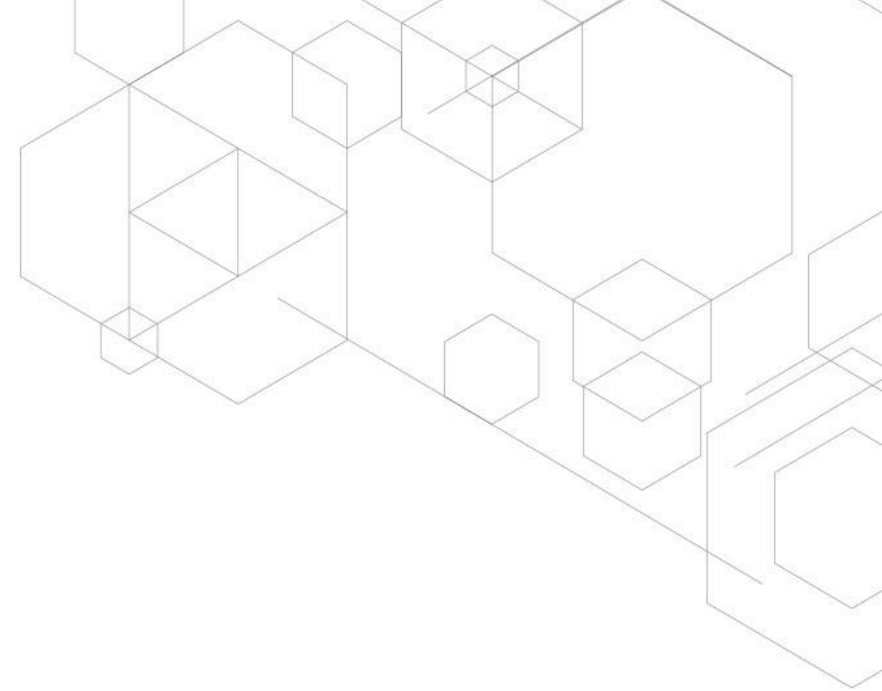
Prepare POIScentral as central component / backend for this customer

- Installation POIScentral
- Test
- Integrate vehicles
- Import / export of the data

Commissioning at the customer

On site on the vehicle in the depot

- ZUKO with router for train-land connection
- Plausibility check
 - Cabling and network communication
 - Comparison of the configuration of the test system
 - Documentation review
- IM test (Stadler vehicles)
- POISmobile and PAN server installation
- PIS and PAN peripherals installation and configuration (TFT, HMI ...)
- Carrying out the test according to the commissioning test script

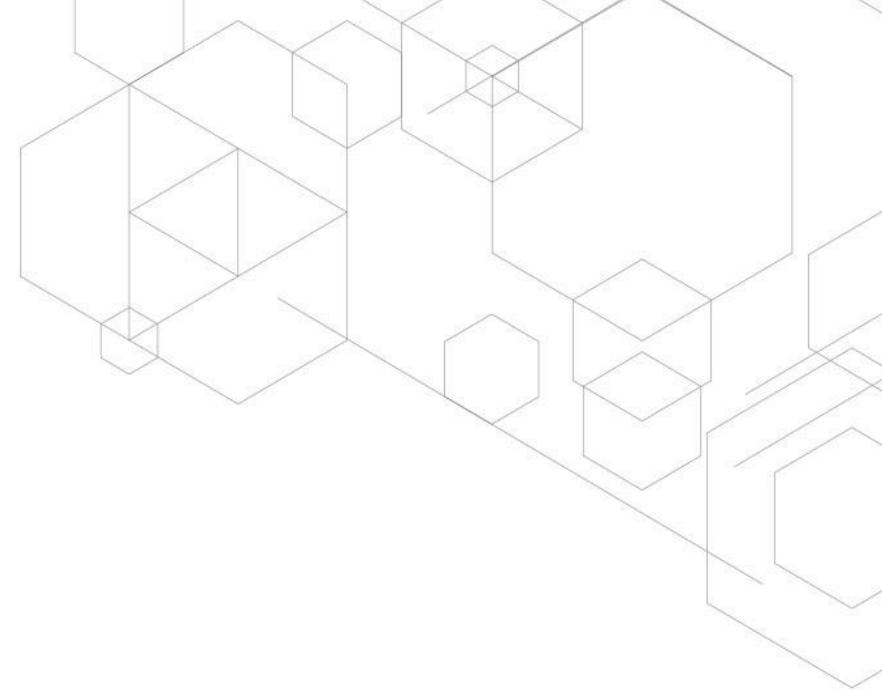


Static test single traction

We test on the vehicle at the customer's site

- Testing of all the features specified in the script
- Audio check according to POIS protocol
- Optional: STIPA test standard or certified STIPA test

- Trouble shooting

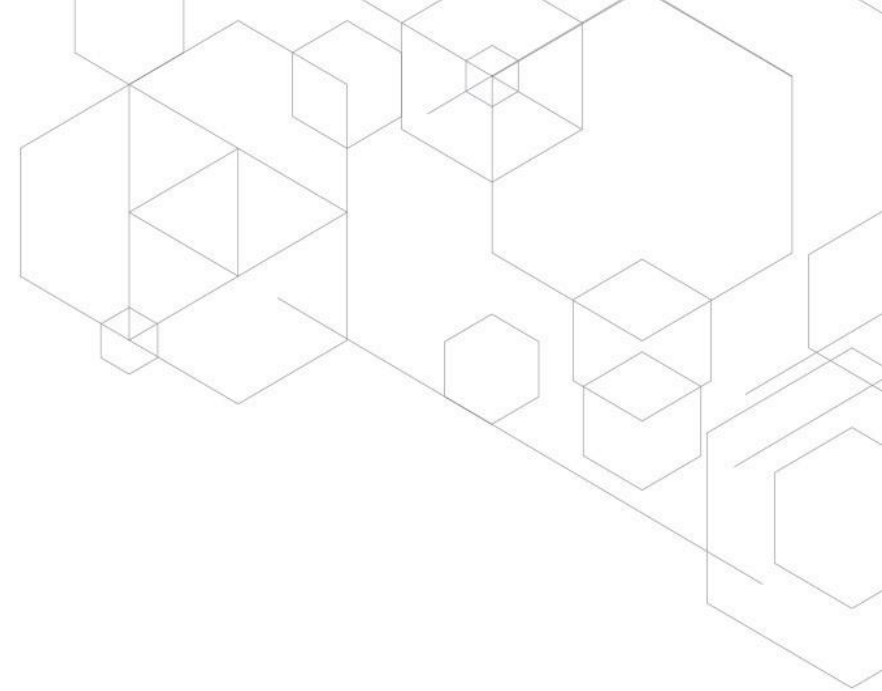


Dynamic test single traction

The test drives take place at the customer's site

- “Stop on request” function in all carriages
- Automatic volume adjustment
- All announcements: inside, outside left/right, all loudspeakers
- The outputs on the screens and front/side indicators
- Call station tests for function and audio quality
- Timetable validity and geoposition of the vehicle (stop districts)

- Audio tests without STIPA by protocol (POIS) or STIPA test standard or certified STIPA test
- Trouble shooting



Test in multiple traction

Static and dynamic test with vehicles 1 and 2 at the customer

- Checking the PIS functionality
- Checking the cab-2-cab communication
- Testing vehicle-specific announcements
- Testing of the PIS functionalities in all vehicles
- Overall test
- Trouble shooting

Test in multiple traction

Static and dynamic test at the customer with systems from different manufacturers

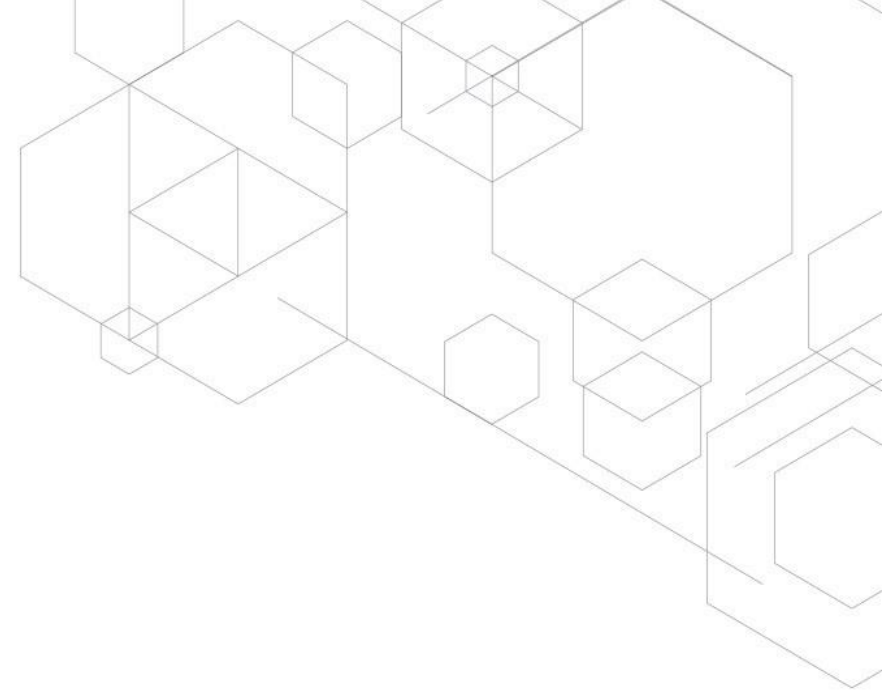
Tests in the vehicles with the FELA system and those with a third-party system

- Checking the PIS functionality
- Checking the cab-2-cab communication
- Testing vehicle-specific announcements (from/to FELA/external system)
- Testing of the PIS functionalities in all vehicles
- Overall system test
- Trouble shooting
- Analysis and logging as well as follow-up

Commissioning-training

On site at the customer on the second vehicle

- Theory and practical part
- Dealing with releases and configuration
- Instruction of the service personnel
- Vehicle inspection, component localization
- Training commissioning network, PIS, PAN and their configuration
- Uscase's troubleshooting
- FAQ

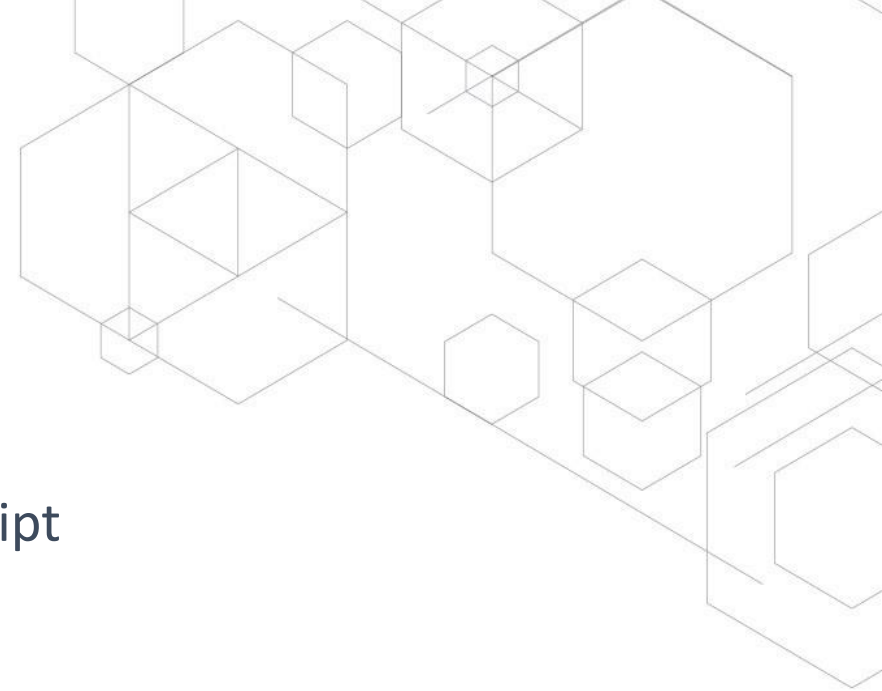


System-acceptance

On site at the customer on the second vehicle

- Carrying out a vehicle test according to the acceptance test script
- Clarification and debriefing

- Creation of pending list for possible rework
- Official handover of the system to the customer





Thank you!



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