

VALIDATION OF SAFETY – CRITICAL RAIL SOFTWARE WITH VECTORCAST

When digitizing rail networks, VectorCAST serves as a vital tool for validating that safety-critical software runs smoothly within wayside and in-cab systems. It provides automated dynamic testing of low software requirements, checking functional safety, and captures full code coverage and statistics at every level, which is essential for SIL4 verification.

WHY PSA RELIES ON VECTORCAST



TÜV SÜD certified



Ensures full compliance with EN 50126, EN 50128, EN 50129 standards



Accelerates testing through extensive task automation



Supports both legacy & new applications



Testing on host, simulator, & embedded systems

IN-DEPTH PSA'S EXPERTISE WITH VECTORCAST

PSA has devoted a significant part of its expertise to VectorCAST, enabling highly reliable verification of updates and changes, the addition of new elements for wayside and in-cab systems, and RAMS verification. As VectorCAST evolves, we embrace its new features, providing increasingly efficient testing processes for our rail clients globally. All tests created and performed by our QA team comply with SIL4 standards, which have been verified by independent audits.

10+

YEARS OF EXPERIENCE

30k+

HOURS OF TESTING

65+

PROJECTS COMPLETED

Our VectorCAST expertise substantially reduces testing cycles, streamlines the handling of complex testing issues, and ensures smooth validation.

VECTORCAST ACTIVITIES AT PSA

- ◆ Unit testing
- ◆ Integration testing
- ◆ Regression testing
- ◆ Test cases description
- ◆ Problem report documentation

VALUE DELIVERED ACROSS PROJECTS

- ◆ Confirmation of seamless integration of subsystems
- ◆ Verification of the functionality of modified components
- ◆ Verification of differences between original and updated software versions
- ◆ Expanded code coverage
- ◆ Identification of variables that may affect system performance
- ◆ Immediate on-site issue resolution

GLOBAL APPLICATION FOR VECTORCAST

Over 20 lines across the U.S., Europe, and Asia have been launched following PSA's validation with VectorCAST.



SYSTEMS COVERED:

CBTC, ATP/ATO, PTC, ETCS

TYPES OF RAIL:

Class I, Freight Rail, Rapid Transit, Commuter Rail, Light Rail

WHY COLLABORATE WITH PSA

◆ MULTI-FACETED RAIL EXPERTISE

Our comprehensive rail services cover signaling design, interlocking and cab product development, dispatching systems, rail CAD, and V&V activities

◆ GREAT PRACTICAL EXPERIENCE

We ensure seamless integration into your main project and adaptability to evolving requirements

◆ CUTTING EDGE IMPLEMENTATIONS

Operating at the intersection of Rail and IoT technologies, PSA is at the forefront of advanced solutions and ready for further evolution

◆ FLEXIBLE ENGAGEMENT OPTIONS

We offer flexible collaboration options, from remote design to onsite support, with customizable teams tailored for specific projects to optimize costs and deliverables

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