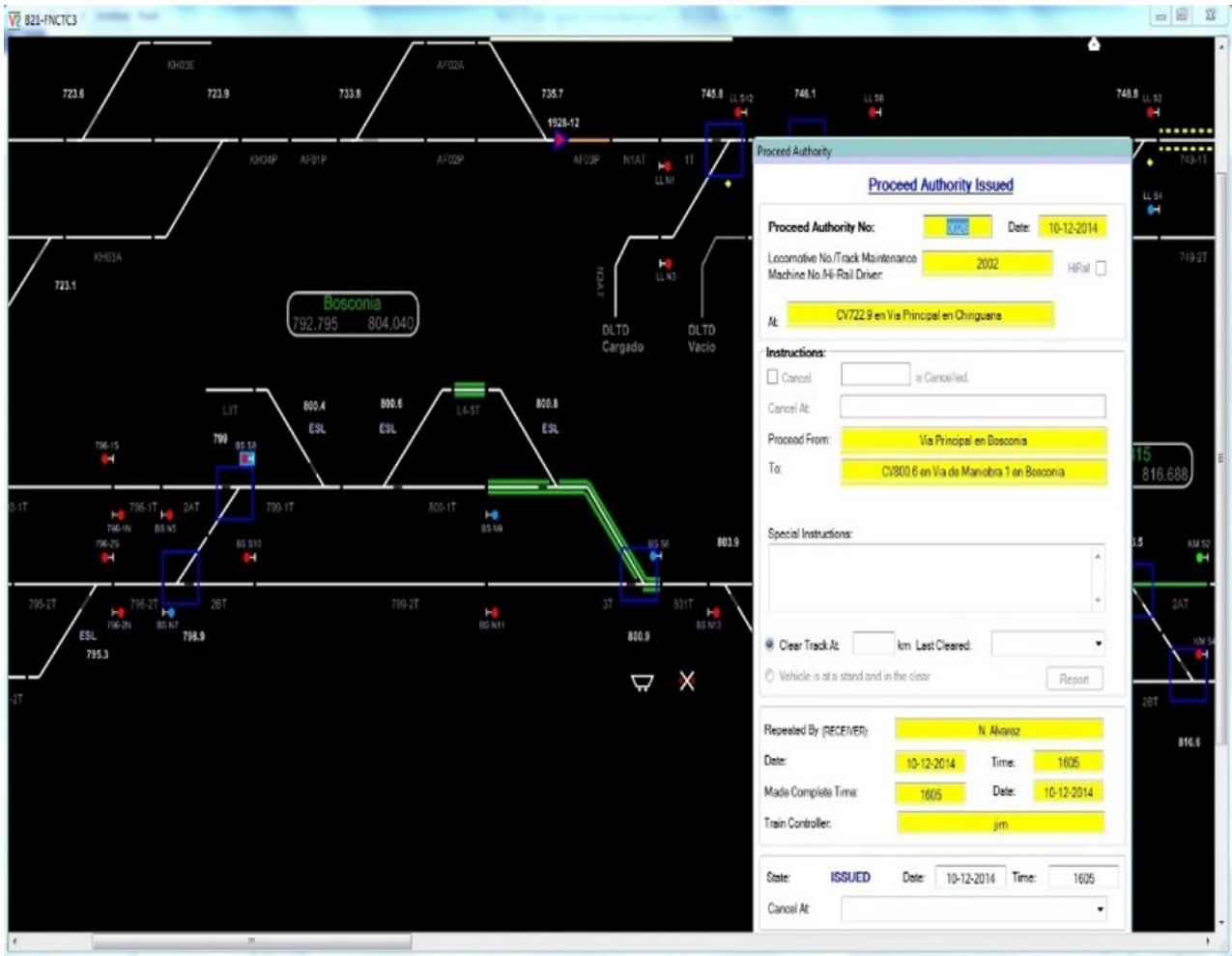# VECTORCAST TESTING FOR RAMS

Datasheet

Project objective

Give an adequate assessment of the Reliability, Availability, Maintainability, and Safety of rail signaling systems' operation to allow for the optimization of rail signaling systems and its components.

Result

In compliance with SIL 3-4, PSA has tested 10+ critical rail systems for RAMS, mainly, the wayside monitoring systems and train/wayside communication products. Testings have identified variables that may slow down the operation of the system, and security exposures, as well as verified the functionality of modified components. Besides code issues, tests reveal the need for the reengineering of system components, manual memory allocation, and custom memory card creation, which PSA has also performed in further projects. This allows the client to increase system's performance by 10% on average.

Scope of work

- Unit & regression product testing utilizing black box testing model according to the list of provided modules
- Re-execution of tests performed earlier, after implementation of new changes
- White box testing when it needs deeper immersion in the source code of the product
- Detailed descriptions, sets of instructions, and continuous remote support for on-target tests execution

Activities

- Requirements Analysis
- Software Analysis
- Test Cases Definition and Creation
- Execution of Test Cases
- Code Coverage Analysis
- Test Results Documentation
- Source Code Injections (for On-target Tests)
- Tests Specifications Delivery

About the project

Technologies

- ✦ VectorCAST
- ✦ C++

Project size

- ◈ 3 Software Engineers

Duration

4

4 months on average

Platforms

Windows
Embedded