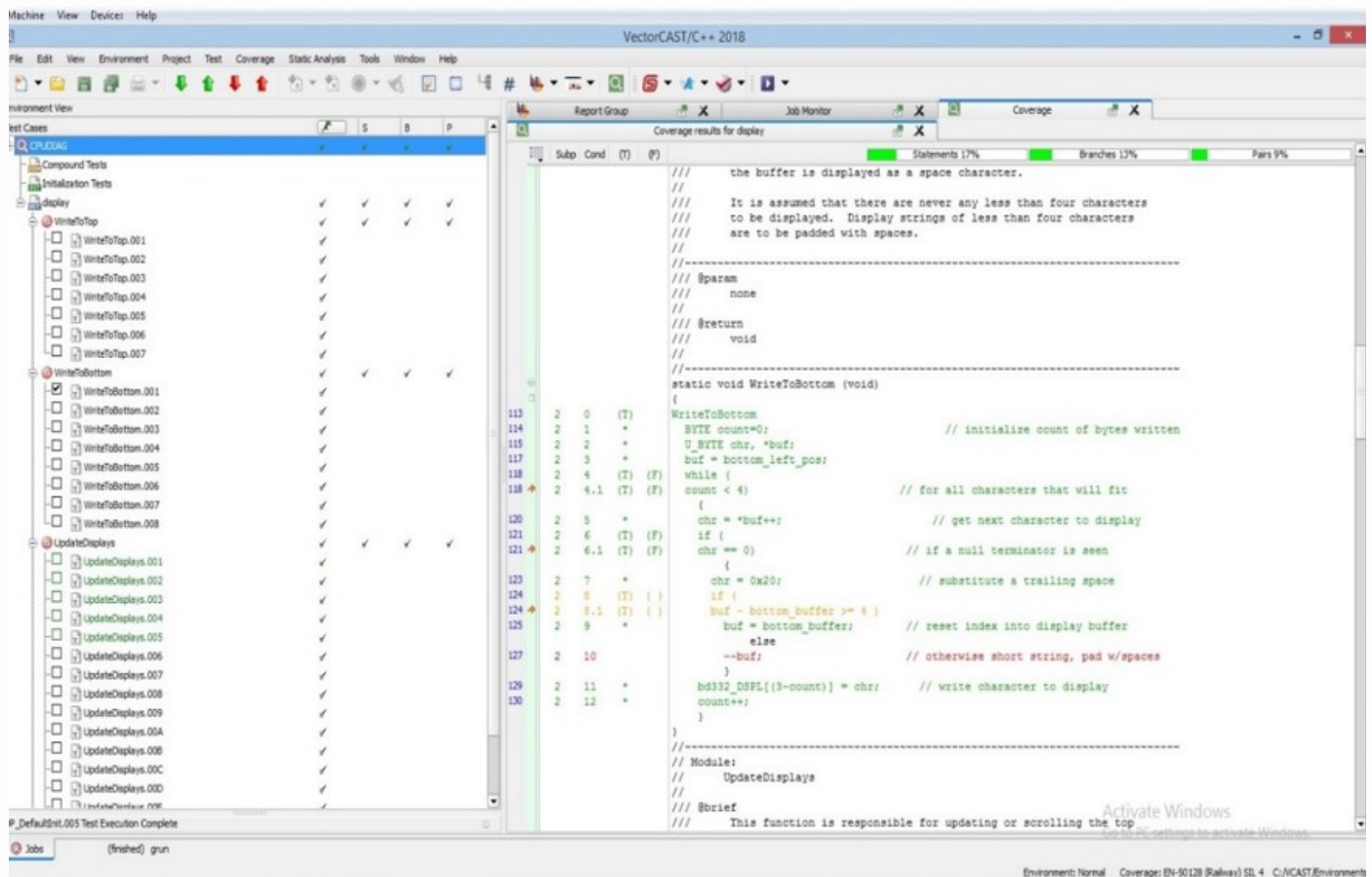


CARBORNE ATP SYSTEMS TESTING

Datasheet

Project objective

Provide a continuous testing support for carborne ATP systems after changes to characteristics or components within the system. Hence, execute unit tests of the updated code to check whether ATP/ATO still can perform its critical functions. Verify the execution of business logic to ensure the safe movement of the train within the Movement Authority Limits.



Result

ATP systems on 20 rapid transit lines in US, Europe, and Asia are on continuous testing support. Generally, it allows for confirming the operability and integration of ATP subsystem after making changes to it, finding an alternative testing approach, and for immediate response for issues that are found onsite.

Requirements

- ❖ Unit & regression testing with a white box methodology
- ❖ 100% code coverage for unit testing verifications: branch coverage, statement coverage, code lines coverage, modified conditions coverage
- ❖ Verifying the differences between the original and updated software versions
- ❖ Compliance with FRA and Cenelec standards

Testing Procedure

- ❖ Requirements Analysis & Verification
- ❖ Test Specifications Creation & Updates
- ❖ Test Cases Creation & Updates
- ❖ Source Code Analysis
- ❖ Environment Compilation
- ❖ Execution of Test Cases
- ❖ Test Results Documentation
- ❖ Problem Report Documentation
- ❖ Bug Fixing

About the project

Technologies

- ⚙️ VectorCAST
- ⚙️ Vblok
- ⚙️ C++



Project size

- 👤 2 Software Engineers

Duration



2 months on average

Platform

Embedded