



# RTT-STO: Source-To-Object Analyzer

## Effective source-to-object code (STO) analysis for safety-critical avionics software

RTT-STO is a software analysis tool-suite that automatically performs static program analyses of C code and assembly required to receive certification credit for source-to-object code validation in the context of safety-critical avionics software.

**Automatic** - RTT-STO automatically performs the following program analyses, which are necessary to receive certification credit for DAL-A software:

- Determine the branching structure of the assembly and match it to the original C program.
- Verify correctness of memory allocation and stack frame implementations with respect to the original C program.
- Detect, analyze and verify that all memory accesses in the assembly are executed as specified in the C program.
- Unveil compiler-inserted function calls.

**Easy-to-use** - RTT-STO parses and processes unmodified programs in C and assembly (produced by the Green Hill's compiler), and thus does not require any intrusions to the code base.

**Efficient** - Analyze a large code base with hundreds of thousands of lines of code in the order of seconds to minutes.

**Supportive** - RTT-STO generates spreadsheets from templates that can be provided as evidence to the certification authorities.

**Qualified** - RTT-STO comes with a tool-qualification suite for all software criticality levels according to the RTCA DO-178B and DO-178C standards.

**For more information  
visit**

[www.verified.de/  
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