RTT-DCC 1.0:
Data Coupling & Control Coupling Analyzer

Automatic data coupling and control coupling
(DC/CC) analysis for safety-critical avionics software

Data coupling and control coupling analysis is a mandatory verification
task for safety-critical avionics software according to DO178B and
DO178C. RTT-DCC is a software analysis tool that automatically performs
this analysis with a focus on pointer-induced couplings.

**Automatic** – RTT-DCC traces and documents all data dependencies
between different source modules, and automatically determines
verification obligations for the test team.

**Easy-to-use** – RTT-DCC parses and processes unmodified programs
written in C and thus does not required any intrusions to the code base.

**Precise** – RTT-DCC performs a very precise context-sensitive program
analysis in order to generate as few spurious warnings as possible.

**Efficient** – Analyze a large code bases with hundreds of thousands of
lines of C code.

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

**Qualified** – RTT-DCC comes with a tool-qualification suite for all software
criticality levels according to the RTCA DO178B and DO178C standards.

**Proven in Use** – The tool has successfully been applied during low-level
verification of software according to Development Assurance Level A
(DAL A).