atollic

Embedded Passion

Measure test quality with dynamic execution flow analysis!

TrueANALYZER

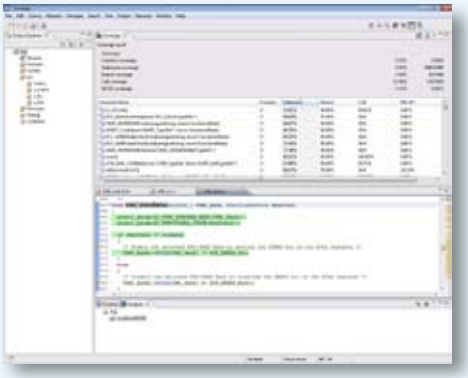
Atollic TrueANALYZER® is a tool for professional code analysis. The product performs dynamic execution flow analysis and provides rigorous code and test coverage measurements of the application as it runs in your target board. It supports many types of code coverage analysis up to the level of Modified Condition/ Decision Coverage as required by RTCA DO-178B (Level A) for flight-safety-critical software.

TrueANALYZER® analyzes the source code of your application to find all statements and branch decision expressions. It then instruments the application and downloads it to the target board using the same JTAG probe used for debugging. TrueANALYZER® monitors the execution of the application in the target board and immediately detects new execution paths and branch conditions as the board interacts with its environment (users press buttons, sensors receive data and other systems send communication packages etc). Code and test coverage data can be uploaded to the TrueSTUDIO® IDE at any time.

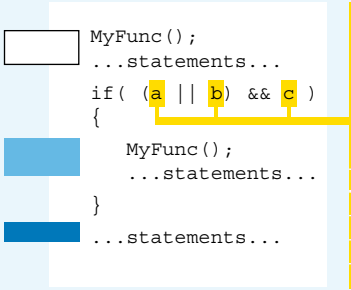
Atollic TrueANALYZER® support:

- Statement coverage
- Function coverage
- Function call coverage
- Branch coverage
- Modified condition/Decision coverage (MC/DC)

Summary – Code coverage analysis	
What is it?	Code coverage analysis gives information on what parts of a program have been executed during a test session.
Why do it?	With knowledge on what execution paths have been exercised during test, you also know what parts of the program is untested and needs to be tested better.
How does it work?	A tool analyze an application, instrument it, and execute it with execution-path monitoring. Once a test session is completed, code coverage information is presented to the developer or tester.

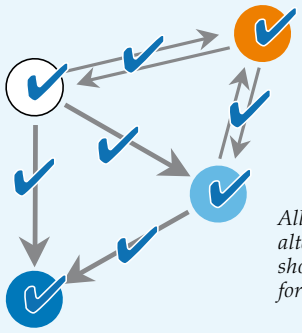


Even trivial code is difficult to test rigorously



For MC/DC all subexpressions must have affected the branch decision independently of other subexpressions.

a	b	c
TRUE	FALSE	TRUE
FALSE	FALSE	TRUE
FALSE	TRUE	TRUE
FALSE	TRUE	FALSE



All code blocks and alternative branch paths should be excercised for a complete test.

Test quality can be measured automatically with dynamic execution flow analysis

Read more at www.atollic.com

A complete set of world class tools for development and testing

More tools for professional development – from code to market.

The embedded systems development tool for the next decade!

TrueSTUDIO

Atollic TrueSTUDIO® is the premier C/C++ development tool for embedded systems development, with its unrivalled feature-set and unprecedented integration. In addition to the state-of-the-art editor, the optimizing C/C++ compiler and multiprocessor-aware debugger, Atollic TrueSTUDIO® also includes features for team collaboration, graphical modeling and design, code review and review meetings, and much more.

Ensure coding standards compliance with professional code inspection!

TrueINSPECTOR

Atollic TrueINSPECTOR® is a tool for professional code analysis. The product performs static source code inspection and generates software metrics. The source code is validated against a database of formal coding standards, and coding constructs that are known to be error-prone are detected automatically. Atollic TrueINSPECTOR® supports the MISRA®-C:2004 coding standard.

Get superior software quality with embedded test automation!

TrueVERIFIER

Atollic TrueVERIFIER™ is a tool for advanced test automation. The product performs source code analysis and auto-generate unit tests that exercise an extensive set of different execution paths. The tool download the test cases and run them in a target board with execution path monitoring. Finally, Atollic TrueVERIFIER™ visualize the test results and the achieved code coverage.

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