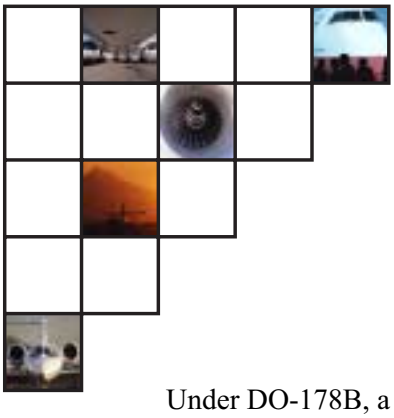
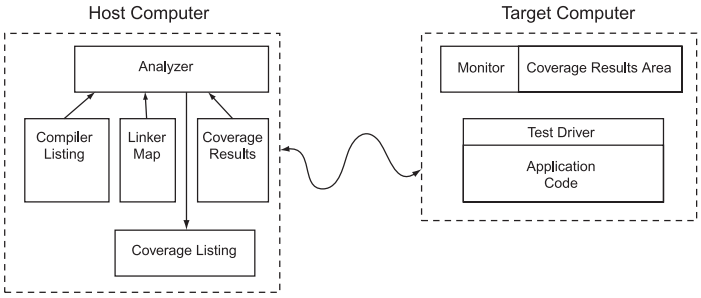


VEROCODE

An Object Code Coverage Analyzer
by VEROCEL

Under DO-178B, a measure is required to determine if any software constructs are omitted during the requirements testing process. This is called coverage analysis and the level of detail addressed varies with the assurance level associated with the software.

VEROCODE (Verify Object Code) is an execution trace analyzer tool that requires no special hardware. The code under test does not need to be instrumented (function calls are not added to record execution states). The application code is executed on a target computer (e.g. PowerPC) and the execution profile is captured on a host machine (PC/Windows NT).



VEROCODE uses the captured execution profile, together with the linker map and the compiler generated listing to indicate which instructions were executed, which were not executed and the state of the condition codes during execution of conditional instructions.

The resultant listings document the evidence required by DO-178B for coverage analysis for the highest level of criticality: Level A.

VEROCODE - shows coverage at the object code level, hence source to object code traceability is not required.

VEROCODE - can combine the results of many tests to provide cumulative coverage data.

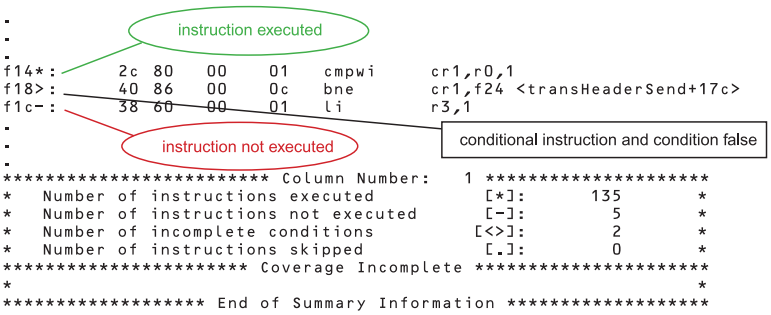
VEROCODE - enables you to obtain Modified Condition Decision Coverage (MCDC) by capturing the results of each condition independently (when the application uses some simple coding conventions).

VEROCODE - does not compromise your test results by instrumenting the code under test.

VEROCODE - can record coverage data as part of your requirements based testing, not as a special coverage test execution.

VEROCODE - can form part of a repeatable, automated, test and coverage analysis script.

VEROCODE - is provided with Qualification Data, so that it can be used as a verification tool and results taken for certification credit.



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