*V*erifysoft
TECHNOLOGY

Software Testing Solutions for Productivity and Quality

- Automated Test Design™
- Static code analysis
- Complexity measurements
- Code coverage

Testwell

Testwell CTC++ Test Coverage Analyser
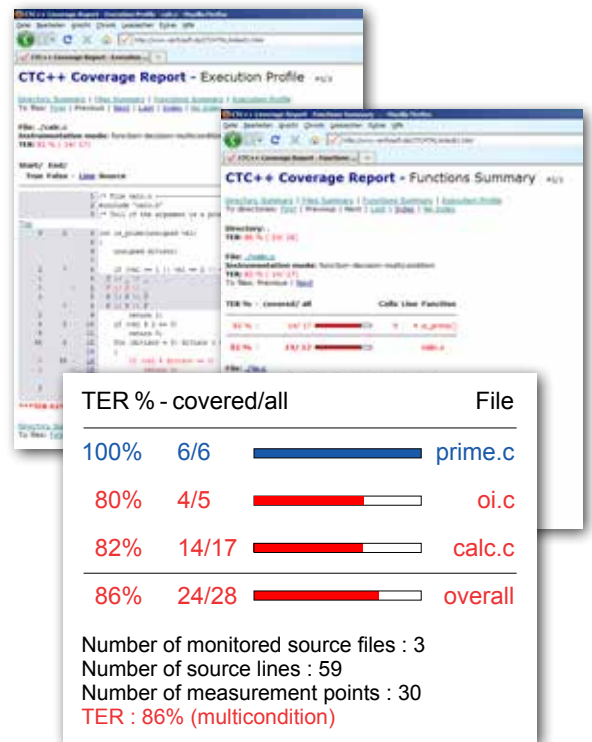### Code coverage for all coverage levels, all compilers, all embedded targets

Testwell CTC++ is a powerful and easy to use code/test coverage tool that shows all parts of your code that have been executed (tested). The tool supports all coverage levels and is ready to be used in safety-critical projects.

Code Coverage for all Coverage Levels

- Statement Coverage
- Function Coverage
- Decision Coverage/Branch Coverage
- Condition Coverage
- Modified Condition/Decision Coverage (MC/DC)
- Multicondition Coverage (MCC)

Testwell CTC++ is the ideal tool to analyse the code coverage of your embedded targets and microcontrollers. It can be used on hosts as well as on targets.

- **Very small** instrumentation overhead
- Analyses code coverage on **all targets**
- Works with even the **smallest targets**
- Works with **any compiler/cross compiler**

TER % - covered/all			File
100%	6/6		prime.c
80%	4/5		oi.c
82%	14/17		calc.c
86%	24/28		overall

Number of monitored source files : 3
Number of source lines : 59
Number of measurement points : 30
TER : 86% (multicondition)

Easy Usage

- No modifications necessary for existing code
- Support of existing make files
- Very fast execution speed
- Seamless integration into common IDEs
- Support for C and C++

Add-ons for Testwell CTC++

- Support for Java
- Support for C#

Code Coverage Results

- Summary Coverage Reports
  - Directory
  - Files
  - Functions
- Execution Profile Listing
- Untested Code Listing
- Coverage Summary Listing
- Execution Time Listing

Testwell CTC++ Test Coverage Analyser
Code coverage for all coverage levels, all compilers, all embedded targets

✓ Code Coverage with Testwell CTC++

- ▶ Fulfill requirements of standards
- ▶ Write better test cases
- ▶ Avoid redundant test cases
- ▶ Find dead code

- ▶ Prove code coverage to your customers
- ▶ Demand proof of code coverage from your suppliers
- ▶ Find bottlenecks by examining runtime behavior

Qualification Kit for Standards
DO-178C - IEC 61508 - EN50128 - ISO 26262

✓ Qualification Kit

Simplify all certification processes of your projects by using the Qualification Kit for Testwell CTC++. The following standards are supported by Testwell CTC++:

- ▶ **DO-178C / ED-12C**
  Software Considerations in Airborne Systems and Equipment Certification
- ▶ **IEC 61508**
  Functional Safety of Electrical/Electronic Programmable Electronic Safety-related Systems
- ▶ **EN 50128**
  Railway applications - Communication, signalling and processing systems
- ▶ **ISO 26262**
  Road vehicles - Functional safety

Testwell CMT++ and Testwell CMTJava

Software complexity analysis for the languages C, C++, C# and Java

Testwell CMT++ and **Testwell CMTJava** are tools to analyse the complexity of C, C++, C# and Java source code. Both tools analyse source code and immediately show you the current internal quality of your software product, even with greater project sizes. Avoid software erosion by archiving a good internal code quality and see how maintainability and testability will be significantly improved.

Complexity Analysis

- ▶ McCabe Cyclomatic Complexity
- ▶ All Lines-of-Code Metrics
- ▶ All Maintainability Indexes
- ▶ All Halstead Metrics

The complexity of your source code has a great impact on robustness and error-proneness of your software products. Complex code is hard to test, is expensive and challenging to maintain. Reduce these costs by examining the complexity of your source code.

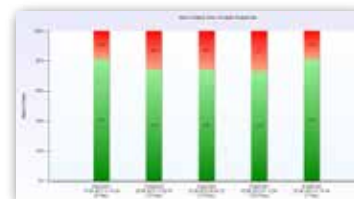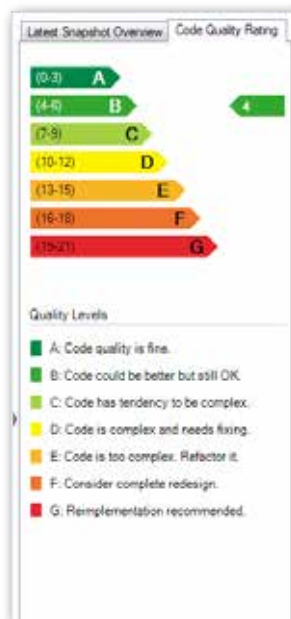## Graphical Add-on for Testwell CMT++

Verybench for CMT++ is a graphical front end for Testwell CMT++. It enables you to examing, evaluate and document your source code's quality fully graphically in a standardised user interface.

▶ Alarms for Metrics
Verybench shows all alarms which have been defined for metrics within Testwell CMT++ and also shows when metrics have extended beyond their recommended values.

▶ Snapshots
Verybench creates a snapshot for every complexity analysis performed, therefore capturing your entire source code's quality over time.

▶ Quality Baseline
All snapshots created over time form a single Quality Baseline that assists you in understanding your software's complexity in-/decrease.

▶ Code Quality Rating
Verybench evaluates your source code after each complexity analysis, giving you an accurate representation of the current code complexity in an instant.

▶ Reports
Verybench helps you document your quality examinations by providing easy to read reports in formats such as PDF-, HTML-, XML-, CSV- and text.

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Our Customers

Hundreds of global corporations, medium-sized and small companies all over the world use our tools to increase their productivity and quality of their softwares.

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AMG · DAIMLER · Infineon · RWE · TomTom

AOA apparatebau gauting · DGA · intel · SAFRAN · T··Systems·

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ATTENSITY · EATON · KNORR-BREMSE · Schindler · VORWERK

Audi · esa · LIEBHERR · Schneider Electric · VW

BARCO · ESO · MAGNETI MARELLI · SICK · WEB.DE

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Verifysoft Technology GmbH was founded in 2003. The company is located in Offenburg, south west of Germany, close to the French border. Our international team of experts provides advice and assistance to customers all over the world. Our engineers have extensive experience in software testing.

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