



RAPITA Systems Ltd A DANLAW Company

Brochure 2017

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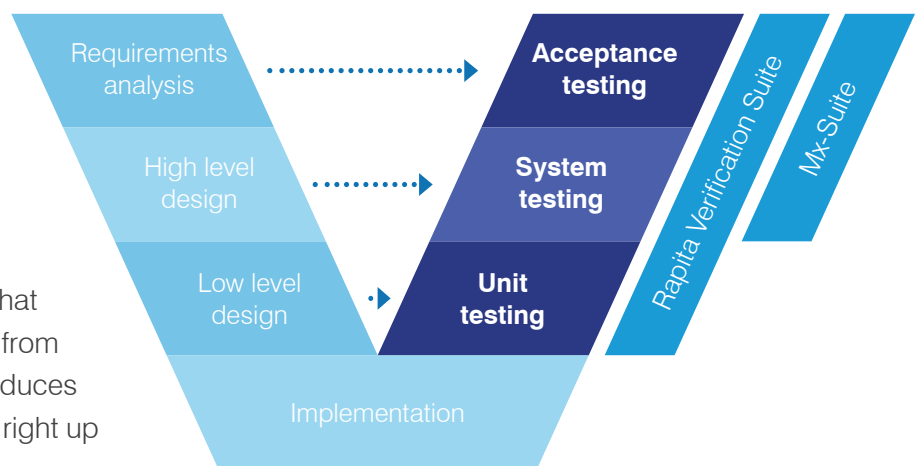
On-target verification solutions for critical embedded software

We provide **verification tools** and **V&V services** to the avionics and automotive electronics industries. Our solutions reduce the cost of verifying critical real-time embedded software.

Where can we help?

Our tools help you test your code throughout the software development life cycle, from the system to integration level to low-level functional testing.

By providing an automated framework that lets you collect verification metrics directly from your embedded target, our software reduces the effort required to run your test project, right up to certification.



“

The more challenging the development and test environment, the less likely it is to benefit from pure “off-the-shelf” solutions.

Our engineers work with you to understand the issues you face, helping you to devise a customized solution for your target environment.

”

Our approach

We believe that one-size-fits-all approaches cannot fully meet the needs of the embedded software industry due to the complexity of their development and target environments.

Because of this, we deliver flexible solutions that can be tailored to meet the needs of the project they are used in to reduce overall testing effort.

For example, by harnessing the flexibility of our toolset and effort from our engineers, we can customize integrations with embedded targets to collect verification data in a variety of ways.

Why choose Rapita?

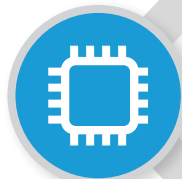
Accelerate your testing

Our solutions eliminate inefficiencies in embedded software testing, with a dedicated multi-user platform, powerful result traceability, and minimal on-target overheads.



On-target specialists

We are the industry leader in on-target testing of Ada, C and C++ projects, with extensive experience working with complex embedded architectures, build and test environments.



We work around you

Our tools integrate seamlessly into your existing test environment, supporting you even when your code base changes.



Reduce V&V costs

We offer a range of solutions for outsourcing your V&V projects. As a subsidiary of Danlaw Inc, we provide experienced software test engineers in Europe and the USA.



Reduce certification effort

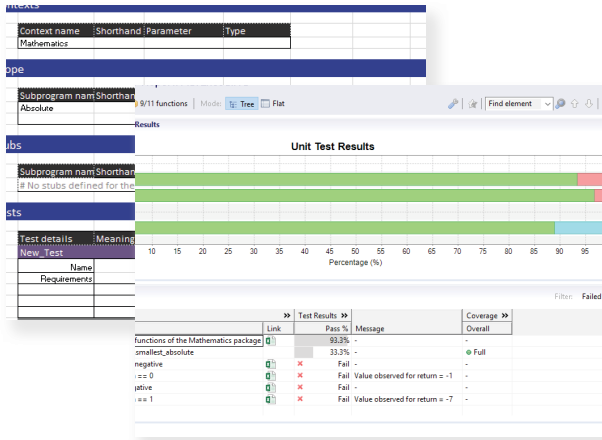
We have developed processes, documents and tests to qualify our solutions for use with DO-178B/C and ISO 26262 projects, so you don't have to.



Software verification solutions

Software/hardware tools

Unit/system testing



RapiTestFramework reduces the effort needed for embedded software testing. By offering a variety of powerful test authoring formats and injecting and running tests automatically, RapiTestFramework streamlines test development and execution.

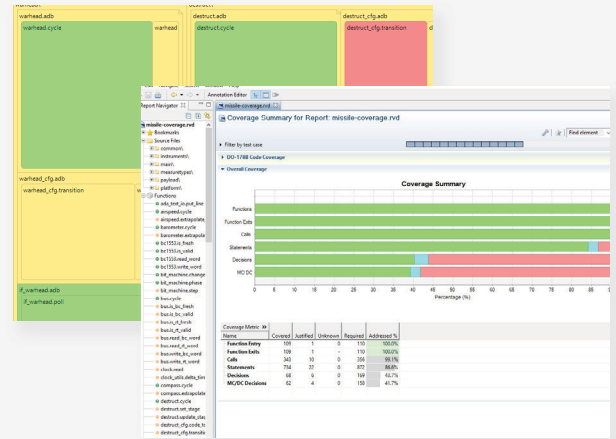
- Manage tests from system to unit level
- Apply and run software tests on-target and on-host
- Designed to significantly reduce testing times

Code coverage analysis

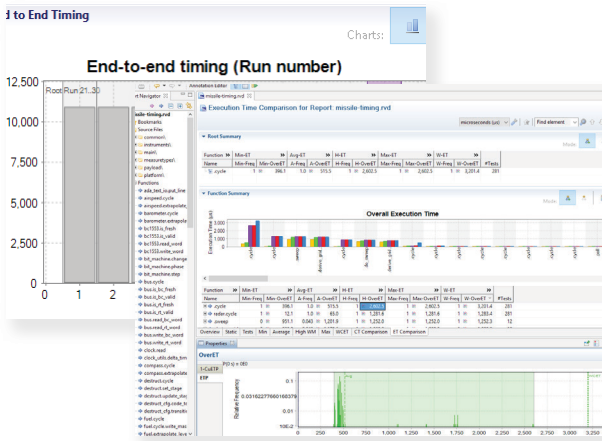


RapiCover is the lowest overhead tool for structural code coverage analysis. By using extremely efficient and configurable instrumentation, RapiCover collects coverage data up to MC/DC level from embedded targets and exports this to a report for certification.

- Measure code coverage up to MC/DC level
- Lowest on-target overheads on the market
- Merge coverage from multiple tests and builds



Timing analysis



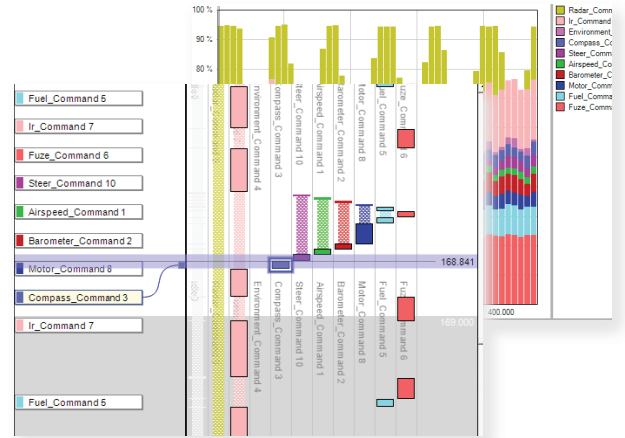
RapiTime calculates timing metrics such as WCET and high water mark times from embedded targets, helping identify optimization candidates. RapiTime's configurable instrumentation can be applied to even the most complex targets, including multi-core.

- Calculate WCET and high water mark times
- Identify where to focus optimization
- Single & multi-core analysis

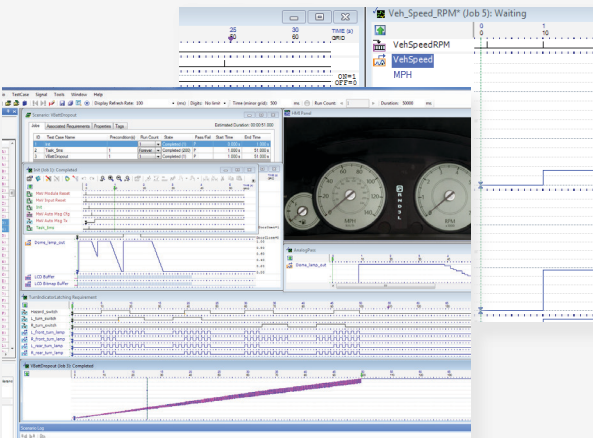
RapiTask

RapiTask helps understand the scheduling behavior of multi-core and multi-threaded embedded systems. By providing a variety of helpful charts and graphs, RapiTask helps identify timing and system capacity issues.

- Visualize system scheduling graphically
- Highlight rare timing events e.g. race conditions
- Identify system capacity issues



Scheduling/event tracing



MX SUITE™

Mx-Suite provides an integrated platform to manage software tests. Using a novel approach of interpreting native signal interfaces from the software under test, Mx-Suite lets you test your software from early design to the end of its life cycle.

- Test simulation models and software code
- Provide evidence that code meets requirements
- Test on target ECU

Mx-Suite

RTBx

RTBx captures trace data from embedded targets at extremely high rates. With a configurable, low overhead instrumentation library and easy-to-use web interface, RTBx is the most advanced data logging solution on the market.

- Trace 100+ million events per second for days
- Minimal instrumentation overheads
- Target independent tracing



Data logging

Software verification solutions

Engineering services



Software verification services

- Software review analysis and testing
- Efficient independent V&V

Our team of software testing experts is on hand to undertake DO-178B/C and ISO 26262 projects worldwide using our tools.

Because our engineers are experienced at using our tools, they can complete test projects with minimal effort, delivering your project on time and on budget.

Integration

- Tie RVS tools into existing build system
- Collect data on target

For you to collect verification data during your project, our tools must be integrated into your build and target systems.

We can provide the effort needed to produce high-quality integrations, so you can focus yours on testing. Because integration is a one-time procedure, achieving a high-quality integration early will pay dividends later.



Qualification

- DO-178B/C & ISO 26262 tool qualification
- Reduce certification effort

Qualifying software tools is costly. That's why we have developed qualification kits for our tools, so you don't have to. These kits can significantly reduce the effort needed to qualify our tools for use in your testing projects.

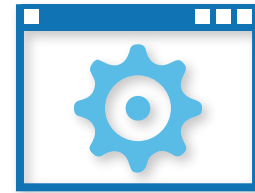
Qualification is part of our design philosophy. We design our tools to be fully qualifiable against standards including DO-178B/C and ISO 26262 from the offset.



Customization

- Customize tools to meet needs
- Targeted solutions

Our tools are built on a powerful framework so we can customize them to meet your specific needs. Using this framework, combined with our team of engineers, we are confident we can create a solution for you.



Whether you need us to develop new trace hardware or software to collect data from your embedded target or add support for a custom compiler, we can.



Training

- Learn how to get the best from our tools
- Customized courses to meet your needs

We offer a variety of training courses so you can get the best from our tools. These courses are customized in advance to meet your individual needs, and delivered by our dedicated field application engineers.

We can deliver training remotely from our offices or visit you on site.

Support

- Cornerstone of our business
- Assurance issue notifications

We have a strong history of excellent customer support and regard this as a cornerstone of our business. Our policy is to always provide you with the best level of support we can, as promptly as possible. In 2016, we resolved 73% of your requests within 7 days, and 96% within 31 days.

The quality of your testing is paramount to us. We inform you whenever we discover issues in our tools that could affect the validity of your test results.



*Meeting global testing needs in the critical
embedded software industry since 2004*

 **Rapita location**  **Distributor/reseller**  **Customer**



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